

Dealing with investors' expectations

A global study of company valuations and their strategic implications



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The authors express special thanks to the people above for their input in the preparation and editing of this report. They would also like to thank the Project Team: Kerstin Biernath, Markus Flakus, Jörg Klasen, Dawn Marley, Aniruddha Patil, Frederik Schorr, Navneet Vasishth and Karsten Wildberger.

Introduction

When we started writing this report in the first week of September 2001, following months of analysis, we had a disconcerting story to tell, at least by the standards of that time. Our annual study of more than 4,000 listed companies worldwide revealed that the gap between market and fundamental values – which we call the expectation premium – was significantly above the level that preceded the 1929 crash and all other major recessions. This finding paled into insignificance on Tuesday, 11 September 2001.

The scale of the tragedy the US suffered that day, which continues to be borne with extraordinary fortitude and dignity, defies belief and BCG's heartfelt sympathy goes out to all of its victims worldwide.

The event also, of course, provided a salutary reminder that it is human, not financial, values that ultimately count. But, as the US has so powerfully and pragmatically demonstrated in the past, economic prosperity is often a pre-requisite for preserving and nurturing these values. Understandably, this thought is not uppermost in most people's minds. Nevertheless, it is important not to lose sight of it, nor of the reality that companies across the globe, on whom millions of lives depend, are now operating in a much more challenging economic environment.

In the wake of these developments, we revised our report in an effort to help businesses emerge successfully from this situation. Originally, at the beginning of September, our goal was to show corporations the scale of the expectation premiums in their respective industries and map out strategies for dealing constructively with them. At the time, these premiums accounted for around 40% of the S&P 400's total value and affected all industries, rising to over 50%, on average, in several sectors. This was hard to sustain and was fuelled by a variety of factors, from increased market liquidity to an apparent rise in speculative trading.

Although these premiums had deflated by the time we went to press in November, they could

be larger than BCG has calculated. The premiums in this report were based on publicly available data on fundamentals for 2000. This year there are indications that profit margins and other fundamental measures have deteriorated, which could leave a bigger premium than we have discovered.

Regardless of the scale of today's premiums, our analysis sheds important new light on the impact these short-term premiums can have on a company's ability to sustain long-term value creation. More specifically, we show that it is the relative, not absolute, size of your premium in your industry that counts and that illuminates previously hidden risks and opportunities. How you deal with these is critical. And as it is relative premiums that matter, these possibilities exist in all stock market conditions, good and bad.

In the long run, however, expectation premiums for the stock market tend to zero, on average, enabling fundamentals to shine through and drive total shareholder returns (TSR). Unfortunately, the possibility of an economic downturn, heightened by the recent fall in the world's stock markets (an event that was exacerbated by high premiums, as shown in the report) threatens to place pressure on companies' abilities to deliver strong fundamental performances. To help businesses address this possibility and emerge fitter from it, we outline a recession contingency plan. This exercise will strengthen your fundamentals and competitive standing, regardless of the economic climate.

The good news is that an above-average fundamental performance – and consequently above-average TSR – is possible in all industries, one of many findings from BCG's study. Equally encouragingly, stock markets have consistently shown their ability to bounce back swiftly from

major shocks over the last 75 years. We hope today's problems will not prove the exception to the rule. And that, by stepping up the focus on fundamental value, companies will be able to achieve a softer landing and a rapid rebound from the recent shocks.

Executive summary

It is not just fundamentals that determine total shareholder returns (TSR). Expectation premiums – the difference between market and fundamental values – can also have a significant, but generally misunderstood, impact both on both stock prices and on a company's fundamental performance, the ultimate driver of long-term value creation. To deal effectively with the risks and opportunities these premiums present, businesses need to incorporate them into their value creation agendas.

Echoing BCG's previous two annual Value Creators' reports, our latest study confirms that companies in all industries can generate above-average TSR, the 'gold standard' of value creation. In the long run, this is fuelled by three key fundamental metrics – margins, asset productivity and investment growth. However, expectation premiums, which are an inherent short-term feature of capital markets, can also play an important role, enhancing or undermining long-term value creation, depending upon how they are handled.

A comparatively high premium, for instance, can be used as an 'acquisition currency' to purchase fundamentally stronger businesses. Unaddressed, it could, amongst other difficulties, lead to a company's stock price being disproportionately penalised in a market correction. This would leave the firm vulnerable to a take over and limit its ability to raise additional capital. Conversely, businesses with relatively low premiums will already face these problems.

As this gap between market and fundamental values is always evident in the short term, these risks and opportunities are always there, regardless of market conditions. Sometimes a company's expectation premium will be justified and sustainable in the long term, but often it will not. Although the capital markets will eradicate unrealistic premiums in the long run, on average, all companies will have premiums at some point and will face the relative risks and opportunities.

It is therefore essential to take expectation premiums – the 'missing link' in the value creation agenda – into account and manage them. Many companies fail to do this and this is precisely why only a handful of corporations have achieved above-average TSR for more than 10 years.

It is the relative, not the absolute, scale of your premium that matters. As BCG's study has shown, there have always been short-term differences in premiums, positive and negative, between industries and companies, stretching back to 1926.

Since 1926, there have been pronounced cycles of high and low premiums in the market, positive and negative, averaging to zero in the long term, according to an analysis of the S&P 400 index. The lowest negative premium was in 1932 (-49% as a proportion of market value) and the largest positive figure in 2000 (168%) for our sample. By the end of September 2001, they remained positive, based on last year's fundamental values.

Moreover, premiums affect all industries. In 2000, for example, 12 of 13 industries had positive premiums and the other a negative premium. Furthermore, there were wide divergences in premiums both between industries and within them. Over this period, the average industry premiums, for example, ranged from 72% for the pharmaceutical sector to 48% for media and minus 2% for automotive. These industry premiums were closely correlated with market performances. The higher the industry's TSR, on average, the higher its premium as a proportion of TSR.

A deeper analysis revealed the importance of relative, as opposed to absolute, premiums. During a market correction, industries and companies with the largest premiums experienced disproportionately large drops in TSR. In the first half of 2001, for instance, the average TSR was minus 7% for our sample, but companies with a positive premium of 83%, on average, at the beginning of this period recorded

minus 21% TSR, on average. More significantly, relative differences in premiums highlight strategic opportunities and risks, as explained later.

To turn premiums to your competitive advantage, it is essential to understand their key drivers. Some of these you can use to influence the scale of your premium. Others, notably macro-economic forces, are beyond your control but can provide valuable indicators of possible market corrections, thus enabling you to prepare accordingly.

There are several levers that businesses can pull to try to influence the size of their premiums: for instance, they can reduce a positive premium in order to limit their vulnerability to a market correction. Fundamental improvements – and especially profitable investment growth – are particularly strongly correlated with positive premiums. This explains why some industries, such as media and technology, have relatively high premiums: they are starting from low investment bases and are able to grow them more rapidly than mature sectors, such as utilities. Other 'corporate' factors positively correlated with premiums include market leadership, which tends to attract the top premium in an industry; branding; intellectual property rights; management credibility; and transparency.

A variety of complexly interwoven macro-economic factors also shapes premiums, often for the market as a whole. These range from GDP growth and liquidity to socio-demographic factors. Understanding these 'big picture' drivers could provide useful warning signals about future market corrections. Sustained positive market premiums, for instance, have never been tolerated for longer than 12 years.

The scale of your premium relative to your industry average indicates the strategic options that are open to you in the short term.

Establish whether the size of your premium, based on your strategic plans, is justified and compare this to your industry average using a matrix that plots premiums against fundamental performances. This will unveil the strategic options available to you. For example, if your business has an above-average premium and fundamental performance, you could use the 'surplus value' of your premium to acquire an under-valued business with strong fundamentals and a negative premium. This assumes it is a strategic fit and that the synergies you reap could help you reduce your premiums and compensate for any premium you have paid to acquire the business. At the other end of the spectrum, businesses with below-average negative fundamentals and premiums can take steps to close these gaps and minimise the possible threat of a take-over. As well as improving fundamentals, they may be able to pull the corporate levers that influence premiums to reduce or eliminate their negative gap – for example, via greater transparency and the removal of multiple or 'non-voting' stocks.

The jury is still out on whether there will be a deep and sustained economic downturn. BCG hopes this does not happen but, as Louis Pasteur once said: "Chance favours only the prepared mind". Putting together a recession contingency plan will strengthen your position, regardless of whether there is an economic downturn.

A recession would be a new event for most managers. A contingency plan to deal with this

possibility is essential, not just to minimise the threats to cash flow but to seize the opportunities that these events offer. The first step is to appoint a task force made up of a broad cross-section of senior managers with different personal attributes. The next step is to ask the task force to conduct a three-stage analysis to evaluate the relative cash flow vulnerabilities of your markets, individual business units and your company as a whole to an economic shock. This will highlight relative risks and opportunities, and will also suggest appropriate action. A similar analysis should be carried out for your competitors. Use an economic downturn, if it occurs, to enhance your competitive position, for example through mergers and acquisitions (M&As) and investing 'against the tide' in strategic areas that will consolidate your position. This approach will be advantageous regardless of whether a recession occurs. It will help you to identify relative cash

flow strengths and weaknesses in your portfolio, instil risk awareness in the business and catalyse managers to think more creatively under pressure, amongst many other benefits.

Never lose sight of the importance of your fundamental performance. Ensure you have an integrated value-based management system that aligns all aspects of your business, down to incentives, enhanced fundamental performance and, by definition, above-average TSR.

At the same time, establish a system to monitor expectation premiums, both for your company and for your industry: it is the relative premium that counts. In effect, take into account both your fundamentals and the capital market perspective of your business, especially the expectation premium. This is the key to sustained value creation.

The importance of expectation premiums in value creation

Fundamentals drive TSR in the long run, but in the short term expectation premiums play an integral part. Ignored, they can undermine a business's ability to sustain long-term improvements in TSR. Properly understood and used, they can become an important strategic asset. This holds true in all markets, good and bad, including today's. Here we describe BCG's view on expectation premiums, their key characteristics and our approach to managing premiums strategically.

A reminder of the importance of TSR

Companies often refer to the concept of value creation in public statements but few actively manage it. This is a missed opportunity because superior value creation – and in particular above-average TSR – is essential for a company's long-term success. It:

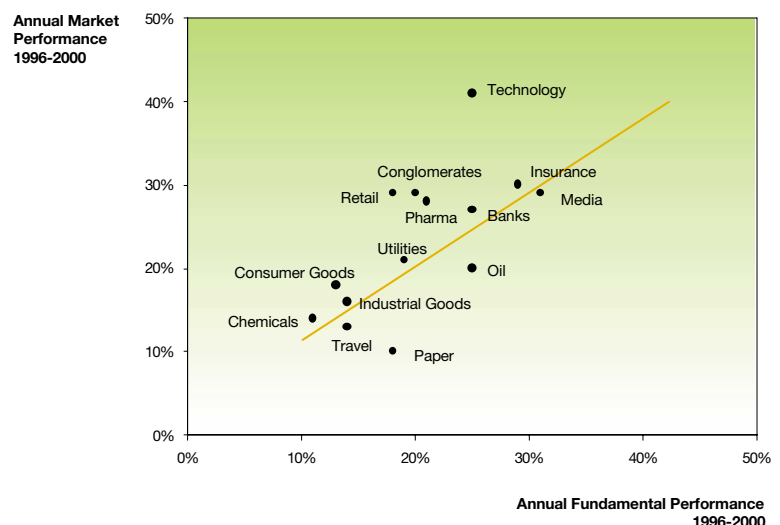
- **Helps attract and retain key staff, especially as share options become more common in remuneration packages:** High TSR is also a public measure of success, often an important factor in attracting and retaining high-calibre employees.
- **Makes it easier to raise capital, enabling companies to finance investment growth – a prime driver of value creation:** Moreover, there is evidence that high, sustained TSR is correlated with higher credit ratings, thus reducing funding costs.
- **Lowers the risk of a take-over and facilitates acquisitions:** The higher your relative market value, the lower your vulnerability to acquisitive companies. This also enables you to become the predator and improve your fundamentals via M&As.
- **Frees CEOs to take long-term strategic decisions:** Strong value creation removes the short-term distractions of dealing with unsatisfied investors.

- **Assists companies in fulfilling their social responsibilities:** Higher TSR tends to lead to higher employment, tax revenue and economic income via the multiplier effect. This social 'dividend' is becoming increasingly important as businesses come under greater pressure to demonstrate their social value and sense of responsibility.

Fundamentals ultimately determine value creation

As previous BCG studies have shown, improvements in profitability and investment growth above the cost of capital ('profitable growth') are the principal drivers of value creation, measured by TSR. This powerful correlation is shown in Figure 1. The product of these two key fundamental drivers is free cash flow.

Fig. 1 Correlation between annual market performance (TSR) and annual fundamental performance (TBR)



Source: T.F. Datastream; annual reports; BCG analysis

In the short term, expectation premiums play an important part in TSR. Our approach sheds new light on this.

In the short term, there is often a difference between a company's stock market and fundamental values, a gap BCG calls the 'expectation premium'. This can be positive or negative, reflecting investor optimism or pessimism. Sometimes investors are justifiably optimistic or pessimistic, sometimes they are not. This short-term difference is inevitable, as investors rarely have access to a company's plans and need time to evaluate its true growth potential and, in some cases, a new management team's ability to deliver. Premiums can also, of course, be zero.

In fact, in the long run they are zero for the market as a whole, on average, demonstrating that capital markets are efficient and that unrealistic premiums are corrected. However, it is possible for a company to have a justifiable and sustainable premium in the medium- to long-term. For example, if a business has a particular strength that protects its cash flow growth against competitive pressures, such as a powerful brand (see 'What drives expectation premiums?'), it would probably warrant a sustained positive premium.

As we will show, both justifiable and unrealistic premiums can have a significant effect on a business, both in the short term and long. Unfortunately, until recently, companies and investors have not had a suitable set of tools to both quantify and understand the significance of these premiums, or the opportunities they can create (See box: 'Premiums versus P/E ratios'). BCG's expectation premium methodology fills the void. There are two main elements to this approach; together, they provide valuable insights:

- **Quantifies investor confidence:** We quantify the proportion of a company's share price or TSR that is due to investor confidence and to fundamentals. We call the confidence element an expectation premium, as institutional investors usually factor in expectations when calculating fundamental values using cash flow projection techniques. There is nothing revolutionary about making this calculation. The tools to do this, notably cash flow models, have existed for a long time, although how you apply them is important (see Fig. 2 'How expectation premiums are calculated'). Nor do we claim that the calculated premiums we derive are exact measures of investor confidence.

Premiums versus P/E ratios

A key analytical advantage of the expectation premium is that it allows you to disaggregate the proportion of a company's market value that is justified by its fundamental performance and the proportion that is determined by investor confidence or pessimism, depending on whether the premium is positive or negative. In itself, a premium does not tell you whether a company is over- or under-valued. But, as we discuss below, it enables you to establish whether this is the case, based on the business's future plans. This has important strategic implications, a point we address in detail in 'How to turn premiums to competitive advantage'.

Price-earning ratios (P/Es) do not provide these insights. Traditionally, P/E ratios have been used to gauge whether a business is fairly valued, relative to the market or an industry average. But in reality they paint an inconclusive and potentially misleading picture. Is a company with a P/E ratio of 12 over-valued compared to one with a ratio of 8? You cannot tell. A P/E ratio – which is determined by equity risk, earnings growth outlook and dividends – does not distinguish between fundamental performance and market expectations. A high ratio could be due to high growth potential or low risk. Furthermore, each company's P/E ratio is determined by factors that are unique to that business, such as its earnings versus cash flow rates. This makes inter-company comparisons invalid; you have to compare like with like.

- **Illuminates the importance of the relative scale of premiums:** BCG's methodology highlights the significance of the relative size of premiums, both within industries and in the market as a whole. Although different assumptions for calculating projected cash flows will produce different premiums, it is not the absolute scale of the premium that counts for companies. It is its relative size that defines the opportunities, as we explain in 'What drives expectation premiums?' It can reveal, for example, competitive weaknesses and potential take-over candidates, plus relative vulnerabilities to economic shocks. And because there are always relative differences in the short term, regardless of whether premiums are high or low, positive or negative, there are always opportunities and threats.

How we calculate premiums

An expectation premium is the difference between a company's market value and fundamental value (Fig. 2).

- The market value of a company is its market capitalisation plus debt.
- BCG calculates the fundamental value using a discounted future free cash flow technique, based on current profitability and historic investment growth. Unlike traditional approaches, we do not forecast cash flow growth for a finite near-term period, such as five years, and assume this growth rate will continue forever. We assume that it will reduce or 'fade' in the long run. In particular, we assume that competitive pressures will fade profitability by a set rate to a weighted average cost of capital for the market or industry. Investment growth, in turn, is assumed to fade to an average economic growth rate over time (Fig. 3).
- We use this method to calculate fundamental value as we do not have

Fig. 2 How expectation premiums are calculated

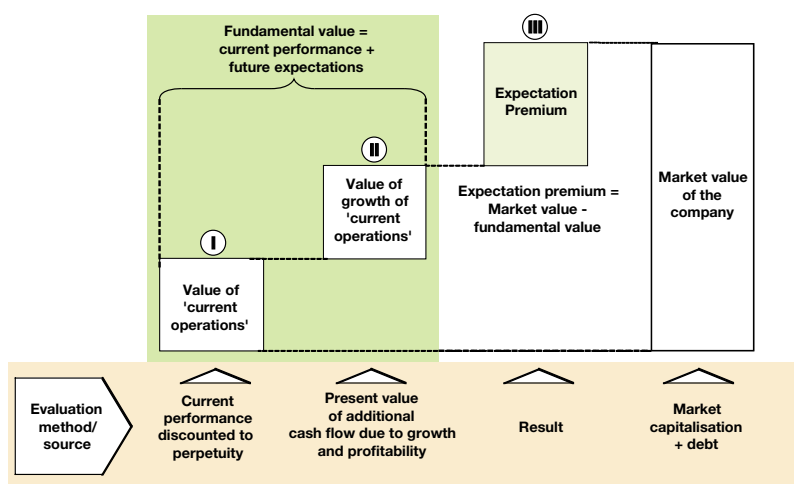
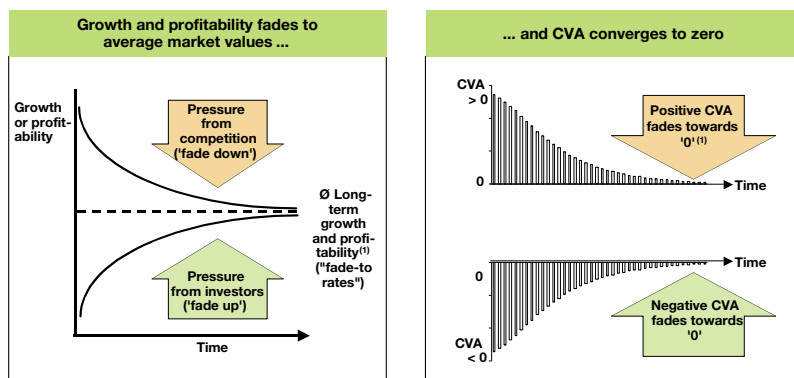


Fig. 3 Fade rate assumptions



access to individual companies' plans. If we did, we would apply standard cash flow techniques, together with P/E ratios and other tools. This approach, which companies should use to assess their individual premiums, enables you to establish whether any gap between market and fundamentals is justified or not, as we discuss in the next section ('How to interpret premiums').

A fuller description of our methodology and the assumptions used for the analyses in this report can be found in the Appendix, along with

evidence that the model is statistically robust.

How to interpret premiums

- A positive premium indicates that the market expects the company to beat the assumed fade rate but this does not imply that the business is over-valued relative to its competitors. This will largely depend on the company's plans. These may be sufficient to generate the future free cash flow required to close the gap between current market and fundamental values. Other factors, such as management

credibility or the protection of brands can also make this gap justifiable, as explained in 'What drives premiums?'

- Similarly, a negative premium does not necessarily mean a corporation is under-valued. Investors might have sound reasons to believe that a company's or an industry's cash flow growth will decline more rapidly than the average forecast rate.

Key characteristics of premiums

In last year's study, *New Perspectives on Value Creation*, published in October 2000, BCG highlighted the fact that expectation premiums were not only high but had been rising rapidly since 1994. Although market corrections in the first half of 2001 took some of the steam out of them, they remained significant over this period, accounting for 35% of the value of the S&P 400 index, based on the assumption that this year's fundamental values are 10% lower than those in 2000 (data for 2001 are not yet publicly available). A long-term analysis of this index, stretching back to 1926, and an in-depth study of premiums for the world's top listed performers over the last decade, enabled us to pinpoint the main characteristics of premiums. These not only demonstrate that premiums differ substantially between companies and industries (as well as across time for the market as a whole), but that these relative differences have different impacts on companies and the market, for example during economic shocks. Here we provide a snapshot of these characteristics. We explain in the next section why they exist and what drives premiums.

An inherent part of market life

Cycles of high and low premiums, positive and negative, have always been a part of markets, as Figure 4 illustrates. Historically, the lowest negative premium was recorded in 1932 (-49%) and highest positive figure in 2000 (168%). The longest time that sustained positive premiums

Fig. 4 Long-term analysis of premiums: 1926-2001

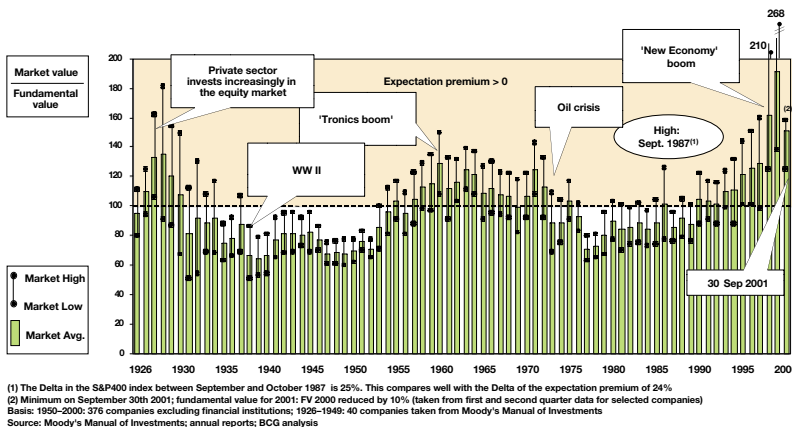


Fig. 5 Expectation premiums for each industry

Industry	1999	2000	30.09.01 ⁽¹⁾
Pharmaceuticals	67% / 33%	72% / 28%	68% / 32%
Insurance	52% / 48%	59% / 41%	45% / 55%
Consumer Goods	53% / 47%	53% / 47%	47% / 53%
Retail	62% / 38%	51% / 49%	48% / 52%
Banks	50% / 50%	48% / 52%	41% / 59%
Media	58% / 42%	48% / 52%	50% / 50%
Technology	62% / 38%	43% / 57%	22% / 78%
Conglomerates	46% / 54%	43% / 57%	37% / 63%
Industrial Goods	23% / 77%	30% / 70%	20% / 80%
Utilities	0% / 100%	17% / 83%	8% / 92%
Chemicals	15% / 85%	8% / 92%	-3% / 103%
Travel	16% / 84%	7% / 93%	-1% / 101%
Auto	8% / 92%	-2% / 102%	-13% / 113%

Legend: Expectation Premium (orange), Fundamental Value (green)

(1) Underlying fundamental value as of 31.12.2000
 Source: T.F. Datastream; annual reports; BCG analysis

The importance of expectation premiums in value creation

have existed is 12 years (1955-1967), compared to 24 years for sustained negative premiums (1931-1955) – twice as long. Generally, the stock market has tended to rebound fairly swiftly after exogenous shocks, such as the 1973 oil crisis and the Cuban missile crisis in 1962 – shocks that occurred when premiums, on average, were close to zero.

Industry differences

Premiums vary substantially between industries (Fig. 5). In 2000, for example, the pharmaceuticals industry had the highest average premium (72%), followed by insurance (59%), consumer goods (53%), retail (51%) and banks (48%). At the other end of the spectrum only one sector had a negative average premium – automotive (-2%). Within sectors, there is also a significant divergence between companies' premiums. In the travel and transport industry, for instance – a sector that has been heavily affected by the recent terrorist attacks – premiums ranged from 53% for the top quintile down to -35% for the bottom quintile.

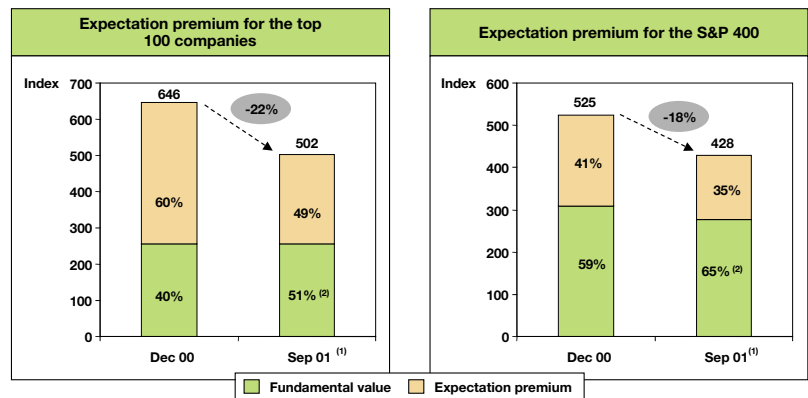
As a proportion of market value, premiums tend to be larger in top TSR companies.

The higher a company's TSR the larger its expectation premium, on average. Premiums for the top 100 TSR companies, for example, averaged 49% between 1 January – 30 September 2001, compared to a market average of 35% (Fig. 6).

Large premiums are highly sensitive to market downturns

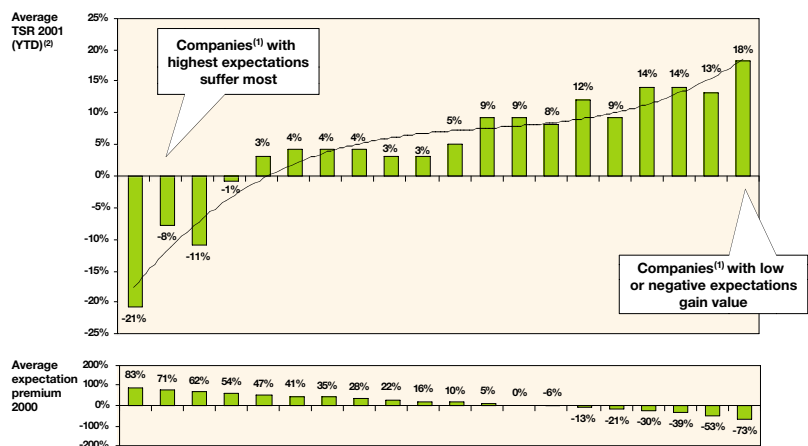
Businesses with the highest expectation premiums tend to suffer disproportionately large drops in TSR in a market downturn. This is illustrated in Fig. 7. During the first eight months of 2001, the average TSR was -7% for our total sample, but companies that had an annual average premium of 83% at the beginning of this period had -21% TSR over the following eight

Fig. 6 Premium of top 100 TSR companies compared with S&P 400 premium



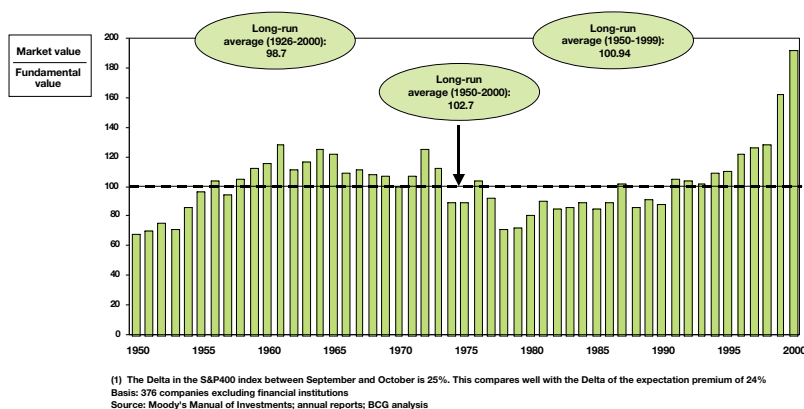
(1) As of 30.09.01
(2) BCG estimates; fundamental value in 2001 reduced by -10%; taken from first and second quarter data for selected companies
Source: T.F. Datastream; annual reports; BCG analysis

Fig. 7 Relationship between size of expectation premium and TSR development



(1) Sample: 1.700 companies, listed since 1996, without market capitalisation hurdle; simple average; 84 companies per cluster;
(2) TSR year-to-date calculated from 1/1/2001–31/08/2001
Source: T.F. Datastream; BCG analysis

Fig. 8 In the long run expectation premiums of the S&P 400 vanish



months, on average – three times the market average. Interestingly, businesses that had a negative premium prior to this period, all benefited from this market correction via increases in TSR. Moreover, companies with the biggest negative premiums enjoyed the biggest rises, underlining the sensitivity of large premiums, whether positive or negative, to market corrections.

The sensitivity of premiums, however, is not just relevant in general market downturns. It can have

an impact in all economic shocks, including global, regional and industry recessions, as well as when companies announce profit warnings.

In the long run, unrealistically high or low premiums are eradicated

As Fig. 8 illustrates, average premiums for the market tend towards zero in the long run. This highlights two important points. First, that the market is efficient – it eliminates unjustified premiums. Second, that fundamentals are ultimately what matter.

This finding, however, does not mean that all businesses have zero premiums in the long run. Certain companies can 'be positive' in the long term if they have protective strengths that reduce competitive pressure on their cash flow growth, enabling them to beat the fade. Management capability and brands are two examples (see 'What drives expectation premiums?'). These types of businesses, though, are relatively small in number – at the least at the moment. In the long run, the vast majority of companies can expect to have a zero premium.

Was a major market correction inevitable?

Over the last three years expectation premiums had soared to record heights, significantly above the levels that preceded the 'Great Crash'. In 2000, for example, premiums were more than twice the level reached in 1929. Moreover, positive premiums had persisted and moved fairly steadily upwards for nearly 11 years, one year less than the previous record for sustained positive premiums (1967-1995).

Was a major correction inevitable, regardless of the events of 11 September? Had premiums reached unjustifiably high levels? Or perhaps, as some people claimed, things were 'different this time' and that we were in a new era of progressively higher market and fundamental value, possibly fuelled by productivity gains from technological advances and other factors?

True, fundamental performances have been rising steadily over the last decade but our analysis suggests that they were not high enough or rising fast enough, on average, to merit the overall market value. Simply to justify its year 2000 value, the S&P 400 index would have had to increase its earnings before interest and tax (EBIT) by 10% a year for the next five years.

But this would only sustain its year 2000 value. Unfortunately, investors expect above-average TSR year on year. To achieve, an annual 12% rise in TSR – the long-term market average – a Herculean increase in EBIT would be required. This leads to the assumption that the market was in general over-valued, although there were doubtless businesses that merited their high premiums.

What drives expectation premiums?

To address the risks and opportunities that premiums present, it is necessary to understand what determines investor confidence. Some of these drivers are specific corporate actions, and may be strategically useful for reducing or increasing premiums. Others are macro-economic. While these macro forces are beyond the businesses' sphere of influence, a deeper understanding of them could help companies spot early warning signs of a possible correction in the future and make appropriate contingency plans.

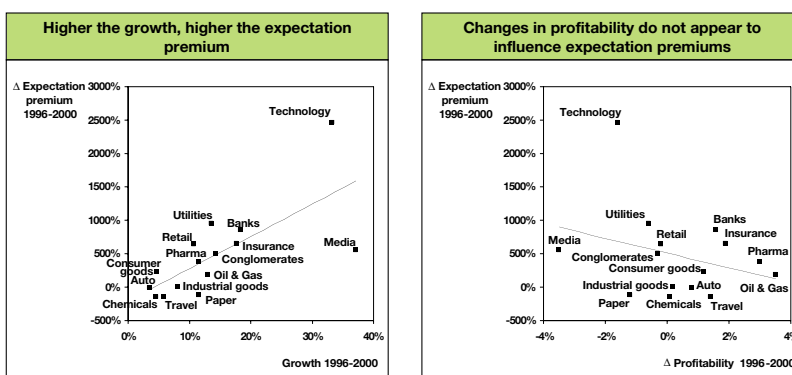
Factors companies may be able to influence to reduce or increase their premiums

Fundamentals: Premiums are strongly correlated with fundamental performances and, in particular, investment growth (Fig. 9). Improvements in profitability have little discernible impact as these tend to be competed away. This explains why mature industries, such as industrial goods, have low or even negative premiums. They already have large, established capital bases, leaving little room for additional growth. Conversely, relatively young and dynamic industries, such as technology, have small investment bases, enabling them to continue to grow, boosting their premiums. However, in the long term they will not be able to sustain these growth rates. As their capital bases increase, their investment growth will fade to an industry average, typically around 2-3%.

Market leadership: Market leaders are often rewarded with the highest premiums in their industries, as Fig. 10 shows. Dell, for example, had a 49% premium in 2000 compared with Compaq's 23%.

Branding: Strong brands enhance customer loyalty, allowing companies to cross-sell products and value-added services. This helps to protect cash flow growth against competitive pressures in the medium to long term, enabling businesses to beat the fade. Although vulnerable to reputational risks that could damage their value, brands are central to the consumer goods and retail industries and are becoming

Fig. 9 Relationship between expectation premiums and profitability & growth



Note: Industries averages for all the parameters are weighted using gross investment (2000)
Source: T.F. Datastream; annual reports; BCG analysis

Fig. 10 Market leadership and expectation premiums

'Market leader'	Expectation Premium 2000	'Peer'	Expectation Premium 2000
Coca Cola	84%	Pepsi Cola	70%
SAP	80%	Peoplesoft	70%
Sony	27%	Philips	-17%
L'Oreal	82%	Wella	50%
Pfizer	85%	Merck	73%
Dell	49%	Compaq	23%
Intel	35%	Motorola	25%
Nike	35%	Adidas	18%

Source: T.F. Datastream; annual reports; BCG analysis

increasingly important in service sectors, such as banking and insurance. All of these industries have above-average premiums. More generally, businesses with powerful brands also offer investors a safe haven if the economy falters.

The significance of strong brands is demonstrated by Coke, arguably the best-known brand in the world. In 2000, Coca Cola had an 84% premium, compared to Pepsi Cola's 70%, a finding that also underlines the value that investors ascribe to market leadership.

Intellectual property rights: Like brands, patents and other intellectual property rights can also reduce competitive pressures on future cash flow. This partly explains why the pharmaceutical sector has one of the highest average premiums (other factors, such as the increasing use of biotechnology to accelerate drug discovery, also enter the equation).

R&D pipeline: Investors may be aware of new products or services in the pipeline that will enable the business to beat the forecast cash flow fade rate for the industry, leading to an expectation premium mark-up. This would explain why some companies exceed the average premiums for their industries where there is already an in-built additional premium for patents and intellectual property rights, for example. The media and pharmaceutical sectors are two cases in point.

Management credibility: Investors will give a business a premium – 'a vote of confidence' – if the management team has a track record of delivering results and taking tough operational and strategic decisions that lead to long-term improvements in fundamentals. It also helps if the team is consistent in its strategic vision and aligns its incentives to shareholder value. The significance of management credibility is reflected in the change in share price often witnessed when a new team or CEO enters the picture. This can be either a positive or negative

movement, depending on the team's known capabilities.

Transparency: The more investors know about a business, including its plans, the less likely they are to ascribe an unjustified positive or negative premium to it. This is both an information and communication issue, ranging from how a business communicates growth initiatives and the strategic milestones it hits, to market understanding of the management team's proven potential.

Governance: The nature and ownership of stocks can affect a company's premiums. For example, institutional investors tend to avoid multiple stock issues that do not entitle them to voting rights as these deny them the opportunity to influence the company's direction. This leads to lower demand for these stocks, depressing their market value and, by definition, their premiums. Major shareholders with voting rights, for example in previously family-run businesses, can have the same effect. Their disproportionate influence can effectively turn other investors into 'muzzled' non-voters, with all of the consequences just described.

Target investors' preference: If a company's approach does not appeal to target investors' risk appetites and other preferences, demand for the stock will consequently be lower, as will, of course, the premium. Concentrating on asset productivity, rather than growth, for example will not attract 'growth' investors. And vice-versa for 'value' investors. Similarly, do debt-to-capital ratios or the mix of business units' risk profiles satisfy the risk appetite of investors?

Macro-economic forces that shape premiums

Numerous socio-economic macro factors influence premiums for the market as whole. Many of these are quantifiable and relatively easy to track and correlate with premiums. Others, notably psychological forces, such as the herd

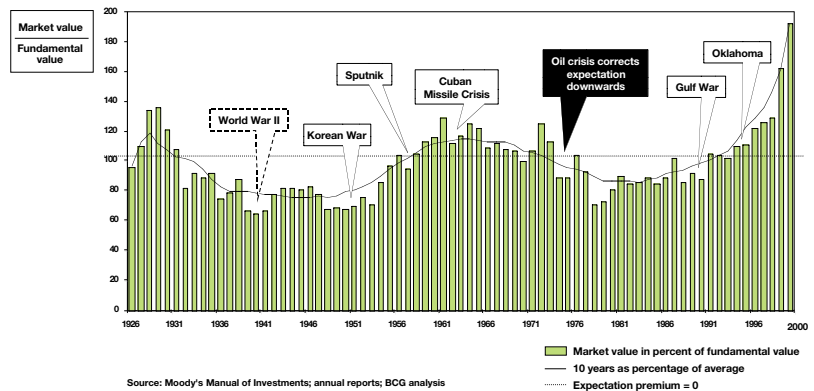
instinct, are harder to pin down. Here we present some of the major drivers. This review is by no means comprehensive but it gives a flavour of the factors that shape overall investor confidence.

Economic growth: Market values and premiums tend to mirror economic cycles. The problem between 1996 and 2000 was that market values had been growing more rapidly than GDP. Over the last 45 years this had only happened once before, in 1968, during the so-called 'tronics boom'.

Geo-political stability: Investor confidence and premiums predictably rise in periods of geo-political stability and fall when it is undermined, as Fig. 11 shows. In 1989, the Berlin Wall came down, heralding the end of the Cold War and ushering in a new air of market optimism, uninterrupted by any major external shocks. Until the 11 September 2001. Historically, as we have shown, the market has quickly recovered from shocks like this, for example after the Korean War and the Cuban missile crisis.

Demographic and socio-economic trends: The forthcoming retirement of the 'baby boomers', born in the 1950s, is one of the most important demographic issues on the expectation premium horizon. To fund the pensions and retirement needs of this large group, significant volumes of stocks could be sold, potentially reducing absolute premiums substantially. At a sectoral level, demographics can also have an impact. The trend towards older populations in industrialised nations could partly explain the pharmaceutical industry's above-average premium. Similarly, the socio-economic shift from an industrial- to a service-based economy has prompted investors to award higher premiums to service sectors as these are expected to achieve faster growth and profitability fade rates than industries, such as utilities.

Fig. 11 Investor confidence and expectation premiums



Fiscal measures: Lower tax rates release more funds for investment, pushing up stock prices and absolute premiums, as well as possibly relative premiums given the relationship between these and higher TSR. This was evident in the 1960s and 1990s, periods of low taxes and high premiums. Fiscal measures that lower inflation, enhancing real investment power, have a comparable impact, as they did once again in the 1960s and 1990s. These relationships between premiums and tax and inflation rates are underscored by the experience of the 1970s, when there was a combination of high tax rates and stagflation. This resulted in negative premiums.

Increased liquidity: Upward pressure on stock prices is intensified by the growth in the money supply: more money chasing roughly the same number of stocks.

Regulatory environments: Regulated businesses are shielded from the full force of competition, enabling them to operate as oligopolies and sometimes monopolies. Consequently, if returns on assets are not capped by regulators, they can achieve better than normally expected cash flow growth.

High-tech hopes: Premiums reached their peak in 2000 at the height of dot.com mania. Technology-driven booms like these are not new.

How to turn premiums to competitive advantage

Although you cannot fully control your market value, you can use your premium to assess the relative risks and opportunities that it presents. This comparative insight is key. It is the relative, not absolute, size of your premium in your industry that illuminates the strategic and operational options available to you either to defend or to improve your position. However, premiums do not just provide strategic insights. They can have intrinsic value in themselves in the short term. Businesses can use their current excess value to acquire other companies if the fit is right, thereby enhancing long-term fundamental performance and TSR.

Quantify your premium and assess whether it is justified by your internal plans

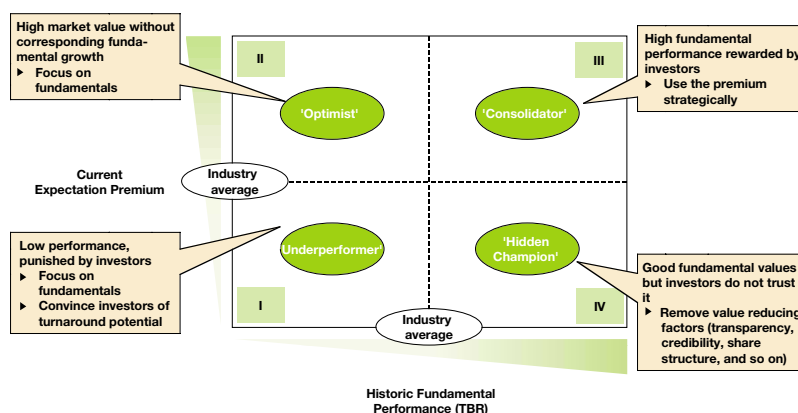
- Take your current market value.
- Quantify your fundamental value, based on your business plans.
- The difference between these two values is your expectation premium.
- Whether the premium is positive or negative, is this justified, taking into account any additional premium that you would expect either for your company or industry? For example, additional premiums attached to patents, management credibility and other factors discussed in 'What drives expectation premiums?'
- There are three reasons why your premium may not be justified. First, your fundamentals, based on your plans, are not sufficient to merit the difference in market and fundamental values once you have factored in any additional premiums you would rationally expect for your business or industry. Secondly, there may be forces, such as macro-economic or socio-demographic drivers, that are inflating premiums for all companies or for your industry as a whole. Thirdly, it could be a combination of both of these. All three possibilities have important strategic implications and these potential impacts are all related to the size of your premium relative to your industry average.

This highlights your relative vulnerability to a market correction (the bigger your premium as a proportion of market value, the harder you will be penalised in an economic downturn, on average) and the competitive threats and opportunities you face within your industry.

Assess the relative scale of your premium compared with your industry average. This will highlight the strategic options

As Fig. 13 illustrates, it is the relationship between your fundamental performance (the reality of today) and your expectation premium (how investors forecast you will perform in the future), relative to your industry average, that determines the strategic options available to you. Identify which quadrant your business occupies, defined by the cross-section of your industry's average premium and fundamental performance.

Fig. 13 Expectation premium matrix



Quadrant 1: Below-average premiums and fundamentals ('Underperformer')

Companies in this quadrant have problems. They not only have relatively weak fundamental performances, but investors expect the situation to deteriorate.

- The top priority is to improve your fundamentals. Unless this is done, your TSR, which is ultimately driven by fundamentals, will be pushed down. This will make it increasingly difficult to raise capital for investment growth or attract high-calibre staff, amongst other problems associated with low TSR.
- If possible, focus on profitable investment growth – a driver correlated with positive premiums. But first check that target investors want growth, rather than asset productivity or 'value'.
- Clearly communicate to investors any initiatives to boost your fundamental performance. This will instil greater confidence and enhance 'transparency'.
- Remove 'value blockers' that might be compounding your negative premium. For example, non-voting shares and majority shareholdings.

Quadrant 2: Relatively weak fundamentals but above-average premiums ('Optimist')

Investors are optimistic about your long-term performance. Your past fundamental growth does not justify this optimism.

Reduce your company's excess premium or your share price could be disproportionately penalised by the markets, relative to your competitors who have lower premiums. This could lead to negative long-term consequences. There are two ways to address this challenge:

- Improve fundamentals, for example by building a 'stretch' agenda.
- Consider using the premium's additional value to acquire a company with a lower premium but stronger fundamentals. Prospective targets will normally be found in Quadrant 4. Ensure target acquisitions make strategic sense and that the synergies, including cost savings, will more than offset any expectation premium paid for the target. These synergies will have to exceed this premium to reduce yours. You should also analyse your investor base and establish whether your strategy – for example, growth or productivity-driven value – is in line with the aims of the target company's investors. If so, communicate this effectively to them.
- Historically, most M&As fail, with a claimed 80% strike-out rate from a long-term TSR or 'value creation' perspective. This appears to be primarily due to culture clashes and mis-managed integration. But it could also be due, in part, to the failure of the acquirers to take into account the need to recover the cost of the target's expectation premium, reflected in its stand-alone stock price.

Quadrant 3: Strong fundamentals and comparatively high premiums ('Consolidator')

In the short term, you have the best of both worlds, a good fundamental performance and a premium for your efforts. However, your comparatively high premium makes you relatively more likely to disappoint investors.

- Your premium gives you the opportunity to consolidate your position via M&As and to justifiably maintain your premium (see above for the considerations when assessing targets). This strategy could propel you into market leadership, a position that typically attracts a superior premium. Properly

handled, this could be used to fund further acquisitions, leading to a virtual upward spiral.

The AOL-Time Warner 'merger' was a classic example of a company, namely AOL, using its paper surplus to enhance its fundamentals (Fig. 14).

Quadrant 4: Good fundamentals but below-average premiums ('Hidden Champion')

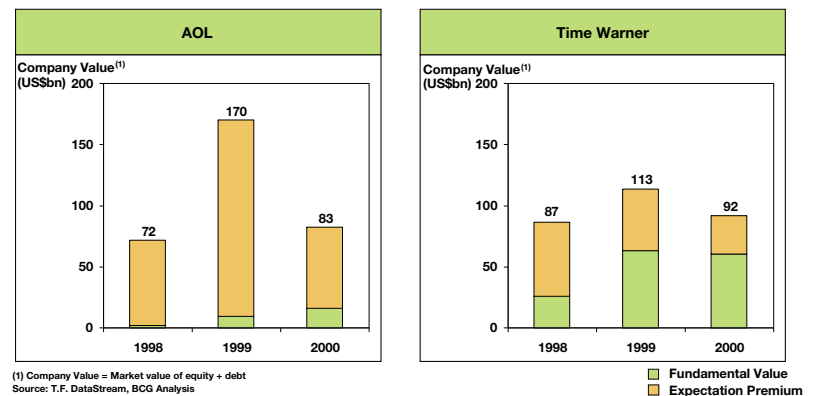
A prime take-over target. Premiums should be raised to avoid this risk.

- Conduct an investor analysis to understand the reasons behind the market's lack of confidence.
- If possible, remove structures and obstacles that lead investors to discount your market value. For example, multiple stocks, lack of transparency and low management credibility.
- Build a stretch agenda to underline your ability to drive fundamentals forward. This could include unbundling non-core activities in order to unlock higher TSR.
- Seek opportunities for investment growth, which, as we have said, is positively correlated with positive premiums.
- Communicate your strengths more effectively to investors, demonstrating the robustness of your internal plans and your management's credibility.
- It might even be worth going private. There is life outside the stock market.

Core advantages of this approach

- Highlights the importance of premiums in the value-creation agenda – the 'missing link' for sustaining above-average TSR.

Fig. 14 AOL used its highly valued shares to acquire Time Warner

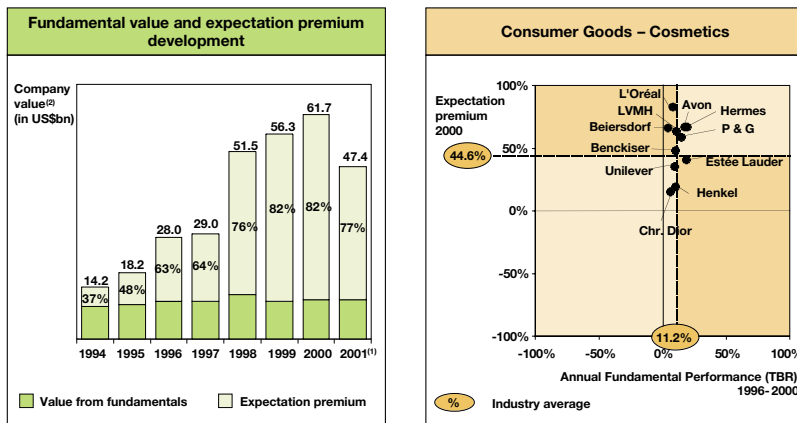


- Identifies the relative risks and opportunities within your industry that your expectation premium raises. These are relative and so they apply to all market circumstances, whether premiums are high or low, positive or negative. In effect, this approach is valuable in every period.
- Enables businesses to identify relatively under-valued prospective targets for M&As. Conversely, it highlights companies' relative vulnerabilities to potential acquirors.
- Implicitly indicates the strategic options companies need to consider in order to optimise their market positions.

Putting this approach into practice

Between 1994 and 2000, L'Oréal's fundamental performance was solid but it barely altered over this period. Despite this, its market value increased dramatically. Or, more accurately, its expectation premium rocketed, accounting for 83% of the company's value in 2000. Whether this surplus was justified or not, based on the company's plans, it has been used to acquire a number of businesses within the sector with strong fundamentals but low premiums (Fig. 15). Is there still room for further acquisitions? This will depend on the current relative fundamental performances of the companies in this industry.

Fig. 15 Value analysis of L'Oréal



Company value of 30.6.2001, fundamental value of 31.12.2000
Market value plus debt
Source: T.F. Datastream; annual reports; BCG analysis

- Governance, for example the use of non-voting stocks
- Target investors' preferences

However, it is important to bear in mind that although altering these 'levers' may influence premiums there is no guarantee this will happen. Moreover, companies should avoid artificially inflating premiums to an unjustifiably high level. This deceit would be rapidly unearthed by the markets and probably penalised. As Abraham Lincoln famously said: "You may fool all the people some of the time; you can even fool some of the people all the time; but you can't fool all of the people all the time."

These will dictate their relative premiums. The data presented here are based upon last year's fundamentals.

A long-term strategy for dealing with premiums

Deliberately cultivating and harvesting premiums

Properly managed, it is possible for businesses to deliberately 'press the buttons' that lead to higher premiums and use this additional value to enhance their fundamental performance, for example through M&As. As we discussed in 'What drives expectation premiums?', key corporate drivers of positive premiums include:

- Fundamentals, especially investment growth
- Market leadership
- Branding
- Intellectual property rights
- Management credibility
- Transparency

The need for corporate systems to monitor relative industry premiums

BCG's study has demonstrated the impact that a short-term divergence between market and fundamental values can have, both on the market as a whole and on individual companies' ability to sustain long-term improvements in fundamental performance and TSR. Crucially, we have shown that companies can use these premiums constructively. In view of these findings, management teams should introduce systems to regularly monitor their premiums relative to their industry average and use this information to help define their long-term value-creation agendas.

Could a deeper understanding of premiums hold the key to more stable markets?

Theoretically, premiums (positive or negative) could be substantially reduced if investors monitored and used them more constructively, based on a deeper understanding of their drivers and implications. This could possibly lead to lower market volatility and less severe corrections: lower premiums respond less acutely to economic downturns and exogenous shocks than higher ones. To work towards this goal, we are currently developing standardised benchmarks to gauge whether premiums are fair.

Integrate premiums into the value-creation agenda

Successful, long-term value creation – measured by above-average TSR – demands that the right levers are pulled at the right time. Unfortunately, only a handful of companies have achieved superior TSR for longer than 10 years. Why? BCG's study indicates that one of the main problems is that businesses have tended to focus on the internal strategic and operational issues but overlooked the importance of the capital market perspective, notably expectation premiums. This perspective is the missing link in most companies' value creation agendas.

The good news: above-average TSR is possible in all industries

Businesses in all sectors can produce above-average TSR, according to an analysis of over 800 listed companies worldwide. During 2000, for example, each industry contained at least one company that exceeded the five-year average TSR (16%) for our sample by over 50% and often by substantially more. In the industrial goods sector, for instance, one business generated a TSR of 79% – nearly five times the market average.

But few companies sustain superior value creation year on year

In last year's report, BCG showed that only two of the 2,500 companies analysed worldwide managed to outperform their local market averages for 10 years in a row.

So why has superior long-term value creation proven so elusive?

Few companies systematically manage value creation. There are proven, systematic linkages between TSR and two key fundamentals: improved profitability and profitable investment growth (see 'The importance of expectation premiums in value creation'). Using established methodologies, described below, these interconnections can be broken down into a family tree of quantifiable and practical financial levers that managers throughout a company can pull to achieve superior TSR. Unless a business understands this system and manages it, long-term value creation cannot be sustained.

Most value-based management (VBM) programmes

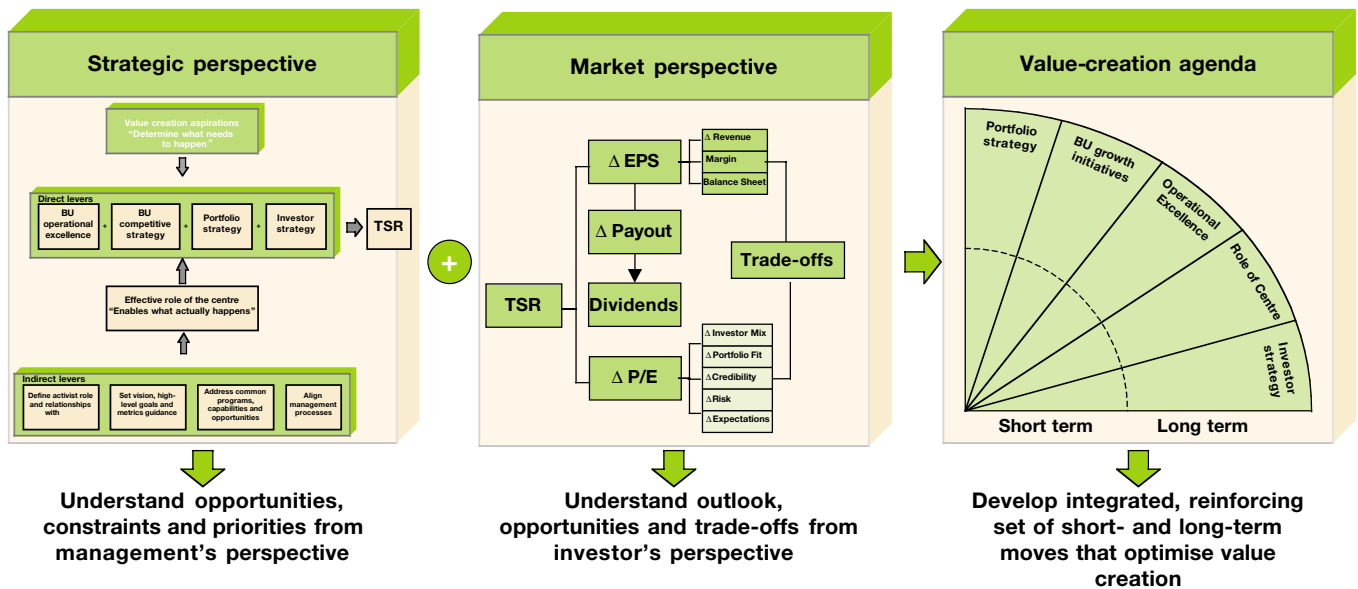
fail in their implementation. This was confirmed by a recent study published in the Harvard Business Review, supported by BCG. Common stumbling blocks include a failure to link incentives to value creation and the use of multiple targets. Focusing on a single over-arching TSR goal, the study discovered, doubles the likelihood that a VBM programme will succeed.

Companies have generally overlooked the importance of the capital market perspective. In particular, they need to factor into their value creation agenda the impact that investor perceptions, measured by expectation premiums, can have on their long-term fundamental performances. This is discussed below.

The missing link: expectation premiums and the capital market perspective

Typically, companies implementing VBM programmes concentrate exclusively on the internal strategic levers they need to pull in order to improve free cash flow and assume this will translate into higher TSR. However, as explained in 'What drives these expectation premiums?', different internal actions can have different impacts on expectation premiums, therefore creating different risks and opportunities, depending on a company's investor base. For example, an aggressive growth strategy could be rewarded with a disappointingly low TSR – and, by implication, a low expectation premium – if value-oriented investors expect short-term cash flow generation. A low TSR and expectation premium, in turn, could leave the business vulnerable to a take-over and limit its ability to raise additional capital, amongst other problems.

Fig. 16 Integrated value-creation agenda



To deal effectively with these interactions between internal strategic initiatives and capital market expectations, companies need to factor both elements into their value-creation agendas. Together, these strategic and capital market perspectives define the short- and long-term actions required to enhance and sustain above-average TSR (Fig. 16).

Crucially, the tools exist to quantify and systematically analyse both perspectives, revealing the strategic options and trade-offs required to hit a company's target TSR:

- **Analysing the internal, strategic requirements:** Everything stems from the company's relative TSR goal. Once this has been agreed, it can be converted into a financially meaningful internal target, using the

total business return (TBR) methodology. The cash value-added (CVA) methodology can then be employed to translate this overall financial goal into a family tree of practical goals for each business unit.

- **Evaluating the external capital market demands:** The expectation premium methodology can not only reveal a company's relative capital market risks and opportunities but also quantifies the gap between its market and fundamental performances, enabling the business to grasp the true scale of the challenge it faces. Is this gap inevitable? Using empirical P/E ratio analyses, in conjunction with the company's plans, it is possible to answer this question and pinpoint the drivers behind the premium (see box: 'Fruitfully applying the capital market perspective').

Fruitfully applying the capital market perspective

The number two player in a mature industry was concerned that its EBITDA¹ multiple, which is equivalent to the expectation premium, had consistently lagged behind the market leader's for the last 10 years. The CEO thought the answer was greater growth and acquired several businesses, but its relative multiple barely

changed. The 'capital market perspective' told a different story: the multiple was being constrained by cash-flow volatility and a high debt-to-capital ratio. The solution was to divest low-return cyclical businesses and use the proceeds to reduce the debt. After this was done, the company's share price leapt by 25%.

1 EBITDA - Earnings before interest, tax, depreciation and amortisation

Prepare for a possible economic downturn

Recent market corrections could trigger an economic downturn. Although everyone hopes this will not happen, managers should still prepare for this eventuality and, in particular, incorporate a contingency plan into their short-term value-creation agenda. Without one there is a strong risk that the intense time pressures of an economic shock will leave errors unquestioned, exacerbating the business's problems.

The contingency plan will reveal important strategic options, enabling businesses to protect their cash flow against falls in prices and volumes that usually accompany a recession, and to improve their long-term value-creation potential. A contingency plan will strengthen a company's competitive position, whether a recession occurs or not. It helps to quantify the relative cash flow strengths and weaknesses of a corporation's business units, plus their dependencies; increases risk awareness; and focuses managers' minds on operating in extreme conditions, often unlocking creative ideas, among other benefits.

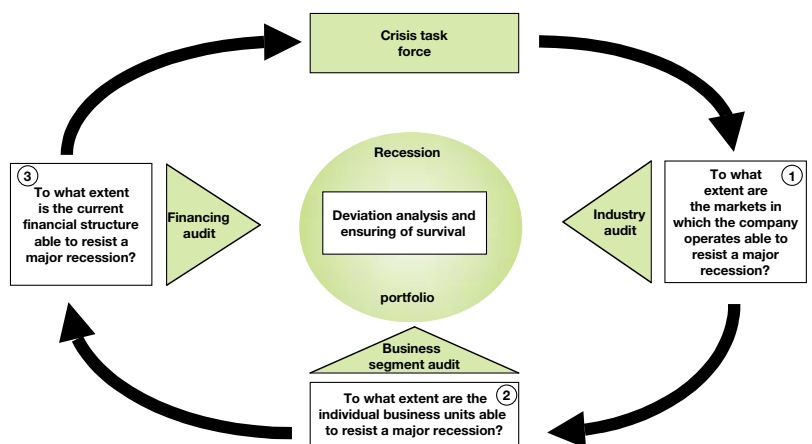
Create a dedicated task force

This should be composed of senior managers from all parts of the company with an equally broad cross-section of personal, intellectual and business skills.

Conduct a three-stage recession check (Fig. 17)

- **Establish the vulnerability of revenues in key markets to a recession.** What are their respective price-volume elasticities?

Fig. 17 Three-stage recession check

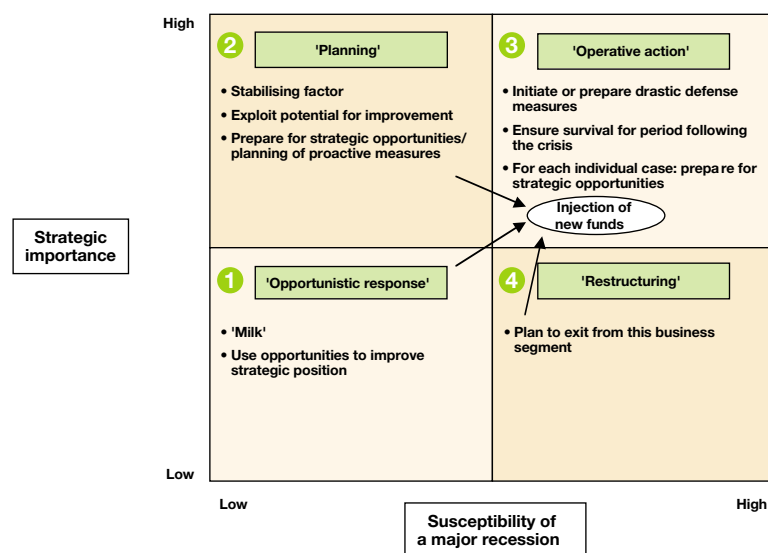


- **How would these market sensitivities affect the sales and cash flows of your individual business units during a recession?** Assess the potential impact of different volumes, prices and costs on their respective cash flows, based on the price-volume elasticities for the business units' markets. You should also evaluate your competitors' relative vulnerability. This will highlight strategic opportunities.
- **Analyse the impact on the company's overall cash flow.** Single out the relative cash flow contributions made by three key areas: operational businesses, financing, and investments. This will pinpoint cash flow weaknesses and indicate remedial actions.

Action to take prior to an economic downturn

- Correct cash flow weaknesses identified in the recession check. If a business unit cannot be turned around in time, consider exiting this market. This will be advantageous in the long run, regardless of how the economy develops.

Fig. 18 'Recession portfolio'



- At a corporate level, create a more flexible organisational and cost structure in order to make it more responsive to the time pressures during a recession.

If a recession occurs, manage business units as a 'recession portfolio'

Place your business units in a matrix of four quadrants based on their relative vulnerability to a crisis and strategic importance, as shown in Figure 18. Each of these quadrants indicates the strategic and operational options available for these units.

- **Quadrant 1:** Primarily 'cash cows' but there might be openings for strategic advances.
- **Quadrant 2:** These businesses are least susceptible to a crisis and have the highest strategic importance. They are the company's 'anchors'. Plan to exploit strategic opportunities that will enhance these units' competitive positions. Options might include M&As or using your competitively superior cash flow to 'invest against the tide' in new technology, R&D and other areas.
- **Quadrant 3:** Vulnerable but strategically important. Stabilise these units and search for strategic opportunities. Use funds from actions taken in the other quadrants to underpin their development.
- **Quadrant 4:** High risk, low strategic priority. Consider exiting from this business field.

CEO checklist

- ✓ Remain focused on the fundamental drivers of long-term value creation: improved profitability and investment growth above the cost of capital. These fundamentals, not expectation premiums, will drive long-term TSR, the ultimate barometer of value creation.
- ✓ Establish the scale of your company's expectation premium relative to your industry average. Is this justified, based on your plans? The higher your premium, the greater the challenge for future value creation.
- ✓ If the premium is positive, take steps to close the gap. Improve efficiency, pursue growth openings and consider using the excess value to acquire enterprises with strong fundamentals and low premiums. Ensure any target is a sound strategic fit and that any M&A synergies will reduce your premium, not inflate it.
- ✓ If the premium is negative, understand and tackle the causes. For example, increase basic performance more than expected, enhance transparency and remove value blockers, such as multiple stocks. Also, communicate more effectively with investors, highlighting your management capability and the credibility of your plans.
- ✓ Given current market and economic conditions, prepare a recession contingency plan. This will benefit your business whether an economic downturn transpires or not. Appoint a dedicated, cross-divisional task force to drive and co-ordinate this project, concentrating on protecting and strengthening cash flow. An external perspective may be appropriate.
- ✓ Use any economic shock to seize opportunities that will boost your long-term value-creation potential, particularly in business units with a high strategic priority. Employ your competitively superior cash flow to 'invest against the tide', in M&As, more cost-efficient technology and other foundations that will enhance your position.
- ✓ Ensure you have a consistently applied value management system in place that aligns all components of your company, from operational targets for business units to incentives, towards a realistic, yet challenging, relative TSR goal.
- ✓ Accept expectation premiums as a cyclical inevitability of corporate life, but do not expect them to sustain long-term value creation. This can only come from fundamental improvements. It's time to return to fundamentals.

Background to the study

The study is based on the annual returns of more than 4,000 companies in Datastream's global market indices for the period 1996-2000. Collectively, they represent around 70% 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 sector and region to reflect their relative economic weight (Figs A1 & A2).
- **Could be classified into one of 13 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 (1996-2000) and it was believed this would distort the findings.

All financial figures were converted into dollars, using the exchange rates of 31 December 2000.

Fig. A1 Market capitalisation hurdles for each industry

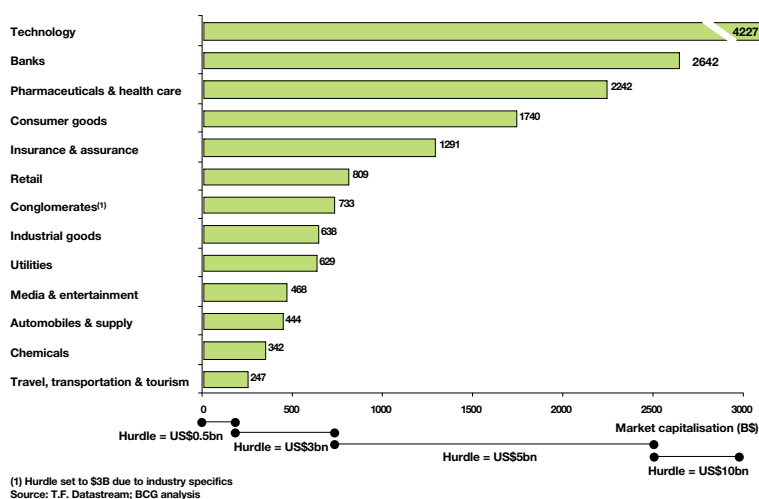
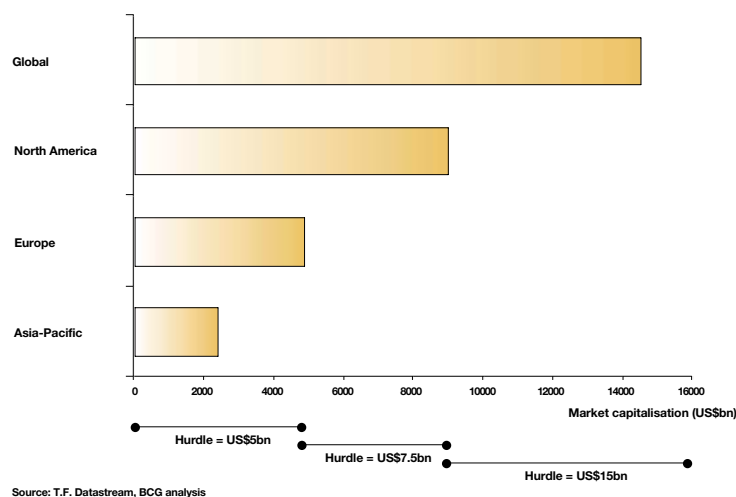
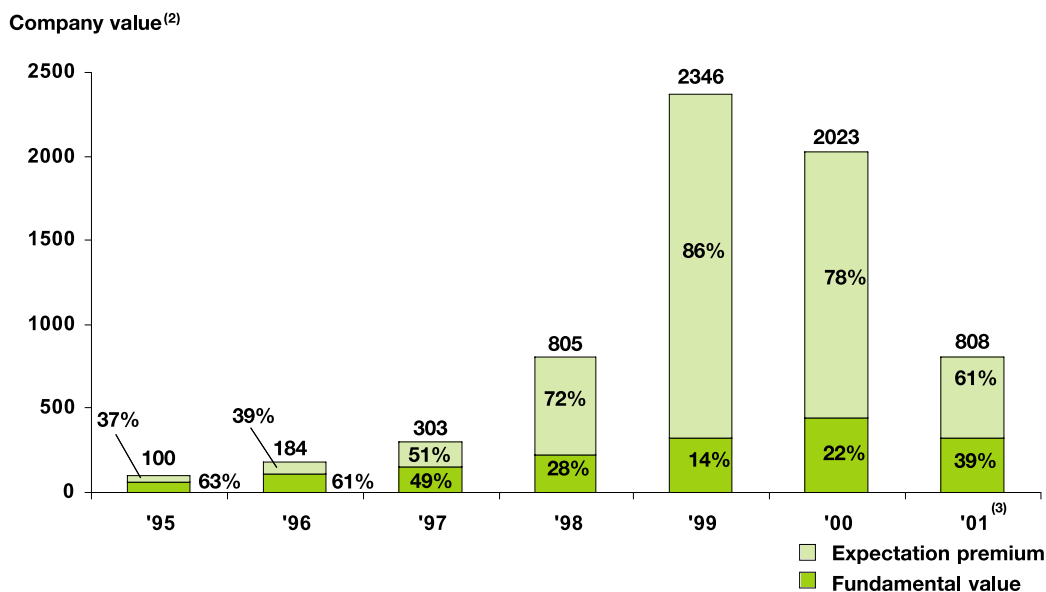


Fig. A2 Market capitalisation hurdles for each region



Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Veritas	US	35,782	104%	156%	74%	299	2,122	-79%	18%
2.	EMC	US	144,995	103%	51%	82%	1,107	10,163	-82%	29%
3.	Nokia	FN	209,346	95%	47%	83%	3,505	29,309	-62%	68%
4.	Comverse Tech.	US	18,031	75%	71%	85%	107	1,370	-81%	53%
5.	Dell Computer	US	45,793	74%	67%	49%	1,049	2,677	6%	66%
6.	Qualcomm	US	61,512	74%	99%	78%	419	3,980	-42%	74%
7.	Sun Microsystems	US	89,712	58%	43%	71%	1,464	8,165	-70%	35%
8.	STMicroelectronics	NL	38,705	58%	8%	80%	705	7,206	-49%	72%
9.	Charles Schwab	US	39,259	58%	45%	83%	248	4,366	-59%	62%
10.	Kohls	US	20,234	56%	38%	82%	114	2,148	-21%	79%

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

(1) Minimum market value 2000: US\$15bn, 287 companies

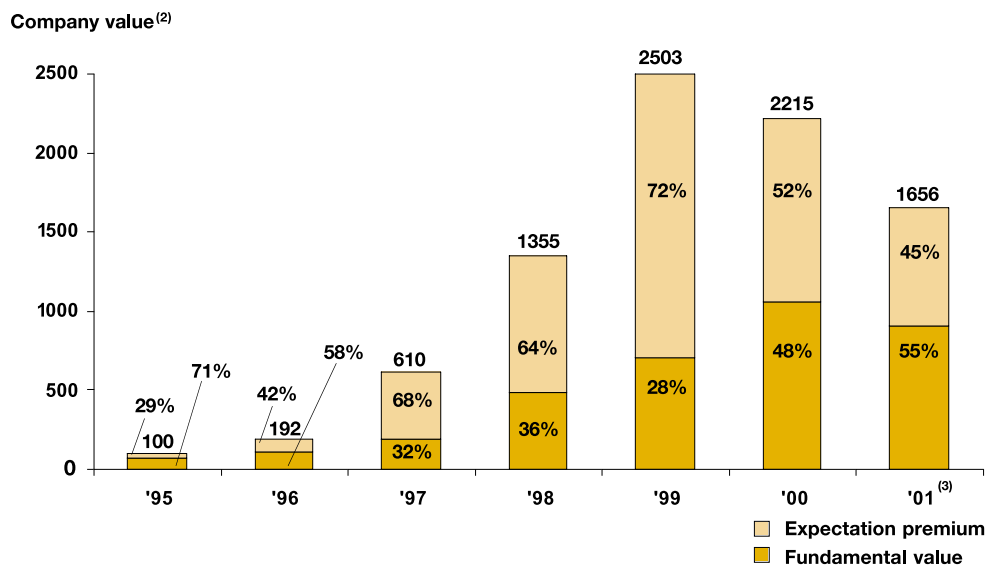
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Veritas	US	35,782	156%	104%	74%	299	2,122	-79%	18%
2.	Qualcomm	US	61,512	99%	74%	78%	419	3,980	-42%	74%
3.	Waste Management	US	17,249	97%	8%	15%	-155	342	-4%	22%
4.	Banca Intesa	I	24,144	85%	43%	37%	719	1,809	-46%	6%
5.	Tyco	US	97,050	81%	48%	43%	2,789	8,435	-18%	45%
6.	Comverse Tech.	US	18,031	71%	75%	85%	107	1,370	-81%	53%
7.	Amvescap	UK	15,800	70%	44%	62%	141	1,367	-46%	40%
8.	Washington Mutual	US	28,594	67%	26%	39%	770	2,166	11%	53%
9.	Dell Computer	US	45,793	67%	74%	49%	1,049	2,677	6%	66%
10.	AES	US	25,348	67%	56%	48%	-732	2,988	-77%	13%

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

(1) Total sample, minimum market value 2000: US\$15bn, 287 companies

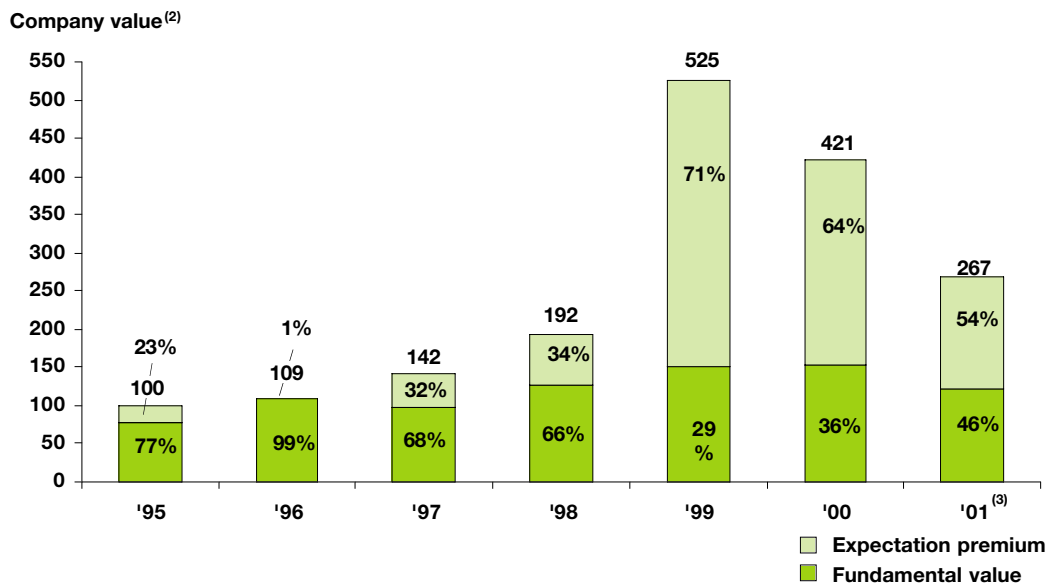
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Infosys Technologies	IN	7,831	158%	67%	96%	28	2,055	-58%	94%
2.	Wipro	IN	11,813	144%	16%	97%	39	3,127	-56%	95%
3.	Hon Hai Prec. Inds	TA	7,378	66%	36%	56%	143	448	-22%	59%
4.	Konami	JP	8,535	56%	38%	72%	179	942	-66%	49%
5.	Matsushita Comms.	JP	23,642	43%	27%	73%	224	2,749	-77%	20%
6.	Taiwan Semic. Mfg.	TA	28,091	42%	20%	46%	530	1,554	-18%	53%
7.	SK Telecom	KO	17,831	39%	11%	59%	-9	1,648	-18%	64%
8.	Furukawa Electric	JP	11,427	33%	18%	36%	161	1,091	-67%	8%
9.	Takeda Chemical	JP	52,640	33%	18%	67%	598	6,257	-18%	57%
10.	Fujisawa Pharm.	JP	10,683	31%	12%	60%	71	1,230	-28%	44%

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

(1) Minimum market value 2000: US\$5bn, 146 companies

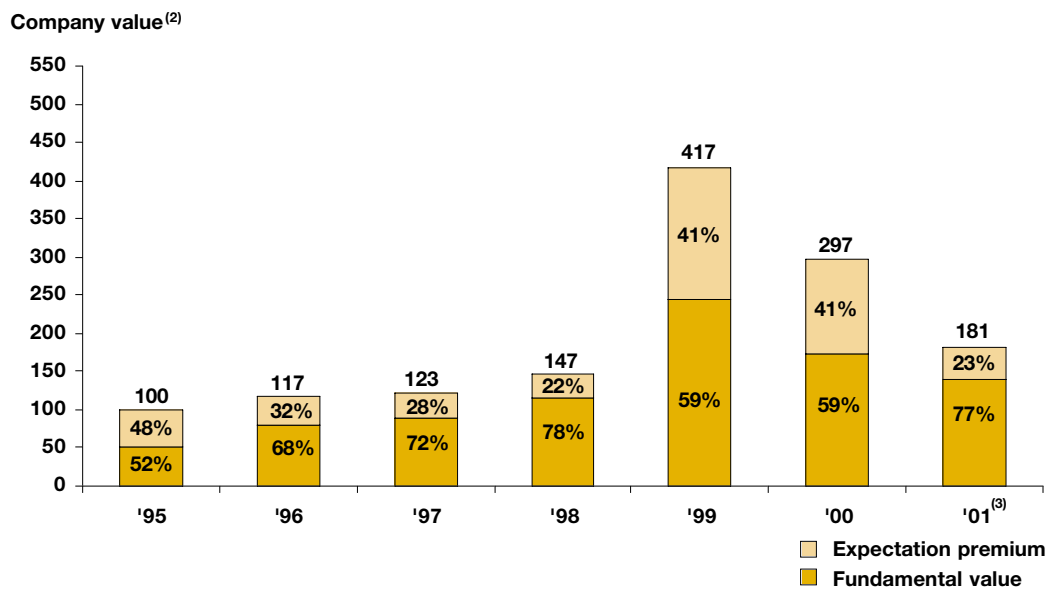
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Infosys Technologies	IN	7,831	67%	158%	96%	28	2,055	-58%	94%
2.	DDI	JP	18,060	44%	-7%	-7%	903	709	-41%	5%
3.	Konami	JP	8,535	38%	56%	72%	179	942	-66%	49%
4.	Advantest	JP	9,344	38%	22%	60%	119	838	-53%	42%
5.	Hon Hai Prec. Inds	TA	7,378	36%	66%	56%	143	448	-22%	59%
6.	Hutchison Whampoa	HK	53,156	31%	21%	33%	-1,786	1,287	-40%	13%
7.	Nippon Tel. Network	JP	8,596	29%	23%	47%	207	776	-29%	30%
8.	Rohm	JP	22,549	28%	31%	51%	581	2,222	-45%	35%
9.	Matsushita Comms.	JP	23,642	27%	43%	73%	224	2,749	-77%	20%
10.	Cmwl. Bank of Aust.	AU	21,757	26%	31%	43%	383	1,940	-12%	30%

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

(1) Total sample, minimum market value 2000: US\$5bn, 287 companies

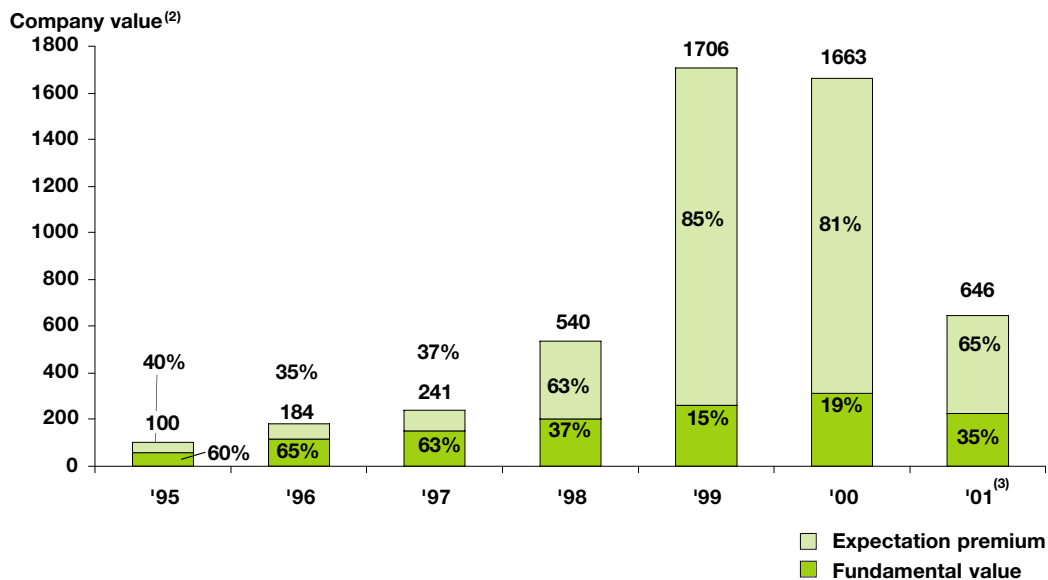
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Nokia	FN	209,346	95%	47%	83%	3,505	29,309	-62%	68%
2.	CMG	UK	8,197	86%	45%	83%	-69	393	-73%	60%
3.	Logica	UK	11,582	84%	47%	87%	71	982	-61%	76%
4.	Bipop Carire	I	11,286	78%	59%	79%	-28	1,905	-67%	47%
5.	Banca Fideuram	I	12,549	75%	33%	88%	130	2,207	-55%	75%
6.	ASM Lithography	NL	9,514	64%	48%	44%	210	507	-50%	32%
7.	STMicroelectronics	NL	38,705	58%	8%	80%	705	7,206	-49%	72%
8.	Skandia	SWE	16,651	55%	37%	84%	63	2,298	-62%	56%
9.	Cap Gemini	F	20,047	54%	29%	74%	190	2,555	-66%	44%
10.	TF 1	F	11,401	53%	22%	78%	283	1,786	-63%	45%

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

(1) Minimum market value 2000: US\$7,5bn, 148 companies

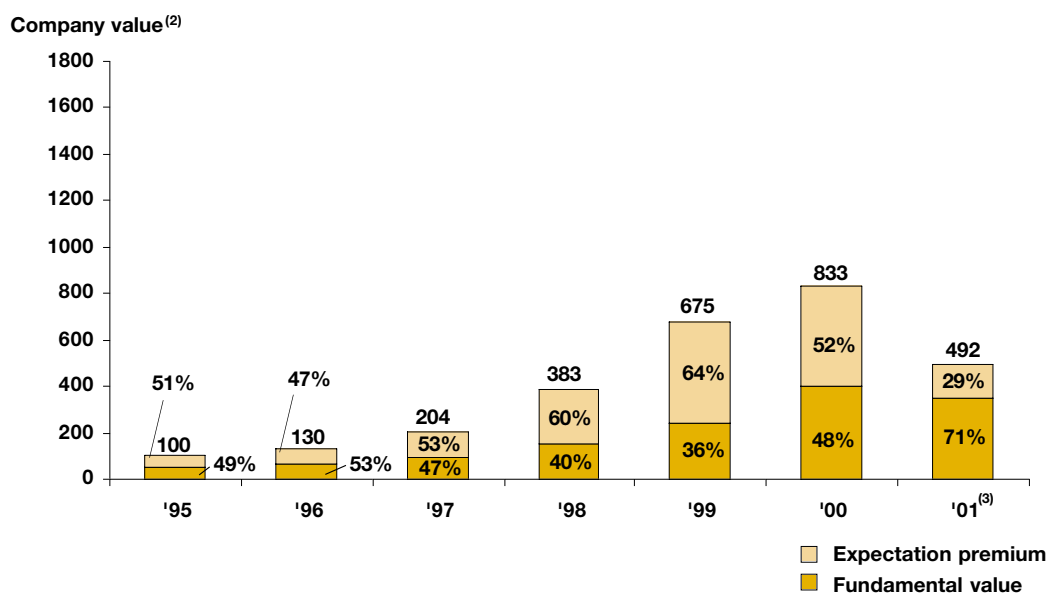
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Banca Intesa	I	24,144	85%	43%	37%	719	1,809	-46%	6%
2.	Ergo	GER	12,616	72%	27%	36%	207	738	-13%	31%
3.	Amvescap	UK	15,800	70%	44%	62%	141	1,367	-46%	33%
4.	Bipop Carire	I	11,286	59%	78%	79%	-28	1,905	-67%	47%
5.	Unicredito Italiano	I	26,160	58%	45%	56%	1,031	3,339	-23%	45%
6.	Munich Re	GER	63,118	57%	37%	17%	-269	971	-25%	-3%
7.	ING	NL	78,078	55%	38%	-3%	8,522	8,183	-29%	-36%
8.	Royal Bank of Scotland	UK	63,274	51%	27%	51%	-875	3,075	-3%	57%
9.	ASM Lithography	NL	9,514	48%	64%	44%	210	507	-50%	32%
10.	Nokia	FN	209,346	47%	95%	83%	3,505	29,309	-62%	68%

CVA = Cash Value Added TBR = Total Business Return (fundamental performance)

EP = Expectation Premium TSR = Total Shareholder Return (market performance)

MV = Market Value (equity)

(1) Total sample, minimum market value 2000: US\$7.5bn, 148 companies

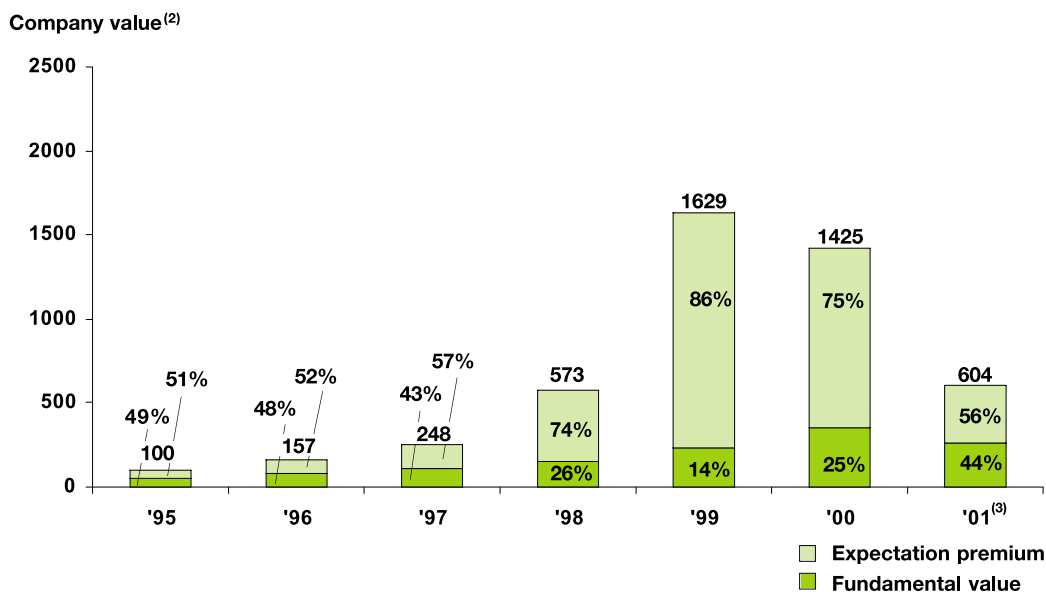
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Veritas	US	35,782	104%	156%	74%	299	2,122	-79%	18%
2.	EMC	US	144,995	103%	51%	82%	1,107	10,163	-82%	29%
3.	Comverse Tech.	US	18,031	75%	71%	85%	107	1,370	-81%	53%
4.	Dell Computer	US	45,793	74%	67%	49%	1,049	2,677	6%	66%
5.	Qualcomm	US	61,512	74%	99%	78%	419	3,980	-42%	74%
6.	Sun Microsystems	US	89,712	58%	43%	71%	1,464	8,165	-70%	35%
7.	Charles Schwab	US	39,259	58%	45%	83%	248	4,366	-59%	62%
8.	Kohls	US	20,234	56%	38%	82%	114	2,148	-21%	79%
9.	AES	US	25,348	56%	67%	48%	-732	2,988	-77%	13%
10.	Oracle	US	162,676	56%	41%	84%	1,515	13,977	-57%	74%

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

(1) Minimum market value 2000: US\$15bn, 156 companies

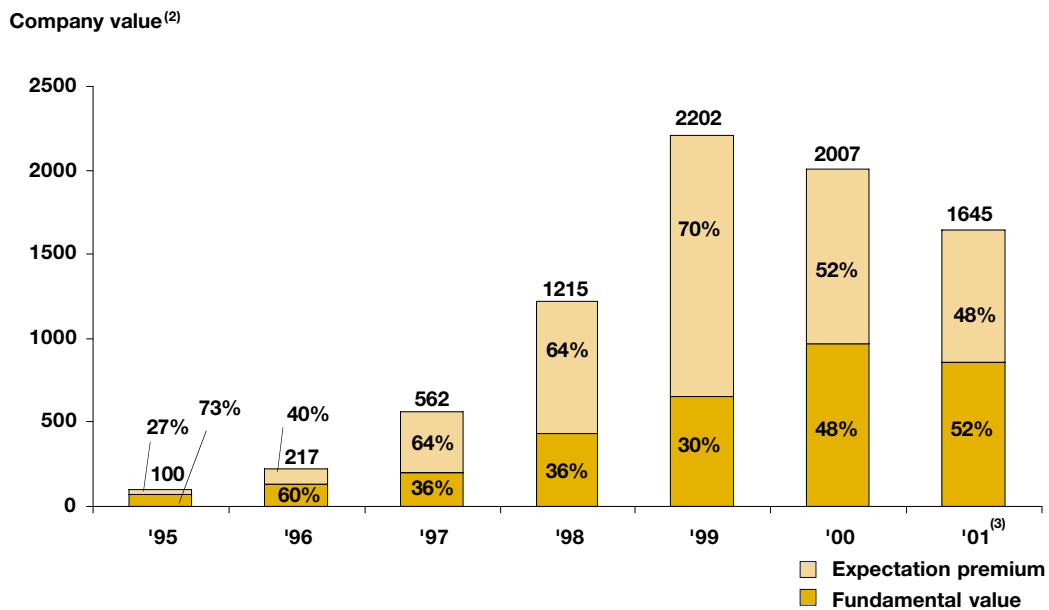
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Average expectation premium top 10 companies⁽¹⁾



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Veritas	US	35,782	156%	104%	74%	299	2,122	-79%	18%
2.	Qualcomm	US	61,512	99%	74%	78%	419	3,980	-42%	74%
3.	Waste Management	US	17,249	97%	8%	15%	-155	342	-4%	22%
4.	Tyco	US	97,050	81%	48%	43%	2,789	8,435	-18%	45%
5.	Comverse Tech.	US	18,031	71%	75%	85%	107	1,370	-81%	53%
6.	Washington Mutual	US	28,594	67%	26%	39%	770	2,166	11%	53%
7.	Dell Computer	US	45,793	67%	74%	49%	1,049	2,677	6%	66%
8.	AES	US	25,348	67%	56%	48%	-732	2,988	-77%	13%
9.	Cardinal Health	US	27,807	60%	33%	54%	260	1,352	12%	61%
10.	El Paso	US	16,758	57%	41%	33%	-1,016	625	-41%	42%

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

(1) Total sample, minimum market value 2000: US\$15bn, 156 companies

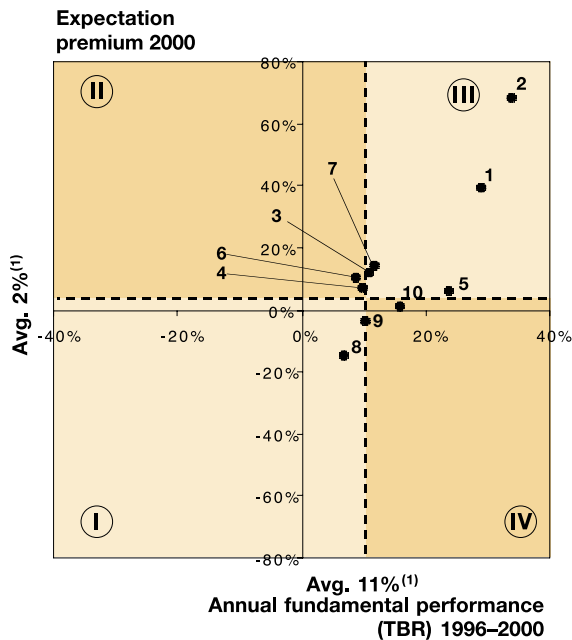
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

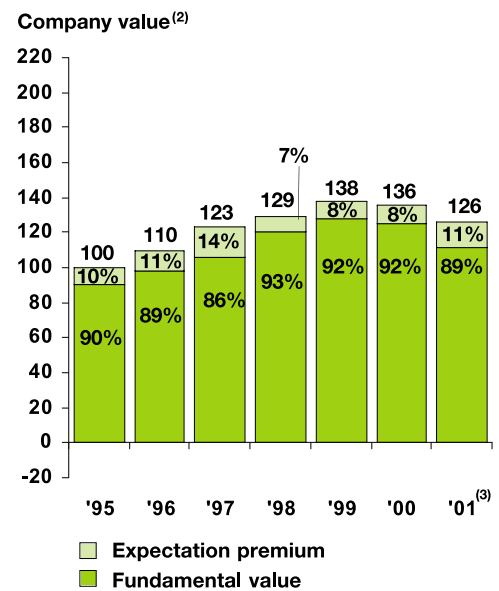
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Porsche	GER	5,701	56%	29%	39%	178	618	-19%	33%
2.	Harley-Davidson	US	12,046	41%	34%	68%	215	1,671	2%	72%
3.	Pirelli	I	6,765	32%	11%	12%	-464	-252	-56%	-36%
4.	BMW	GER	21,202	26%	10%	7%	1,343	1,956	-19%	7%
5.	Paccar	US	3,768	24%	24%	6%	0	86	1%	15%
6.	Renault	F	12,495	23%	9%	10%	-117	600	-41%	5%
7.	Ford Motor	US	42,782	22%	12%	14%	-369	6,329	-24%	19%
8.	Peugeot	F	10,353	21%	7%	-15%	270	-617	4%	-3%
9.	Volkswagen	GER	19,737	20%	12%	-10%	3,407	1,712	-31%	-7%
10.	Honda Motor	JP	36,349	15%	16%	1%	1,516	1,601	-9%	2%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn, 29 companies

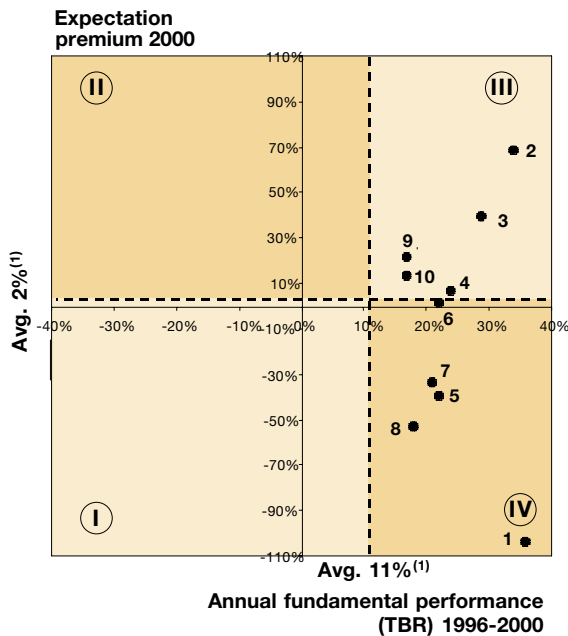
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

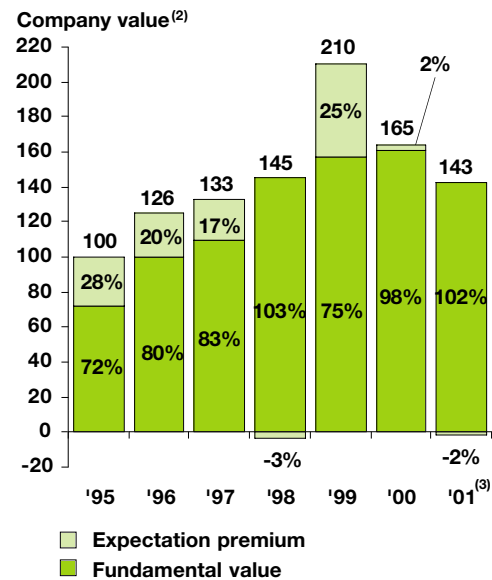
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Magna	CN	3,242	36%	3%	-104%	355	-411	35%	-54%
2.	Harley-Davidson	US	12,046	34%	41%	68%	215	1,671	2%	72%
3.	Porsche	GER	5,701	29%	56%	39%	178	618	-19%	33%
4.	Paccar	US	3,768	24%	24%	6%	0	86	1%	15%
5.	Daihatsu Motor	JP	3,213	22%	10%	-40%	64	-254	-43%	-78%
6.	Toyota Motor	JP	119,663	22%	12%	1%	1,181	1,514	-16%	-5%
7.	Johnson Controls	US	4,474	21%	11%	-34%	373	-34	27%	-3%
8.	Valeo	F	3,703	18%	10%	-53%	188	-246	-24%	-76%
9.	GKN	UK	7,615	17%	15%	21%	283	635	-7%	-45%
10.	Genuine Parts	US	4,532	17%	3%	13%	178	297	25%	33%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn, 29 companies

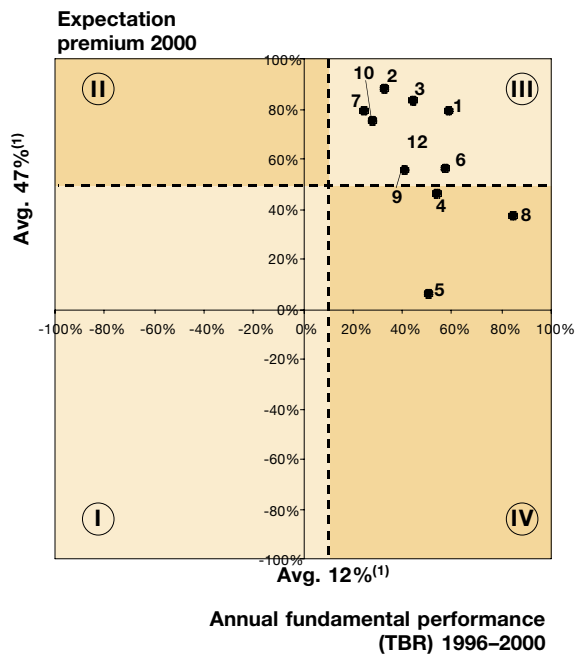
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

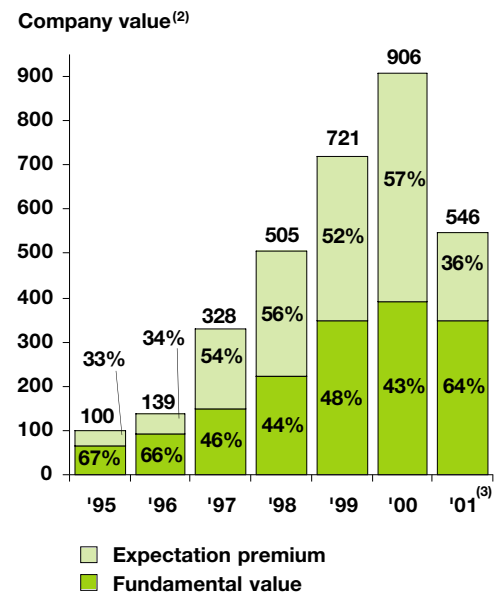
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Bipop Carire	I	11,286	78%	59%	79%	-28	1,905	-67%	47%
2.	Banca Fideuram	I	12,549	75%	33%	88%	130	2,207	-55%	75%
3.	Charles Schwab	US	39,259	58%	45%	83%	248	4,366	-59%	62%
4.	MSDW	US	89,697	48%	54%	46%	3,267	8,537	-41%	16%
5.	Lehman Brothers	US	16,419	46%	51%	6%	872	1,025	-16%	-1%
6.	Unicredito Italiano	I	26,160	45%	58%	56%	1,031	3,339	-23%	45%
7.	Northern Trust	US	18,089	44%	25%	79%	212	2,686	-35%	71%
8.	Banca Intesa	I	24,144	43%	85%	37%	719	1,809	-46%	6%
9.	BBV Argentario	E	46,946	43%	41%	55%	311	3,637	-28%	43%
10.	State Street	US	20,027	42%	28%	75%	233	2,593	-26%	70%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$10bn, 73 companies

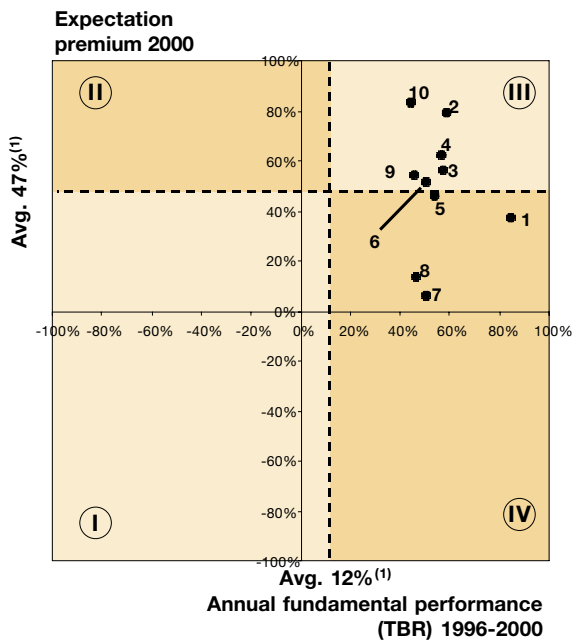
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

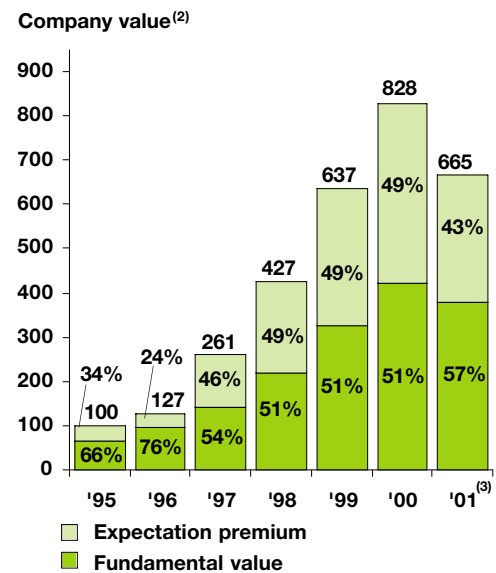
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Banca Intesa	I	24,144	85%	43%	37%	719	1,809	-46%	6%
2.	Bipop Carire	I	11,286	59%	78%	79%	-28	1,905	-67%	47%
3.	Unicredito Italiano	I	26,160	58%	45%	56%	1,031	3,339	-23%	45%
4.	Firstar	US	22,090	57%	31%	62%	174	1,895	-2%	82%
5.	MSDW	US	89,697	54%	48%	46%	3,267	8,537	-41%	16%
6.	Royal Bank of Scotland	UK	63,274	51%	27%	51%	-875	3,075	-3%	57%
7.	Lehman Brothers	US	16,419	51%	46%	6%	872	1,025	-16%	-1%
8.	Fleetboston Finl.	US	33,897	47%	17%	13%	1,624	2,252	0,3%	34%
9.	BSCH	E	48,329	46%	34%	54%	5	3,268	-25%	43%
10.	Charles Schwab	US	39,259	45%	58%	83%	248	4,366	-59%	62%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$10bn, 73 companies

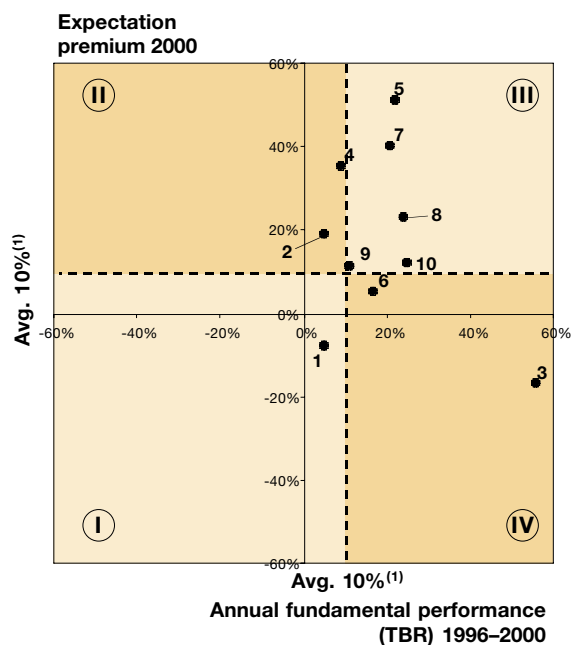
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

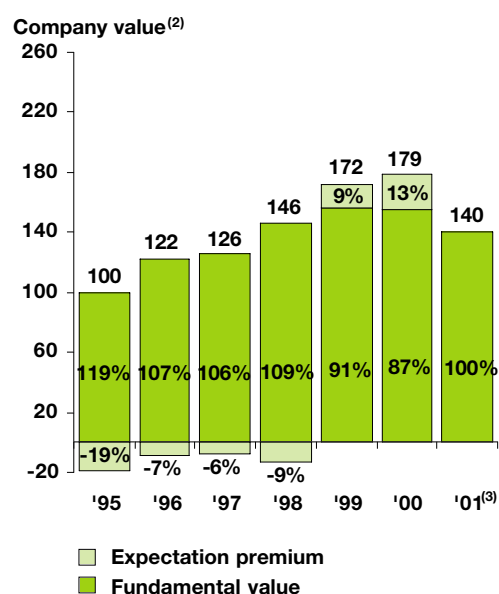
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	BASF	GER	28,247	28%	5%	-8%	74	-617	-17%	-14%
2.	Bayer	GER	38,467	27%	5%	19%	-91	1,913	-43%	-11%
3.	Clariant	CH	5,248	27%	56%	-17%	84	-130	-57%	-60%
4.	Akzo Nobel	NL	15,354	25%	9%	35%	597	2,259	-20%	29%
5.	Ecolab	US	5,485	25%	22%	51%	193	711	-15%	49%
6.	Hitachi Chemical	JP	4,744	21%	17%	5%	101	156	-66%	-76%
7.	Johnson Matthey	UK	3,495	19%	21%	40%	90	339	-12%	37%
8.	Shin-Etsu Chemical	JP	16,280	17%	24%	23%	275	885	-24%	10%
9.	Air Liquide	F	13,639	14%	11%	11%	-40	295	-1%	15%
10.	Rohm & Haas	US	7,978	14%	25%	12%	-145	142	-8%	16%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn, 34 companies

(2) Market value of equity plus debt, 1995 = 100

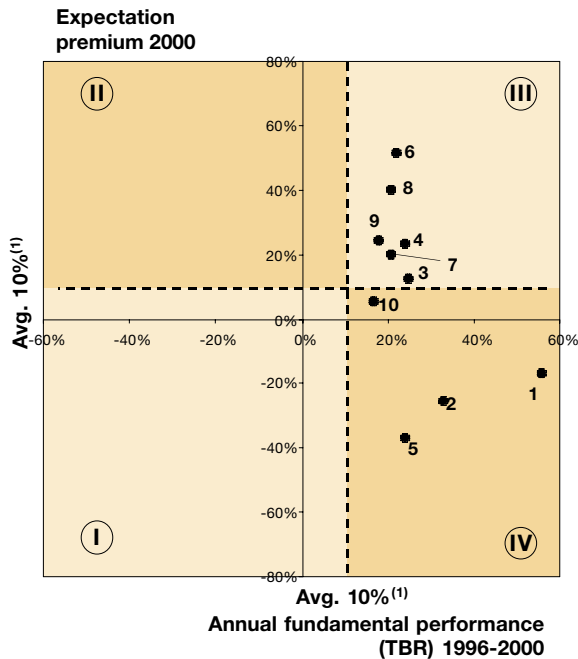
(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

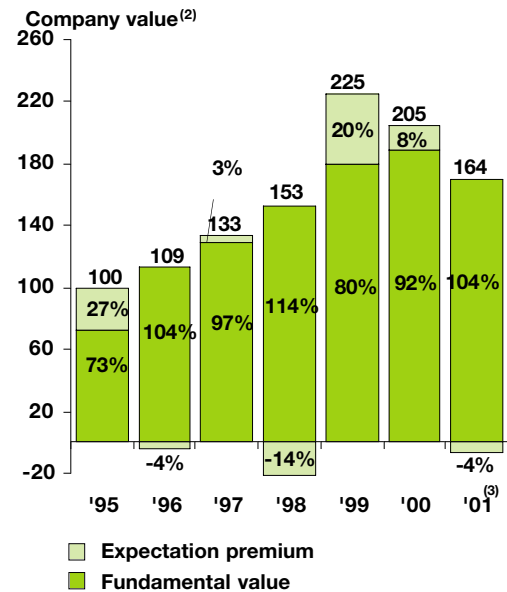
(5) Clariant is a good example that the premium is not necessarily an indicator for over- or undervaluation. Since two years there is a negative trend in fundamental value which seems to continue until today, justifying investors' scepticism.

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁵⁾
1.	Clariant	CH	5,248	56%	27%	-17%	84	-130	-57%	-60%
2.	Mitsui Chemicals	JP	3,821	33%	-7%	-26%	-171	-511	-36%	-34%
3.	Rohm & Haas	US	7,978	25%	14%	12%	-145	142	-8%	16%
4.	Shin-Etsu Chemical	JP	16,280	24%	17%	23%	275	885	-24%	10%
5.	Nan Ya Plastics	TA	5,868	24%	12%	-37%	221	-265	-40%	-74%
6.	Ecolab	US	5,485	22%	25%	51%	193	711	-15%	49%
7.	Union Carbide	US	7,275	21%	9%	20%	-605	-272	-3%	26%
8.	Johnson Matthey	UK	3,495	21%	19%	40%	90	339	-12%	37%
9.	Potash Sask	CN	4,093	18%	6%	24%	-10	212	-24%	13%
10.	Hitachi Chemical	JP	4,744	17%	21%	5%	101	156	-66%	-76%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn, 34 companies

(2) Market value of equity plus debt, 1995 = 100

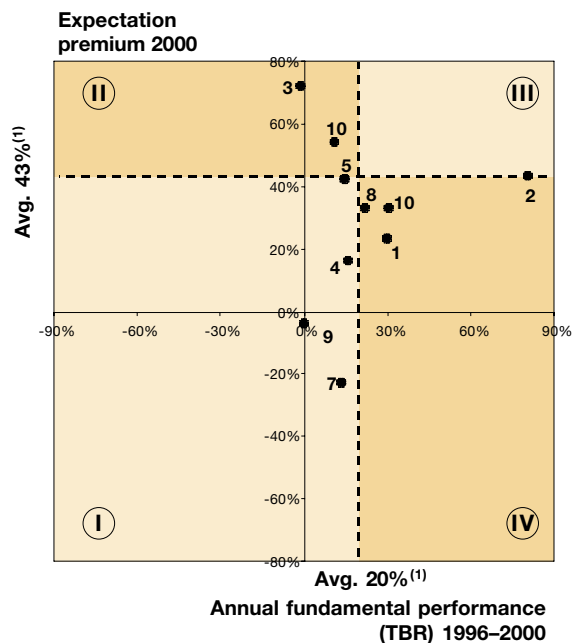
(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

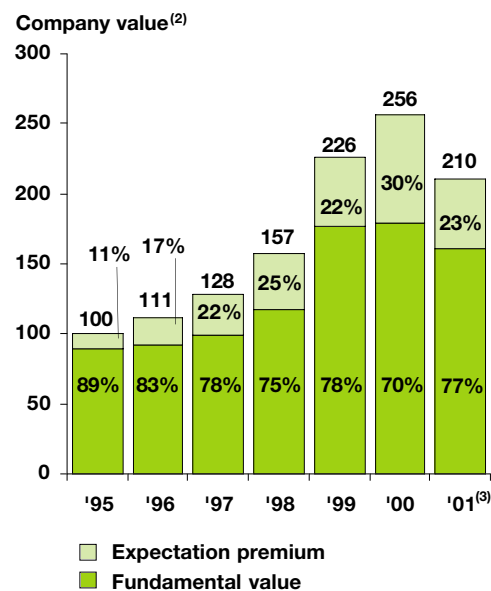
(5) Clariant is a good example that the premium is not necessarily an indicator for over- or undervaluation. Since two years there is a negative trend in fundamental value which seems to continue until today, justifying investors' scepticism.

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Bouygues	F	15,037	50%	30%	23%	395	1,053	-41%	-4%
2.	Tyco	US	97,050	48%	81%	43%	2,789	8,435	-18%	45%
3.	Industrivarden	SWE	3,673	36%	-1%	72%	-162	406	-32%	59%
4.	Siemens	GER	77,767	30%	16%	16%	3,526	6,689	-55%	-28%
5.	United Technologies	US	36,825	29%	15%	42%	733	4,107	-40%	22%
6.	Hutchinson Whampoa	HK	53,156	21%	31%	33%	-1,786	1,287	-40%	13%
7.	Saint Gobain	F	13,483	19%	14%	-23%	164	-909	-6%	-18%
8.	Dover	US	8,238	18%	22%	33%	325	821	-25%	23%
9.	Montedison	I	3,786	18%	0%	-4%	-41	-179	11%	8%
10.	3M	US	47,529	16%	11%	54%	1,153	7,004	-12%	53%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$1bn, 23 companies

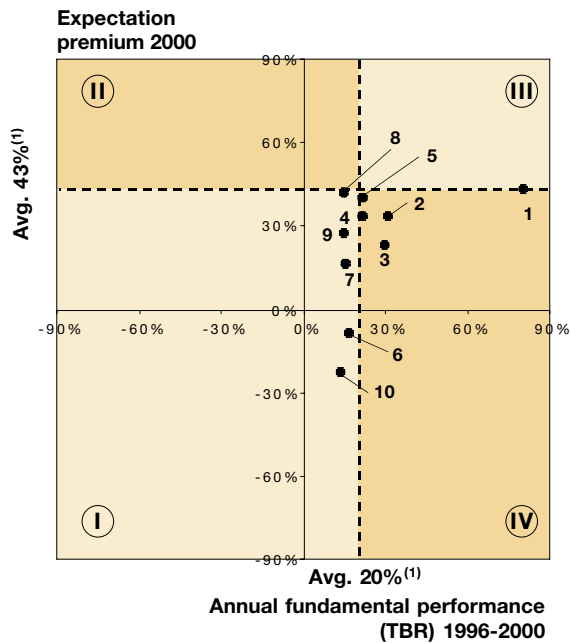
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

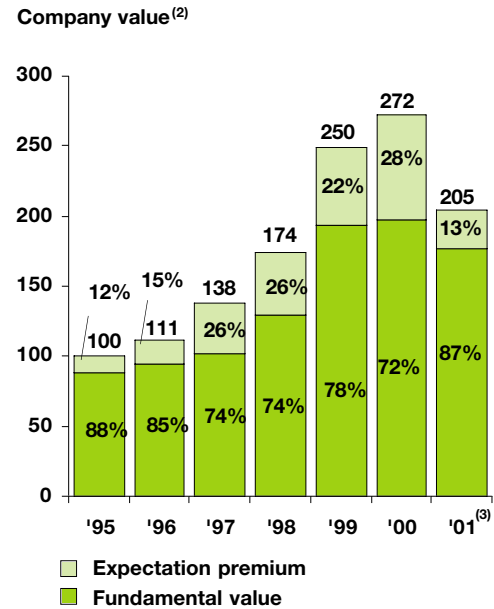
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Tyco	US	97,050	81%	48%	43%	2,789	8,435	-18%	45%
2.	Hutchison Whampoa	HK	53,156	31%	21%	33%	-1,786	1,287	-40%	13%
3.	Bouygues	F	15,037	30%	50%	23%	395	1,053	-41%	-4%
4.	Dover	US	8,238	22%	18%	33%	325	821	-25%	23%
5.	Honeywell	US	38,084	22%	16%	40%	356	3,359	-43%	17%
6.	Raytheon	US	7,427	17%	-6%	-9%	-748	-958	13%	22%
7.	Siemens	GER	77,767	16%	30%	16%	3,526	6,689	-55%	-28%
8.	United Technologies	US	36,825	15%	29%	42%	733	4,107	-40%	22%
9.	NGK Insulators	JP	4,989	15%	9%	27%	21	298	-39%	-2%
10.	Saint Gobain	F	13,483	14%	19%	-23%	164	-909	-6%	-18%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$1bn, 23 companies

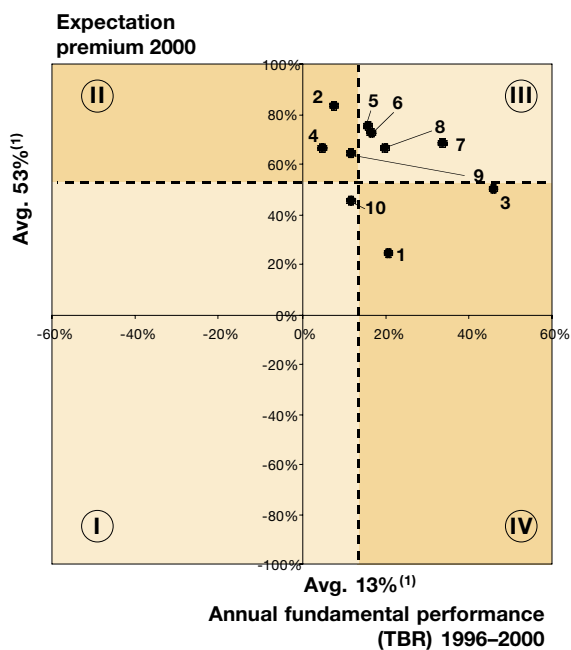
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

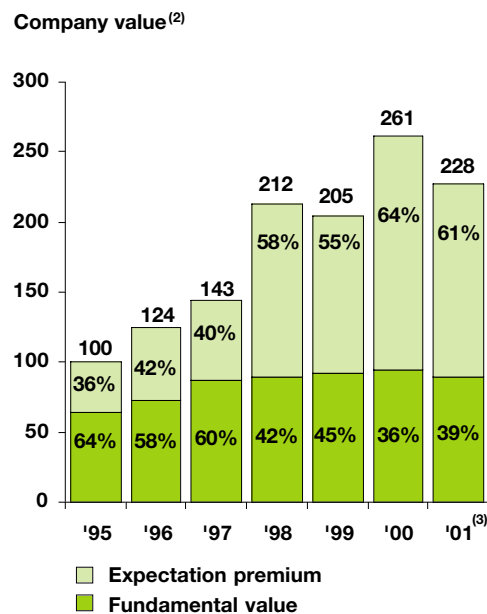
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Weston George	CN	7,360	40%	21%	24%	150	527	24%	35%
2.	L'Oréal	F	57,950	39%	8%	82%	356	10,703	-16%	80%
3.	Numico	NL	8,023	37%	46%	50%	-53	609	-35%	36%
4.	Beiersdorf	GER	8,714	35%	5%	66%	75	1,352	10%	69%
5.	Colgate-Palmolive	US	37,076	32%	16%	75%	786	7,528	-9%	73%
6.	Sysco	US	20,028	32%	17%	72%	257	2,939	-14%	70%
7.	Cintas	US	8,950	30%	34%	68%	140	944	-24%	61%
8.	Hermes	F	5,216	28%	20%	66%	112	675	-14%	62%
9.	Heineken	NL	25,511	27%	12%	64%	237	3,766	-19%	57%
10.	Unilever	NL	37,269	26%	12%	45%	552	6,300	-11%	44%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 61 companies

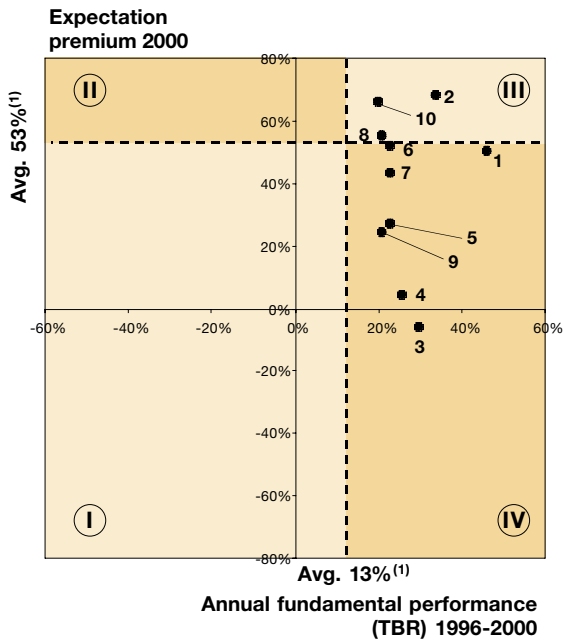
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

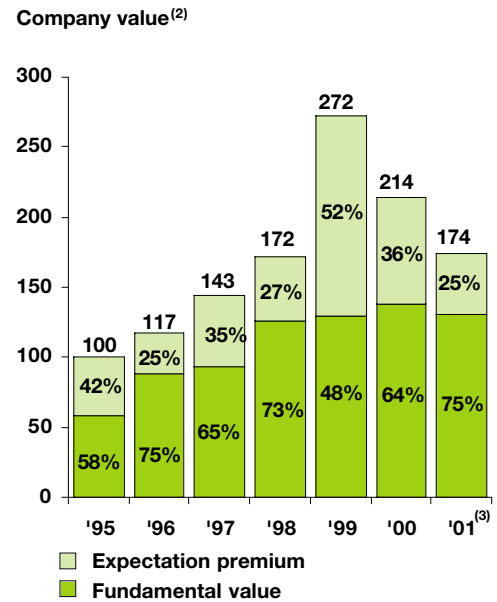
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Numico	NL	8,023	46%	37%	50%	-53	609	-35%	36%
2.	Cintas	US	8,950	34%	30%	68%	140	944	-24%	61%
3.	Albertsons	US	10,846	30%	-3%	-6%	-48	-166	23%	10%
4.	Newell Rubbermaid	US	6,065	26%	0%	4%	94	136	2%	8%
5.	Sony	JP	63,374	23%	21%	27%	735	4,061	-44%	-5%
6.	Carnival	US	18,009	23%	22%	52%	-71	1,401	-28%	39%
7.	Clorox	US	8,363	23%	17%	43%	272	917	6%	48%
8.	Kimberly-Clark	US	38,042	21%	14%	55%	842	5,463	-11%	51%
9.	Weston George	CN	7,360	21%	40%	24%	150	527	24%	35%
10.	Hermes	F	5,216	20%	28%	66%	112	675	-14%	62%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 61 companies

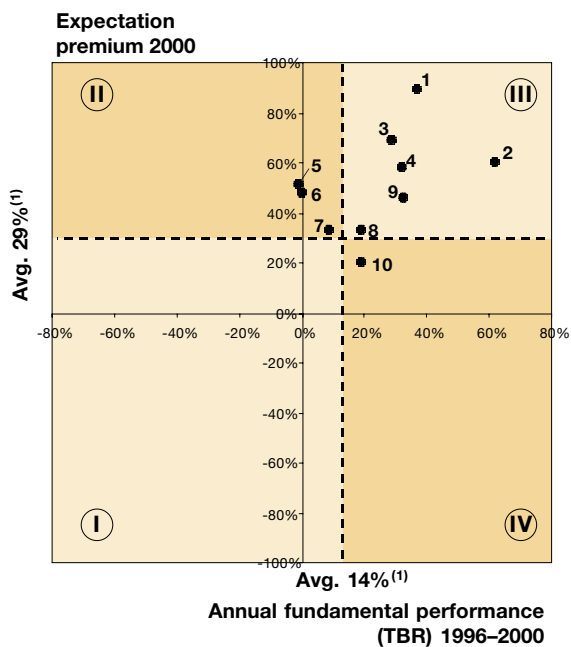
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

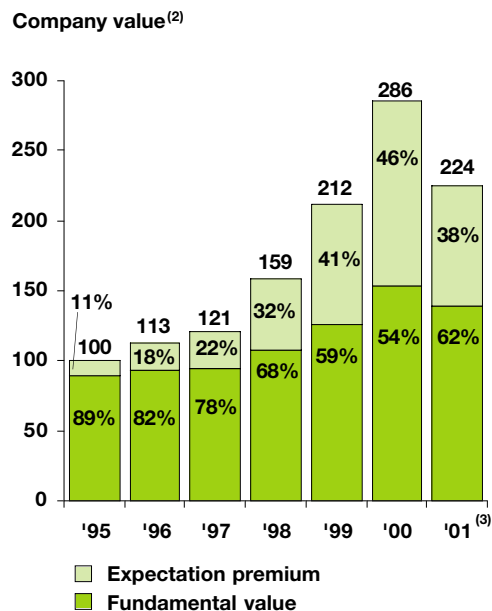
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Waters	US	10,675	79%	37%	89%	107	1,705	-57%	77%
2.	Anglo Am. Platinum	SA	10,113	48%	62%	60%	461	1,993	-8%	50%
3.	Bombardier	CN	21,231	40%	29%	69%	104	2,967	-50%	51%
4.	Danaher	US	9,700	34%	32%	58%	129	1,183	-31%	48%
5.	Finmeccanica	I	9,584	33%	-1%	51%	-73	1,710	-41%	40%
6.	Thales	F	8,039	28%	0%	48%	9	1,065	-20%	41%
7.	Schneider Elte.	F	11,340	28%	9%	33%	169	1,148	-47%	27%
8.	Nippon Sheet Glass	JP	5,367	26%	19%	33%	94	499	-68%	-23%
9.	General Dynamics	US	15,380	24%	33%	46%	419	1,727	15%	57%
10.	Alcoa	US	28,976	23%	19%	20%	-88	1,318	-6%	23%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 33 companies

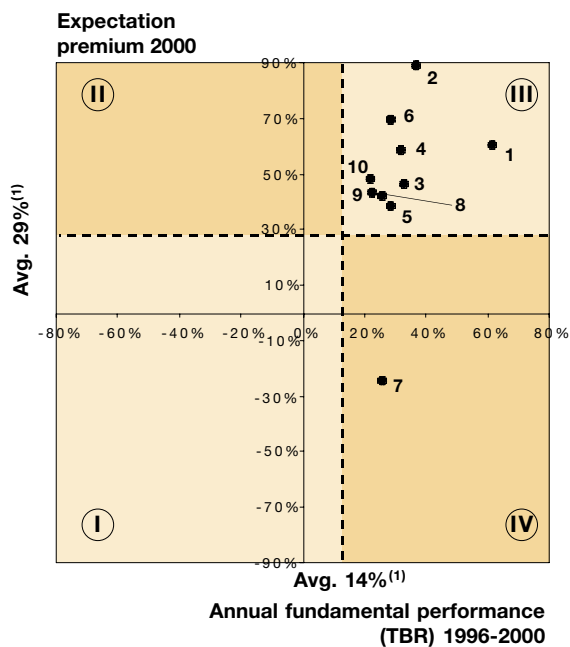
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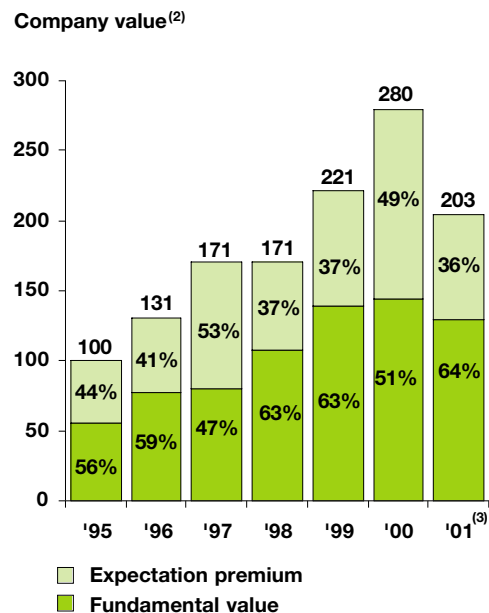
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Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Anglo American Platinum	SA	10,113	62%	48%	60%	461	1,993	-8%	50%
2.	Waters	US	10,675	37%	79%	89%	107	1,705	-57%	77%
3.	General Dynamics	US	15,380	33%	24%	46%	419	1,727	15%	57%
4.	Danaher	US	9,700	32%	34%	58%	129	1,183	-31%	48%
5.	Illinois Tool Works	US	17,978	29%	16%	38%	402	1,681	-8%	39%
6.	Bombardier	CN	21,231	29%	40%	69%	104	2,967	-50%	51%
7.	Fuji Heavy Inds.	JP	4,537	26%	13%	-25%	420	68	-20%	-28%
8.	Masco	US	11,716	26%	13%	42%	130	1,213	-19%	39%
9.	BAE Systems	UK	17,141	23%	16%	43%	-868	853	-12%	44%
10.	Boeing	US	58,638	22%	12%	48%	-13	5,881	-49%	17%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 33 companies

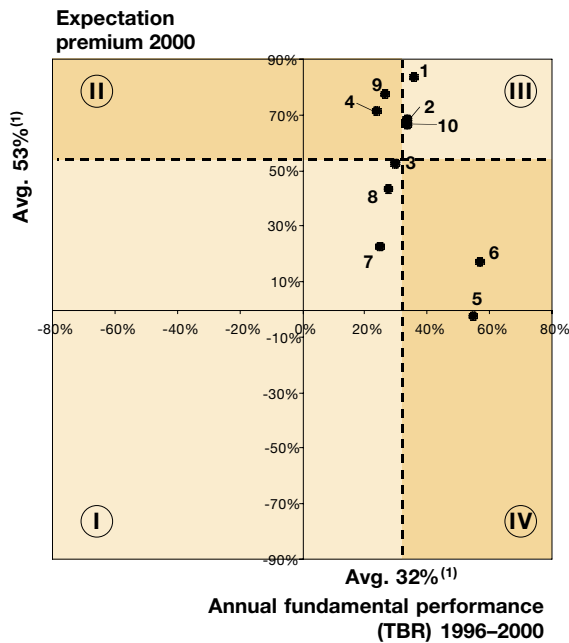
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

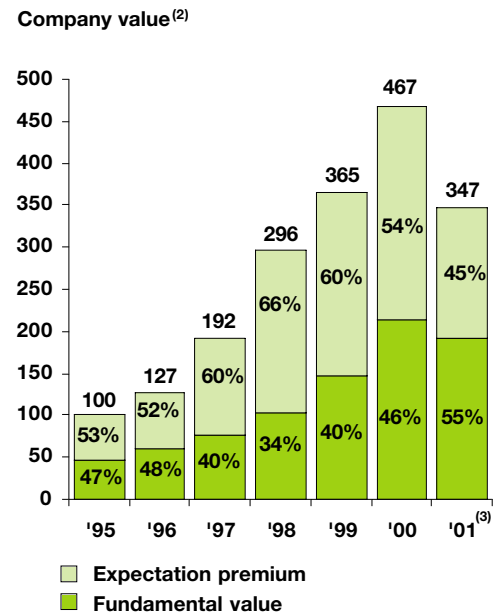
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Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Skandia	SWE	16,651	55%	36%	83%	72	2,303	-62%	55%
2.	Aegon	NL	55,850	43%	34%	68%	674	6,002	-33%	56%
3.	Great West Lifeco	CN	9,242	42%	30%	52%	190	890	-14%	46%
4.	Aflac	US	19,147	39%	24%	71%	329	2,533	-25%	65%
5.	ING	NL	78,078	38%	55%	-3%	8,522	8,183	-29%	-36%
6.	Munich Re	GER	63,118	37%	57%	17%	-269	971	-25%	-3%
7.	Baloise	CH	6,228	37%	25%	22%	11	208	-34%	-10%
8.	Power Financial	CN	8,041	36%	28%	43%	186	751	2%	46%
9.	AIG	US	228,227	35%	27%	77%	1,505	28,827	-21%	74%
10.	Marsh & McLennan	US	31,746	35%	34%	66%	621	3,272	-16%	63%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 40 companies

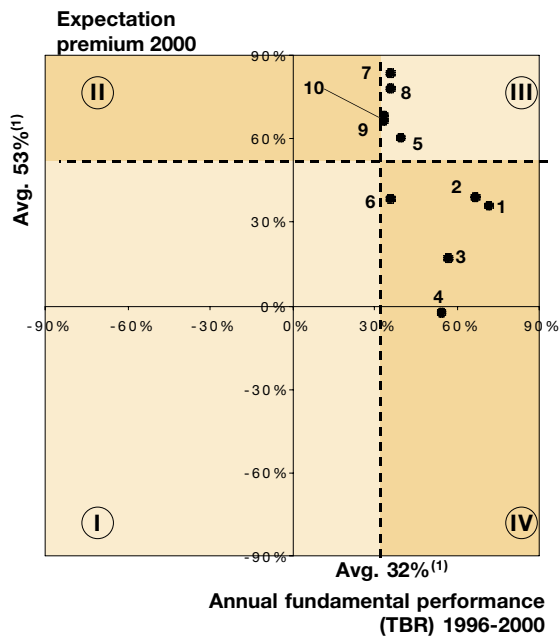
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

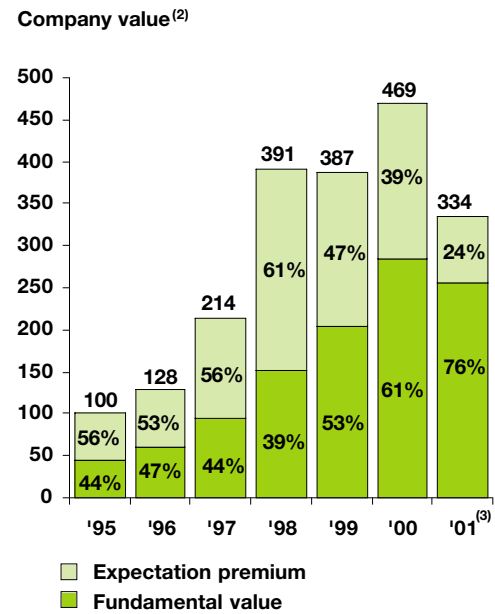
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Ergo	GER	12,616	72%	27%	36%	207	738	-13%	31%
2.	Washington Mutual	US	28,594	67%	26%	39%	770	2,166	11%	53%
3.	Munich Re	GER	63,118	57%	37%	17%	-269	971	-25%	-3%
4.	ING	NL	78,078	55%	38%	-3%	8,522	8,183	-29%	-36%
5.	AXA	F	59,641	40%	29%	60%	1,887	6,268	-42%	36%
6.	Fortis	B	23,866	36%	31%	38%	923	2,048	-21%	26%
7.	Skandia	SWE	16,651	36%	55%	83%	72	2,303	-62%	55%
8.	Alleanza	I	11,387	36%	23%	78%	133	1,630	-36%	71%
9.	Marsh & McLennan	US	31,746	34%	35%	66%	621	3,272	-16%	63%
10.	Aegon	NL	55,850	34%	43%	68%	674	6,002	-33%	56%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 40 companies

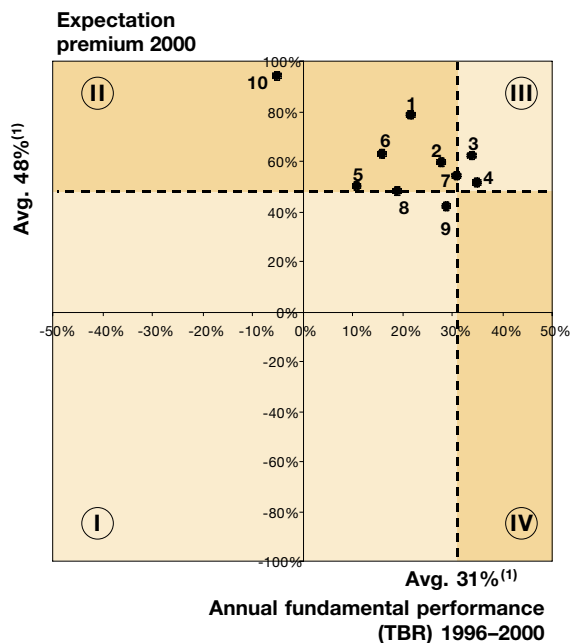
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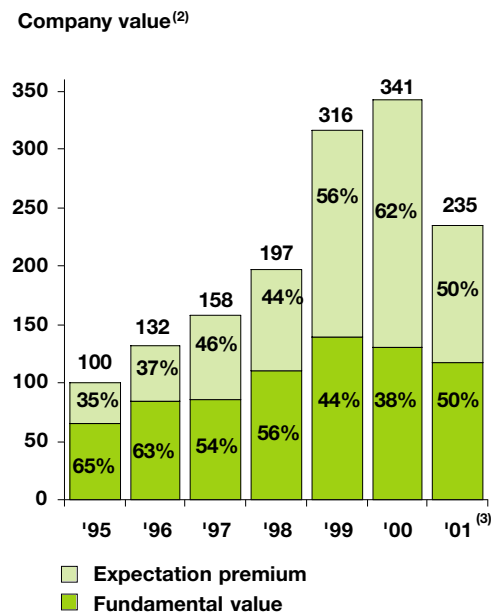
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	TF1	F	11,401	53%	22%	78%	283	1,786	-63%	45%
2.	VNU	NL	11,571	41%	28%	59%	-177	507	-40%	44%
3.	WPP Group	UK	15,581	41%	34%	62%	-180	1,096	-43%	46%
4.	Omnicom	US	14,674	36%	35%	51%	462	1,442	-21%	47%
5.	Thomson	CN	23,220	28%	11%	50%	-112	2,329	-20%	45%
6.	Pearson	UK	18,996	26%	16%	63%	-461	977	-53%	41%
7.	Interpublic Group	US	13,098	25%	31%	54%	261	1,304	-52%	35%
8.	McGraw-Hill	US	11,414	25%	19%	48%	498	1,602	0%	53%
9.	Tribune	US	13,021	24%	29%	42%	-507	345	-25%	36%
10.	B Sky B	UK	30,946	24%	-5%	94%	-194	1,833	-47%	90%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 27 companies

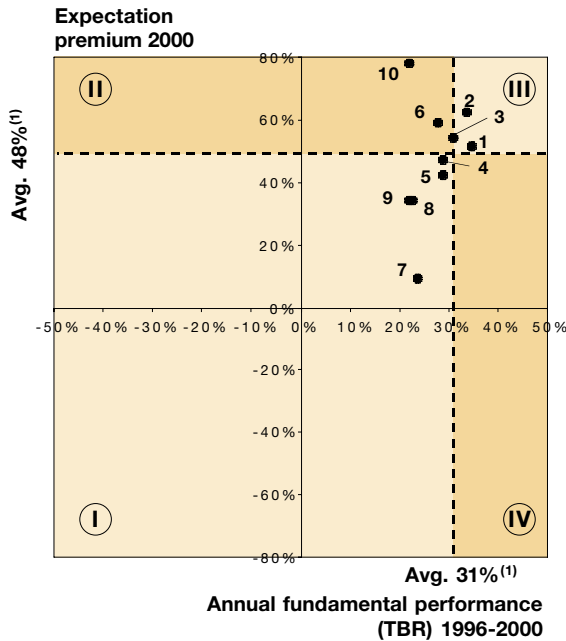
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

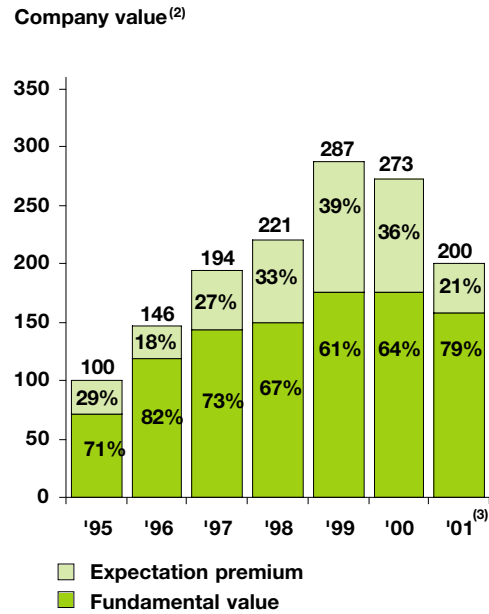
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Omnicom	US	14,674	35%	36%	51%	462	1,442	-21%	47%
2.	WPP Group	UK	15,581	34%	41%	62%	-180	1,096	-43%	46%
3.	Interpublic Gp.	US	13,098	31%	25%	54%	261	1,304	-52%	35%
4.	Nippon Tel.Network	JP	8,596	29%	23%	47%	207	776	-29%	30%
5.	Tribune	US	13,021	29%	24%	42%	-507	345	-25%	36%
6.	VNU	NL	11,571	28%	41%	59%	-177	507	-40%	44%
7.	Walt Disney	US	60,323	24%	9%	9%	2,303	3,104	-36%	-15%
8.	Walters Kluwer	NL	7,638	23%	12%	34%	58	303	-15%	32%
9.	Gannett	US	16,625	22%	17%	34%	166	1,398	-4%	39%
10.	TF1	F	11,401	22%	53%	78%	283	1,786	-63%	45%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 27 companies

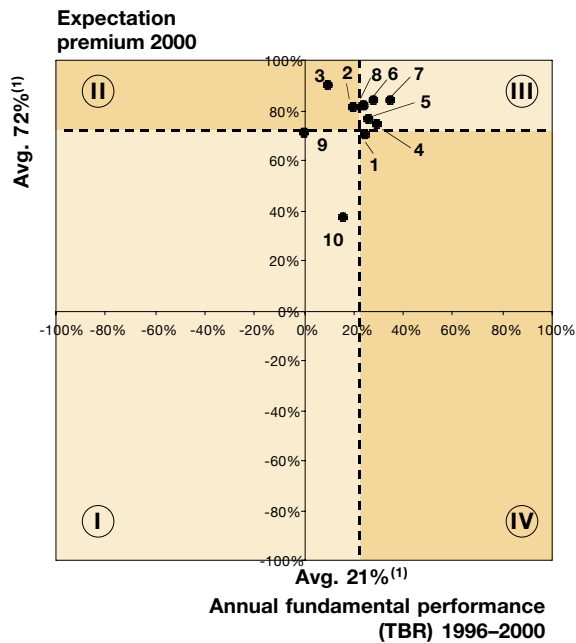
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

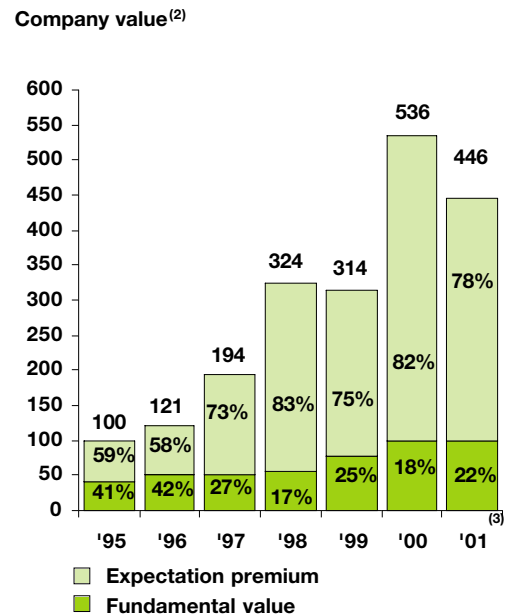
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Serono	CH	11,223	51%	25%	70%	123	1,305	-22%	62%
2.	Allergan	US	12,545	45%	20%	81%	108	1,959	-31%	74%
3.	Forest Labs	US	11,646	42%	10%	90%	48	2,031	9%	91%
4.	Guidant Corp.	US	16,552	39%	30%	74%	324	2,153	-29%	63%
5.	Pfizer	US	290,216	36%	28%	84%	2,261	34,100	-12%	82%
6.	Schering-Plough	US	82,971	35%	26%	76%	1,454	9,796	-34%	63%
7.	Medtronic	US	72,425	35%	35%	84%	732	8,221	-28%	77%
8.	Amgen	US	65,722	34%	24%	82%	738	7,887	-8%	81%
9.	Altana	GER	6,155	33%	0%	71%	49	1,036	15%	74%
10.	UCB	B	5,409	33%	16%	37%	274	674	14%	42%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 44 companies

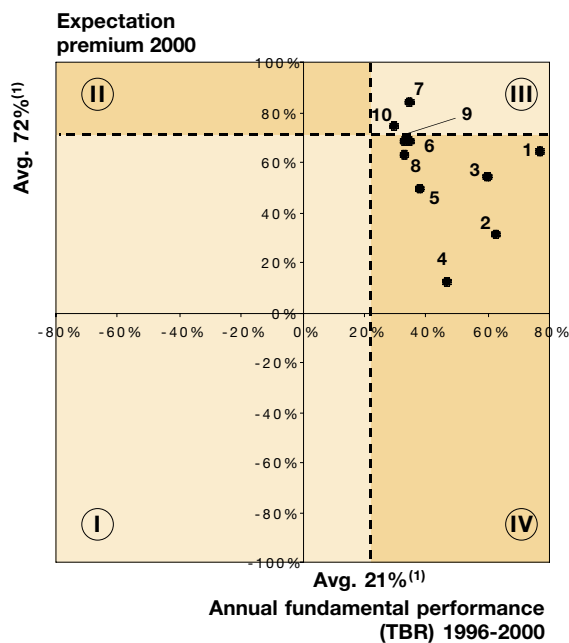
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

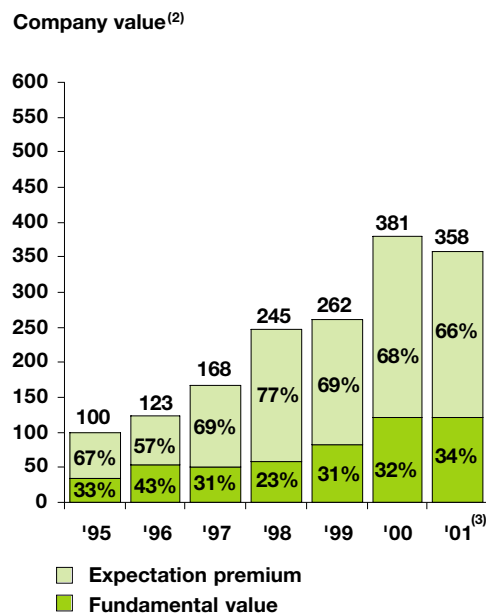
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



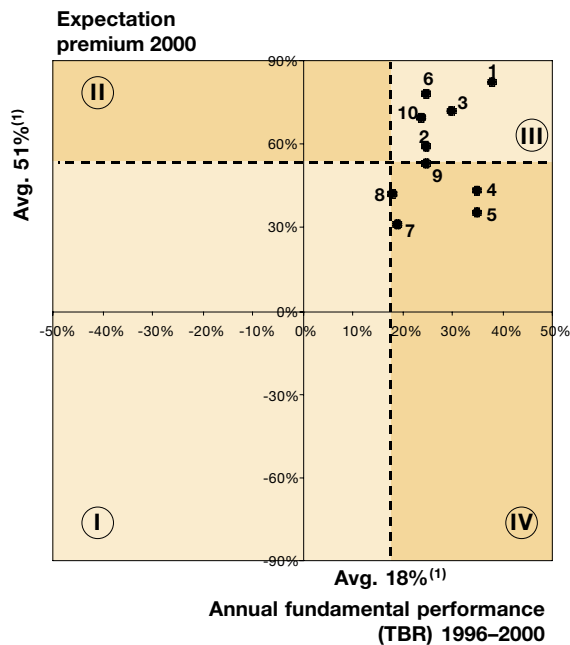
Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Biogen	US	9,052	77%	31%	64%	212	927	-8%	61%
2.	Watson Pharms.	US	5,260	63%	16%	31%	73	202	7%	36%
3.	Cardinal Health	US	27,807	60%	33%	54%	260	1,352	12%	61%
4.	Boston Scientific	US	5,563	47%	-11%	12%	263	351	50%	38%
5.	Nycomed Amersham	UK	5,284	38%	28%	49%	126	457	5%	50%
6.	Astrazeneca	UK	89,033	35%	25%	68%	2,054	10,940	-5%	65%
7.	Medtronic	US	72,425	35%	35%	84%	732	8,221	-28%	77%
8.	Stryker	US	9,874	33%	31%	63%	238	1,140	5%	65%
9.	GlaxoSmithKline	UK	177,627	33%	19%	68%	5,416	26,136	3%	68%
10.	Guidant Corp.	US	16,552	30%	39%	74%	324	2,153	-29%	63%

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

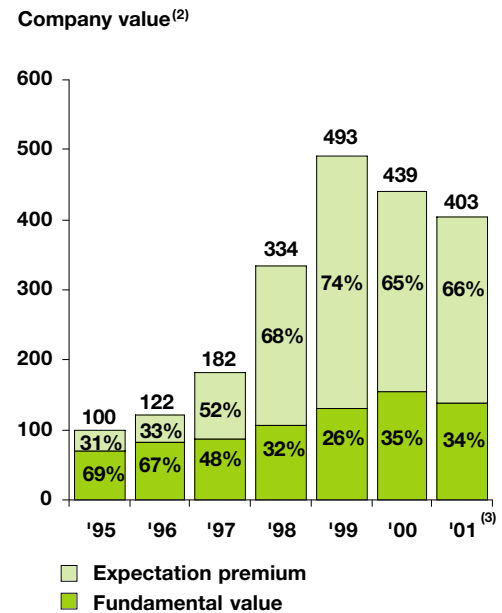
- (1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 44 companies
- (2) Market value of equity plus debt, 1995 = 100
- (3) Estimated fundamental value and market value as of 30 Sept 2001
- (4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1–9/30	EP 9/30 ⁽³⁾
1.	Kohls	US	20,234	56%	38%	82%	114	2,148	-21%	79%
2.	Pinault Printemps	F	25,570	53%	25%	59%	-209	2,877	-46%	47%
3.	Hennes & Mauritz	SWE	11,301	53%	30%	72%	213	1,410	27%	78%
4.	Best Buy	US	6,112	49%	35%	43%	306	749	54%	67%
5.	TJX	US	7,758	44%	35%	35%	491	953	19%	49%
6.	Walgreen	US	42,230	42%	25%	78%	441	5,352	-17%	77%
7.	Casino Guichard	F	8,617	41%	19%	31%	33	654	-19%	31%
8.	Target	US	28,887	40%	18%	42%	784	3,450	-1%	48%
9.	Costco	US	17,896	39%	25%	53%	281	1,795	-11%	53%
10.	Wal Mart Stores	US	237,274	38%	24%	69%	3,292	29,935	-6%	70%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 46 companies

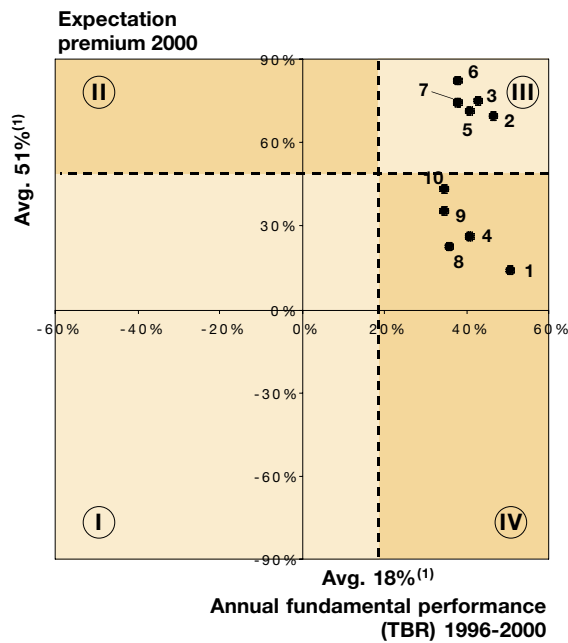
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

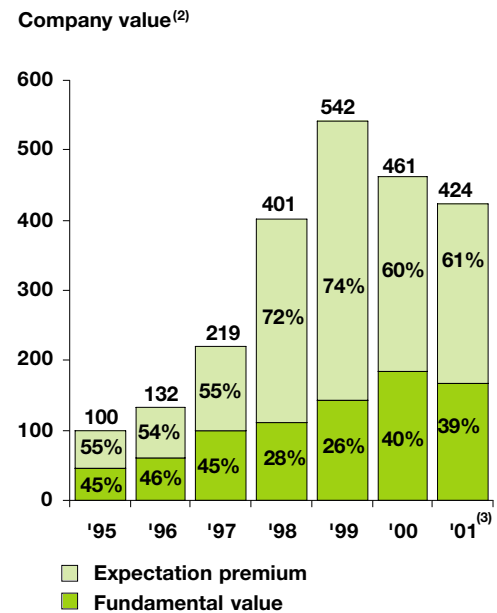
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	Staples	US	5,351	51%	10%	14%	220	317	13%	31%
2.	Walmex	MX	8,852	47%	26%	69%	-441	681	6%	74%
3.	Bed Bath & Beyond	US	6,323	43%	36%	75%	98	662	14%	81%
4.	Ahold	NL	25,095	41%	30%	26%	782	1,877	-10%	33%
5.	Starbucks	US	8,210	41%	33%	71%	66	769	-33%	63%
6.	Kohls	US	20,234	38%	56%	82%	114	2,148	-21%	79%
7.	Home Depot	US	106,053	38%	34%	74%	1,353	10733	-16%	72%
8.	Dixons Group	UK	6,458	36%	18%	22%	334	559	-16%	16%
9.	TJX	US	7,758	35%	44%	35%	491	953	19%	49%
10.	Best Buy	US	6,112	35%	49%	43%	306	749	54%	67%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 46 companies

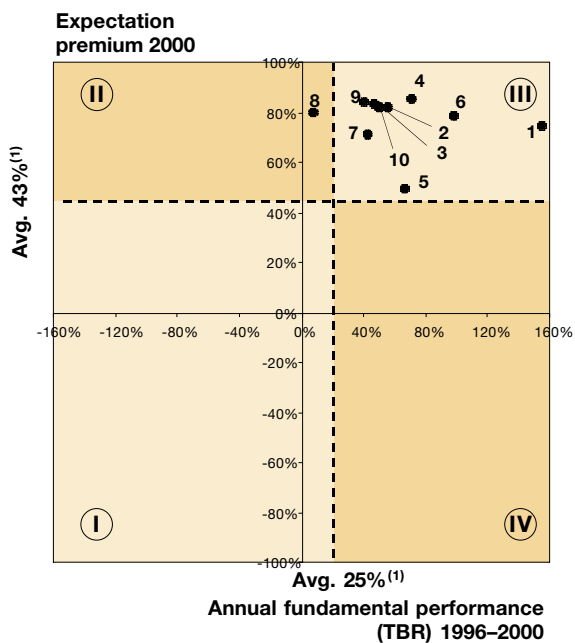
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

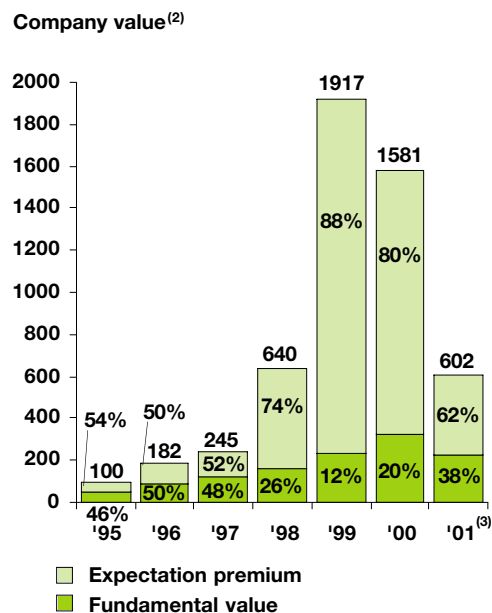
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Veritas	US	35,782	104%	156%	74%	299	2,122	-79%	18%
2.	EMC	US	144,995	103%	51%	82%	1,107	10,163	-82%	29%
3.	Nokia	FN	209,346	95%	47%	83%	3,505	29,309	-62%	68%
4.	Comverse Tech.	US	18,031	75%	71%	85%	107	1,370	-81%	53%
5.	Dell Computer	US	45,793	74%	67%	49%	1,049	2,677	6%	66%
6.	Qualcomm	US	61,512	74%	99%	78%	419	3,980	-42%	74%
7.	Sun Microsystems	US	89,712	58%	43%	71%	1,464	8,165	-70%	35%
8.	STMicroelectronics	NL	38,705	58%	8%	80%	705	7,206	-49%	72%
9.	Oracle	US	162,676	56%	41%	84%	1,515	13,977	-57%	74%
10.	Cisco Systems	US	268,662	56%	56%	82%	643	15,572	-68%	62%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$15bn, 66 companies

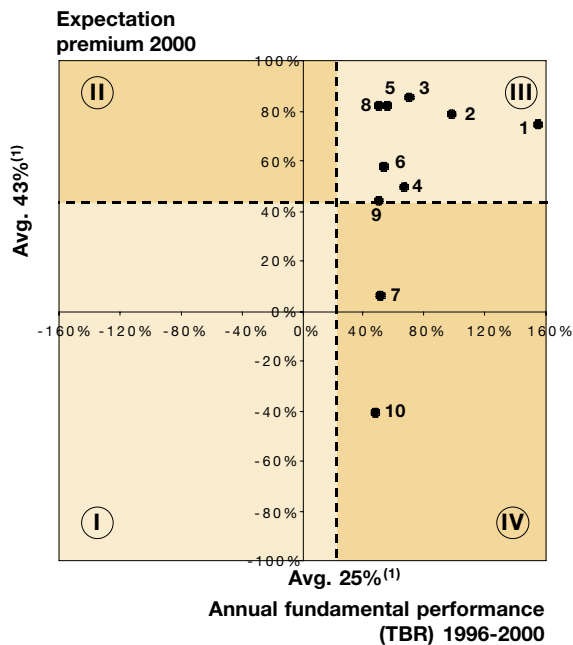
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

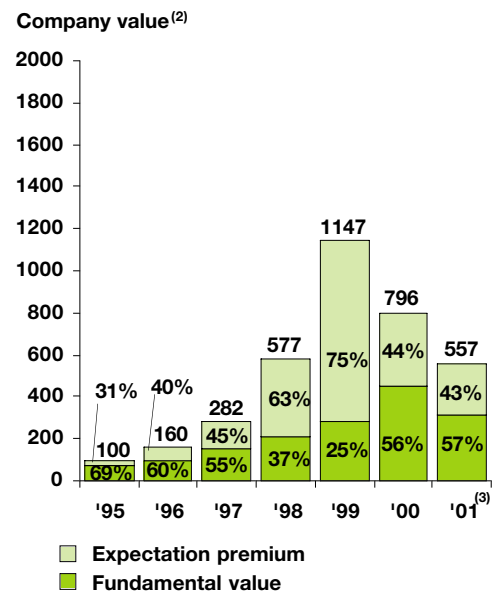
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Veritas	US	35,782	156%	104%	74%	299	2,122	-79%	18%
2.	Qualcomm	US	61,512	99%	74%	78%	419	3,980	-42%	74%
3.	Comverse Tech.	US	18,031	71%	75%	85%	107	1,370	-81%	53%
4.	Dell Computer	US	45,793	67%	74%	49%	1,049	2,677	6%	66%
5.	Cisco Systems	US	268,662	56%	56%	82%	643	15,572	-68%	62%
6.	Tellabs	US	23,171	54%	44%	57%	517	1,627	-83%	-69%
7.	Cox Communic.	US	26,636	52%	37%	6%	877	1,103	-10%	29%
8.	EMC	US	144,995	51%	103%	82%	1,107	10,163	-82%	29%
9.	Microsoft	US	231,290	51%	32%	44%	5,214	12,616	18%	67%
10.	Verizon Comms.	US	135,292	48%	12%	-41%	2,895	-4,371	10%	6%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$15bn, 66 companies

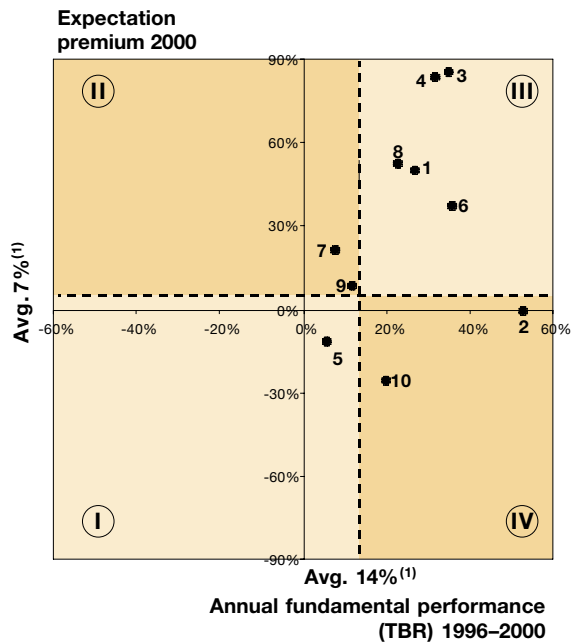
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

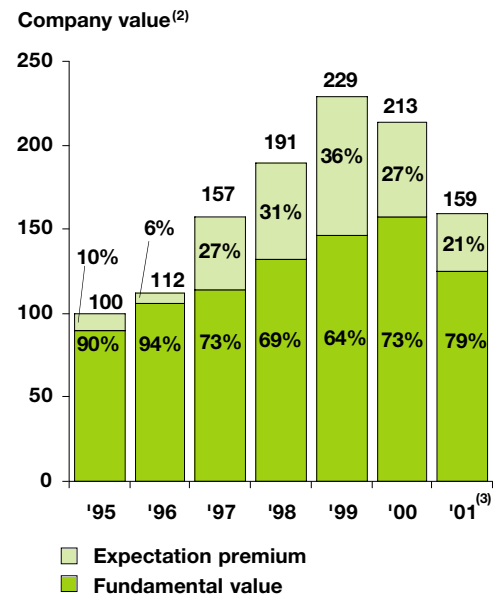
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	Southwest Airlines	US	16,827	38%	27%	50%	189	1,595	-34%	44%
2.	CN Railways	CN	5,975	36%	53%	-1%	-267	-289	37%	28%
3.	D/S 1912	DK	8,853	27%	35%	85%	103	1,245	-29%	82%
4.	D/S Svendborg	DK	8,196	25%	32%	83%	99	1,198	-31%	80%
5.	Lufthansa	GER	9,670	24%	6%	-12%	447	89	-60%	-50%
6.	Exel	UK	4,094	23%	36%	37%	27	240	-42%	22%
7.	Accor	F	8,346	22%	8%	21%	113	649	-28%	20%
8.	Carnival	US	18,009	22%	23%	52%	-71	1,401	-28%	48%
9.	Singapore Airlines	SG	12,150	20%	12%	8%	-255	-71	-53%	-57%
10.	Fedex	US	11,393	17%	20%	-26%	302	-323	-8%	-4%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn, 32 companies

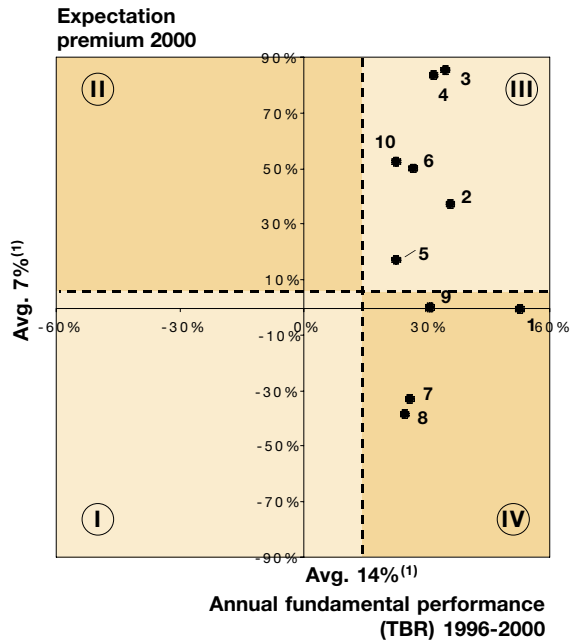
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

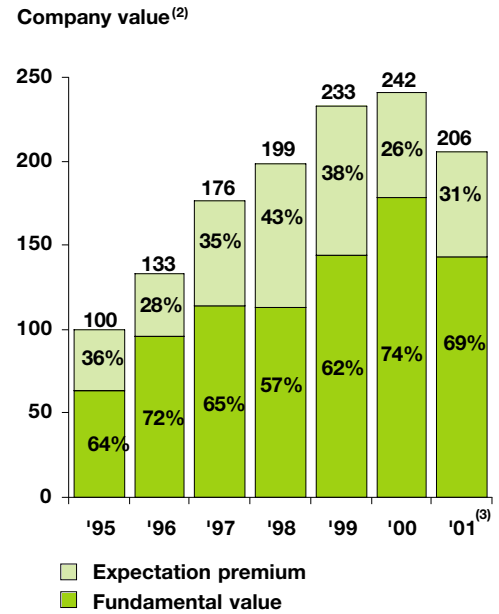
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽⁴⁾
1.	CN Railways	CN	5,975	53%	36%	-1%	-267	-289	37%	28%
2.	Exel	UK	4,094	36%	23%	37%	27	240	-42%	22%
3.	D/S 1912	DK	8,853	35%	27%	85%	103	1,245	-29%	82%
4.	D/S Svendborg	DK	8,196	32%	25%	83%	99	1,198	-31%	80%
5.	Hilton Hotels	US	3,871	31%	3%	0%	20	20	-25%	12%
6.	Southwest Airlines	US	16,827	27%	38%	50%	189	1,595	-34%	44%
7.	Malaysia Intl. Shipp.	MAL	3,475	26%	5%	-33%	172	-6	-2%	-10%
8.	Canadian Pacific	CN	9,286	25%	13%	-39%	313	-827	19%	-6%
9.	Harrahs Entm.	US	3,079	23%	2%	17%	-80	54	2%	35%
10.	Carnival	US	18,009	23%	22%	52%	-71	1,401	-28%	48%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$3bn 32 companies

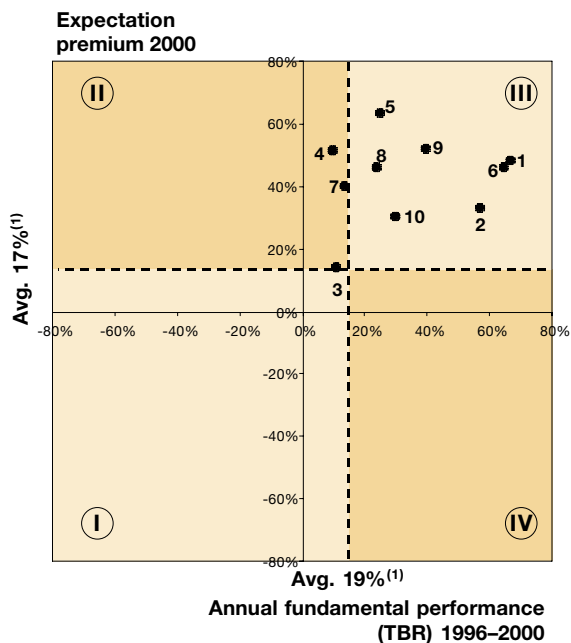
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

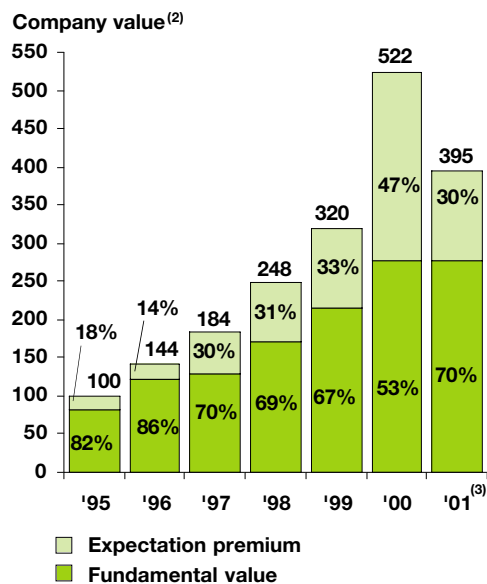
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TSR '96-'00	TBR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	AES	US	25,348	56%	67%	48%	-732	2,988	-77%	13%
2.	El Paso	US	16,758	41%	57%	33%	-1,016	625	-41%	42%
3.	Union Fenosa	E	5,592	39%	11%	14%	-630	-298	-15%	6%
4.	Coastal	US	18,983	38%	10%	51%	-630	1,916	-10%	47%
5.	Enron	US	61,422	37%	25%	63%	-1,547	7,543	-67%	29%
6.	Dynegy	US	13,306	35%	65%	46%	-362	1,211	-38%	28%
7.	National Grid	UK	13,495	31%	14%	40%	-590	1,075	-28%	25%
8.	Edison	I	7,085	30%	24%	46%	-4	617	-15%	37%
9.	Kinder Morgan	US	5,971	25%	40%	52%	-350	678	-5%	50%
10.	Williams Cos.	US	17,573	25%	30%	30%	-638	1,256	-25%	21%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 49 companies

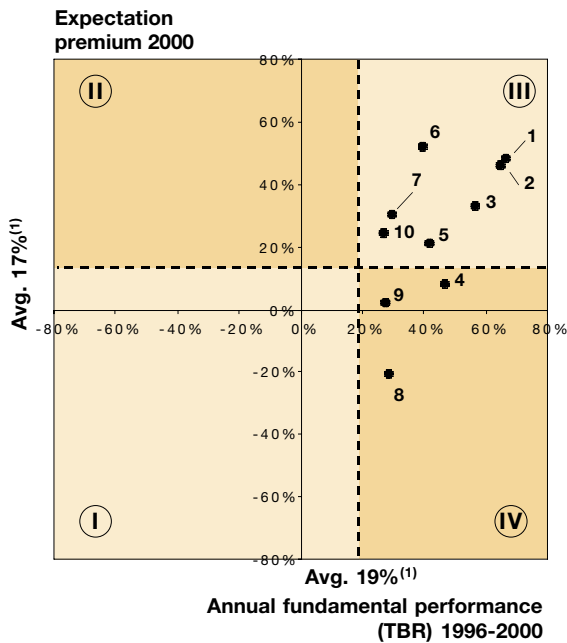
(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

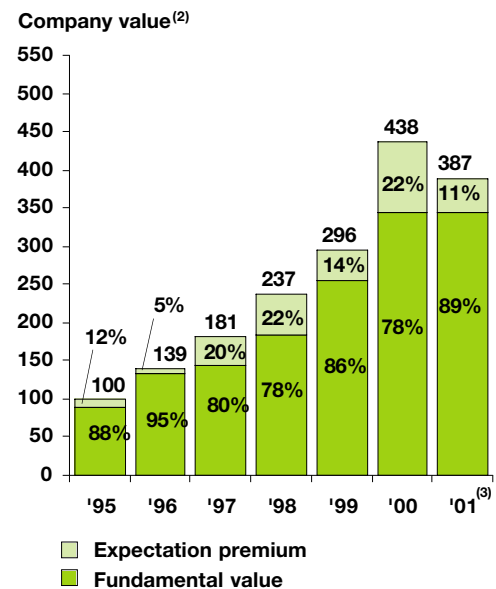
(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Expectation premium matrix



Average expectation premium top 10 companies



Place	Company	Country	MV 2000 M\$	TBR '96-'00	TSR '96-'00	EP 2000	CVA 2000 M\$	Implied CVA ⁽⁴⁾ 2000 M\$	2001 year to date	
									TSR 1/1-9/30	EP 9/30 ⁽³⁾
1.	AES	US	25,348	67%	56%	48%	-732	2,988	-77%	13%
2.	Dynegy	US	13,306	65%	35%	46%	-362	1,211	-38%	28%
3.	El Paso	US	16,758	57%	41%	33%	-1,016	625	-41%	42%
4.	Scottish Power	UK	14,626	47%	14%	8%	-46	240	-19%	-9%
5.	Keyspan	US	5,703	42%	13%	21%	-357	87	-19%	14%
6.	Kinder Morgan	US	5,971	40%	25%	52%	-350	678	-5%	50%
7.	Williams Cos.	US	17,573	30%	25%	30%	-638	1,256	-25%	21%
8.	Endesa	E	18,041	29%	14%	-21%	-545	-2,088	-3%	-26%
9.	Xcel Energy	US	9,814	28%	10%	2%	-1,021	-937	1%	2%
10.	Nisource	US	6,268	27%	15%	24%	-1,274	-563	-22%	17%

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

(1) Weighted average of the total sample, minimum market value 2000: US\$5bn, 49 companies

(2) Market value of equity plus debt, 1995 = 100

(3) Estimated fundamental value and market value as of 30 Sept 2001

(4) The "implied CVA" is the required CVA 2000 level to justify the market value only by the fundamental performance

Source: T.F. Datastream; BCG analysis

Technical notes

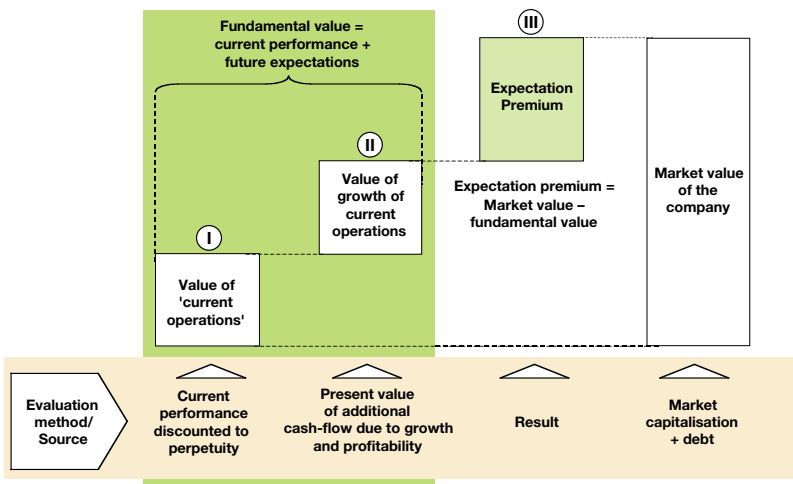
1. CALCULATING EXPECTATION PREMIUMS

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 1996-2000 the difference between the annual market performance and the annual fundamental performance was less than +/-15% for almost two thirds of the companies in that 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% per annum to the weighted average cost of capital over 40 years due to competitive pressures and other factors. In addition, it was assumed that growth would fade by 20% per annum to an average economic growth rate of 1.5% over the same period (Fig. A5).

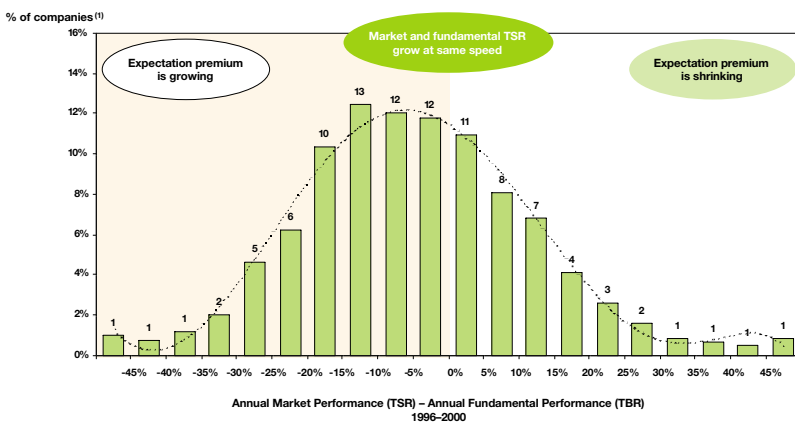
Fig. A3 How the expectation premium is calculated



2. DIFFERENT WAYS TO MEASURE VALUE CREATION

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

Fig. A4 Robustness of the valuation model



(1) Sample: 1,700 companies, listed since 1996, without market capitalization hurdle

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 of 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.

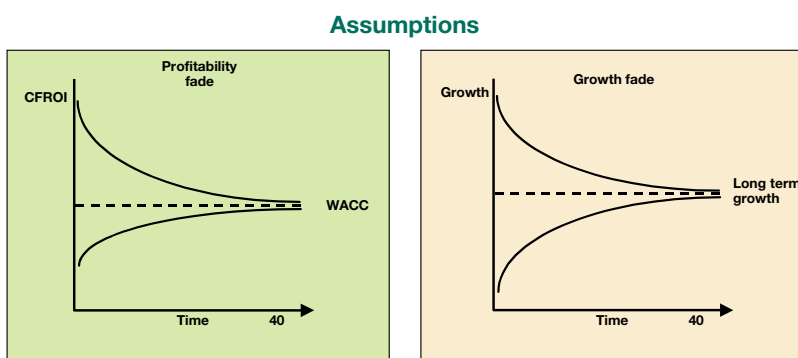
Aligning internal aspirations and plans: TBR

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.

BCG has developed a range of methodologies to calculate the TBR that can be tailored depending on the very specific situation of our clients. The TBR can be measured with sophisticated proprietary valuation models or with relatively simple approaches employing EBITDA, EBIT, or cash flow multiples.

Fig. A5 Calculation of fundamental value



- Growth in GI (1994-1999) is taken as the base growth rate to be faded out
- Growth is faded to a long term value of 1.5%
- CFROI of appropriate year is taken as base for profitability fade to WACC
- Fade rate for Growth: 20%⁽¹⁾
- Fade rate for CFROI: 10%⁽¹⁾

⁽¹⁾ BCG research

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

Fig. A6 Framework of value measures

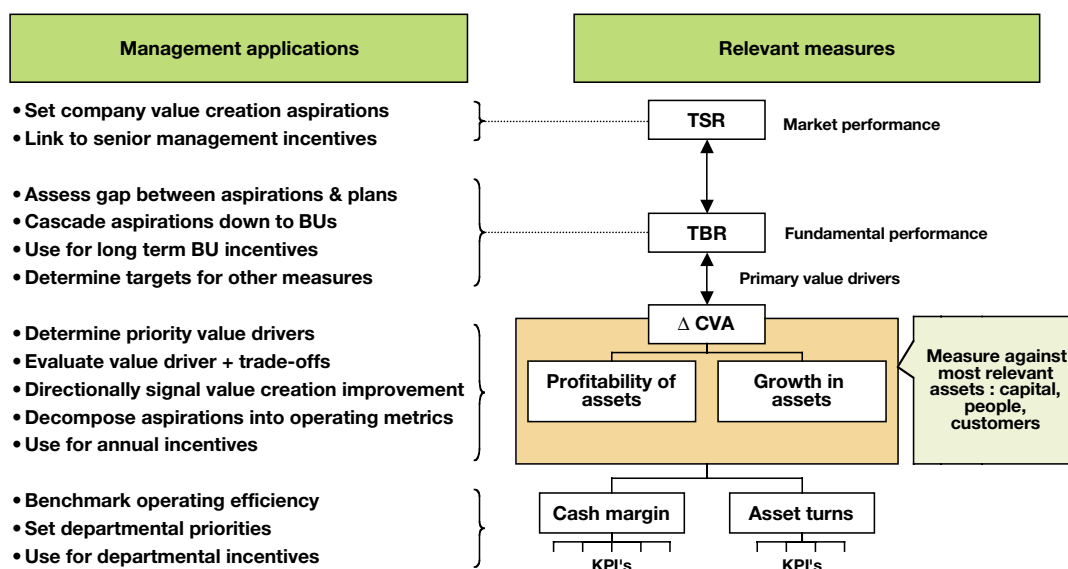
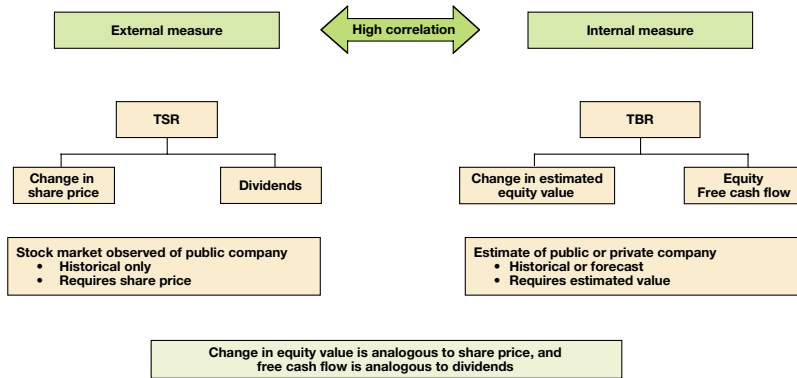


Fig. A7 TBR is the internal analogue to TSR



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 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

Fig. A8 How CVA is calculated

Concept and example												
<p>1 Direct calculation CVA = gross cash flow – economic depreciation – capital charge</p> <p>2 Indirect calculation CVA = (CFROI – cost of capital) x gross investment</p> <p>with</p> <p>Capital charge = cost of capital x gross investment</p> <p>CFROI = $\frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$</p>	<table border="1"> <tr><td>Gross cash flow</td><td>150</td></tr> <tr><td>Economic depreciation</td><td>50</td></tr> <tr><td>CFROI</td><td>10%</td></tr> <tr><td>Gross investment</td><td>1,000</td></tr> <tr><td>Cost of capital</td><td>10%</td></tr> <tr><td>Capital charge</td><td>100</td></tr> </table> <p>1. CVA = 150 – 50 – 100 = 0 2. CVA = (10% – 10%) x 1,000 = 0</p> <p>CVA is the residual cash flow minus the implicit cost of reinvestment and the cost of capital</p>	Gross cash flow	150	Economic depreciation	50	CFROI	10%	Gross investment	1,000	Cost of capital	10%	Capital charge	100
Gross cash flow	150												
Economic depreciation	50												
CFROI	10%												
Gross investment	1,000												
Cost of capital	10%												
Capital charge	100												

Cash value added, CVA (or its financial services equivalent, AVE), is an absolute measure of operating performance 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 (Figs A8 & A9). The CVA measure is a very powerful tool to help managers pull the appropriate levers to create value. It can indeed accurately assess the contribution of the economic assets that actually drive a business. As noted in the report, in some cases they are tangible assets, in others they are either people or customers.

Fig. A9 How CFROI is calculated

Definition of CFROI	Formula								
$\text{CFROI} = \frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$ <p>Economic depreciation is the amount that has to be put aside annually to finance future replacement investments</p>	$\text{CFROI} = \frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$ $\text{Economic depreciation} = \frac{\text{WACC}}{(1 + \text{WACC})^n - 1} \times \text{Depreciable assets}$								
Definition of components	Example								
<p>WACC = Weighted average cost of capital</p> <p>Gross cash flow = Adjusted profit + interest expense + depreciation</p> <p>Gross investment = Net current assets + historical initial cost (possibly adjusted for inflation)</p> <p>Asset life = Economic operating life of the mix of assets</p> <p>Nondepreciable assets = Assets that flow back into the books at the end of their operating life</p>	<table border="1"> <tr><td>Gross cash flow =</td><td>150</td></tr> <tr><td>Gross investment =</td><td>1,000</td></tr> <tr><td>Nondepreciable assets =</td><td>200</td></tr> <tr><td>Asset life =</td><td>10 years</td></tr> </table> $\text{Economic depreciation} = \frac{10\%}{(1 + 10\%)^{10} - 1} \times (1000 - 200)$ $= 50$ $\text{CFROI} = \frac{150 - 50}{1000} = 10\%$	Gross cash flow =	150	Gross investment =	1,000	Nondepreciable assets =	200	Asset life =	10 years
Gross cash flow =	150								
Gross investment =	1,000								
Nondepreciable assets =	200								
Asset life =	10 years								

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 be easily further broken down into the key performance indicators (KPIs) that are relevant to each management area. KPIs form the basis for internal or 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.

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