

Section II:

SHAREHOLDER VALUE

VALUE MANAGED VS EARNINGS MANAGED COMPANIES

Introduction

The pervasiveness of the value approach

Case studies: FT100 companies creating and
destroying value

Why shareholder value?

Three steps to value

Earnings-based management's failings

Return on capital employed has failings

Focussing on earnings is not the same as value

How a business creates value

The five actions for creating value

Conclusion

Introduction

The first few chapters of this book linked together the objective of shareholder wealth maximization and acceptance or otherwise of proposed projects. This required knowledge of the concepts of the time value of money and the opportunity cost of investors' funds placed into new investments. If managers fail to achieve returns at least as high as those available elsewhere for the same level of risk then, as agents for investors, they are failing in their duty. If a group of investors place £1m in the hands of managers who subsequently generate annual returns of 10 percent those managers would in effect be destroying value for those investors if, for the same level of risk, a 14 percent return is available elsewhere. With a future project the extent of this value destruction is summarized in the projected negative NPV figure.

This technique, and the underlying concepts, are well entrenched throughout modern corporations. However, the full potential of their application is only now dawning on a few particularly progressive organizations. Applying the notion of opportunity cost of capital and focussing on the cash flow of new projects rather than profit figures is merely skimming the surface. Since the mid-1980s a growing band of corporations, ranging from Pepsi in the USA to LloydsTSB bank in the UK, have examined their businesses in terms of the following questions:

- How much money has been placed in this business by investors?
- What rate of return is being generated for those investors?
- Is this sufficient given the opportunity cost of capital?

These questions can be asked about past performance or about future plans. They may be asked about the entire organization or about a particular division, strategic business unit or product line. If a line of business does not create value on the capital invested by generating a return greater than the minimum required then managerial attention can be directed to remedying the situation. Ultimately every unit should be contributing to the well-being of shareholders.

The pervasiveness of the value approach

The examination of an organization to identify the sources of value may not seem particularly remarkable to someone who has absorbed the concepts discussed in Chapters 1 to 5, but to many managers steeped in the traditions of accounting-based performance measures such as profits, return on investment and earnings per share, they have revolutionary consequences.

The ideas themselves are not revolutionary or even particularly new. It is the far-reaching application of them to create a true shareholder-value-oriented company that can revolutionize almost everything managers do.

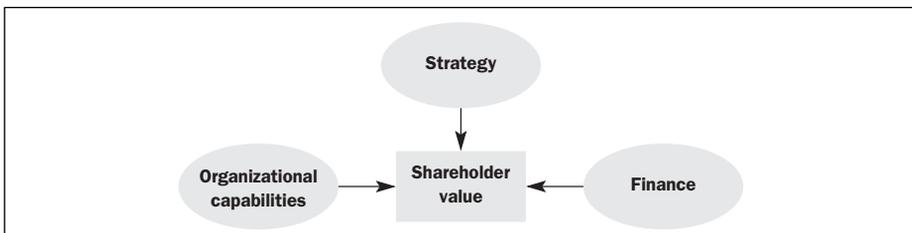
- Instead of working with *plans* drawn up in terms of accounting budgets, with their associated distorted and manipulable view of ‘profit’ and ‘capital investment’, managers are encouraged to think through the extent to which their new strategies or operational initiatives will produce what shareholders are interested in: a discounted inflow of cash greater than the cash injected.
- Instead of being *rewarded* in terms of accounting rates of return (and other ‘non-value’ performance measures, such as earnings per share and turnover) achieved in the short term, they are rewarded by the extent to which they contribute to shareholder value over a long-term horizon. This can radically alter the incentive systems in most firms.
- Instead of directors accepting a low *cash flow on the (market value of) assets tied up* in a poorly performing subsidiary because the accounting profits look satisfactory, they are forced to consider whether greater wealth would be generated by either closure and selling off the subsidiary’s assets or selling the operation to another firm which can make a more satisfactory return.
- There then follows a second decision: should the cash released be invested in other activities or be given back to shareholders to invest elsewhere in the stock market? The answers when genuinely sought can sometimes be uncomfortable for executives who prefer to expand rather than contract the organization.

Dealing with such matters is only the beginning once an organization becomes value based. Mergers must be motivated and evaluated on the criterion of the extent to which a margin above the cost of capital can be achieved given the purchase price. Strategic analysis does not stop at the point of often vague and woolly qualitative analysis, it goes on to a second phase of valuation of the strategies and quantitative sensitivity analysis. The decisions on the most appropriate debt levels and the dividend payout ratios have as their core consideration the impact on shareholder wealth. In the field of human resources, it is accepted that all organizations need a committed workforce. But committed to what? Shareholder value-based management provides an answer, but also places an onus on managers to communicate, educate and convert everyone else to the process of value creation. This may require a shift in culture, in systems and procedures as well as a major teaching and learning effort.

Value-based management brings together the way in which shares are valued by investors with the strategy of the firm, its organizational capabilities and the finance function (see Figure 6.1).

FIGURE 6.1

Components of shareholder value-based management



Value-based management is much more than a technique employed by a few individuals who are 'good with numbers'. The principles behind it must pervade the organization – it touches almost all aspects of organizational life.

Value-based management is a managerial approach in which the primary purpose is long-run shareholder wealth maximization. The objective of the firm, its systems, strategy, processes, analytical techniques, performance measurements and culture have as their guiding objective shareholder wealth maximization.

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The example of German companies (*see* Exhibit 6.1) shows that a switch to shareholder value-based management can have dramatic consequences.

The monoliths stir

A wave of corporate restructuring is sweeping across Germany in response to the growing pressures of global competition, writes Haig Simonian

'Shareholder value' has become a driving force in German boardrooms. Conglomerates could once justify unwieldy structures, poor earnings and cross subsidisation between profitable and loss-making businesses by saying they were pursuing long-term goals. This stance tended to be compared favourably with the 'short termism' of industrial rivals in the UK or US.

The argument sometimes had merits, but it was also used as an excuse for inactivity. It has been harder to make the same claim in the face of rising shareholder pressure. This has partly come from German investors, but has been led by the US and UK institutions that have increasingly diversified investments outside their domestic stock market.

The pressure for improved profitability and consistency of dividends has led to greater pressure on operations within larger underperforming industrial groups. At Daimler-Benz, Mr Schrempp has required every business to make a return of 12 per cent on capital employed or face closure. Mr Esser of Mannesmann

has set an internal target of 15 per cent return on capital for his group next year.

The demand for higher profits has forced many company chairmen to reassess the breadth of their activities. Not all have been as Draconian as Mr Schrempp, but there has been a widespread move to identify activities with the most potential, and try either to improve or to sell less promising ones.

'We have to think what is best for business, and of creating value for the shareholders,' says Mr Esser about Mannesmann's demerger plan . . .

Heinrich von Pierer, Siemens chairman, wants to shed the group's reputation for conservatism by divesting almost one-seventh of its businesses, with sales of about DM17bn. Earlier this year, he said three of its four lossmaking operations would break even within a year, and launched plans to float a number of subsidiaries. 'It's only in the past year that they have started to take shareholder value really seriously,' says Mr Berger.

EXHIBIT 6.1 The monoliths stir

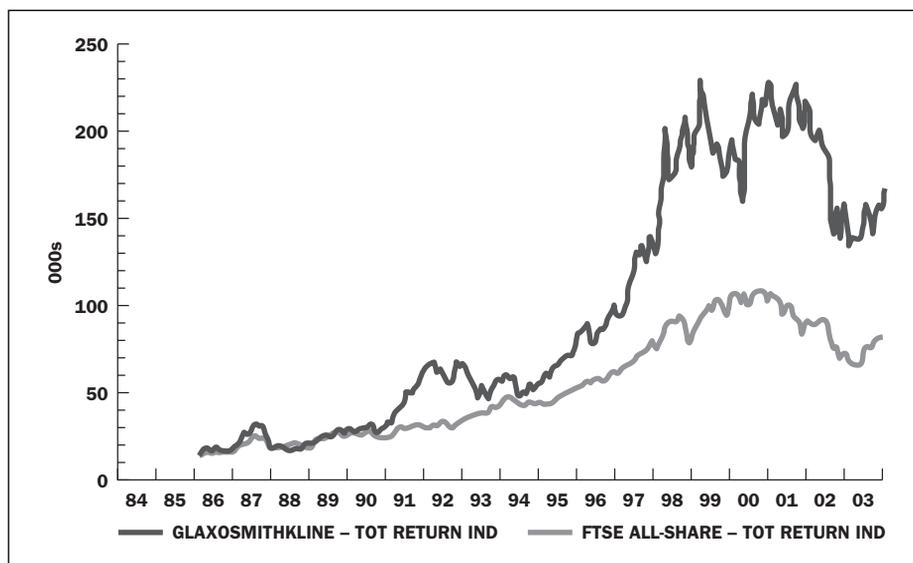
Source: *Financial Times*, 28 September 1999

Case studies: FTSE100 companies creating and destroying value

We will start by taking a brief look at three companies. One has successfully created vast amounts of value for shareholders, one has destroyed shareholder value over a long period and one is trying to convert itself from a value destroyer to a value creator.

GlaxoSmithKline (GSK) has been a terrific share over 10, 20 and 30 years. If you had bought £1,000 of shares in Glaxo in 1965 your holding would have grown to be over £1.8m by 2004. Ian White, pharmaceutical analyst at Robert Fleming, says of Glaxo, 'It had the combination of good commercial management, vibrancy and the drive to succeed, and the right products. You often get two of the three, but rarely the whole package' (*Investor's Chronicle* 26 July 1996). The return on Glaxo shares relative to the *FTSE All-Share Index* is shown in Figure 6.2.

FIGURE 6.2
GSK total return performance



Source: Datastream

Take another company, the UK-based industrial firm T & N. In 1982 investors realized that T & N would suffer as a result of asbestosis-related litigation. During August the market value of its shares fell to £37m as the shareholders realized that T & N would be forced to pay out vast sums to the victims of asbestosis. In November 1996 the company estimated that past and future compensation and other payments would amount to between £800m and £1.6bn.

From where [the *Investors Chronicle* asked] did a £37m basket case get £1.6bn? From its shareholders. Since 1986 T & N has issued around £700m of new equity via five rights issues, one placing and the 1987 takeover of AE . . . All this is to the good of the asbestosis sufferers, but it's a fair bet the shareholders who put it up aren't normally so generous with their donations to charity which is what in effect all T & N's capital raisings have been . . . The best course of action for T & N at any date in the 1980s would have been to hand the company over to the asbestos litigants lock, stock and barrel.

Investor Chronicle, 18 April 1997, p.10.

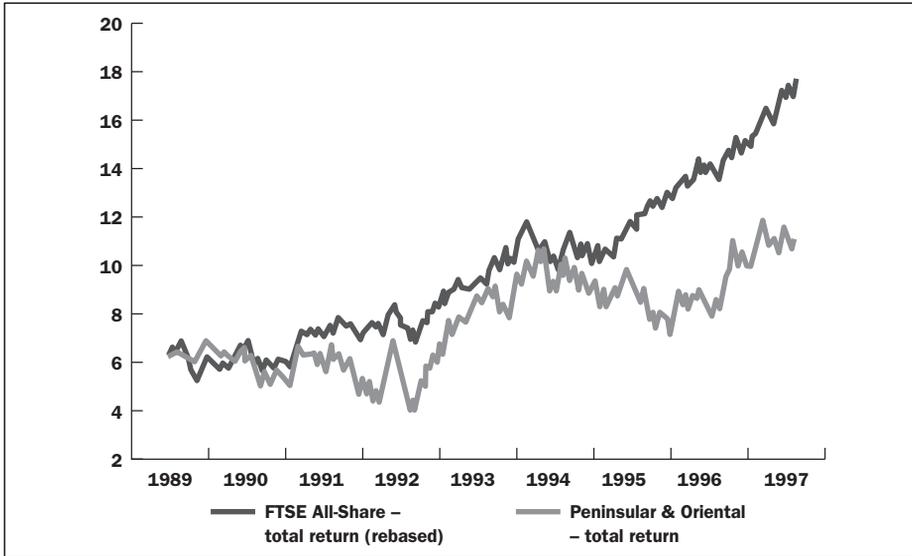
In 1998 what was left of T & N was taken over by the US company Federal Mogul.

Perhaps we can gain a glimpse of what shareholder value is by considering the mid-1990s crisis at the transport property conglomerate P&O. Lord Sterling, the chairman, was facing a shareholders' revolt and was battling to keep his job. As Figure 6.3 makes clear, P&O had under-performed the FTSE All-Share Index for ten years.

The management were judged to have destroyed shareholder value by putting resources into activities which 'have not produced enough return to cover the cost of using the money'. When they began to shake themselves up the change was noticeable to outside observers such as David Court, a fund manager at Scottish Amicable: 'When we met P&O in early 1996 it was regarded by its management as a national institution holding the flag for UK plc. When we met again six months later there were some interesting changes. Much to our surprise, management recognised that there were shareholders out there.' The company announced a target rate of return on capital of 15 percent for each of its operating divisions by 1998 and outlined plans to reduce its exposure to bulk shipping and sell off £500m worth of property and dispose of Bovis. Its container shipping business was merged with Nedlloyd to gain the necessary critical mass (112 container ships and a turnover of £4bn) in a highly competitive market and to gain cost savings estimated at between £120m and £400m. The English Channel ferry business was merged with Stena in 1998. These two shipping deals took P&O closer to making satisfactory returns. Many analysts were not convinced that these moves could save the company, mainly because of the unattractiveness of many of the industries in which it operates; for example, in the container shipping market, freight rates were falling because there were too many ships chasing too little work.

P&O formed a joint venture with a Chinese company for its bulk shipping unit. In 1999 Bovis Homes was given a stock market flotation and Bovis construction was sold to Australian owners in 1999. By 2000 P&O was achieving returns of nearly 15 percent, but the share price had not risen very much over the three years of managerial effort (total shareholder returns on shares had averaged 2.6 percent per year). The company pushed on with its search for shareholder value. This included investing in new capital items as well as disposals. For example, it ordered nine ships for delivery during 2000–4 at a total cost

FIGURE 6.3
P&O total return relative to the FTSE All-Share Index



Source: Thompson Financial Datastream

of £2.3bn. The directors judged that more shareholder value could be achieved if the company split itself into two. In October 2000 it demerged the cruise business from the ports, ferries and logistics business – a radical move as most of the company’s value was in cruising. In 2002 it went even further, selling its 50 percent stake in the bulk shipping operations and sold its logistics business Trans European.

All these actions were designed to create value in each of its strategic business units. Sometimes it reduced costs by gaining sufficient scale through joint ventures, sometimes it sold an asset for more than what it was worth to P&O to a company that valued it more highly, sometimes it spent a tremendous amount of money buying new equipment to expand an operation.

Why shareholder value?

It is clear that many commercial companies put shareholder value in second or third place behind other objectives. So why should we feel justified in holding up shareholder wealth maximization as the banner to follow? Isn’t growth in sales or market share more worthy? And what about the return to the labor force and to society generally?

What follows is a brief recap and extension of some of the comments made in Chapter 1 about the objectives of the firm in a competitive market environment that has responsibilities to shareholders.

There are several reasons why shareholder value is gaining momentum. One of these is the increasing threat of takeover by teams of managers searching for poorly managed businesses. Perhaps these individuals are at present running a competitor firm or are wide-ranging ‘corporate raiders’ ready to swoop on under-managed firms in any industry which, through radical strategic change, divestiture and shifting of executive incentives, can create more value for shareholders.

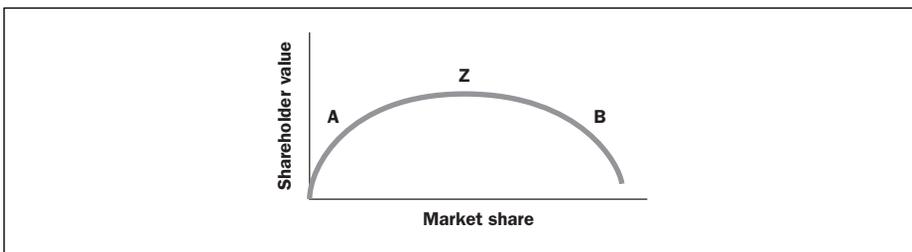
The owners of businesses have a right to demand that directors act in their best interests, and are increasingly using their powers to remove the stewards of their savings if they fail to do their utmost. To feel truly safe in their jobs managers should aim to create as much wealth as possible.

Arguably society as a whole will benefit if shareholder-owned firms concentrate on value creation. In this way scarce resources can be directed to their most valuable uses. Maximizing the productivity of resources enables high economic growth and higher standards of living.

Confusing objectives

Some managers claim that there are measures of performance that are synonymous with, or good proxies for, shareholder wealth – such as customer satisfaction, market leadership or lowest-cost producer. These are then set as ‘strategic objectives’. In many cases achieving these goals does go hand in hand with shareholder returns but, as Figure 6.4 shows, the pursuit of these objectives can be taken too far. There is frequently a trade-off between shareholder value and these proxy goals. Taking market share as an example: it is apparent that for many firms increasing market share will bring greater economies of scale, create barriers to entry for potential competitors and help establish brand loyalty, among other benefits. This sort of situation is demonstrated by moving from A to Z in Figure 6.4. High market share is clearly an important factor in many industries but some firms seem to become trapped in an obsessive quest for market share.

FIGURE 6.4
Market share as a strategic objective can be taken too far



The car industry is notorious for its very poor returns to shareholders combined with addiction to market share data. For example, the Detroit car makers averaged returns on capital of 3 percent per year in the 1990s (*The Economist*, 23 February 2002, p. 100). Perhaps some in the industry have taken matters too far and ended up at point B in Figure 6.4. Enormous investment in plant capacity, marketing and price promotions has created a situation where the risk-adjusted returns on the investment are lower than the optimum.

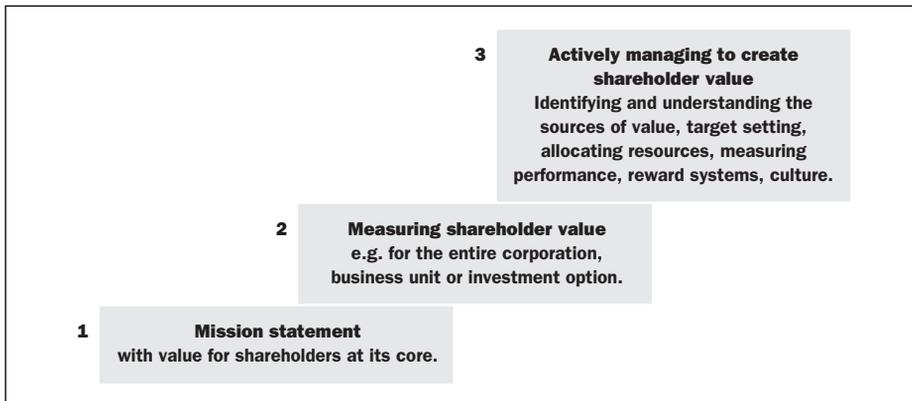
Three steps to value

There are three steps to creating shareholder value. First, obtain awareness of, and a genuine commitment to, a shareholder-wealth-enhancing mission throughout the organization. Second, put in place techniques for measuring whether value is being created at various organizational levels. Make sure everyone understands and respects the measures adopted. Third, ensure that every aspect of management is suffused with the shareholder value objective, from human resource management to research and development.

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FIGURE 6.5

The three steps of value-based management



It is clearly important to have a management team that both understand and are fully committed to shareholder value. To implement true shareholder wealth maximization, managers need to know how to measure the wealth-creating potential of their actions. Before turning to appropriate methods of evaluating value creation we will examine some of the more popular and increasingly dated measurement techniques used to guide (or misguide) a business.

Earnings-based management's failings

The *Financial Times's* Lex column expressed a view on the traditional accounting-based performance measure of earnings (profits) per share, in the column on 7 May 1996.

How do you know a company is doing well? When earnings per share (eps) are growing rapidly, would be the standard reply. Eps is the main valuation yardstick used by investors; it has also become something of a fixation within companies. Rentokil, most famously among UK companies, has a target of boosting eps by at least 20 per cent a year. One of the reasons it gobbled up rival services group, BET, was to keep that growth rate going a few more years. But eps is not a holy grail in determining how well a company is performing. This is not merely because management still have latitude in deciding what earnings to report; it is because eps growth says little about whether a company is investing shrewdly and managing its assets effectively. It may, for example, be possible to boost eps by stepping up the rate of investment. But unless the return on investment exceeds the cost of capital, a company will be destroying value.

There are many reasons why earnings can mislead in the measurement of value creation, some of which are:

- accounting is subject to distortions and manipulations;
- the investment made is often inadequately represented;
- the time value of money is excluded from the calculation;
- risk is not considered.

The trouble with accounting numbers

When drawing up profit and loss accounts and balance sheets accountants have to make judgments and choose a basis for their calculations. They try to match costs and revenues. Unfortunately for the users of the resulting 'bottom line' figures, there can be many alternative approaches, which give completely different results and yet all follow accounting body guidelines.

Take the example of the identical companies X and Y. These have just started up and in the first three years, annual profits of £3m before deducting depreciation are expected. Both companies invested their entire initial capital of £10m in plant and machinery. The accountant at X takes the view that the machinery has a useful life of ten years and that a 25 percent declining balance depreciation is appropriate. The accountant at Y, after reviewing the information on the plant and machinery, is more pessimistic and judges that a seven-year life with straight-line depreciation more truly reflects the future reality. The first three years' profits are shown in Table 6.1.

The underlying economic position is the same for both company X and company Y, but in the first two years, company X appears to be less profitable.

Outside observers and management comparing the two companies may gain a distorted view of quality of stewardship and the potential of the firm. Investment decisions and incentive schemes based on profit figures can lead to sub-optimal decisions and behavior. They may also lead to deliberate manipulation. There are several arbitrary accounting allocations that make comparisons and decisions difficult. These concern, for example, goodwill and provisions, extraordinary and exceptional items and the treatment of research and development expenditure.

TABLE 6.1
Companies X and Y: Profits for the first three years

	Year (£000s)		
	1	2	3
Company X			
Pre-depreciation profit	3,000	3,000	3,000
Depreciation	<u>2,500</u>	<u>1,875</u>	<u>1,406</u>
Earnings	500	1,125	1,594
Company Y			
Pre-depreciation profit	3,000	3,000	3,000
Depreciation	<u>1,429</u>	<u>1,429</u>	<u>1,429</u>
Earnings	1,571	1,571	1,571

Ignoring the investment money sacrificed

Examining earnings per share growth as an indicator of success fails to take account of the investment needed to generate that growth. Take the case of companies A and B (*see* Table 6.2), both of which have growth in earnings of 10 percent per year and are therefore equally attractive to an earnings-based analyst or manager.

TABLE 6.2
Companies A and B: Earnings

	Year (£000s)		
	1	2	3
Earnings of A	1,000	1,100	1,210
Earnings of B	1,000	1,100	1,210

To a value-oriented analyst A is much more interesting than B if we allow for the possibility that less additional investment is needed for A to create this improving profits pattern. For example, both firms need to offer credit terms to their customers: however B has to offer much more generous terms than A to gain sales; so it has to invest cash in supporting higher debtor balances. B is also less efficient in its production process and has to invest larger amounts in inventory for every unit increase in sales.

When B's accounts are drawn up the additional debtors and inventory are included as an asset in the balance sheet and do not appear as a cost element in the profit and loss account. This results in the costs shown in the profit and loss account understating the cash outflow during a period.

If we examine the cash flow associated with A and B (*see* Table 6.3) we can see immediately that A is generating more shareholder value (assuming the pattern continues and all other factors are the same).

Table 6.3 illustrates the conversion from earnings to cash flow figures.

TABLE 6.3
Companies A and B: Earnings and cash flow

Year	Company A			Company B		
	£000s			£000s		
	1	2	3	1	2	3
Profit (earnings)	1,000	1,100	1,210	1,000	1,100	1,210
Increase in debtors	0	20	42	0	60	126
Increase in inventory	0	30	63	0	50	105
Cash flow before tax	1,000	1,050	1,105	1,000	990	979
Percentage change		+5%	+5.2%		-1%	-1.1%

If B also has to invest larger amounts in vehicles, plant, machinery and property for each unit increase in sales and profit than A the difference in the relative quality of the earnings growth will be even more marked.

Time value

It is possible for growth in earnings to destroy value if the rate of return earned on the additional investment is less than the required rate. Take the case of a team of managers trying to decide whether to make a dividend payment of £10m. If they retained the money within the business both earnings and cash flow would rise by £1,113,288 for each of the next ten years. Managers motivated by earnings growth might be tempted to omit the dividend payment. Future earnings would rise and therefore the share price would also rise on the announcement that the dividend would not be paid. Right? Wrong! Investors in this firm are likely to have a higher annual required rate of return on their £10m than the 2 percent offered by this plan. The share price will fall and shareholder

value will be destroyed. What the managers forgot was that money has a time value and investors value shares on the basis of *discounted* future cash flows.

It seems so obvious that a 2 percent rate of return on invested money is serving shareholders badly. Yet how many companies do you know holding tens or hundreds of millions of cash rather than giving back to shareholders to invest elsewhere? Sure, it gives managers a greater sense of security to have all that cash around – how can the company be liquidated and they lose their jobs? – but shareholders would rather this money was used more effectively. Any money that cannot be used to generate good returns should be handed back to them. If earnings per share are rising what have the shareholders got to complain about? retort the managers. The thundering reply is: it is easy to increase earnings per share just by holding onto ever-larger quantities of money; what shareholders want is a return greater than the opportunity cost of capital (the time value of money) – the return available elsewhere for the same level of risk.

A variation on the theme of growing eps by investing large sums is to acquire other companies. In the case of Vodafone (Exhibit 6.2) shareholders are worried that managers are incentivized to increase eps with insufficient attention paid to the amount of investment required by shareholders to boost these accounting numbers.

Gent's latest package raises acquisition fear

By Robert Budden, Telecommunications correspondent

Analysts and investors in Vodafone have started questioning some of the performance targets behind Sir Christopher Gent's latest bonus package.

They argue that the new targets could over-encourage the chief executive to pursue more acquisitions.

Attention is focusing on Sir Christopher's new 9m share options package, where the award of options is linked to earnings per share targets. To receive his total entitlement to the estimated 9m options, Sir Christopher must deliver challenging group eps growth of 15 per cent a year over and above retail price inflation.

Analysts said this top hurdle was tough, but warned it could encourage Sir Christopher to embark on more acquisitions to hit the eps targets.

'These targets include acquired eps,' said one analyst, 'so an easy way to grow eps would be to acquire companies on a lower multiple.'

Vodafone confirmed that if it were to take over companies trading on lower price earnings multiples this could boost its earnings per share figure and so trigger higher payouts. But this could jeopardise its other performance based targets linked to the factors such as share price performance or growth in average revenues per user.

'We would be wary of further acquisitions,' said one large shareholder.

'An acquisition strategy that fits in terms of extending their global footprint would have to be proved to be rapidly enhancing to shareholder value.'

Some analysts are also believed to be unhappy that Sir Christopher's share options are tied to eps 'before goodwill amortisation and exceptional items', because they fear this protects him against any future write-downs against acquisitions.

EXHIBIT 6.2 Gent's latest package raises acquisition fear

Source: *Financial Times* 24 June 2002

Ignoring risk

Focussing purely on the growth in earnings fails to take account of another aspect of the quality of earnings: risk. Increased profits that are also subject to higher levels of risk require a higher discount rate. Imagine a firm is contemplating two alternative growth options with the same expected earnings, of £100,000 per year to infinity. Each strategy is subject to risk but S has a wider dispersion of possible outcomes than T (*see* Table 6.4).

Investors are likely to value strategy T more highly than strategy S. Examining crude profit figures, either historic or projected, often means a failure to adequately allow for risk. In a value-based approach it is possible to raise the discount rate in circumstances of greater uncertainty – more on this in Chapter 10.

TABLE 6.4
Probabilities of annual returns on strategies S and T

	Strategy S		Strategy T	
	Outcome earnings (profits) £	Probability	Outcome earnings (profits) £	Probability
	-100,000	0.10	80,000	0.10
	0	0.20	90,000	0.15
	100,000	0.40	100,000	0.50
	200,000	0.20	110,000	0.15
	300,000	0.10	120,000	0.10
<i>Expected outcome</i>	£100,000		£100,000	

Worked example 6.1 EARNINGS GROWTH AND VALUE

Earnings and earnings per share growth can lead to higher shareholder value in some circumstances. In others it can lead to value destruction. Shareholder value will rise if the return obtainable on new investment is at least as great as the required rate of return for the risk class. Consider EPSOS plc, financed entirely with equity capital and with a required rate of return of 15%. To make the example simple we assume that EPSOS does not need to invest in higher levels of working capital if sales expand. EPSOS pays shareholders its entire earnings after tax every year and is expected to continue doing this indefinitely. Earnings and cash flow amount to £100m per year. (The amount charged as depreciation is just sufficient to pay for investment to maintain sales and profits.) The value of the company given the opportunity cost of shareholders' money of 15% is $£100\text{m}/0.15 = £666.67\text{m}$.

	<i>£m</i>
Sales	300.00
Operating expenses	<u>157.14</u>
Pre-tax profit	142.86
Taxes @ 30%	<u>42.86</u>
Profits and cash flow after tax	<u>100.00</u>

Now imagine that EPSOS takes the decision to omit this year's dividend. Shareholders are made poorer by £100m now. However, as a result of the additional investment in its operations for the next year and every subsequent year sales, earnings, eps and cash flows after tax will rise by 20%. This is shown below.

	<i>£m</i>
Sales	360.00
Operating expenses	<u>188.57</u>
Pre-tax profit	171.43
Taxes @ 30%	<u>51.43</u>
Profits and cash flow after tax	<u>120.00</u>

Earnings have grown by an impressive 20%. Also value has been created. The extra £20m cash flow per annum stretching into the future is worth $\text{£}20\text{m}/0.15 = \text{£}133.33\text{m}$. This is achieved with a £100m sacrifice now. Here a growth in earnings has coincided with an increase in value. £33.33m of value is created.

Now consider a scenario in which sales growth of 20% is achieved by using the £100m to expand the business, but this time the managers, in going for sales growth, push up operating expenses by 32%. Earnings and cash flow increase by a respectable 6.81%, but, crucially, value falls.

	<i>£m</i>
Sales	360.00
Operating expenses 157.14×1.32	<u>207.42</u>
Pre-tax profit	152.58
Taxes @ 30%	<u>45.77</u>
Profits and cash flow after tax	<u>106.81</u>

The incremental perpetual cash flow is worth a present value of $\text{£}6.81\text{m}/0.15 = \text{£}45.4\text{m}$. But the 'cost' of achieving this is the sacrifice of £100m of income now. Overall shareholder value has been destroyed despite earnings and eps growth. It is surprising how often senior managers make this basic error.

For an example of a real company growing earnings (profits carefully defined as before the deduction of interest, tax, depreciation and amortization) but producing poor returns on invested capital we again turn to Vodafone – see Exhibit 6.3. Perhaps we should not focus exclusively on income over a few recent years. Perhaps this near term sacrifice is worth it. Perhaps net cash flows will rocket once the basic infrastructure is in place. Perhaps.

A wake-up call for bean counters

John Plender Lombard

There was something faintly surreal about the accounts of telecom companies in the 1990s bubble, with their multiple definitions of profit and their customary invitation to ignore the bottom line loss. Now that the bubble has burst there is still a hint of surrealism about, as I found when thumbing through Vodafone's figures last week.

Vodafone is now the 13th largest company in the world measured by stock market capitalisation. The obvious pertinent question is whether, when Vodafone's managers talk of 'enlarging our footprint', they are employing a euphemism for size for size's sake or whether they are creating real value.

The preliminary announcement contains a welter of figures, including a loss for the year of £9.8bn. ('Once again we have delivered excellent results,' says Lord MacLaurin, the chairman.) Then you have operating profit before goodwill amortisation and exceptional items; adjusted earnings per share; earnings before interest; tax, depreciation and amortisation (ebitda); and free cash flow.

These numbers are more flattering. Understandably enough, they are also the ones on which Sir Christopher Gent, Vodafone's outgoing chief executive, chooses to dwell.

I emphasise that this is no criticism of Sir Christopher or Vodafone, which observes the normal reporting conventions, but of the conventions themselves. Despite the shareholder value movement, traditional disclosure is hopelessly deficient in explaining the efficiency with which companies deploy capital.

Ebitda, earnings per share, free cash flow and the rest mean nothing without adequate information on the capital used to generate them. Yet nobody has had the wit to ask the quoted companies to report routinely their weighted average cost of capital along with some sensible measure of return on capital.

For that you have to turn to a securities analyst like Mustapha Omar at brokers Collins Stewart. His figures will tell you that Vodafone's cash flow return on investment stopped covering its cost of capital in 2000. Given the wholesale destruction of value since then, he worries that Arun Sarin, the incoming chief executive, is already talking about those damned footprints again ... Forcing companies, analysts and investors to focus on whether a surplus is being earned over the cost of capital could do wonders for value creation.

EXHIBIT 6.3 Big feet, shrinking values

Source: *Financial Times* 13/14 September 2003

Return on capital employed (ROCE) has failings

It is becoming clear that simply examining profit figures is not enough for good decision-making and performance evaluation. Obviously the amount of capital invested has to be considered alongside the income earned. This was recognized long before the development of value-based management, as signified by the widespread use of a ratio of profits to assets employed. There are many variations on this theme: return on capital employed (ROCE), return on investment (ROI), return on equity (ROE) and accounting rate of return (ARR), but they all have the same root. They provide a measure of return as a percentage of resources devoted. The major problem with using these metrics of performance is that they are still based on accounting data. The profit figure calculations are difficult enough, but when they are combined with balance sheet asset figures we have a recipe for unacceptable distortion. The *Financial Times* puts it this way in its Lex column of 7 May 1996:

Unfortunately, the crude figures for return on capital employed – operating profit/capital employed – that can be derived from a company's accounts are virtually useless. Here the biggest problem is not so much the reported operating profit as the figures for capital employed contained in the balance sheet. Not only are assets typically booked at historic cost, meaning they can be grossly undervalued if inflation has been high since they were acquired; the capital employed is also often deflated by goodwill write-offs. Once balance sheets have been shrunk, pedestrian profits translate into fabulous returns.

Added to the list of problems is the issue of capitalization. That is the extent to which an item of expenditure is written off against profits as an expense or taken on to the balance sheet and capitalized as an asset. For example, firms differ in their treatment of R&D; companies that spend significant sums on R&D and then have a policy of writing it off immediately are likely to have lower asset value than those which do not write it off against profits in the year of expenditure. Cross-company comparisons of profits/assets can therefore be very misleading.

Focussing on accounting rates of return can lead to short-termism. Managers who are judged on this basis may be reluctant to invest in new equipment as this will raise the denominator in the ratio, producing a poor ARR in the short term. This can destroy value in the long term. Fast-growing companies needing extensive investment in the short term with the expectation of reaping rich rewards in the long term should not be compared with slow-growth and low-investing firms on the basis of ARR despite the current low ARR, they are more likely to outperform in terms of value in the long term.

Focussing on earnings is not the same as value

One of the most pervasive myths of our time is: ‘**But our shareholders do focus on eps and ARR, don’t they?**’ – and it is easy to see why. Senior executives when talking with institutional shareholders and analysts often find the conversation reverting to a discussion of short-term earnings forecasts. If a merger is announced directors feel the need to point out in press releases that the result will not be ‘earnings dilutive’ in the forthcoming year.

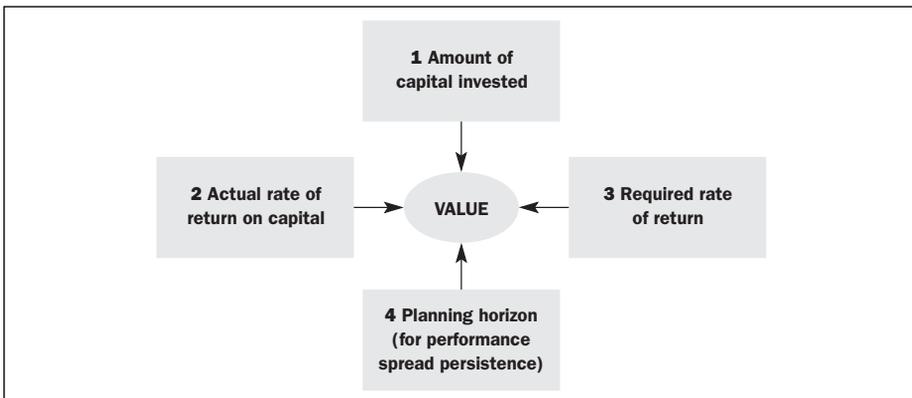
This surface noise is deceiving. Intelligent shareholders and analysts are primarily interested in the long-term cash flow returns on shares. The earnings attributable to the next couple of years are usually an insignificant part of the value of a share. Over two-thirds of the value of a typical share is determined by income to be received five or more years hence (see Chapter 13 for these calculations). Knowledge of this or next year’s earnings is not particularly interesting in itself. It is sought because it sheds light on the medium- and long-term cash flows.

There are hundreds of quoted companies that do not expect to produce any positive earnings at all in the next two to five years and yet often these shares are among the most highly valued in the market. There are dozens of biotechnology companies that have tapped shareholders for funds through rights issues and the like for years. Some have become massive concerns and yet have never made a profit or paid a dividend. The same applies to internet companies, and, in the past it was true of satellite television operators (for example BSkyB) which have now reached the phase of high cash generation. Exhibit 6.4 describes what investors are looking for.

How a business creates value

Value is created when investment produces a rate of return greater than that required for the risk class of the investment. Shareholder value is driven by the four factors shown in Figure 6.6.

FIGURE 6.6
The four key elements of value creation



Investment community piles on pressure for better returns

Companies need increasingly to develop medium-term corporate strategies which will enable them meet the rising expectations of those who provide their equity capital

Nigel Page

Tapping into the booming liquidity of global capital markets is the corporate ideal – but the gatekeepers of that liquidity, the global investor and analyst communities, are basing their investment strategies on increasingly focused information. In this environment, the historical reporting model is living on borrowed time – investors, who typically base share price valuations on their forecasts of future cash flows, demand forward-looking information to feed into their valuation models.

Management is increasingly sensitive to the stark fact that the use of equity capital is not ‘free’ – it has been invested in the hope of earning a return. It is this required return . . . that defines the company’s cost of equity capital. Management can only create value for shareholders if the company consistently generates a return on capital greater than its cost of capital . . .

For companies, the challenge must be to use this escalating value focus in their strategic planning, and in measuring performance. Once the internal

systems are in place, the priority is to establish effective communication into the marketplace. . . .

‘Historical cost accounting measures are becoming less relevant, with more companies using value-based information and non-financial indicators to judge performance internally. Greater disclosure in these areas will allow investors to make more informed decisions on the potential future of companies.’

The international investment community is well aware of the limitations of annual reports, which provide emphasis on accounting profit – itself no real indicator of the creation of economic value . . .

Analysts and institutional investors focus much of their research on company strategy and the ‘value platforms’ underlying that strategy and recent surveys of investors’ demand for, and use of, information confirm their desire for more forward-looking information, as well as the importance of drivers of future performance to their investment decisions.

EXHIBIT 6.4 Investment community piles on pressure for better returns

Source: *Financial Times*, 10 December 1999, FT Director (special section), p. VIII

The difference between the second and third elements in Figure 6.6 creates the *performance spread*. The performance spread is measured as a percentage spread above or below the required rate of return, given the finance provider’s opportunity cost of capital. Value is destroyed if 3 is greater than 2, and is created when 2 is greater than 3.

The absolute amount of value generated is determined by the quantity of capital invested multiplied by the performance spread. So, for example, if Black plc has a required rate of return of 14 percent per annum and actually produces 17 percent on an investment base of £1,000,000 it will create £30,000 of value per year:

$$\begin{aligned}
 \text{Annual value creation} &= \text{Investment} \times (\text{actual return} - \text{required return}) \\
 &= I(r - k) \\
 &= \pounds 1,000,000 \times (0.17 - 0.14) = \pounds 30,000
 \end{aligned}$$

The fourth element in Figure 6.6 needs more explanation. It would be unreasonable to assume that positive or negative return spreads will be maintained forever. If return spreads are negative, presumably managers will (eventually) take the necessary action to prevent continued losses. If they fail to respond then shareholders will take the required steps through, say, sackings or the acceptance of a merger offer. Positive spreads arise as a result of a combination of the attractiveness of the industry and the competitive strength of a firm within that industry (see Chapter 7). High returns can be earned because of market imperfections. For example, a firm may be able to prevent competitors

The higher the initial performance spread the more attractive market entry seems to potential competitors.

entering its market segment because of economies of scale, brand strength or legal exclusion through patents. However most firms will sooner or later experience increased competition and reduced margins. The higher the initial performance spread the more attractive market entry seems to potential

competitors (or substitute product developers). Examples of industries that were at one time extremely profitable and which were penetrated to the point where they have become highly competitive include personal computers and silicon chip manufacture.

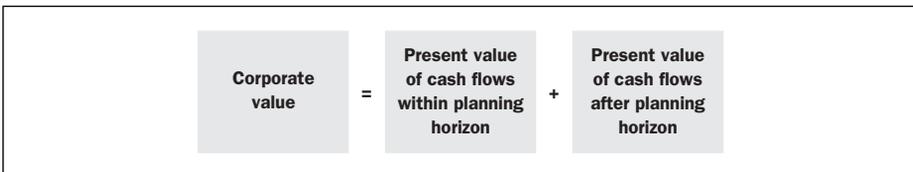
In shareholder value analysis it is usually assumed that returns will, over time, be driven towards the required rate of return. At some point in the future (the planning horizon) any new investment will, on average, earn only the minimum acceptable rate of return.

Any new investment will, on average, earn only the minimum acceptable rate of return.

Having said this, we do acknowledge that there are some remarkable businesses that seem to be able to maintain positive performance spreads for decades. Their economic franchises are protected by powerful barriers preventing serious competitive attack, e.g. Coca-Cola and

Gillette. Warren Buffett calls such companies ‘inevitables’ because there is every reason to believe they will be dominating their industries decades from now – see Arnold (2002). If we leave inevitables to one side, we see that for the majority of businesses their value consists of two components, as shown in Figure 6.7.

FIGURE 6.7
Corporate value



In the second period (after the planning horizon), even if investment levels are doubled, corporate value will remain constant, as the discounted cash inflows associated with that investment exactly equal the discounted cash outflows.

If it is assumed that Black plc can maintain its 3 percent return spread for ten years and pays out all income as dividends then its future cash flows will look like this:

Years:	<u>1 → 10</u>	11 → infinity
Cash flow:	£170,000	£140,000

The value of the firm is the discounted value of these cash flows.

The discounted cash flow within the planning horizon is:

$$\begin{aligned} \text{£170,000} \times \text{annuity factor (10 years, 14\%)} &= \text{£170,000} \times 5.2161 \\ &= \text{£886,737} \end{aligned}$$

plus the discounted cash flow after the planning horizon:

£140,000/0.14 = £1,000,000. This is then discounted back 10 years:

$$\frac{1,000,000}{(1 + 0.14)^{10}} = \text{£269,744}$$

<i>Less</i> initial investment	(£1,000,000)
Value created	£156,481

The value of the firm = Capital (£1,000,000) + Value created (£156,481)
= **£1,156,481**

An alternative approach: The value of the firm is equal to the initial investment in the firm (£1,000,000) plus the present value of all the values created annually.

Investment	+	Value created within planning horizon	+	Value created after planning horizon
£1,000,000	+	£30,000 × 5.2161 £30,000 × Annuity factor (10 years, 14%)	+	£1,000,000 (0.14 – 0.14)
£1,000,000	+	£156,481	+	0
				= £1,156,481

The five actions for creating value

Good growth occurs when a business unit or an entire corporation obtains a positive spread. Bad growth, the bane of shareholders, occurs when managers invest in strategies that produce negative return spreads. This can so easily happen if the focus of attention is on sales and earnings growth. To managers encouraged to believe that their job is to expand the business and improve the

bottom line, acceptance of the notion of bad growth in profits is a problem. But, as we have seen, it is perfectly possible to show growing profits on a larger investment base producing an incremental return less than the incremental cost of capital.

Figure 6.8 shows the options open to managers. This model can be applied at the corporate, business unit or product line level.

FIGURE 6.8
To expand or not to expand?

	Grow	Shrink
Positive performance spread	Value creation	Value opportunity forgone
Negative performance spread	Value destruction	Value creation

It has already been demonstrated that overall Black plc produces a more than satisfactory return on investment. Now assume that the firm consists of two divisions: a clothing factory and a toy import business. Each business is making use of £500,000 of assets (at market value). The clothing division is expected to produce an 11 percent return per annum over the next ten years whereas the toy division will produce a 23 percent per annum return over the same period. After the ten-year planning horizon both divisions will produce returns equal to their risk-adjusted required return: for the clothing division this is 13 percent and for the more risky toy division this is 15 percent.

The cash flows are:

Year	1 → 10	11 → infinity
Clothing	£55,000	£65,000
Toys	£115,000	£75,000

The annual value creation within the planning horizon is:

$$I \times (r - k)$$

Clothing	$£500,000 \times (0.11 - 0.13) = -£10,000$
Toys	$£500,000 \times (0.23 - 0.15) = +£40,000$

Despite the higher return required in the toy division, it creates value (calculating required rates of return is covered in Chapter 10). For the next ten years a 15 percent return is achieved plus a shareholder bonus of £40,000. This division could fit into the top left box of Figure 6.8. The management team may want to consider further investment in this unit so long as the marginal investment can generate a return greater than 15 percent. To pass up positive return spread

investments would be to sacrifice valuable opportunities and enter the top right box of Figure 6.8.

The clothing operation does not produce returns sufficient to justify its present level of investment. Growth in this unit would only be recommended if such a strategy would enable the division to somehow transform itself so as to achieve a positive spread. If this seems unlikely then the best option is probably retrenchment, a scaling down or withdrawal from the market. This will release resources to be more productively employed elsewhere, either within or outside of the firm. Such shrinkage would create value by reducing the drag this activity has on the rest of the firm.

This line of thought can assist managers at all levels to allocate resources. At the corporate level knowledge of potential good growth and bad growth investments will help the selection of a portfolio of businesses. At the business unit level, product and customer groups can be analyzed to assess the potential for value contribution. Lower down, particular products and customers can be ranked in terms of value. A simplified example of corporate level value analysis is shown in Figure 6.9.

In Figure 6.9, strategic business unit A (SBU_A) is a value destroyer due to its negative return spread. Perhaps there is over-investment here and shareholders would be better served if resources were transferred to other operations. SBU_B produces a small positive spread and decisions on its future will depend on the expected longevity of its contribution. SBU_C produces a lower return spread than SBU_E , but manages to create more value because of its higher future investment levels. Some businesses have greater potential than others for growth while maintaining a positive spread. For example, SBU_E might be a niche market player in fine china where greatly expanded activity would reduce the premium paid by customers for the exclusivity of the product – quickly producing negative spread on the marginal production. Strategic business unit C might be in mid-priced tableware competing on design where investment in the design and marketing teams might produce positive spread growth. Strategic business unit D is capable of high spreads and high investment producing the largest overall gain in value. The anti-ulcer drug, Zantac, when still under patent, produced large spreads and was sold in high volumes around the world, producing billions of pounds of value for GlaxoSmithKline.

The five actions available for increasing value are shown in the value action pentagon (Figure 6.10). The five actions in the value action pentagon could be applied to Black plc.

FIGURE 6.9

Value creation and strategic business unit (SBU) performance spreads

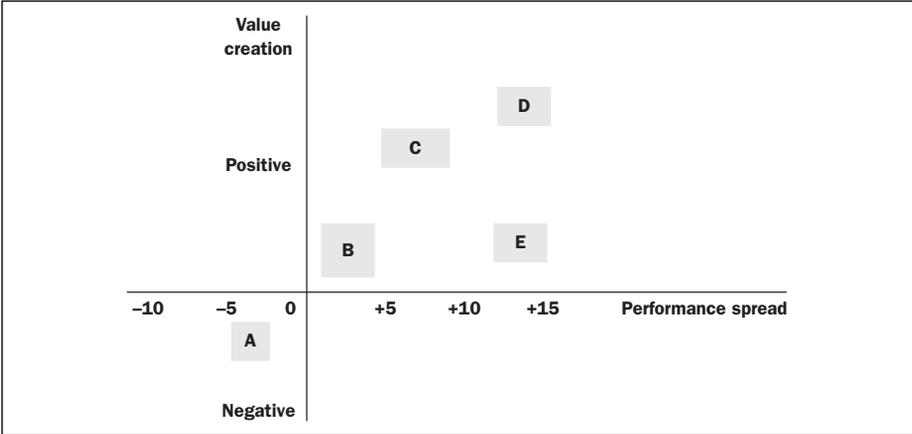
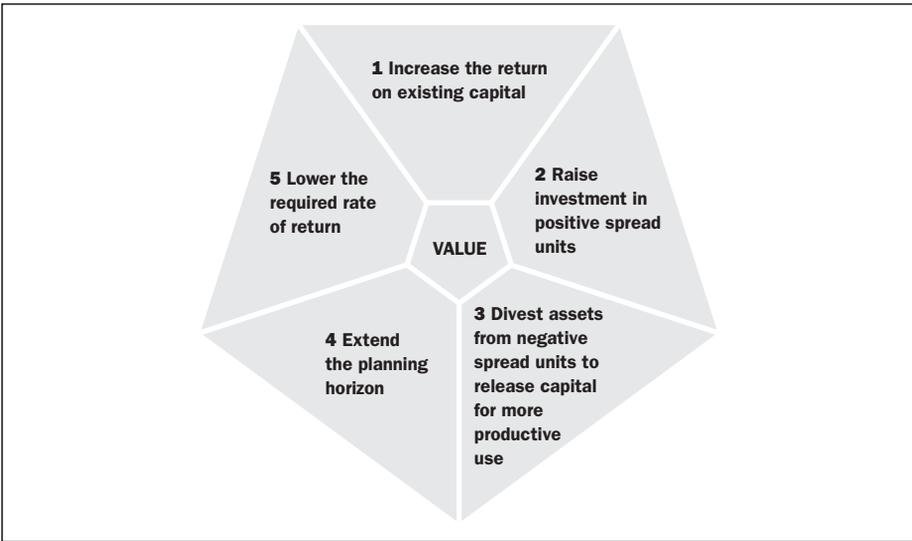


FIGURE 6.10

The value action pentagon



Increasing the return on existing capital

The value of Black of £1,000,000 + £156,481 could be increased if the management implemented a plan to improve the efficiency of their existing operations. If the rate of return on investment for the firm as a whole over the next ten years is raised to 18 percent then the firm’s value rises to £1,208,644, viz:

Annual value creation	= $I \times (r - k)$	
	= $\pounds 1,000,000 \times (0.18 - 0.14)$	
	= $\pounds 40,000$	
Present value over ten years	= $\pounds 40,000 \times \text{Annuity factor (10 years, 14\%)}$	
	= $\pounds 40,000 \times 5.2161 =$	$\pounds 208,644$
plus initial investment		<u>$\pounds 1,000,000$</u>
Corporate value		<u>$\pounds 1,208,644$</u>

An increase of $\pounds 52,163$ ($\pounds 1,208,644 - \pounds 1,156,481$) in value is available for every 1 percent improvement in return spread.

Raise investment in positive spread units

If Black could obtain a further $\pounds 500,000$ from investors with a required rate of return of 15 percent to invest in the toy division to produce a 23 percent return the value of the firm would rise to $\pounds 1,847,242$ ($\pounds 500,000$ being the new capital invested).

Annual value creation on clothing	=	$-\pounds 10,000$
Annual value creation on toys = $\pounds 40,000 \times 2$	=	<u>$\pounds 80,000$</u>
		<u>$\pounds 70,000$</u>
Over ten years		
Clothing: $-\pounds 10,000 \times \text{Annuity factor (10 years, 13\%)}$		
Toys: $\pounds 80,000 \times \text{Annuity factor (10 years, 15\%)}$		
Clothing: $-\pounds 10,000 \times 5.4262$	=	$-\pounds 54,262$
Toys: $\pounds 80,000 \times 5.0188$	=	<u>$\pounds 401,504$</u>
		<u>$\pounds 347,242$</u>
plus the initial investment		<u>$\pounds 1,500,000$</u>
Corporate value		<u>$\pounds 1,847,242$</u>

Divest assets

If Black could close its clothing division, release $\pounds 500,000$ to expand the toy division and achieve returns of 23 percent on the transferred investment then value increases dramatically:

Annual value creation	= $I \times (r - k)$	
	= $\pounds 1,000,000 \times (0.23 - 0.15)$	
	= $\pounds 80,000$	
Present value over ten years	= $\pounds 80,000 \times \text{Annuity factor (10 years, 15\%)}$	
	= $\pounds 80,000 \times 5.0188 =$	$\pounds 401,504$
plus initial investment		<u>$\pounds 1,000,000$</u>
Corporate value		<u>$\pounds 1,401,504$</u>

Extend the planning horizon

Sometimes steps can be taken to exploit a competitive advantage over a longer period than originally expected. For example, perhaps the toy division could negotiate a long-term exclusive import license with the supplier of an established premium-priced product, thus closing the door on the entry of competitors. If we suppose that the toy division will now produce a return spread of 23 percent for a 15-year period rather than 10 years the value of the company rises to £1,179,634, viz:

Annual value creation on clothing	=	-£10,000	
Annual value creation on toys	=	£40,000	
Present value over 10 years (clothing)			
=	-£10,000 × Annuity factor (10 years, 13%)		
		= -£10,000 × 5.4262	
		= -£54,262	
Present value over 15 years (toys)	=	£40,000 × Annuity factor (15 years, 15%)	
	=	£40,000 × 5.8474 = £233,896	
Total value creation	=	£233,896 - £54,262 =	£179,634
<i>plus</i> initial investment			<u>£1,000,000</u>
Corporate value			<u>£1,179,634</u>

Lower the required rate of return

It may be possible to lower the required rate of return by adjusting the proportion of debt to equity in the capital structure or by reducing business risk. (Capital structure is examined in more detail in Chapters 10 and 18.) Suppose that Black can lower its required rate of return by shifting to a higher proportion of debt, so that the overall rate falls to 12 percent. Then the value of the firm rises to £1,282,510.

Annual value creation	=	$I \times (r - k)$	
	=	1,000,000 × (0.17 - 0.12)	
	=	£50,000	
Present value over ten years	=	£50,000 × Annuity factor (10 years, 12%)	
Total value creation	=	£50,000 × 5.6502 =	£282,510
<i>plus</i> initial investment			<u>£1,000,000</u>
Corporate value			<u>£1,282,510</u>

(Many companies tend to borrow little. They finance their businesses almost entirely through equity (shareholders') money. The motivation is often to reduce the risk of financial distress. This may be due to a desire to serve the interests of shareholders, but more often it is because managers want to avoid financial distress for their own safety. They can become too cautious and forgo the opportunity of reducing the overall cost of capital (discount rate) by not using a higher proportion of cheaper debt finance.)

Conclusion

The switch from management by accounting numbers to management using financial concepts such as value, the time value of money and opportunity cost is only just beginning. Some highly successful firms are leading the way in insisting that each department, business unit and project add value to shareholders' investment. This has required a re-examination of virtually all aspects of management, ranging from performance measurement systems and strategic planning to motivational schemes and training programs. The rest of this section of the book builds on the basic principles behind value-based management discussed in this chapter.