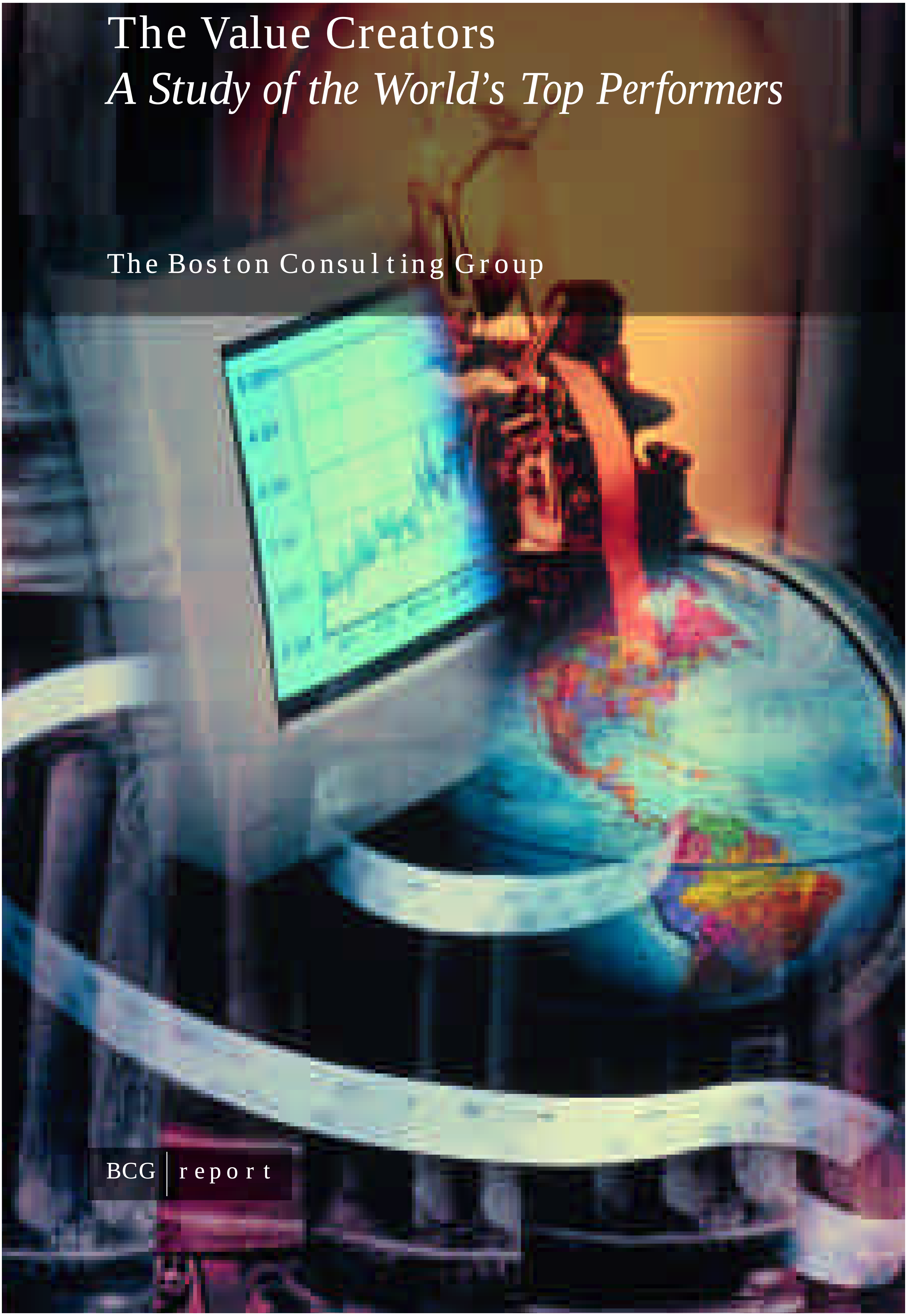
The Value Creators
A Study of the World's Top Performers

The Boston Consulting Group



BCG | report

The Value Creators

A Study of The World's Top Performers

by The Boston Consulting Group http://www.bcg.com

Contents

Dr Daniel Stelter, a Vice President of The Boston Consulting Group, based in the firm's Munich office, led the research on which this report is based. Dr Stelter heads BCG's Corporate Development practice in Germany. His co-authors were:

- Mark Joiner, a Vice President based in New York, who leads BCG's Corporate Development practice worldwide
- Eric Olsen, a Vice President based in Chicago, who leads BCG's Value Management expertise worldwide
- Neil Monnery, a Vice President based in London, who leads BCG's Corporate Development practice in Europe
- Xavier Mosquet, a Vice President based in Paris, who is the Chair of BCG's Marketing and Innovation Group for Europe
- Ahmed Fahour, a Vice President based in Sydney, who leads BCG's Corporate Development practice in Asia Pacific.

For more information on The Boston Consulting Group's capabilities in value management and corporate development, contact the individuals listed below

Europe

Amsterdam	Jan Willem Maas
Brussels	Yvan Jansen
Helsinki	Harri Andersson
London	Neil Monnery
Madrid	Juan González
Milan	Tommaso Barracco
Munich	Daniel Stelter
Paris	Joel Benzimra & Xavier Mosquet
Warsaw	Jean Baron-Mazloumian
Zurich	Elmar Wiederin

The Americas

Atlanta	Michael Deimler
Chicago	Eric Olsen & Gerry Hansell
Dallas	J Puckett
New York	Mark Joiner & Jeff Kotzen
Sao Paulo	Rob Davies
San Francisco	Art Peck
Toronto	Peter Stanger
Washington	Rob Hutchinson

Asia Pacific

Hong Kong	Tom Lewis
Mumbai	Ralph Heuwing
Singapore	Brett Schiedermayer
Sydney	Ahmed Fahour

The authors express special thanks to the people listed above for their input in the preparation and editing of this report. They would also like to thank Tony Tiernan, BCG's Marketing Director for Europe and the analysis team: Markus Flakus, Gerd Lüetjering and Monika Reiter.

Introduction

This report is based on the results of an extensive study conducted by The Boston Consulting Group. Our research examined the performance of 5,316 large quoted companies from around the world. Together, these companies account for approximately 80% of the total capitalisation of all the world's stock markets.

The study examined the companies' performance over the five-year period from the end of 1993 to the end of 1998. The main measure of performance was the average annual TSR (total shareholder return*), the rate at which the companies added value for their shareholders. The top 100 companies in the world and in Europe were ranked and are listed in the study. The top 10 companies by industry sector and by nationality are also listed.

The study's aim was to ascertain how the best companies achieved superior performance. What strategic, financial or operational actions did their management take that resulted in an above-average increase in shareholder value? How does the creation of shareholder value differ by country or by industry sector? What lessons could be learned that can be applied more broadly to help companies and management teams define strategies for high value creation?

The message to managers that emerges from our findings is resoundingly clear and encouraging: *you are in charge*. The body of this report sets out our conclusions in detail, but in summary they are that:

- Managers have three levers that they can use to create value – the cash-flow margin, asset productivity and gross investment
- It is possible to outperform the market, whatever industry you are in – but the levers you choose to deploy will depend on the state of the business
- Growth has been the engine for value creation in the US, but in Europe restructuring has been the preferred lever
- Profitable growth companies create more value than restructuring companies
- Successful value creators build profitability first, then go for growth.

High achievers

The highest performing company over the period was Dell Computer, the American PC manufacturer. Dell's average TSR between year-end 1993 and 1998 was an astounding 153% per annum. Only America Online, the fast-growing Internet service provider, came anywhere near it, with a TSR of 143%. AOL was the only other company to exceed 100%.

The very top performers outstripped the rest of the pack by far. The gap between the top company and the 50th company's average annual TSR was 115 percentage points; the gap between the 50th and the 100th company was just over eight percentage points.

To shareholders, the difference between the very top performer (Dell Computer) and the still extraordinary performance of tenth-placed Compuware is vast. Whereas Dell's shareholder value multiplied more than 100-fold during the period, Compuware's multiplied 'only'12 times.

Further down the list of top performers, the average TSR of the lowest decile of the top 100 (numbers 91-100) was 30%. This is an excellent performance – the median for all companies in the study was 13% - which means that these companies, on average, increased their shareholder value 3.75 times.

It is a continual challenge to remain a top performer. Some have stumbled since the end of the period of the study (31.12.98) and are now fighting back. Others are sure to slip down the list in the coming months. Past performance is no guarantee of future performance. This is true for high performers and under-performers.

Exhibit 1

Value Management Terminology

Area	Measure/value lever	Technical term for industrial companies	Abbre-viation	Technical term for banks and insurance companies	Abbre-viation
External value creation	Investor's return	Total shareholder return	TSR	Total shareholder return	TSR
Proxy to external value creation	Residual income Change in residual income	Cash value added Λ cash value added	CVA Λ CVA	Added value on equity Λ added value on equity	AVE DAVE
Internal metrics	Change in profitability	Λ cash flow return on investment	Λ CFROI	Λ real return on equity	Λ RROE
	Change in cash flow margin	Λ cash flow margin	Λ CFM	Not relevant	
	Change in asset productivity	Λ capital turns	Λ AP	Not relevant	
	Growth	Λ capital invested	Λ CI	Λ equity	

** The total shareholder return over a period is the capital gain plus the dividend payments, relative to the share price at the start of the period, assuming that the dividends are immediately reinvested in the company.*

Executive Summary

The study

- *The Boston Consulting Group examined the performance of 5,316 large quoted companies around the world.*
  The performance measure used was the average annual rate of increase in value to the shareholders, or TSR, (total shareholder return) from the end of 1993 to the end of 1998.

- *The best performing company over the five years was Dell Computer.*
  Dell delivered an average annual TSR of 153%. The best performing European company was the German software firm SAP. The median annual return of the total sample was 13%.

- *The top performers in the study will not necessarily continue to dominate in the future.*
  Some of them have already stumbled. In fact, it is very difficult to maintain top performance over the long term. Only two companies beat their local markets every year of the last decade, they are Nokia, the Finnish mobile phone company and Aegon, the Dutch insurance company.

The methodology

- *TSR is the best measure of corporate value creation.*
  The study established that there is a very close correlation between TSR, an external measure of value creation, and the change in 'cash value added' (CVA), an internal measure. CVA is defined as profit less the cost of the company's capital. CVA, which is directly under the control of a company's managers, can be used as an internal proxy for TSR.

- *Managers have three levers within the business that they can use to create value.*
  These levers can be used to increase CVA: the cash-flow margin; the productivity of the company's assets; and the growth in gross investment.

- *Managers are in full control of the value creation process.*
  The study shows that the very best performing companies deploy all three value creation levers in three distinct waves. But they have to choose appropriately between them and then mobilise their organisation to deliver. The study demonstrates that long-term value creation is not an

accident or the result simply of market forces. It comes from making strategic choices about which of the three levers you use. Market forces will, of course, have an impact, but the encouraging news for business leaders is that companies can manage the level of value that they create.

The results

- *The best performing industries were Information/Communication and Telecommunications (IC&T) and Retail.*
  The top 10 performers in IC&T delivered an average TSR of 76% per annum. The top 10 companies of the retail sector were second with an average TSR of 49%.

- *Growth industries and companies create more value than restructuring ones.*
  The average TSR for the top ten companies in the growth industries was 43% per year. This is 20 percentage points higher than the average of the top ten restructuring industries.

- *American companies were more successful than their European counterparts.*
  America produced a far higher proportion of the very top performers during the period of the study. The average TSR per annum of the top 50 American companies during the period was 55%; the average TSR of the top 50 European companies was 40%. Over a five-year period that is the difference between a nine-fold increase in shareholder value and a 5.4 times increase.

- *American companies tended to create value by growth; Europeans tended to create it by restructuring.*
  All the top performers whose capital invested more than quadrupled over the period were American. Even a company as large as Microsoft, with a market capitalisation of nearly € 300 billion, ($354 billion) increased its capital invested by more than 200%.
  On the other hand, of the five top performers that recorded the highest rates of increase in cash-flow margin and asset productivity (i.e. gains from restructuring operations) four were European.

Implications for managers

- *You can outperform the market, regardless of your industry sector, market or profitability-level.*
  Some companies in under-performing industries put in a spectacular performance and some companies in the over-performing industries

didn't. Monsanto, in the chemicals sector, recorded a higher TSR than the average of the very successful IC&T industry. Also, in each of the local markets, the top companies showed a performance superior to the world-wide or European average.

Regardless of the starting level of a company's current profitability or growth, improvement that exceeds the market's expectations will result in a superior TSR performance.

- *Successful value creators first build profitability, then grow.*
  The value creation strategy has to take into account the current situation. Only when companies get their levels of profitability up to above the cost of capital can they create profitable and sustainable growth.

- *Managers need to focus actively on value creation.*
  This means employing an investor's perspective in managing the business portfolio and installing a consistent system of metrics and incentive systems geared towards value creation. In the long term the change in company culture will sustain the ability to create value.

Exhibit 2

The World's Top Ten Performers

Top 10 performers	Average annual TSR (94-98)	Relative importance of value drivers		
		Cash flow margin	Asset productivity	Growth of capital invested
1. Dell Computer (US)	153%	++	+++	+++
2. America Online (US)	143%	++	+	+++
3. SAP (Germany)	91%	-	+++	+++
4. Nokia (Finland)	79%	+++	+++	++
5. Hennes & Mauritz (Sweden)	69%	++	-	+++
6. Microsoft (US)	69%	++	-	+++
7. Cisco Systems (US)	67%	-	-	+++
8. Aegon* (Netherlands)	66%	++	NM	+++
9. Charles Schwab* (US)	65%	-	NM	+++
10. Compuware (US)	64%	++	++	+++

Source:Datastream, BCG Analysis

NOTE:Scale of importance:+ = low;++ = medium;+++ = high;NM = Not Meaningful

** For Financial Companies Real Return on Equity has been substituted for Cash Flow Margin*

The Sources of Value Creation

TSR is an external measure that includes both management performance and factors over which a company's managers have little or no direct control, such as interest rates or economic growth.

To isolate the sources of value creation that managers control, BCG examined a number of internal performance measures as proxies for TSR.
What we found is a close correlation between external value creation and the change in a company's cash value added (CVA). CVA is a company's profit less the capital charge: the cost of all the capital invested in the company.
(The concept has to be slightly adjusted to suit financial institutions, but the principles remain the same.)

The change in CVA is a function of three factors:

- Improvement in the company's cash flow margin;
- Improvement in the productivity of the company's assets; and
- The growth in investment.

These three factors are the main levers for creating shareholder value. Managers can also create value by optimising the cost of capital. However, this study focuses on the strategic and operational levers in the business, as opposed to financial management.

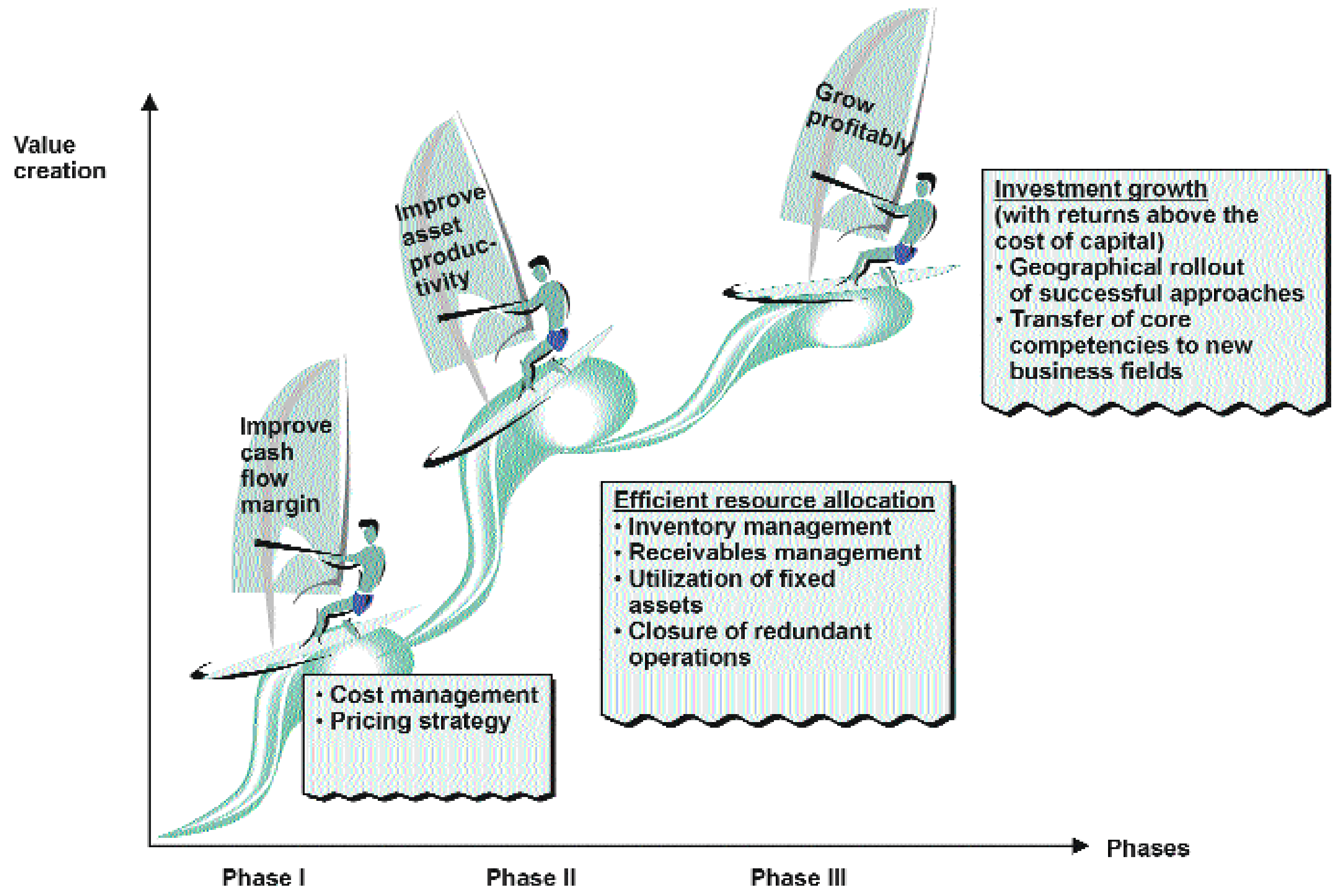
Managers hold these three levers in their hands. They can improve cash flow margins by better cost management and/or pricing strategy. Improvements in asset productivity come from more efficient resource allocation via, for example, better management of inventory or better utilisation of fixed assets.
Both are essentially inward looking, concerned with restructuring what the company already has.

The third lever, investment growth, comes from things like transferring core competencies to new business areas, or from rolling out successful products or services into new geographical markets. It is essentially an outward looking activity, concerned with creating new assets.

Value creation is not an accident; nor is it purely the work of market forces. A company's managers can manipulate the three levers that influence CVA and produce a superior return for their shareholders. The right levers in each case will depend on the industry that the company is in plus a number of other factors. Most top performing companies in the study used all three levers, rolling them out in waves that build powerfully on each other.

Exhibit 3

Surfing the Value Waves



The World’s Top Performers

Of the top 10 performers worldwide, six are American, and four European (one German, one Swedish, one Finnish and one Dutch). Six of the top 10 companies also come from one sector – information / communication & telecommunications (IC&T) – and four of those are American. The four other sectors in the top 10 (with one representative each) were media & entertainment, retail, insurance and banking.

The top 10 companies all scored strongly on investment growth. Safeway is the only company in the top 20 that had a growth in capital invested of less than 50%. By and large, companies that do not invest heavily do not produce spectacular shareholder returns.

The very top performers scored significantly less well on the restructuring levers: asset productivity and cash-flow margin. Here the measure used was the change in the cash flow return on investment (CFROI), the cash flow margin multiplied by the asset productivity. The explanation for the low scores on these dimensions is that these companies had previously restructured and so were already delivering excellent performance in asset productivity and cash-flow margin.

Exhibit 4

The World’s Top Ten Performers

Name	Nationality	Sector	Average annual TSR (94-98)	Market capitalisation (31.12.98)	
				€ (bn)	$(bn)
1.Dell Computer	US	IC&T	153%	78.9	93.1
2.America Online	US	Media & Entertainment	143%	60.2	71.0
3.SAP	Germany	IC&T	91%	18.0	21.3
4.Nokia	Finland	IC&T	79%	48.7	57.5
5.Hennes & Mauritz	Sweden	Retail	69%	14.4	16.8
6.Microsoft	US	IC&T	69%	293.2	345.9
7.Cisco Systems	US	IC&T	67%	124.2	146.5
8.Aegon	Netherlands	Insurance	66%	61.0	72.0
9.Charles Schwab	US	Banks	65%	19.1	22.5
10.Compuware	US	IC&T	64%	12.2	14.4

Among the top 50 American and top 50 European companies in the rankings, five showed an improvement in CFROI over the period of more than 15 percentage points. Of those five, four are European. They include Europe's top two performers, SAP and Nokia.

Dell is the only American company to obtain a top score on CFROI. Cisco Systems, Clear Channel Communications, Compaq and even the mighty Microsoft, were all among the top 20 performers worldwide, yet each of them recorded a decline in their CFROI over the period. However, the point here is that these companies did not need to focus on CFROI: they had already achieved high levels of profitability.

The data is clear: *profitable* investment growth is a far more powerful driver of TSR than are the restructuring levers of improvement in cash flow margin and asset productivity. During the period of the study, European companies were better at restructuring; American companies were better at growth. As a result, in the five years 1994 and 1998, American companies were disproportionately well represented among the very top performers.

Local markets

The study looked at both absolute total shareholder return rankings and rankings adjusted for local stock market performance. If differences across local stock markets were caused by external factors such as rising or declining local interest rates, then adjusting the rankings to be relative to local market average TSR performance would be the appropriate basis for worldwide comparisons. However, if differences across local market average TSRs were driven by the difference in local companies' relative successes in creating value through improved performance, then adjusting absolute company TSRs for the local stock market average TSR would be misleading.

After reviewing the drivers of local market performance, BCG based the rankings on absolute rather than local market adjusted TSR rankings. We took this approach for three reasons. First, in markets where the average local TSR exceeded the worldwide average (i.e. the United States), analysis indicated that management performance was a greater contributor to excess returns than were exogenous factors.

Secondly, when we did calculate the total shareholder returns for each company taking into account local market performance, it made little difference to the rank order. Among the top 20, Nokia dropped down two places, to below

Microsoft (this was because of Nokia's exceptional importance in the Finnish index) and three new companies entered the rankings (Takeda Chemicals at five, Pinault Printemps at 18 and Honda at 20). Dell Computer was still the undisputed champion.

Thirdly, capital moves to wherever the highest returns are expected. Investors typically take a global view, not a national one.

Long-term champions

We did, however, assess value creation consistency by examining each company in the context of its local market. This revealed that of those in the sample that had been listed for more than 10 years and that had a market capitalisation of over € 1 billion ($1.18 billion), there were only two that had outperformed their home market in every single one of those 10 years. As many as 26 succeeded in doing so in nine out of the 10 years.

Both of the long-term champions were European, both of them feature in the top 10, and both of them are based in relatively small domestic markets. They are Nokia and Aegon. Nokia outperformed the Finnish market by an annual average of 37 percentage points from 1988 to 1998; Aegon outperformed the Dutch market by an annual average of 21 percentage points. The reasons for these successes are analysed below.

Spectacular TSR wins Dell Computer world first place

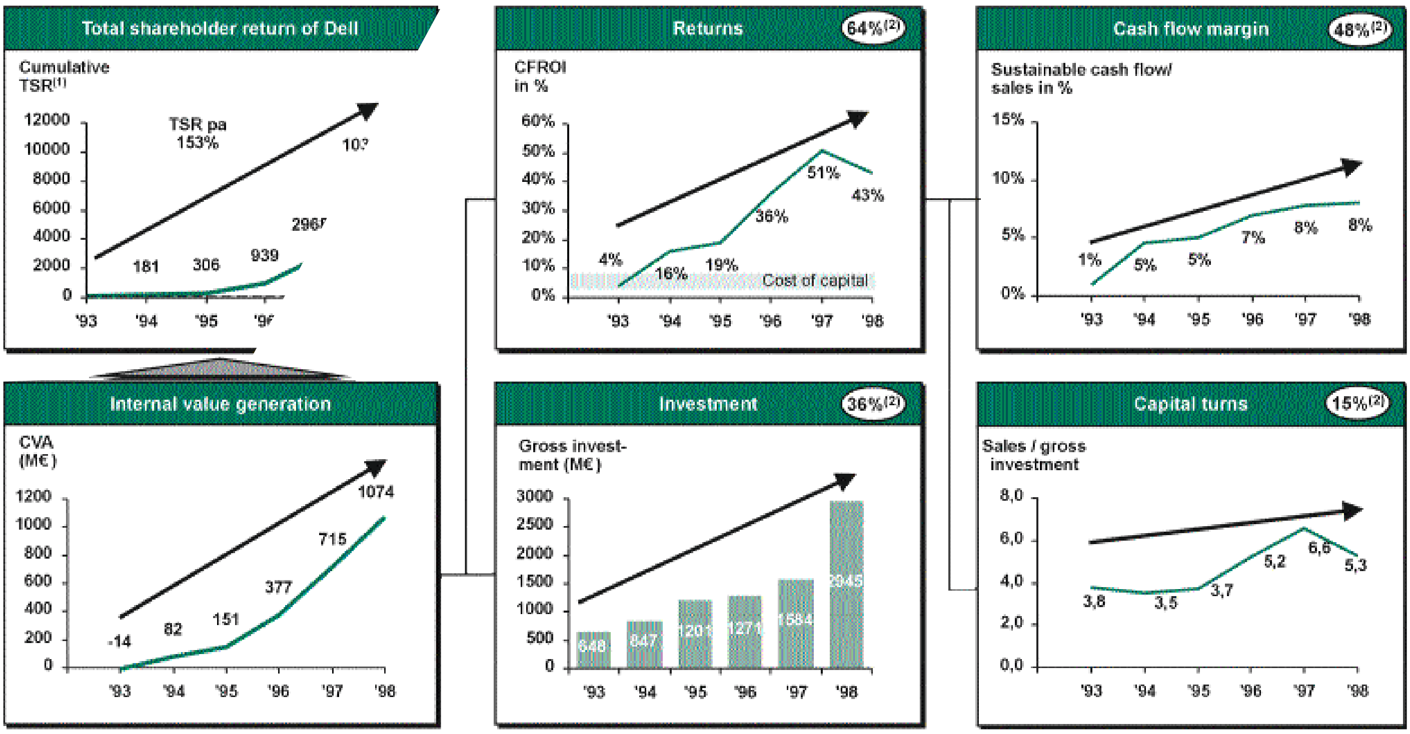
Dell Computer is the fourth biggest computer manufacturer in the world (after IBM, Hewlett-Packard and Compaq). Its TSR over the five-year period was spectacular – more than 50 percentage points higher than that of the company that came third (SAP). Value creation over the period was enhanced by a five-fold increase in the company's P/E ratio, driven by the cost of capital and growth.

Dell increased its CVA by over a € 1 billion ($1.18 billion) during the five-year period: roughly 50% of this came from growth in asset-efficient capital invested; and almost half came from an increase in its cash-flow margin.

The improvement in cash flow (from 1% of sales in 1993 to 8% in 1998) was largely brought about by the extensive use of Web technology and the reduction in supply-chain costs that this brought about. The company's Web site is already selling over € 16.5 million ($19.5 million) worth of goods online every day, and it is Dell's aim to have 50% of all its sales online by 2000.

Exhibit 5

Dell



(1) 31 December 1993 = 100
(2) XX% = relative contribution level to value increase 1993-98 (DCVA)
Source: BCG Val database, Datastream, Compustat, annual reports

Asset productivity improvements came from a strong focus on the management of working capital and the company's philosophy of 'build-to-order'. Dell reduced the average time that it holds inventory from 32 days in 1994 to only six days in 1998. We believe that this presents a challenging model to many hardware companies, from electronic appliances to automobiles: create direct customer relationships through the Internet and develop build-to-order manufacturing by sharing online data with suppliers and adopting pull-based manufacturing techniques.

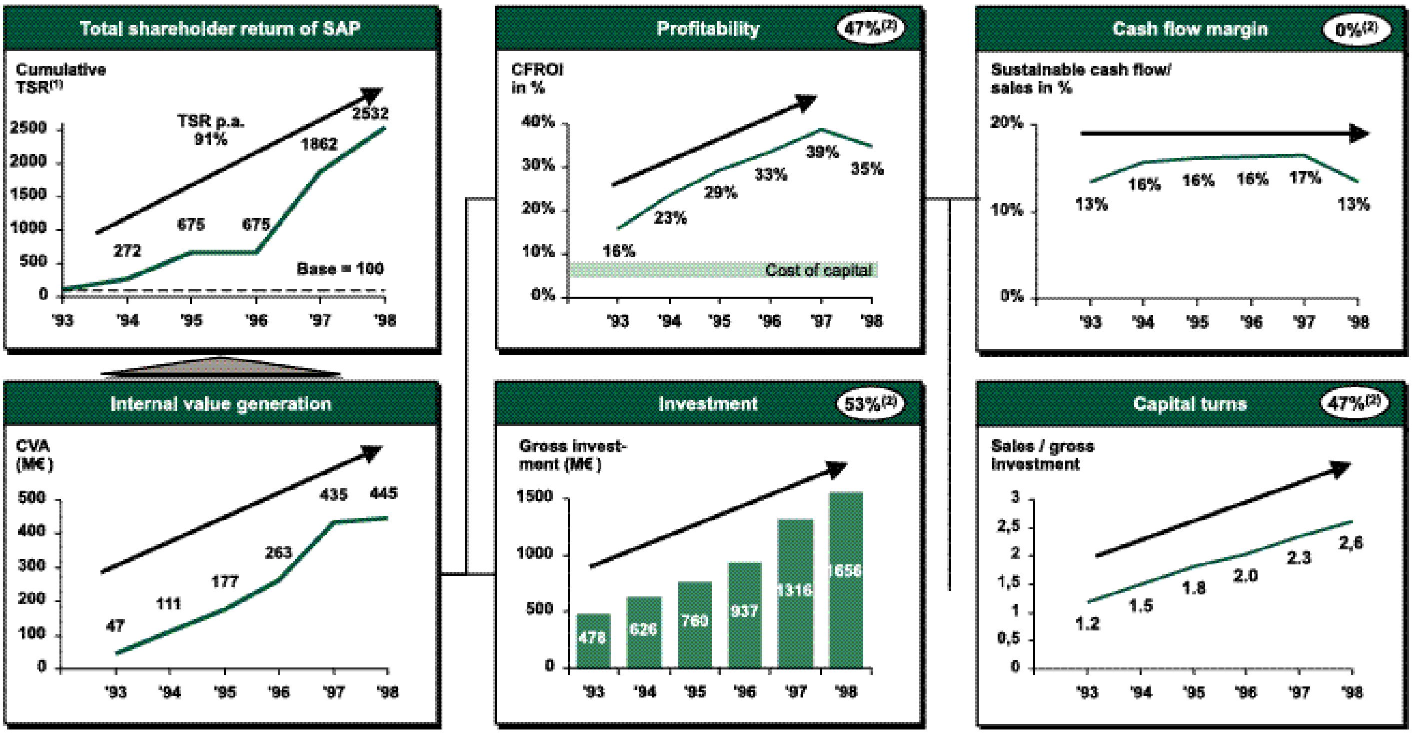
Dell's strategy of selling 'direct' (thereby eliminating middlemen) has had a big impact on inventory times. Competitors who sell through traditional retail channels hold 50 days of inventory on average. In the PC business, where component prices can drop by as much as 1% a month, this time is money lost.

Profitability and growth create value at SAP

SAP, the world’s fourth largest software firm, is Europe's top performer over the period. € 100 ($118) invested in the company at the end of 1993 was worth € 2,532 ($2,988) five years later. The German company has a dominant position in the market for Enterprise Resource Planning (ERP) systems (its market share is bigger than that of its next five rivals added together).

Exhibit 6

SAP



(1) 31 December 1993 = 100
(2) XX% = relative contribution level to value increase 1993-98 (DCVA)
Source: BCG Val database, Datastream, Hoppenstedt, annual reports

The most significant driver behind the company's increase in CVA was its rapid growth in sales.

The demand for SAP’s systems during the period of the study was enormous. Sales revenue increased by some 50% per annum, driven by the company’s rapid global expansion. Before 1992, the vast majority of SAP’s sales were generated in Europe; by 1995 the US had become SAP's largest market.

Globalisation (the company now has a local presence in 60 countries) rode on the back of SAP's highly successful R/3 system, first launched in 1992 and now installed in half of the Fortune top 500. The company successfully got around the potential bottleneck in installing its systems by maintaining a close relationship with the big IT consulting firms who became specialists in SAP implementation. SAP forms partnerships with software houses and IT consulting firms allowing it to benefit from this rapidly growing part of the business without the complexity and cost of developing local field forces. SAP has therefore ‘deconstructed’ the once integrated software business model and avoided an obstacle that might have slowed growth.

Since December 1998, the end of the period of the study, SAP’s share price has fallen.The fall reflects the market’s lowered expectations of future growth. SAP’s relative position as a top performer has fallen in line. Much of this is due to fears that SAP will be challenged by more specialised and efficient software companies, whose product may prove cheaper and more flexible. The company has now reoriented its impressive R&D resources to this new challenge and future software modules will be outward looking (dealing with customer interface over the Internet and integration of suppliers) rather then dealing with internal issues (such as accounting or human resources management).

Asset productivity powers Nokia’s performance

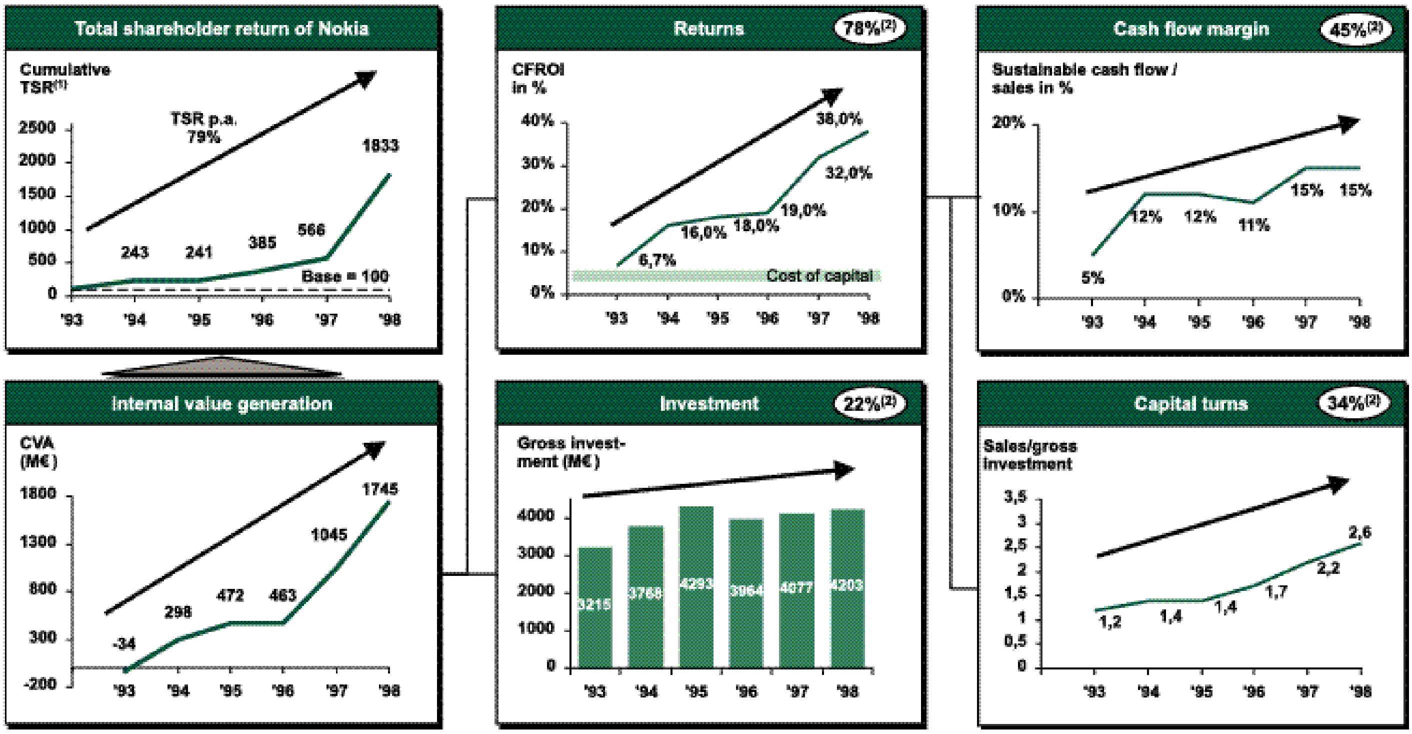
Nokia, the Finnish mobile phone company, was the fourth most successful performer over the period, and the second most successful European company. Its average annual TSR was 79%. € 100 ($118) invested in Nokia at the end of 1993 was worth € 1,833 ($2,163) by the end of 1998.

A significant contributor to Nokia's increase in CVA over the period was the improvement in its asset productivity. This was partly brought about by the company's divestment of almost all assets not relating to telecoms. Mobile phones and telecom infrastructure now account for over 90% of Nokia's sales; in 1990 they accounted for only 20%. Over the period, the company has, in effect, reinvented itself – not for the first time in its history.

Strong sales growth helped to push up asset productivity. The company managed an average annual increase in sales of 27% between 1993 and 1998. A dynamic entrepreneurial culture enabled Nokia to ride on the back of the rapid global growth in the market for mobile phones and to direct resources to the fastest growing segment of its business portfolio.

Exhibit 7

Nokia



(1) 31 December 1993 = 100
(2) XX% = relative contribution level to value increase 1993-98 (DCVA)
Source: BCG Val database, Datastream, annual reports

The company's cash-flow margin improved sharply over the period – from just 5% in 1993 to 15% in 1997 and 1998. This was thanks in part to the company's ability to reap ever greater economies of scale (Nokia is now the world's biggest manufacturer of mobile phones.) The company's continuous introduction of new innovative products also contributed (Nokia is the industry's benchmark for the commercialisation of new products). The transformation of Nokia's portfolio of businesses also had a significant impact on its performance.

Growth and increasing returns make Aegon top financial performer

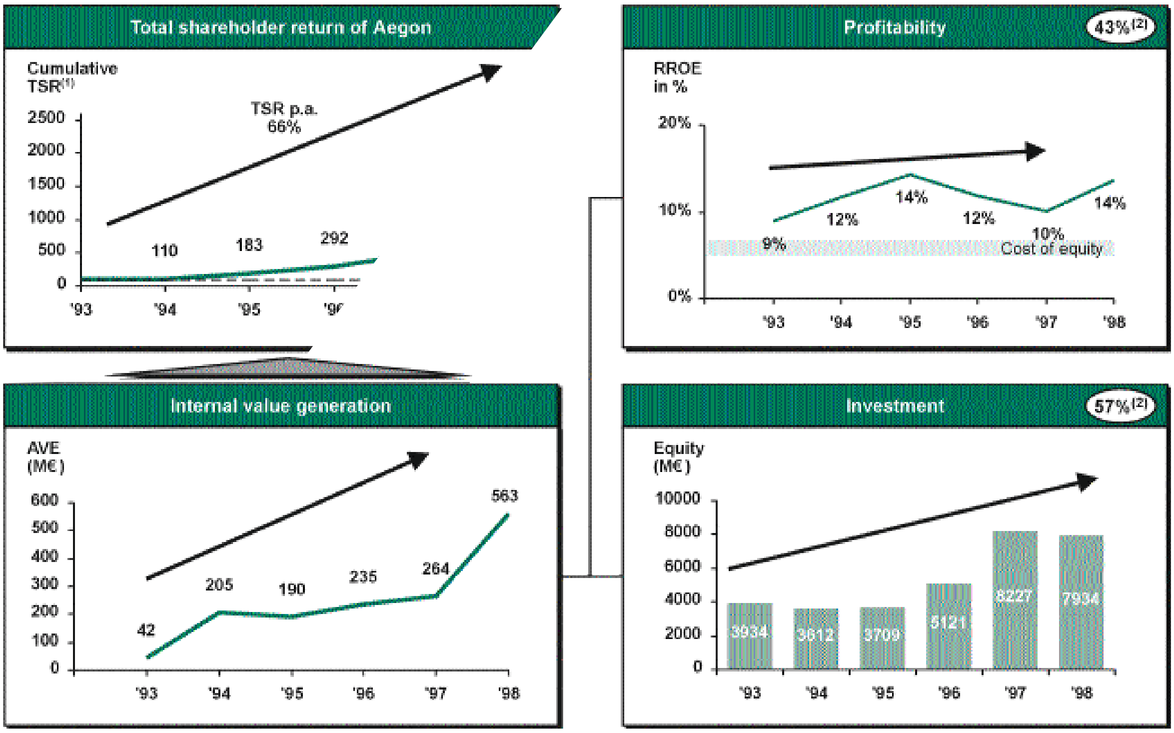
Aegon, the Dutch insurance company, was the eighth best performing company in the world over the period, and the highest from the financial sector. Its average annual total shareholder return was 66%; €100 ($118) invested in the company at the end of 1993 was worth €1,264 ($1,491) by the end of 1998.

Aegon created value largely through growth, both internal and by acquisition. The company has become the seventh largest insurance company in the world, measured by assets, and the third largest when measured by market capitalisation.

Autonomous internal growth came from the growing demand for pensions-related insurance in those markets where governments are backing away from the task of providing for their citizens' old age. External growth came from an ambitious programme of mergers and acquisitions. During the period Aegon purchased Scottish Equitable, Transamerica and Providian. And it managed to realise many of the takeovers’ promised synergies, saving costs through geographical consolidation and by reaping greater economies of scale. The company has an excellent record at post-merger integration.

Exhibit 8

Aegon



(1) 31 December 1993 = 100
(2) XX% = relative contribution level to value increase 1993-98 (DCVA)
Source: BCG Val database, Datastream, Bloomberg

Aegon also created value by improving its returns. It lowered its ratio of expenses to revenues, and it increased its sales per employee from € 460,000 ($542,750) in 1993 to € 782,000 ($922,700) in 1998. It also improved its revenues by switching its portfolio away from bonds and towards higher performing equities.

Margins were boosted by the company’s consistent strategy of focusing on its core life business, where margins are better than they are in non-life business. Life assurance accounted for 69% of the company's business in 1993 and 82% of (a much larger) business in 1998. Meanwhile, the company sold off its interests in banking, health and non-life insurance.

Superior business model makes Hennes & Mauritz best retail performer

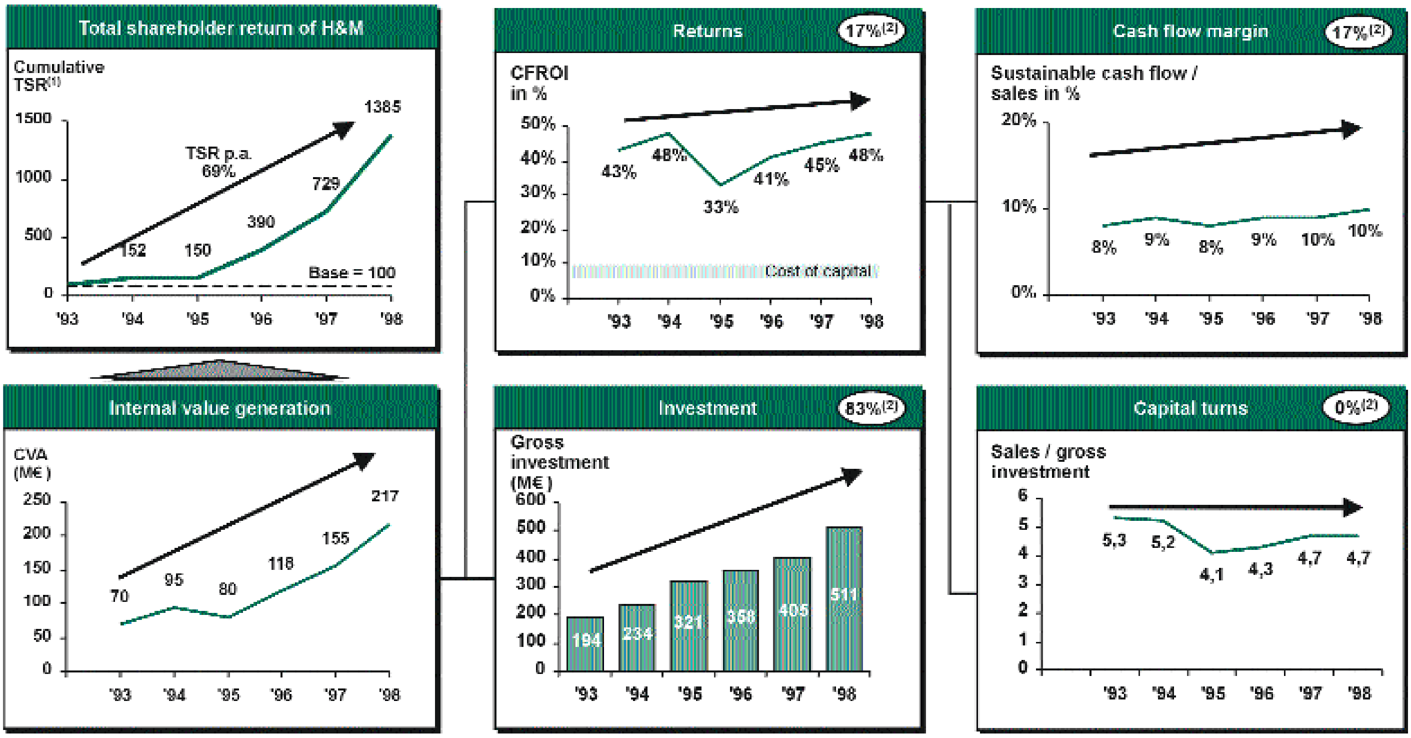
An average annual TSR of 69% makes Hennes & Mauritz the world's number one retailer. Profitable growth, based on strong inventory management and low costs, is the key driver behind the company's exceptional value creation. H&M increased its CVA by nearly € 150 million ($177 million) over the period of our study, and more than 80% of that increase came from growth in investment.

Clothes retailing in Europe is a fragmented market compared with the US. Even in Germany, its largest market, Hennes & Mauritz commands only a 2-3% market share. However the company experienced strong growth by expanding within its current North European markets and entering the French, Spanish and North American markets.

H&M's business model is based on offering the latest international fashion, at low prices, at good quality, in premium store locations featuring consumer-friendly store layouts. It has proved to be a winning formula.

Exhibit 9

Hennes & Mauritz



(1) 31 December 1993 = 100

(2) XX% = relative contribution level to value increase 1993-98 (DCVA)

Source: BCG Val database, Datastream, annual reports

The retailer's careful management of inventory and costs has enabled it to fund the profitable growth that lies behind its value creation performance. The fact that H&M's new chief executive was formerly head of logistics may contribute to the success of its approach to inventory management. This approach is based on:

- Continuous introduction of new fashion lines (this increases inventory turnover)
- A focused strategy for entering new markets (aiming to achieve critical mass for cost-efficient logistics)
- Sophisticated information technology to help manage inventory.

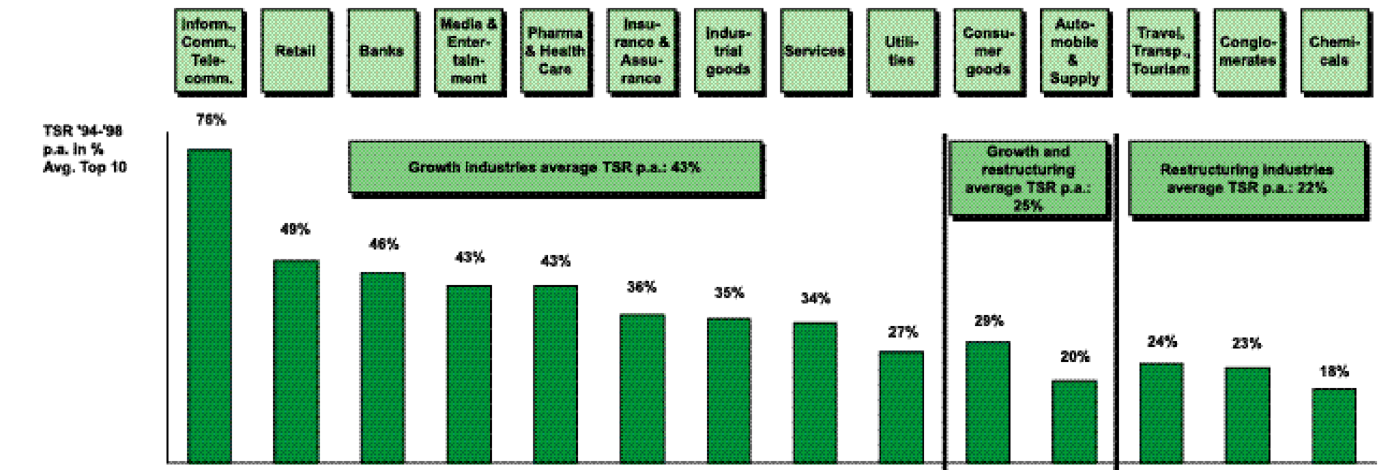
H&M outsources all of its production. Fashion clothes are sourced in Europe (higher costs, but shorter lead times), while the more basic lines are sourced in Asia (lower costs, but longer lead times). Everything is purchased directly from the manufacturer and subject to rigorous quality control. Design and purchasing are both centralised.

Top Performers by Industry

The companies in the study were classified by industry. Five of the industrial sectors – IC&T, banks, retail, pharmaceuticals & healthcare, and insurance & assurance - are ‘over-performing’ sectors in the sense that they have more than their ‘fair share’ of top performers. The percentage of the top 100 which comes from those industries is higher than the remaining industrial sectors which can be said to be standard or under-performers.

Exhibit 10

Top Performers in Growth Industries Produce Highest Returns



Value creation lever		Inform., Comm., Tele-comm.	Retail	Banks	Media & Enter-tain-ment	Pharma & Health Care	Insu-rance & Assu-rance	Indus-trial goods	Services	Utili-ties	Consu-mer goods	Auto-mobile & Supply	Travel, Transp., Tourism	Conglo-merates	Chemi-cals
Return	Δ Cash-flow margin	++	+	+	+	+	++	+	+	+	++	++	++	++	++
	Δ Asset productivity	+	+		+	+		+	+	-	+	+	+	+	+
Growth(1)		+++	+++	+++	++	++	+++	++	+++	++	++	++	+	+	+

(1) Of capital invested
Source: BCG VAL Database, Datastream, Bloomberg, BCG analysis

Judged by the performance of the top 10 in each industry, the 14 industrial sectors can be divided into growth industries, restructuring industries or industries that activated both levers over the period. The restructuring industries were conglomerates, travel, transport & tourism and chemicals. Consumer goods and automobiles & supply used both levers. All others are growth industries. On average, the contribution of investment growth to the increase in CVA of the top companies in each of the restructuring industries was low (a ‘one-star’classification).

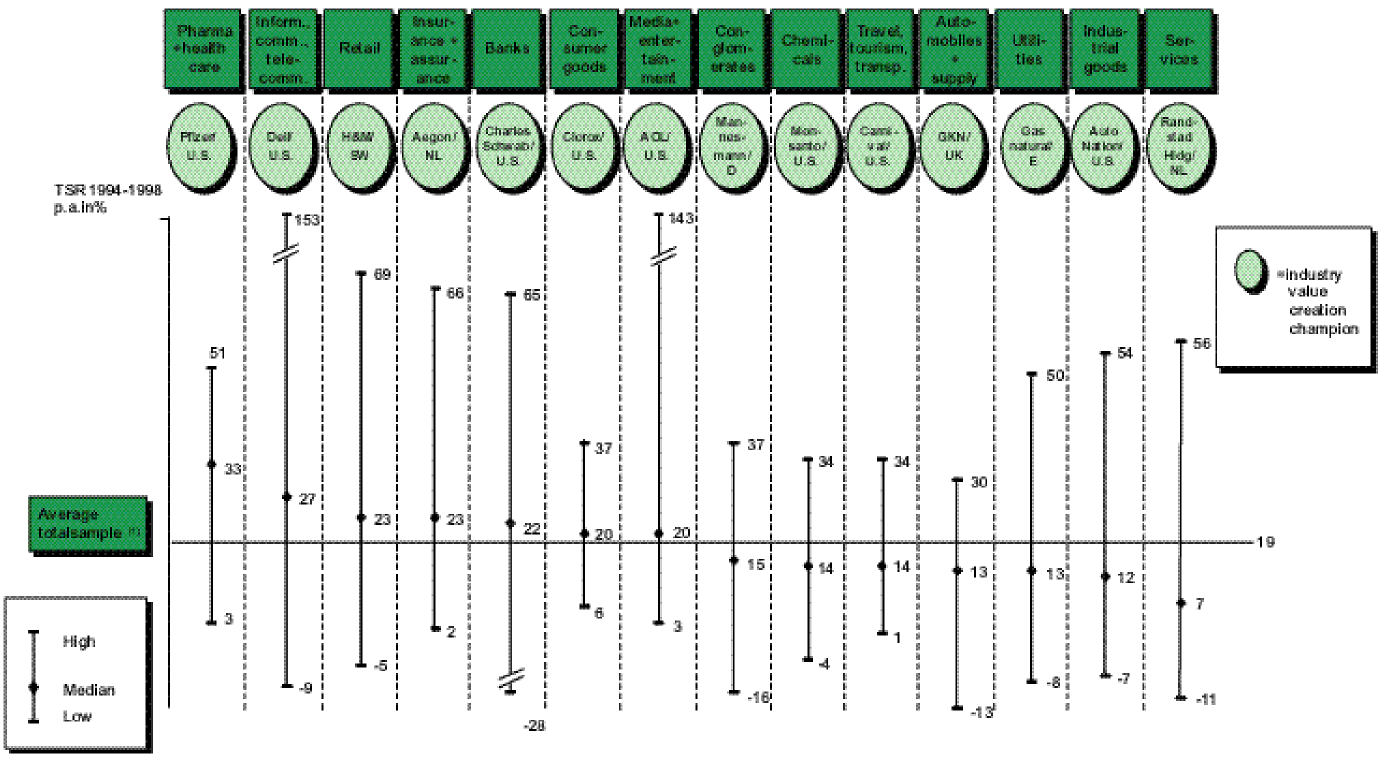
The average TSR of the top 10 in the growth industries was higher than that of the top 10 in the other industries - with the exception of utilities, which was just beaten by consumer goods.

Nevertheless, growth is not everything: restructuring industries also provided some star performers.

Companies like Mannesmann (among the conglomerates) and Clorox (among consumer goods firms) chalked up average annual TSRs that were way above the average for the whole sample. In all the under-performing restructuring sectors, the top performers exceeded the average TSR of the top 100 worldwide.

Exhibit 11

Even in Underperforming Industries, Significant Value Creation is possible



(1) Market capitalisation >€ 5bn, 685 companies
Source: BCG VAL Database, Datastream, BCG analysis

On the other hand, high growth industries also provide some significant under-performers. The banking sector included one company with an annual average TSR of minus 28%, far worse than any company in any of the restructuring industries. And even the glamorous IC&T sector included some companies with a negative average annual TSR. The under-performing travel, tourism and transport sector, in contrast, had no representatives with a negative TSR. Investors could have made large sums of money in unfashionable sectors over the period. And they could have lost large sums of money in fashionable sectors over the period. The lesson here is positive, although performance is sector-sensitive, managers within any industry can outperform the market.

Automobiles and supply

Restructuring and growth were both used for value creation in this industry. The top ten of the sector returned an average TSR of 20% over the five years of the study. The sector's highest performer, GKN, delivered a TSR of 30%.

The top 10 companies in the sector come from an unusually wide range of countries. Germany, Japan and the United States have two representatives each and the UK, Sweden, France and Italy have one representative each. Improvement in asset productivity was particularly weak among the top performers reflecting the industry's over-capacity in manufacturing, as well as assets tied up in retail networks. This sector has the potential for significant improvement in the coming years as globalisation drives rationalisation in R&D and manufacturing, and manufacturers exploit opportunities for leaner sales and distribution through the Internet.

The sector's results do not include the 40% TSR recorded by the German company Porsche. It made a sharp recovery during the period, but the company is not big enough to be included in the industry rankings.

Banks (including brokerage firms)

Banking was a high performer over the period, driven mainly by consolidation and external growth. Much of this came from a spate of successful acquisitions during the period – by companies like Intesa in Italy and Lloyds TSB in the UK.

The average annual TSR of the top 10 companies in the sector is 46%, putting it third overall after IC&T and retail. There is strong representation from the United States (five companies) and from Italy (three).

The American top performers come from a wide range of businesses within the sector. The comfortable winner is Charles Schwab, a company that has grown very fast to become the leading player in two rapidly growing niches - online brokerage and the distribution of mutual funds. Well established in the US, this bank is now expanding through Europe, challenging local competitors to respond quickly enough.

Fourth-placed Bank of New York, on the other hand, is a long-established traditional bank; fifth-placed MBNA is a credit-card operator; and seventh-placed Freddie Mac started life as a government agency for granting mortgage guarantees.

In Italy the banking sector dominates like no other. A wave of consolidation, led by Banca Intesa (sixth in the sector) and Unicredito (ninth) resulted in the creation of considerable value. Of the top 10 performers in Italy, seven are banks.

Chemicals

Although well above the market average of 13%, the top 10 chemicals companies put the least distance between themselves and their peers. Their average annual TSR over the period is 18% and only the top company in the sector (Monsanto) made it into the global top 100, in 71st place. Monsanto owes much of its success to the change from being a pure chemicals company to a life-sciences business, and to the aggressive management of its portfolio of businesses.

The top ten performers are dominated by the United States (four) and Germany (three). France, Belgium and the Netherlands account for the rest.

Conglomerates

Restructuring yielded an average TSR of 23% across this sector's top ten. Again, the United States (four) and Germany (three) account for the bulk of the best performers. The top performer (Mannesmann) had a TSR of 37%, putting it 56th in the worldwide top 100. Its success was largely due to its entry into the mobile phone business, a move that dramatically changed its portfolio over the period. It reinvented itself, but unlike Nokia, it held on to its old businesses.

The Austrian company Semperit is too small to feature in the top 10, but has a TSR of 55% and is the top performer in its country.

Consumer goods

Seven of the top 10 performers in this sector come from the United States, emphasising that country's excellence at creating powerful consumer brands. They include manufacturers of household name products like Philip Morris (Marlboro), Gillette, Colgate-Palmolive and Coca Cola.

This is a sector where very large companies feature prominently among the top performers. Three out of the top 10 have a market capitalisation of over €100 billion ($118 billion) reflecting the importance of critical mass in this sector.

However, it is also a sector where a number of smaller companies performed extremely well, companies which failed to meet the size qualification for inclusion in the main rankings. In the Netherlands, for example, Numico had an average annual TSR of 49%; in the US, Fort James's was 47% and in Spain Tabacalera took advantage of its monopoly status to generate a TSR of 38%. The average across the industry’s top ten was 29%.

Industrial goods and engineering

Growth proved the main path to value creation in this sector, where the average TSR across the leaders was 35%, and again, the United States accounts for the majority of the top ten. The champion, AutoNation, has succeeded by consolidating independent car retailers in order to reap the benefits of increased scale.

The success of British Aerospace, fuelled largely by its enforced restructuring, appears to be an exception to the industry rule. In 1992 the company’s pre-tax losses were €1.7 billion ($2 billion) and it set about selling off a number of under-performing assets including the Rover car company.

Information/communication and telecommunication

This was the most spectacular sector by far over the period. It includes the current stars of the computing (Dell, Sun and Compaq), software (SAP, Microsoft) and telecommunication (Nokia, Cisco, Tellabs, EMC) industries. The average TSR of the top 10 performers was 76% per annum - higher than the best performer in every other industrial sector except media and entertainment. The 10^{th} company in the sector (Compaq Computers) was 18^{th} in the overall worldwide rankings.

Every one of the 10 top performers invested heavily in profitable growth. Eight of them recorded an increase in investment of over 200%. Dell and Nokia (numbers one and three respectively) combined that with spectacular success in improving their asset productivity and their cash flow margins.

The United States' accounted for eight of the top 10. Germany (with SAP) and Finland (with Nokia) are the only other countries with a presence in the top 10.

Apart from these two companies, Europe's performance overall in this sector was weak. While seven out of the overall top ten companies in the United States came from this extraordinarily dynamic sector, Germany, Italy and the UK each had only one representative from the sector in theirs (SAP, Telecom Italia and Vodafone respectively). In France, there are two (Altos and Cap Gemini).

Among the top 100 European companies nine are from the IC&T sector. It is hard to avoid the conclusion that, on the whole, Europe has taken little advantage of the rewards that this sector offers (for employees as well as shareholders, as this growth engine is a powerful job creator). We must wait to see how Europe will position itself in the next battle of internet related products and services.

Insurance and assurance

This is a sector where Europe holds its own against the United States. The top four companies in the sector are all European, as are six of the top 10 (two Dutch, two Swiss, one Belgian and one British). The two Swiss companies are also the top two performers in their country, and the Dutch company Aegon heads its national list.

Growth through acquisition has been, and still is, the key to value creation: much of the strong performance was driven by the restructuring that was taking place in the industry. The top Swiss company, Swiss Re, for instance, focused sharply on reinsurance, making a number of acquisitions in the area and divesting itself of its interests in primary insurance.

Media and entertainment

Seven of the top 10 performers, including the top three, are from the United States each of whom chalked up an average annual TSR of over 50%. Canada (one) and the Netherlands (two) account for the rest.

The sector is dominated, like no other, by one company. Not only did America Online, second in the overall rankings to Dell Computer, outstrip all others in the sector by far (its average annual TSR of 143% was more than twice that of the company in second place), but it is also considerably larger than any other company in the sector. Its market capitalisation of €60 billion ($71 billion) compares with the €12.2 billion ($14.4 billion) of second-placed Clear Channel Communications. Several internet companies were excluded from the study by our focus on long term performance, however there is little doubt that they will appear in future reports.

Pharmaceuticals and health care

The average TSR of the top 10 in this sector is relatively high at 43%, but the variation between them is not. A mere 16 percentage points separates the annual average TSR of number one (Pfizer) from number 10 (Sanofi).

It is another industry dominated by American companies. Eight of the top 10 performers are American, with the UK's SmithKline Beecham and France's Sanofi filling the other two places, both having rebuilt sound profitability levels. Companies throughout the sector can be found in the top 10 in Belgium, France, Switzerland and the UK.

As with consumer goods, there are three companies with a market capitalisation of over €100 billion ($118 billion) among the top 10 performers. By and large, smaller companies in the sector did not sparkle during the period (with the notable exceptions of UCB in Belgium and Synthelabo in France). Increasing scale in R&D and sales forces has fuelled consolidation around developers of successful breakthroughs like Pfizer, Glaxo Wellcome or Novartis.

Retail

This was a very dynamic sector during the period, both in the United States and Europe. Seven of the top 10 performers are American, and their average annual TSR is the second highest across all sectors, after IC&T.

By and large, the top performers in the sector for this period, are smaller companies, with the top 10's market capitalisation ranging from €27 billion ($32 billion) for GAP to €10.9 billion ($12.9 billion) for Rite Aid.

Although smaller than our world ranking threshold, the retailer Harvey Norman was the top performer in Australia, with an average annual TSR of 49.6% and the industry leader, Hennes & Mauritz, made nearly 70% in annual TSR, giving it a position of fifth in the overall global ranking.

As with all the best-performing sectors, the top 10 invested heavily in growth during the period. They were notably weaker at improving their cash-flow margins and their asset productivity, although Safeway, Staples, Rite Aid and Gap showed that strong growth is a useful tool for reducing costs and increasing asset productivity without paying the cost of restructuring.

Services

The top 10 performers in Services produced an average annual TSR of 34%, while the median for the sector overall was 7%. All companies invested heavily over the period.

The industry is dominated by relatively small companies – the largest company in the top ten in Rentokil Initial with a market cap of€ 18.2 billion ($21.5 billion) The three UK representatives (Compass Group, Hays and Rentokil Initial) are also among the top ten performers in the UK across all sectors.

Companies from the sector appear among the top 10 in a number of other European countries. In Belgium and France, services companies top the national lists; Sodexho in France, second in the ranking, reached 41% annual TSR with an aggressive growth strategy, globalising its once local catering business. In Germany and the Netherlands service companies take second place; while companies from the sector also appear in the top 10 in Austria and in Switzerland.

By contrast, two of the US companies in the sector's top 10 do not make it into their national top 100. Fourth placed Cintas was 72^{nd} in the United States.

All companies in the sector invested heavily during the period, growing organically and through mergers or acquisitions, but in other areas their performance was patchy. Some (like Adecco) improved cash-flow margins dramatically. Others (like the sector's third place Compass Group) got high marks for asset productivity fuelled by growth, but showed less improvement in cash-flow margins.

Travel, transport and tourism

The average TSR of the top ten performers in this sector is 24%, with the best performance coming from the largest company in the sector, the American cruise ship operator Carnival (average annual TSR of 33.9%)

Four of the top 10 performers in the sector are American, and six are airlines. In both Austria and Italy the national airlines are among the country's top 10 performers.

Utilities

Performance in the utilities sector was greatly influenced by the nature and extent of government deregulation in each individual national market. Spanish companies in particular found their environment conducive to high shareholder returns. Three of the top 10 performers in the sector are Spanish, and three utilities appear in Spain's own national top 10.

The star performer is Gas Natural. Its average annual TSR (50%) is 15 percentage points higher than the next best performing company in the sector. Gas Natural has established a dominant position in Spain's natural gas industry. Its vertical integration of supply and transport has given it control over the domestic industry's value chain and a share of over 90% of the Spanish industrial market for natural gas. Investment by Gas Natural rose rapidly (particularly in Latin America), as it did for the other Spanish utilities.

Exhibit 12

The Top Performers in Each Industry

Industry sector	Top performer	Country	Average annual TSR (94-98)	Market capitalisation (31.12.98)	
				€ (bn)	$(bn)
Automobiles & supply	GKN	UK	30%	8.0	9.4
Banks	Charles Schwab	US	65%	19.1	22.5
Chemical	Monsanto	US	34%	24.3	28.7
Conglomerates	Mannesmann	Germany	37%	38.0	44.8
Consumer goods	Clorox	US	37%	10.3	12.2
Industrial goods & enginneering	AutoNation	US	54%	5.9	7.0
IC&T	Dell Computer	US	153%	78.9	73.1
Insurance & assurance	Aegon	Netherlands	66%	61.0	72.0
Media & entertainment	America Online	US	143%	60.2	71.0
Pharma & health care	Pfizer	US	51%	137.5	162.2
Retail	Hennes & Mauritz	Sweden	69%	14.4	17.0
Services	Randstad Holding	Netherlands	56%	5.3	6.3
Travel, transportation & Tourism	Carnival	US	34%	24.2	28.5
Utilities	Gas Natural	Spain	50%	13.9	16.4

European and US Approaches to Value Creation

The preponderance of American companies among the top performers is one of the most striking results of the survey. Although four of the top 10 companies are European, 16 out of the top 20 are American – i.e. every single company from number nine (Charles Schwab) through to number 20 (Pfizer) is American.

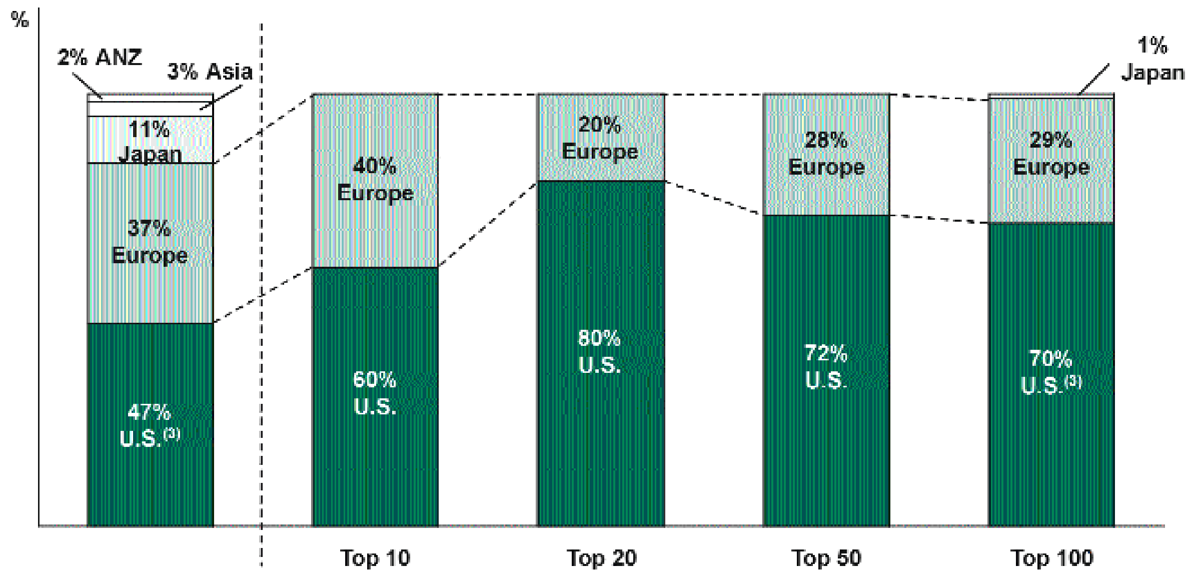
Among the top 100, 70% are American, 29% European and 1% Japanese. This compares with the sample as a whole where 47% of all the companies are American, 37% European and 11% Japanese (5% came from elsewhere).

Six of the top 10 companies came from the information / communication & telecommunication sector. Out of the top 100 companies, however, only 27 are in the IC&T sector and of those, 20 are American.

Exhibit 13

Relative to Representation in Sample, the U.S. Produces more Top Performers than Europe

Composition of Top 100 per region[1]



(1) Market capitalization € > 10bn; worldwide; ranked by TSR 1994-1998 p.a.
(2) 368 companies; % by number of companies
(3) Incl. 1 Canadian company
Source: Datastream, BCG analysis

Within each of the over-performing industries - except insurance and assurance - the US has a share of the top performers that is higher than its share of the overall sample. For instance, it accounts for 54% of all IC&T companies in the overall sample; yet it provides 74% of the top 100 IC&T companies. Again, in banking it accounts for 41% of the overall sample, but for 68% of the top 100

Only in insurance and assurance does Europe manage to have a higher share of the industry's top 100 (63%) than it has of the overall sample (62%).

Europe's under-performance is most pronounced in pharmaceuticals & healthcare. Although it accounts for 33% of the overall sample in the sector, it provides only 13% of its top 100 performers.

Exhibit 14

Within each Industry, The U.S. Generates a Higher Share of Top Performers than Europe

	Industry	U.S.		Europe	
		Overall share[2]	Share within top 100[2]	Overall share[2]	Share within top 100[2]
Over-performing industries	Information, communication, telecommunication	54%	74%	24%	22%
	Banks	41%	68%	43%	32%
	Retail	57%	69%	37%	31%
	Pharma & health care	62%	80%	33%	13%
	Insurance & assurance	27%	38%	62%	63%

(1) Ranked by TSR 94-98pa;
Market Capitalisation >€ 10bn;
Worldwide overall sample:368 companies
(2) % by number of companies

Source:Datastream, BCG Analysis

Go for growth

The United States has achieved dramatically higher value creation during the period than Europe, because it has been more focused on investment growth. The Europeans have been more concerned with restructuring, with improving the performance of existing assets.

When the top 50 American companies and the top 50 European companies are plotted on a graph where the axes are:

- increase in cash-flow return on investment (CFROI); and
- increase in capital invested

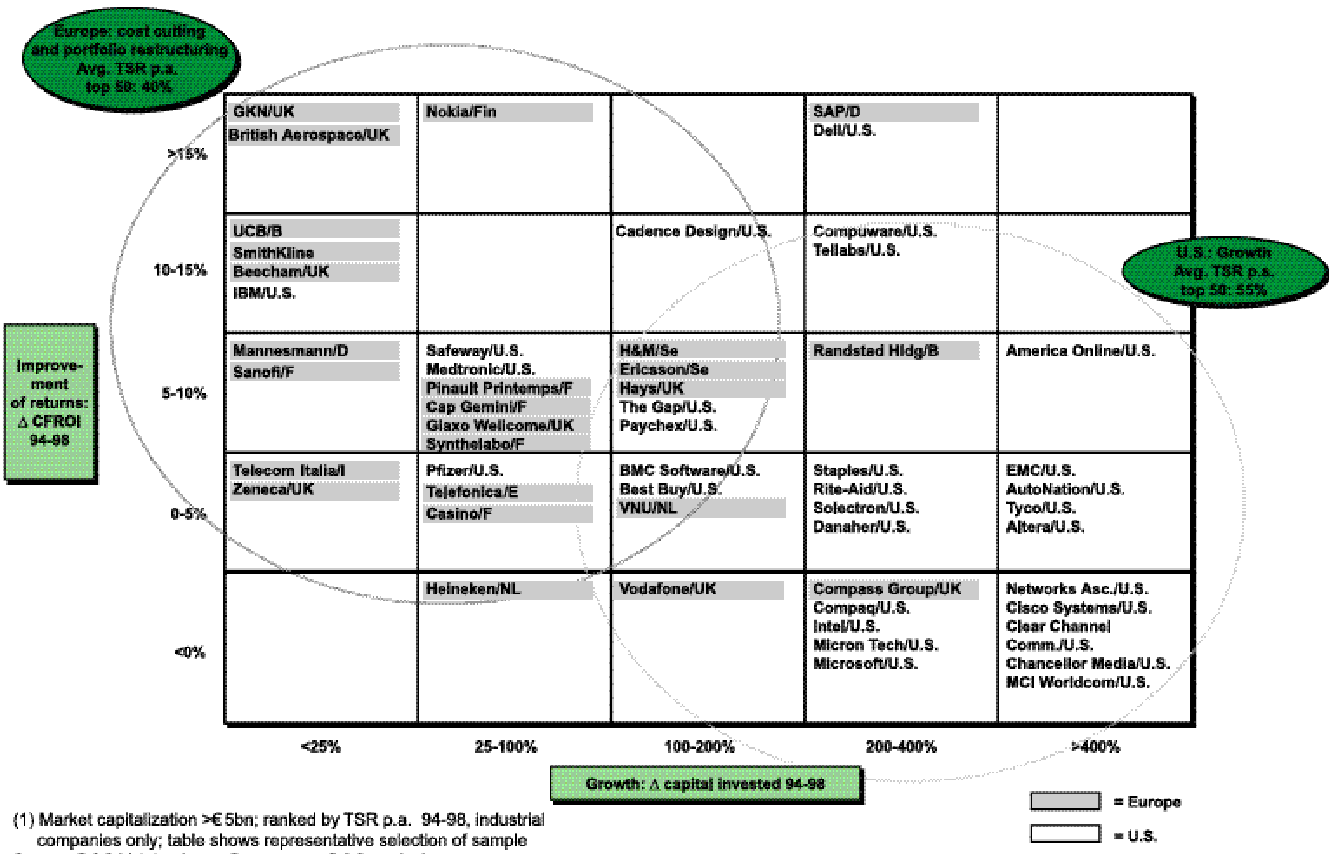
American companies score highly on the latter while European companies score more highly on the former. Even a company as large as Microsoft, grew its capital invested by more than 200% in the five years from 1994 to 1998.

All the companies among the top 50 Americans and the top 50 Europeans that recorded a growth in capital invested between 1994 and 1998 of more than 400% were American. Of the five companies that recorded an increase in CFROI of more than 15 percentage points over the five years, four were European. The American company in this category (Dell) also, incidentally, notched up a growth in capital invested of over 200% - i.e., they were growth-oriented.

Growth industries create more value than restructuring industries. The average annual TSR of the top 50 (growth seeking) American companies is 55%; the average TSR of the top 50 (tending to restructure) European companies is 40%. It is the difference between a nine-fold increase in shareholder value for the American companies and a 5.4-fold increase for the Europeans.

Exhibit 15

U.S. Top Performers Create Superior Value Through Growth



(1) Market capitalization >€ 5bn; ranked by TSR p.a. 94-98, industrial companies only; table shows representative selection of sample
Source: BCG Val database, Datastream, BCG analysis

Top American Performers

The average annual TSR of the top 10 American companies was 86.5%, compared with the US average of 23.1%. The average TSR of the bottom decile of the top 100 American companies (i.e. ranking of 91–100) was 31.3%.

Exhibit 16

America's Top Ten

Name	Sector	Average annual TSR (94-98)	Market capitalisation (31.12.98) € (bn)	Market capitalisation (31.12.98) $(bn)
1. Dell Computer	IC&T	153%	78.8	93.0
2. America Online	Media &Entertainment	143%	60.2	71.0
3. Network Associates	IC&T	114%	7.6	9.0
4. Microsoft	IC&T	69%	293.2	345.9
5. Cisco Systems	IC&T	67%	124.2	146.5
6. Charles Schwab	Banks	65%	19.1	22.5
7. Compuware	IC&T	64%	12.2	14.4
8. Clear Channel Communication	Media & Entertainment	64%	12.2	14.4
9. Sun Microsystems	IC&T	64%	27.6	32.6
10. Tellabs	IC&T	63%	11.3	13.3

In America, the top 10 was dominated by IC&T companies, (seven out of 10). In the top 100 in America, four industries were most frequently represented. These were IC&T, financial services, pharmaceuticals & healthcare and retail, with 27, 23, 12 and nine companies in each respectively.

Although many of the top 100 companies in America scored well (++ or higher) on restructuring profitability (CFROI), all except 13 scored either equally high or higher on growth (++ or +++). And, for American companies scoring high on growth, the rate of growth was dramatically higher than that of their European counterparts.

Underlying Drivers of American Results

For several reasons, American companies were represented in the rankings with proportionately higher frequency and with a significantly higher level of growth operating as the driver. Although European companies improved CFROI by a greater amount, American companies maintained a higher level of CFROI over the period.

This higher level of CFROI allowed growth to have a compound impact on TSR, since growth at high returns is more valuable than growth at returns closer to the cost of capital. BCG has determined that the primary driver of the relatively higher American CFROIs is the fact that American companies engaged earlier in restructuring activities to improve profitability (i.e. in the late 1980s) than European companies did.

A second contributing factor to both high CFROIs and high growth is the fact that investor pressures on American management to deliver value creation were significantly more pronounced than in Europe during this period. Additionally, this pressure resulted in more American companies adopting value management as a discipline to ensure a focus on value creation throughout their organisations.

A third factor was the role of incentive compensation in American companies. BCG's assessment is that American incentive practice has three differentiating features that have promoted higher value creation. One is that American incentives have a much greater range of upside and downside potential.
A second is that American incentive plans place a much greater emphasis on long-term performance.

The third distinguishing feature is that American incentive plans change more dynamically over time to meet better the evolving requirements for value creation. For example in the 1990s, there was a significant shift from plans that rewarded restructuring to plans focused on rewarding profitable growth.

The amount and focus of incentives both matter, at least in the American context. To reinforce this point further, American companies adopting long-term incentive plans specific to business units have outperformed American companies that have not adopted such plans by approximately 15% since 1993.

Top European Performers

Our study shows that different European countries tend to favour different value creation levers, reflecting variations in the national economies. Growth is the preferred means of value creation in Austria, the Netherlands and the UK. Managers in France and Belgium tend to deploy a combination of restructuring and growth, while their counterparts in Spain, Germany and Switzerland focus mainly on restructuring.

The average annual TSR of the top 10 performing companies in Europe over the five-year period was 61% (compared with the worldwide figure of 87%), and the average TSR of the bottom decile of the European top 100 (rankings of 91-100) was 19% (compared with the worldwide figure of 30%). The influence of American companies in boosting the worldwide averages is considerable.

Exhibit 17

Europe's Top Ten

Name	Nationality	Sector	Average annual TSR (94-98)	Market capitalisation (31.12.98)	
				€ (bn)	$(bn)
1. SAP	Germany	IC&T	91%	18.0	21.2
2. Nokia	Finland	IC&T	79%	48.7	57.5
3. Hennes & Mauritz	Sweden	Retail	69%	14.4	17.0
4. Aegon	Dutch	Insurance	66%	61.0	72.0
5. Randstad Holding	Dutch	Services	56%	5.3	6.3
6. UCB	Belgium	Pharma & healthcare	54%	7.7	9.1
7. Banca Fideuram	Italy	Banks	51%	5.5	6.5
8. Gas Natural	Spain	Utilities	50%	13.9	16.4
9. Numico	Dutch	Consumer goods	49%	5.2	6.1
10. Banca Bilbao Vizcaya	Spain	Banks	49%	27.3	32.2

Unlike the US, where the top 10 ranking is dominated by firms from the IC&T sector, the top 10 performers in Europe come from no less than eight different sectors. Only IC&T (SAP and Nokia) and banks (Banca Fideuram and Banco Bilbao Vizcaya) have more than one representative in the top 10.

The most commonly represented sector in the top 100 performers in Europe is banks (23) followed by insurance & assurance (17). This focus on finance

(40% of the top performers) is partly a reflection of the fact that in several European countries these industries were being deregulated during the period. This presented firms with new opportunities to cut costs through restructuring and to reap economies of scale from mergers and acquisitions.

Not only are Europe's top performers well spread around industries, they are also well spread around countries. The top 10 come from seven different nations (Germany, Finland, Sweden, the Netherlands, Belgium, Italy and Spain). France's Pinault Printemps retailing group makes 11th place. The Netherlands has three representatives in the top 10 (Aegon, Randstad Holding and Numico); Spain has two (Gas Natural and Banco Bilbao Vizcaya).

Exhibit 18

Europe's National Champions

Country	National champion	Average annual TSR (94-98)	Sector
Austria	Semperit	55%	Conglomerates
Belgium	D'Ieteren	66%	Services
Finland	Nokia	79%	IC&T
France	Altran Technologies	66%	Services
Germany	SAP	91%	IC&T
Italy	Banca Fideuram	51%	Banks
Netherlands	Aegon	66%	Insurance
Spain	Gas Natural	50%	Utilities
Sweden	Hennes & Mauritz	69%	Retail
Switzerland	Swiss Re	39%	Insurance
UK	British Aerospace	40%	Industrial goods

Belgium

Managers in Belgium tend to create value using both restructuring and growth. Belgian companies also raised their profitability well above the cost of capital during the period of our study.

Belgium's UCB, the pharmaceuticals & healthcare company, is sixth overall in Europe. But only one-eighth of its increase in CVA over the period can be attributed to growth in capital invested. The other seven-eighths come from a sharp improvement in cash flow margin and a more modest improvement in asset productivity.

Despite its spectacular performance, however, UCB is not the top performing Belgian company. That position was taken by a services company, the car dealer D'Ieteren. It recorded a 66% average annual TSR over the period.

France

The average annual TSR of the French companies in the sample (at 14%) is close to the European average (13%). But France has the widest spread of performance of any European country. It ranges from a world-class 66% to champions of value destruction at minus 20% per annum. French managers tend to use a combination of growth and restructuring levers.

The top company, Altran Technologies, comes from the services sector and compares with the very best US performers. Servicing high technology companies, Altran has benefited from the intrinsic dynamics of the sector. This sector is well represented among France's top performers, with Altos (ranked second) and Cap Gemini (ranked fourth).

The performance of French retailers is also worthy of note. Pinault Printemps and Promodes are both in the top 10, while Carrefour and Casino feature in the top 20.

Germany

Germany's top performers are remarkably well spread across industries. The nation's top 10 come from nine different industrial sectors. Only the automobile and supply industry had two representatives.

However, these are not growth companies. Several of Germany's top performers – for example, Porsche and Volkswagen - depended on restructuring and cost-cutting programmes for most of their value creation over the period. Most of those German companies that were best at using the restructuring lever to create value succeeded in raising their profitability above the cost of capital.

The average CFROI in Germany rose during the period, but overall most German companies still do not earn enough to cover their cost of capital.

Hence, the opportunities to use growth as a lever for value creation are limited. Among the few companies that have successfully created value by high and profitable rates of growth are SAP and MLP.

Much of the slow growth of the German economy can be attributed to the continuing corporate focus on cash-flow margin to improve performance, and to the failure of some highly profitable companies to generate growth. Economic and fiscal policies continue to make it difficult for German companies to earn their cost of capital. Moreover, German management needs to learn that high profitability alone is not sufficient for sustained value creation.

Italy

Italy's top performers are totally dominated by banks (the first five in the list, and seven out of the top 10), reflecting the extensive consolidation that took place in the sector during the period. The consolidation gave rise to plenty of opportunities for restructuring.

Among the top performers:

- Banca Fideuram generated value by improving its efficiency and by focusing on the highly profitable niche of investment products for individual investors
- Banca Intesa generated value through a highly aggressive strategy of acquisition and consolidation
- Alitalia improved its asset utilisation and efficiency by downsizing. It was also helped by the creation of a new operating company and by an enhancement of its loyalty and marketing programmes.

The Netherlands

The Netherlands has peformed well in terms of value creation in Europe: the Dutch top 10 has the highest average TSR in the region (44%) as well as three representative companies in Europe's top 10: Aegon, Randstad and Numico. It has achieved this by focusing primarily on growth. Dutch companies have for some time managed to raise their profitability well above the cost of capital. Randstad, Getronics and VNU, have even been able to continue increasing profitability, while growing rapidly.

Aegon has already been discussed within this report, but other top performers within the country are:

- Getronics managed to grow rapidly through acquisitions while simultaneously continuing to increase its profitability.
- Numico, a specialty foods company, has also created value through acquisition and by focusing on high margin products. The trend started 10 years ago, once profitability was increased significantly above its cost of capital.
- Ahold, a retail company, has created value by growing over 800% over the last 10 years while not eroding its profitability. Again, this was realised through acquisitions, mainly in the US.

Switzerland

Restructuring enabled Swiss managers to create a strong increase in profitability. TSR of the top 10 Swiss performers ranged from 23% (Roche) to 39% (Swiss Re). The average was 27%. Swiss Re was the only Swiss company among the top 40 European companies (it ranked 20th).

The top performing Swiss companies come from a variety of industries including: insurance (Swiss Re, Zurich Allied, Baloise), pharmaceuticals (Novartis, Roche), industrial goods (Rieter, AL Group), banking (J. Baer), services (Adecco) and travel and transportation (Kuoni).

Among Swiss top performers:

- Swiss Re generated high TSR through increased profitability via divestiture of its primary insurance business and growth in the highly profitable reinsurance sector
- Kuoni transformed from a closely held Swiss Foundation to a broadly held public company by achieving internal growth in its core markets and external expansion through acquisition
- J. Baer achieved superior returns via internal and geographic expansion

of its core businesses - private banking and asset management

- AL Group generated high TSR by increasing both profitability and growth. The company exited from its cyclical and capital intensive commodity businesses and focused on internal and external growth in high value added activities, such as flexible and pharmaceutical packaging

UK

The United Kingdom performed strongly during the period under study, accounting for 25 of the companies in Europe's top 100. Growth and restructuring were the two value creation levers favoured by UK managers, with growth being the more common of the two.

Several companies among the UK's top performers have already achieved high levels of profitability, compared with their continental European counterparts. This is the result of a clear focus on restructuring and optimisation over the course of the previous decade. These companies were therefore in a position to concentrate on profitable growth during the period of our study. Others among the UK's top performers continue to use the restructuring and asset productivity levers.

Those UK companies that continue to grow at high levels of profitability include Vodafone in the telecommunications sector, Lloyds TSB in the banking sector and Compass Group and Hays in the services sector.

Lessons for Chief Executives

Our study shows the wide range of performance recorded by companies during the five-year period from year end 1993 to year end 1998 (as measured by average annual TSR). Some companies in under-performing industries put in spectacular performances, and some companies in over-performing industries didn't. This was true of all geographical markets.

The study finds that in the five-year period between year-end 1993 and year-end 1998, American companies (on average) added far more value than European companies. This was because they were more focused on investment growth than on restructuring, the main preoccupation of most of Europe's successful companies during the period.

The top 100 companies in America and in Europe all put in truly extraordinary performances, far exceeding expectations. But to remain an extraordinary performer over the next five years will require these companies to continue to exceed the increased market expectations embedded in their stock prices. Past performance is no guarantee of future performance. Some of the top performers from 1993-98 (companies like SAP) have lost some momentum and will have to fight to regain their former position.

Any five-year period is arbitrary, and the list of top performers for any other five-year period would be different. (Five years were chosen – as opposed to one or three – so that the findings would take account of long-term strategy and not be unduly influenced by short-term performance blips.)

How can companies hope to make it into the top 100 for the next five years? The good news is that their fate is in the hands of their managers. Value creation is not a random process.

There is no single specific prescription for improving value creation for all companies. But, there are general principles that can be systematically applied to improving the ability to manage value creation. From our experience in applying value management concepts and tools over the last decade, we have distilled 10 success factors that apply to all companies.

1. *TSR is the endgame.* TSR reflects the actual wealth creation for investors and employee-owners over a specific time frame. It should be embedded in the goals and subsequent incentive rewards for senior executives. Every company should aspire to achieve superior TSR performance over the long term, whether at rates just slightly above local market or peer group averages, or in the extreme stretch of the top decile of worldwide companies. The degree of aspiration and the benchmark basis will vary, but should always represent a stretch that taps the full potential of the company.

2. *TSR reflects economics.* Sustained high TSR performance is not possible without superior economic performance (i.e. generating high levels of cash flow and deploying cash in investments that yield returns above the cost of capital). Success at improving economic performance creates a strong platform for future improvements in competitive advantage and TSR. In this regard, value creation tends to create a virtuous circle.

3. *TSR provides a level field.* Superior TSR performance requires beating the market's expectations of underlying economic performance. Thus, regardless of the starting level of a company's current profitability or growth, improvement that exceeds expectations is required. It's not where you have been or where you are, but where you are going that counts.

4. *Executives should manage like investors.* Corporate executives should objectively review the value creation achievement and potential of each business in the portfolio from the perspective of its contribution to TSR. Where possible, the responsibility for TSR contribution should also be devolved to business unit managers. They should feel the same pressures and discipline that they would if their business units were publicly traded.

5. *Install an internal value creation metric.* The measure should allow managers to make trade-offs between financial drivers and between short and long-term impacts on value creation. BCG has found that either the CVA or Total Business Return (TBR) measure can provide a relatively simple but comprehensive link to actual TSR contribution.

6. Manage priorities and trade-offs between drivers. The levers to influence CVA or TBR are margin, asset productivity, and growth. The relative priority of each of these levers will vary based on the starting point of the business and the opportunities facing it. Trade-offs between these levers must be managed to ensure the optimum impact on CVA/TBR and hence TSR. Developing cross-functional consensus at the operating level is often necessary to implement appropriate trade-offs between these levers.

7. Manage the business portfolio to TSR targets. An explicit TSR target provides an anchor for portfolio strategy. If the current portfolio of businesses cannot meet the value creation aspiration, be prepared to take action, not change the goal.

8. Build a value creation culture. Developing a sustainable ability to create value takes time and effort. Executives must ensure that management processes (planning, budgeting, reporting, incentives, etc.) form an effective and integrated system that drives behaviour towards the value creation goal. Processes should be used to devolve both power and discipline to business units and functions.

9. Communicate to investors. In order to ensure that the market recognises achievements, understands the potential of the business, and believes in the commitment to superior value creation, an effective investor communication programme is necessary. Typically, this requires management to demonstrate knowledge of and commitment to address the main value drivers under their control. Credibility with investors is an important off-balance-sheet asset that can be greatly enhanced by steps 1-8 above, if they are clearly communicated.

10. Respect the challenge. Superior value creation is difficult to sustain. It requires appropriately focused activities at many levels in a company. Building and refining the capability will take years, not months. Changes will be required in decisions, priorities, processes, and measurement systems. If the goal is appropriately stretching, then tough choices will be needed. But in the end, achieving superior value creation is worth the effort and not just for owners. It will provide the means to meet the aspirations of all stakeholders, while inferior value creation will limit the resources for doing so.

Market Forces Level the Playing Field

If history is any indication, competing for a top ranking in total shareholder return is a significant challenge. Given the last five years of experience, the bar appears higher to be a top performer in America than in Europe. This could change if European companies act to achieve parity in CFROI and pursue growth initiatives more aggressively.

Those companies that are already at the top have high expectations built into their stock prices and these will be challenging to exceed. However, some comfort can be gained from the sustaining advantages of being a top value creator. High value creators generate and can attract more capital to invest in building competitive advantage and/or pursuing future growth opportunities. High value creators also enjoy a human resource advantage in attracting or retaining management talent. To stay ahead, top performers must effectively exploit these advantages and continuously hone their internal ability to manage value creation proactively.

For those companies aspiring to move into the top performer category, several observations are relevant. First, coming from a below-average starting point for either CFROI or overall value creation is usually accompanied by a lower level of expected performance embedded in current stock price. What counts for both high and low performers is the ability to exceed expectations. Thus, looking forward, market forces create a level playing field. Second, the evidence indicates that industry participation is not an insurmountable roadblock. Industry participation helps, but is not a prerequisite. What matters in the end is how you play the hand you are dealt.

Profitability in Preparation for Growth

In this area, there are two rules. First, ensure that your CFROI sufficiently exceeds the cost of capital before you embark on aggressive growth programmes. The process of improving low CFROI business creates significant value. Secondly, recognise that maintaining high CFROIs without achieving accompanying growth adds little value. Profitable growth is required to exploit high CFROIs and move into top performer status.

If European companies want to ratchet up the level of their performance over the next five years then they will have to be ready for the 'go for growth' of value management. But companies that seek growth before they have sufficient underlying profitability (as measured by their CFROI) will get into difficulties (see the sidebar on ‘The C-Curve’).

The challenge for European companies over the next five years is to improve their CFROI by further restructuring, and then to make the judgement as to when CFROI is adequate to support a move towards sustainable and profitable investment growth.

To be ready for this stage, European managers need to learn now how to manage growth. They need to be ready to change their company’s culture to a growth-oriented one, one that has the right incentives to foster entrepreneurship, for example, and to build new businesses.

Countries like Germany where CFROI is relatively low, have some way to go with restructuring. In the UK, however, where profitability is relatively high, companies are in a better position to benefit from a US-style push for growth.

American companies’ successful growth during the 1994-98 period was enabled by the radical restructuring they had gone through at an earlier stage. They were thus better placed to invest in the dynamic new industries that developed over the period, particularly in the IC&T sector.

Preparing for growth should be just part of a company’s overall programme of value management. Even when markets decline and growth is low on the agenda, the company that is skilled at value management will be able to put in a superior performance. Such a company will be better able to withstand shocks and exploit opportunities.

Profitability versus Growth: The C-Curve Story

Companies with low profitability that are seeking to turn around their performance, face conflicting options. Should they seek to grow out of the problem? Or should they restructure their businesses, divesting some and focusing on the profitable ‘hard-core’? This choice — fix what you have or invest for the future — is often a source of internal corporate tension.

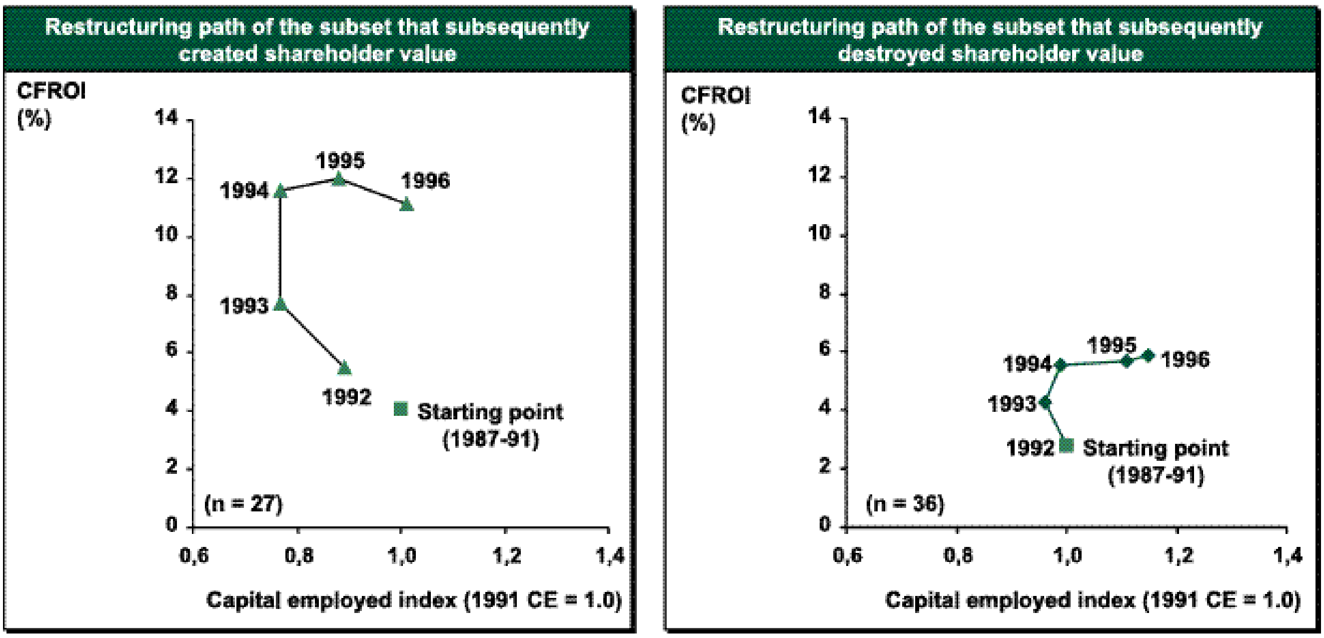
A study by BCG of successful and unsuccessful turnarounds found a number of significant features in the successful ones:

- They raised their profitability to well above the hurdle rates before they set out to increase their investment
- This often involved a radical restructuring – a reduction in the investment base of as much as 20-25% and a doubling or tripling of the return on capital employed
- Successful turnarounds often spent as long as two or three years on this restructuring before they switched their emphasis to growth.

The charts below plot an index of capital employed (1991 = 1.0) against return on investment, for the first and last quartiles of a sample of turnaround companies between 1992 and 1996. The index of capital employed for the first quartile (the successful companies) fell sharply and the return on investment rose sharply before investment grew. The poor performers (the fourth quartile) rushed into growth after only moderate restructuring and after only a small improvement in their return on capital.

Exhibit 19

"Turnarounds": Companies With Low Profitability Starting Positions



Each of these graphs forms the letter 'C'. One is short and squashed; the other is tall and well-rounded. European companies in the process of restructuring need to chart the course of a well-rounded 'C'.

Key Tables

TOP 50 PERFORMERS WORLDWIDE

Rk	Company	Country	Industry	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	DELL COMPUTER	USA	information/communication & telecommunication	78,936	93,137	157.9%	1,088	1,284	+++	++	+++	+++
2	AMERICA ONLINE	USA	media & entertainment	60,248	71,086	143.1%	148	175	++	++	+	+++
3	SAP	D	information/communication & telecommunication	17,981	21,226	90.6%	445	525	+++	-	+++	+++
4	NOKIA	FIN	information/communication & telecommunication	48,687	57,445	78.8%	1,778	2,098	+++	+++	+++	++
5	H&M	S	retail	14,388	16,974	69.2%	147	174	++	++	-	+++
6	MICROSOFT	USA	information/communication & telecommunication	293,173	345,914	68.8%	2,178	2,570	-	++	-	+++
7	CISCO SYSTEMS	USA	information/communication & telecommunication	124,241	146,587	66.6%	601	717	-	-	-	+++
8	AEGON	NL	insurance & assurance	61,004	71,979	66.2%	521	615	++	NM	NM	+++
9	CHARLES SCHWAB	USA	banks	19,097	22,533	64.7%	134	159	-	NM	NM	+++
10	COMPUWARE	USA	information/communication & telecommunication	12,170	14,360	64.4%	226	267	+++	++	++	+++
11	CLEAR CHANNEL COMMS	USA	media & entertainment	12,172	14,362	63.9%	75	88	-	++	-	+++
12	SUN MICROSYSTEMS	USA	information/communication & telecommunication	27,626	32,596	63.7%	464	548	++	++	++	+++
13	TELLABS	USA	information/communication & telecommunication	11,209	13,225	63.3%	225	265	+++	+++	+	+++
14	SAFEWAY	USA	retail	25,117	29,635	62.9%	517	610	++	++	++	++
15	EMC CORP.	USA	information/communication & telecommunication	36,162	42,668	60.4%	370	436	++	++	-	+++
16	FIRSTAR*	USA	banks	17,156	20,242	55.9%	- 102	- 120	-	NM	NM	++
17	STAPLES	USA	retail	11,381	13,429	54.0%	127	150	++	+	++	+++
18	COMPAQ	USA	information/communication & telecommunication	60,529	71,418	53.0%	- 1,356	- 1,600	-	-	-	+++
19	TYCO	USA	industrial goods & engineering	41,397	48,845	52.3%	402	474	+	++	-	+++
20	PFIZER	USA	pharmaceuticals & health care	137,525	162,265	51.2%	795	938	++	++	-	+++
21	INTEL	USA	information/communication & telecommunication	167,591	197,604	50.0%	2,586	3,052	-	-	-	+++
22	GAS NATURAL	E	utilities	13,860	16,353	49.8%	- 25	- 30	-	-	-	+++
23	WARNER LAMBERT	USA	pharmaceuticals & health care	52,357	61,775	49.5%	601	709	++	++	++	++
24	MEDTRONIC	USA	pharmaceuticals & health care	30,816	36,360	49.5%	256	302	++	++	+	+++
25	BANCO BILBAO VIZCAYA	E	banks	27,316	32,230	48.7%	645	761	++	NM	NM	++
26	SCHERING PLOUGH	USA	pharmaceuticals & health care	68,834	81,217	48.3%	712	840	++	++	++	++
27	RITE AID	USA	retail	10,901	12,863	47.5%	11	13	+	+		+++
28	IBM	USA	information/communication & telecommunication	144,245	170,194	47.1%	7,672	9,053	+++	+++	++	
29	ELI LILLY	USA	pharmaceuticals & health care	82,833	97,731	46.7%	919	1,084	+++	++	++	
30	GAP	USA	retail	27,163	32,050	46.3%	475	560	++	++	++	+++
31	BANK OF NEW YORK	USA	banks	25,955	30,624	45.7%	497	586	++	NM	NM	++
32	PINAULT PRINTEMPS	F	retail	19,121	22,561	45.6%	319	376	++	+	++	++
33	MBNA CORP.	USA	banks	16,013	18,895	44.2%	390	459	++	NM	NM	+++
34	WALGREEN	USA	retail	24,759	29,213	43.5%	209	247	+	+	+	+++
35	MCI WORLDCOM	USA	information/communication & telecommunication	111,510	131,592	43.2%	4,420	5,225				+++
36	KROGER	USA	retail	13,141	15,505	43.2%	232	274	++	+		++
37	BANCA INTESA	I	banks	11,401	13,452	43.1%	270	319	++	NM	NM	+++
38	TEXAS INSTRUMENTS	USA	information/communication & telecommunication	28,300	33,394	41.4%	113	133	+	++		+++
39	FREDDIE MAC	USA	banks	37,000	43,657	40.9%	424	500		NM	NM	+++
40	MICRON TECHNOLOGY INC	US	information/communication & telecommunication	10,567	12,468	40.8%	440	520				+++
41	ROLO BANCA 1473	I	banks	10,060	11,870	40.5%	390	464	+++	NM	NM	+++
42	BRISTOL MYERS SQUIBB	USA	pharmaceuticals & health care	112,718	132,995	40.3%	1,260	1,495	++	+	++	+
43	BRITISH AEROSPACE	UK	industrial goods & engineering	12,600	14,871	40.2%	340	403	+++	++	+++	
44	VODAFONE	UK	information/communication & telecommunication	42,361	49,981	40.1%	234	277			+	+++
45	DAYTON HUDSON	USA	retail	20,274	23,921	39.7%	508	592	++	+	++	++
46	UNICREDITO ITALIANO	I	banks	23,508	27,810	39.2%	298	348	++	NM	NM	+++
47	SWISS RE	CH	insurance & assurance	32,428	38,259	39.1%	1,261	1,488	+++	NM	NM	++
48	LLOYDS TSB	UK	banks	65,180	76,921	39.0%	1,112	1,312	+	NM	NM	+++
49	FIFTH THIRD BANCORP	USA	banks	16,127	19,029	39.0%	125	147	+	NM	NM	+++
50	ORACLE	USA	information/communication & telecommunication	35,108	41,395	38.0%	390	460	+		+	+++

NM: Not Meaningful
(1) In million
(2) CVA_{1998} - CVA_{1993}
(3) $CFROI_{1998}$ - $CFROI_{1993}$
(4) Cash Flow $Margin_{1998}$ - Cash Flow $Margin_{1993}$
(5) Asset $Productivity_{1998}$ - Asset $Productivity_{1993}$
(6) Gross $Investment_{1998}$ / Gross $Investment_{1993}$

For banks and insurance companies the following expressions need to be replaced:

CVA	-> AVE
ΔCVA	:- DAVE
Gross Investment	:- Equity
CFROI	:- RROE
WACC	:- Cost of Equity

* We have less then five years of data for these companies due to major restructuring or inconsistencies in accounting practices

TOP 100 PERFORMERS WORLDWIDE

Rk	Company	Country	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
51	ERICSSON	S	information/communication & telecommunication	36,251	42,749	37.9%	940	1,109	++	++	++	+++
52	CLOROX	USA	consumer goods	10,252	12,086	37.7%	158	186	++	++	+	++
53	SMITHKLINE BEECHAM	UK	pharmaceuticals & health care	65,748	77,503	37.1%	717	846	+++	++	++	-
54	MERCK	USA	pharmaceuticals & health care	148,853	175,726	36.9%	1,980	2,337	++	-	++	++
55	AHOLD	NL	retail	19,720	23,265	36.9%	354	417	+	+	-	+++
56	MANNESMANN	D	conglomerates	38,018	44,859	36.8%	1,260	1,481	++	++	+	+
57	LEGAL & GENERAL	UK	insurance & assurance	13,982	16,495	36.8%	65	77	-	NM	NM	+++
58	HOME DEPOT	USA	retail	81,061	95,607	36.5%	831	980	++	+	++	+++
59	FORTIS	B	insurance & assurance	24,547	28,963	36.2%	431	509	++	NM	NM	+++
60	MELLON BANK	USA	banks	15,220	17,958	36.2%	371	437	++	NM	NM	+
61	CARDINAL HEALTH	USA	pharmaceuticals & health care	12,912	15,234	35.9%	135	159	++	+	-	+++
62	SANOFI	F	pharmaceuticals & health care	15,171	17,900	35.2%	197	233	++	++	++	-
63	XEROX	USA	information/communication & telecommunication	32,809	38,704	34.8%	471	556	++	++	+	+
64	APPLIED MATS.	USA	information/communication & telecommunication	13,301	15,694	34.5%	115	136	-	++	-	+++
65	WILLIAMS COMPANIES	USA	utilities	11,310	13,345	34.4%	- 140	- 170	-	-	+	+++
66	GENERAL ELECTRIC	USA	conglomerates	283,348	334,322	34.1%	3,965	4,678	++	++	+	+
67	CARNIVAL	USA	travel, transportation & tourism	24,220	28,587	33.9%	332	392	++	+++	-	+++
68	PROGRESSIVE CORP.	USA	insurance & assurance	10,400	12,281	33.7%	75	88	-	NM	NM	+++
69	HEINEKEN	NL	consumer goods	16,080	18,972	33.7%	116	137	-	++	-	+++
70	CIGNA	USA	insurance & assurance	13,533	15,968	33.6%	865	1,021	+++	NM	NM	++
71	MONSANTO	USA	chemicals	24,324	28,699	33.6%	253	298	++	++	+	-
72	FANNIE MAE	USA	banks	64,230	75,795	33.5%	940	1,100	+	NM	NM	+++
73	AMGEN	USA	pharmaceuticals & health care	22,561	26,619	33.4%	337	397	++	++	-	+++
74	AMERICAN EXPRESS	USA	banks	39,264	46,351	33.1%	601	709	++	NM	NM	+
75	TAKEDA*	JP	pharmaceuticals & health care	28,906	34,110	32.9%	100	120	+	++		++
76	BELLSOUTH	USA	information/communication & telecommunication	82,085	97,560	32.8%	615	862	+	++	+	++
77	CHASE MANHATTAN	USA	banks	50,800	60,060	32.8%	1,290	1,522	++	NM	NM	++
78	WASTE MANAGEMENT INTERNATIONAL	USA	industrial goods & engineering	22,700	26,787	32.6%	760	896	+		+	+++
79	CITIGROUP*	USA	banks	95,700	112,917	32.5%	411	485		NM	NM	+
80	AMERICAN HOME PRODS.	USA	pharmaceuticals & health care	62,990	74,322	32.4%	910	1,063	++	++	+	++
81	JOHNSON & JOHNSON	USA	pharmaceuticals & health care	95,012	112,613	32.4%	1,430	1,681	++	++	++	++
82	HOUSEHOLD INTL.	USA	banks	16,210	19,136	32.3%	29	34		NM	NM	+++
83	RENTOKIL INITIAL	UK	services	18,201	21,476	32.3%	352	416				+++
84	SPRINT	USA	information/communication & telecommunication	24,506	28,908	32.2%	134	158	+	++		++
85	AMERITECH	USA	information/communication & telecommunication	59,273	69,939	31.8%	470	561	+	++	+	++
86	TELEFONICA	E	information/communication & telecommunication	39,645	46,777	31.7%	1,563	1,845	++	++	+	++
87	US BANCORP*	USA	banks	21,840	25,769	31.6%	374	3441	++	NM	NM	+
88	NORTHERN TELECOM	CN	information/communication & telecommunication	28,081	33,145	31.4%	311	367	++	++	++	++
89	UNITED TECHNOLOGIES	USA	conglomerates	20,810	24,565	31.3%	820	969	++	++	+	
90	PROMODES	F	retail	11,654	13,785	31.3%	6	7				+++
91	TELECOM ITALIA	I	information/communication & telecommunication	[illegible]	[illegible]	30.9%	[illegible]	[illegible]	+		+	+
92	3COM	USA	information/communication & telecommunication	13,624	16,074	30.7%	18	23				+++
93	AMERICAN INTERNATIONAL GROUP	USA	insurance & assurance	86,108	[illegible]	30.5%	[illegible]	1,155	++	NM	NM	+++
94	KBC	B	banks	18,654	21,540	30.5%	69	82	+	NM	NM	++
95	SUNTRUST BANKS	USA	banks	13,591	16,036 15,703	30.4%	[illegible]	[illegible]	+	NM	NM	+++
96	COSTCO COMPANIES	USA	retail	13,360	23,408	30.3%	146	172	+	+		++
97	BANCO SANTANDER	E	banks	[illegible]		30.2%	[illegible]	235		NM	NM	+++
98	WELLS FARGO*	USA	banks	[illegible]	[illegible]	30.2%	50	60		NM	NM	
99	BANK OF SCOTLAND	UK	banks	12,442	14,680	29.9%	481	567	+++	NM	NM	+++
100	ABBOTT LABORATORIES	USA	pharmaceuticals & health care	63,041	74,382	29.7%	681	804	++	++		++

NM: Not Meaningful
(1) In million
(2) $CVA_{98} - CVA_{94}$
(3) $CFROI_{98} - CFROI_{94}$
(4) $\text{Cash Flow Margin}_{98} - \text{Cash Flow Margin}_{94}$
(5) $\text{Asset Productivity}_{98} - \text{Asset Productivity}_{94}$
(6) $\text{Gross Investment}_{98} / \text{Gross Investment}_{94}$

For banks and insurance companies the following expressions need to be replaced:
CVA :- AVE
ΔCVA :- ΔAVE
Gross Investment :- Equity
CFROI :- RROE
WACC :- Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

TOP 100 EUROPEAN PERFORMERS

Rk	Company	Country	Industry	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1)(2)	ΔCVA (in US$)(1)(2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	SAP	D	information/communication & telecommunication	17,861	21,226	80.6%	445	525	+++	-	+++	+++
2	NOKIA	FIN	information/communication & telecommunication	48,857	57,445	76.6%	1,778	2,086	+++	+++	+++	++
3	H&M	S	retail	14,358	16,904	69.2%	147	174	++	++	-	+++
4	AEGON	NL	insurance & assurance	61,104	71,979	66.2%	521	615	++	NM	NM	+++
5	RANDSTAD	NL	services	5,258	6,187	58.3%	81	96	++	+	+	+++
6	UCB	B	pharmaceuticals & health care	7,668	9,047	53.7%	177	209	+++	+++	+	+
7	BANCA FIDEURAM	I	banks	5,544	6,541	50.7%	118	140	+++	NM	NM	+++
8	GAS NATURAL	E	utilities	13,860	16,353	49.8%	- 25	- 30	-	-	-	+++
9	NUMICO	NL	consumer goods	5,160	6,088	49.0%	94	111	++	++	+	+++
10	BANCO BILBAO VIZCAYA	E	banks	27,318	32,230	48.7%	645	761	++	NM	NM	++
11	PINAULT PRINTEMPS	F	retail	19,121	22,561	45.0%	319	376	++	+	++	++
12	BANCA INTESA	I	banks	11,401	13,452	43.1%	270	319	++	NM	NM	+++
13	CAP GEMINI	F	information/communication & telecommunication	9,430	11,126	41.1%	119	140	++	+	+++	++
14	SODEXHO ALLIANCE	F	services	6,372	7,518	40.9%	135	159	-	+	-	+++
15	ROLO BANCA 1473	I	banks	10,060	11,870	40.5%	393	464	+++	NM	NM	+++
16	SYNTHELABO	F	pharmaceuticals & health care	8,708	10,275	40.5%	138	163	++	++	+	++
17	BRITISH AEROSPACE	UK	industrial goods & engineering	12,603	14,871	40.2%	783	923	+++	++	+++	-
18	VODAFONE	UK	information/communication & telecommunication	42,361	49,981	40.0%	234	277	-	-	+	+++
19	UNICREDITO ITALIANO	I	banks	23,569	27,810	39.2%	296	349	++	NM	NM	+++
20	SWISS RE	CH	insurance & assurance	32,420	38,253	39.1%	1,203	1,420	+++	NM	NM	++
21	LLOYDS TSB*	UK	banks	65,109	76,821	38.8%	1,112	1,312	+	NM	NM	+++
22	ERICSSON	S	information/communication & telecommunication	36,231	42,749	37.9%	940	1,109	++	++	++	+++
23	SMITHKLINE BEECHAM	UK	pharmaceuticals & health care	65,740	77,573	37.1%	717	846	+++	++	++	-
24	AHOLD	NL	retail	19,720	23,266	36.9%	354	417	+	+		+++
25	MANNESMANN	D	conglomerates	38,019	44,859	36.6%	1,264	1,491	++	++	+	+
26	LEGAL & GENERAL	UK	insurance & assurance	13,982	16,496	36.0%	65	77		NM	NM	+++
27	COMPASS GROUP	UK	services	6,541	7,718	35.4%	75	89			+++	+++
28	FORTIS	B	insurance & assurance	24,547	28,963	35.2%	431	509	++	NM	NM	+++
29	SANOFI	F	pharmaceuticals & health care	15,171	17,900	35.2%	197	233	++	++	++	
30	VNU	NL	media & entertainment	6,090	7,186	34.7%	127	150	+	++		+++
31	HEINEKEN	NL	consumer goods	16,080	18,972	33.7%	116	137		++		+++
32	SKANDIA	S	insurance & assurance	6,660	7,863	32.9%	66	78		NM	NM	+++
33	HAYS	UK	services	6,300	7,402	32.4%	133	157	++		++	+++
34	RENTOKIL INITIAL	UK	services	18,201	21,476	32.3%	352	416				+++
35	TELEFONICA	E	information/communication & telecommunication	39,645	46,777	31.7%	1,393	1,645	++	++	+	++
36	PROMODES	F	retail	11,684	13,786	31.3%	6	7				+++
37	TELECOM ITALIA	I	information/communication & telecommunication	38,200	45,152	30.9%	3,051	3,600	+		+	+
38	KBC	B	banks	18,064	21,540	30.5%	69	82	+	NM	NM	++
39	BANCO SANTANDER	E	banks	19,837	23,406	30.2%	199	235		NM	NM	+++
40	BANK OF SCOTLAND	UK	banks	12,442	14,680	29.8%	481	567	+++	NM	NM	+++
41	GKN	UK	automobiles & supply industry	7,937	9,366	29.8%	337	397	+++	+++	++	
42	ING GROUP	NL	insurance & assurance	49,090	57,921	29.6%	266	314	+	NM	NM	+++
43	SHB	S	banks	7,760	9,163	29.5%	307	362	++	NM	NM	++
44	ZENECA	UK	pharmaceuticals & health care	34,070	40,183	29.5%	251	296	++	++	+	+
45	ZURICH ALLIED	CH	insurance & assurance	26,540	31,298	29.5%	265	312	++	NM	NM	+++
46	NOVARTIS*	CH	pharmaceuticals & health care	103,552	122,183	29.4%	852	1,006			+	
47	[illegible]	I	consumer goods	41,620	49,116	29.2%	270	319			+	+++
48	TRACTEBEL	B	utilities	14,040	16,577	28.8%	22	26	+		+	++
49	GLAXO WELLCOME	UK	pharmaceuticals & health care	105,093	123,997	28.5%	989	1,166	++	++	+	++
50	CASINO GUICHARD	F	retail	6,471	7,637	28.4%	81	96	+	+		++

NM: Not Meaningful
(1) In million
(2) CVA_{98} - CVA_{93}
(3) $CFROI_{98}$ - $CFROI_{93}$
(4) Cash Flow $Margin_{98}$ - Cash Flow $Margin_{93}$
(5) Asset $Productivity_{98}$ - Asset $Productivity_{93}$
(6) Gross $Investment_{98}$ / Gross $Investment_{93}$

For banks and insurance companies the following expressions need to be replaced:

CVA	-> AVE
ΔCVA	:- DAVE
Gross Investment	:- Equity
CFROI	:- RROE
WACC	:- Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

TOP 100 EUROPEAN PERFORMERS

Rk	Company	Country	Industry	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1)(2)	ΔCVA (in US$)(1)(2)	ΔCFROI(3)	ΔCash Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
51	WOLTERS KLUWER	NL	media & entertainment	12,062	15,056	28.3%	239	282	-	++	-	+++
52	DIXONS	UK	retail	5,138	6,060	28.2%	153	180	++	++	++	+
53	PHILIPS	NL	information/communication & telecommunication	21,069	24,860	28.1%	169	200	-	-	+	+
54	ADECCO	CH	services	6,613	7,805	27.9%	705	832	+++	+++	-	+++
55	BANCO CENTRAL HISPANOAMERICANO	E	banks	11,198	13,215	27.8%	298	353	++	NM	NM	+
56	BALOISE	CH	insurance & assurance	5,408	6,387	27.4%	271	319	++	NM	NM	-
57	ASDA GROUP	UK	retail	6,902	8,144	27.4%	127	149	+	+	+	++
58	BANCO POPULAR	E	banks	7,124	8,405	26.5%	144	170	++	NM	NM	++
59	UNILEVER	NL	consumer goods	46,024	53,012	26.4%	1,364	1,610	++	+	++	-
60	VOLKSWAGEN	D	automobiles & supply industry	21,010	24,790	26.2%	3,808	4,503	++	++	++	++
61	CARREFOUR	F	retail	24,984	29,470	25.8%	72	85	-	+	-	+++
62	IBERDROLA	E	utilities	14,380	16,974	25.8%	69	81	-	-	-	+
63	ABBEY NATIONAL	UK	banks	25,534	30,128	25.7%	772	911	++	NM	NM	++
64	ELECTROLUX	S	consumer goods	5,219	6,158	25.6%	39	47	-	-	+	+
65	PRUDENTIAL CORP.	UK	insurance & assurance	24,748	29,200	25.5%	384	454	-	NM	NM	+++
66	SAN PAOLO IMI	I	banks	21,146	24,950	25.2%	584	689	++	NM	NM	+++
67	ROYAL CARIBBEAN CRUISES	N	travel, transportation & tourism	5,201	6,136	24.6%	16	19	-	++	-	+++
68	AXA	F	insurance & assurance	42,727	50,414	24.6%	798	942	++	NM	NM	+++
69	TESCO	UK	retail	15,931	18,808	23.8%	78	92	-	-	++	++
70	EDISON	I	utilities	6,375	7,522	23.7%	147	174	+	-	+	+++
71	COMIT	I	banks	10,506	12,396	23.6%	389	459	++	NM	NM	++
72	ALUSUISSE	CH	industrial goods & engineering	6,183	7,295	23.4%	257	304	++	++	+	++
73	ARGENTARIA	E	banks	10,823	12,770	23.2%	246	290	++	NM	NM	+
74	ELECTRABEL	B	utilities	20,386	24,056	23.1%	13	16	+	+		+
75	ROYALE BELGE	B	insurance & assurance	5,613	6,586	22.7%	415	489	+++	NM	NM	++
76	BRITISH TELECOM	UK	information/communication & telecommunication	82,096	96,867	22.6%	1,170	1,380	++	++	+	
77	ROCHE	CH	pharmaceuticals & health care	72,926	86,046	22.5%	200	236			+	+++
78	ABN AMRO	NL	banks	25,835	30,482	21.8%	687	797	++	NM	NM	++
79	HYPOVEREINSBANK	D	banks	25,786	30,435	21.7%	1,036	1,226	+++	NM	NM	+++
80	PIRELLI	I	automobiles & supply industry	5,182	6,115	21.3%	352	415	++	++	+	
81	CENTROS COMERCIAL PRYCA	E	retail	5,006	5,906	21.2%	- 46	54		+		+++
82	NOVO NORDISK	DK	pharmaceuticals & health care	7,204	8,500	21.2%	165	194	+	++		++
83	DEN DANSKE BANK	DK	banks	6,072	7,164	21.1%	159	187	+	NM	NM	++
84	THAMES WATER	UK	utilities	5,630	6,643	21.1%	133	157	+	++		++
85	UNILEVER	UK	consumer goods	30,830	36,380	20.7%	1,143	1,349	+++	++	+++	
86	MUNICH RE	D	insurance & assurance	36,052	42,573	20.6%	209	247	++	NM	NM	+++
87	ROYAL BANK OF SCOTLAND	UK	banks	11,792	13,913	20.6%	644	760	+++	NM	NM	++
88	STANDARD CHARTERED	UK	banks	9,771	11,529	20.6%	138	163		NM	NM	+++
89	NESTLE	CH	consumer goods	73,006	86,139	20.0%	895	1,057	+	+	+	+
90	BMW	D	automobiles & supply industry	15,071	18,888	19.9%	547	645	++	++	+	+++
91	ASTRA	S	pharmaceuticals & health care	23,251	27,434	19.7%	580	685				+++
92	HOECHST	D	chemicals	20,773	24,510	19.6%	1,409	1,662	++	++	++	
93	CADBURY SCHWEPPES	UK	consumer goods	14,624	17,255	19.5%	202	239	++	++	++	
94	ACCOR	F	travel, transportation & tourism	6,625	7,816	19.5%	91	107	+	+	+	
95	BARCLAYS	UK	banks	27,455	32,394	19.0%	1,235	1,457	++	NM	NM	++
96	ENDESA	E	utilities	21,577	25,458	19.2%	1,373	1,620		++		+++
97	BASF	D	chemicals	20,392	24,061	19.0%	1,040	1,228	++	++		++
98	GENERALI	I	insurance & assurance	35,550	41,134	18.9%	730	865	++	NM	NM	++
99	ALLIANZ	D	insurance & assurance	76,444	90,196	18.9%	157	185	++	NM	NM	+++
100	NATIONAL WESTMINSTER	UK	banks	27,580	32,557	18.6%	1,206	1,423	++	NM	NM	++

NM: Not Meaningful
(1) In million
(2) CVA_{1998} - CVA_{1993}
(3) $CFROI_{1998}$ - $CFROI_{1993}$
(4) Cash Flow $Margin_{1998}$ - Cash Flow $Margin_{1993}$
(5) Asset $Productivity_{1998}$ - Asset $Productivity_{1993}$
(6) Gross $Investment_{1998}$ / Gross $Investment_{1993}$

For banks and insurance companies the following expressions need to be replaced:

CVA	:- AVE
ΔCVA	:- DAVE
Gross Investment	:- Equity
CFROI	:- RROE
WACC	:- Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

Top 10 Performers by Industry

AUTOMOBILES AND SUPPLY INDUSTRY

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	GKN	UK	7,957	9,389	39.8%	557	657	+++	+++	++	-
2	FORD MOTOR	USA	58,375	68,871	27.2%	4,613	5,443	++	++	-	++
3	VOLKSWAGEN	D	21,000	24,780	26.2%	3,385	3,993	++	++	++	++
4	PIRELLI	I	5,182	6,115	21.3%	352	415	++	++	+	-
5	HONDA MOTOR	JP	27,008	31,877	20.3%	1,871	2,208	++	++	+	++
6	BMW	D	15,871	18,688	18.8%	547	645	++	++	+	+++
7	VOLVO	S	5,908	6,968	17.3%	605	714	++	++	+	++
8	BRIDGESTONE	JP	16,014	18,805	15.7%	807	952	++	++	+	+
9	VALEO	F	5,590	6,592	13.0%	65	77	+	-	+	+++
10	TRW	USA	5,691	6,715	12.0%	62	73	+	-	+	++

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

BANKS

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔAVE (in EURO)[1,2]	ΔAVE (in US$)[1,2]	Relative Importance of Value Drivers: ΔRROE[3]	EQUITY[4]
1	CHARLES SCHWAB	USA	19,087	22,523	61.7%	134	158	-	+++
2	FIRSTAR*	USA	17,156	20,242	55.3%	- 102	- 120	-	++
3	BANCO BILBAO VIZCAYA	E	27,316	32,230	48.7%	645	761	++	++
4	BANK OF NEW YORK	USA	25,265	29,824	45.7%	497	586	++	++
5	MBNA CORPORATION	USA	15,813	18,658	44.2%	388	458	++	+++
6	BANCA INTESA	I	11,401	13,452	43.1%	270	318	++	+++
7	FREDDIE MAC	USA	37,000	43,607	40.9%	424	500	-	+++
8	ROLO BANCA 1473	I	10,060	11,870	40.5%	343	404	+++	+++
9	UNICREDITO ITALIANO	I	23,560	27,810	39.2%	290	340	++	+++
10	LLOYDS TSB*	UK	65,103	76,821	38.8%	1,112	1,312	+	+++

(1) In million
(2) AVE – AVE
(3) RROE – RROE
(4) EQUITY – EQUITY
* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices.

CHEMICALS

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	MONSANTO	USA	24,324	28,698	30.8%	253	298	++	++	+	-
2	DU PONT & CO INC	USA	50,645	59,758	20.2%	- 112	- 132	+	++	-	+
3	HOECHST	D	20,773	24,510	19.8%	1,408	1,662	++	++	++	-
4	BASF	D	20,387	24,061	18.1%	1,043	1,230	++	++	-	++
5	BAYER	D	25,971	30,643	16.8%	1,087	1,283	++	++	+	+
6	AKZO NOBEL	NL	11,070	13,061	16.3%	435	514	++	++	+	++
7	SOLVAY	B	5,388	6,358	15.2%	457	539	++	++	+	-
8	AIR PRODUCTS & CHEMICALS	USA	7,779	9,174	14.7%	160	188	++	++	+	++
9	DOW CHEMICALS	USA	17,064	20,133	14.2%	- 34	- 41	+	++	-	+
10	AIR LIQUIDE	F	12,957	15,288	12.4%	70	83	+	+	+	++

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

CONGLOMERATES

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	MANNESMANN	D	38,019	44,858	38.8%	1,264	1,491	++	++	+	+
2	GENERAL ELECTRIC	USA	283,348	334,322	34.1%	3,965	4,678	++	++	+	+
3	UNITED TECHNOLOGIES	USA	20,819	24,565	31.3%	820	968	++	++	+	-
4	TEXTRON	USA	10,240	12,081	23.7%	255	301	++	+	++	-
5	ALLIED SIGNAL	USA	21,089	24,884	18.4%	494	583	++	++	-	++
6	SUEZ LYONNAISE DES EAUX	F	25,758	30,388	18.2%	235	278	-	++	-	+++
7	VIVENDI	F	35,152	41,478	17.7%	353	417	++	+	+	++
8	VIAG	D	13,245	15,627	10.9%	150	177	+	++	-	+++
9	VEBA	D	25,467	30,037	10.4%	414	488	+	+	-	+
10	CORNING	USA	8,810	10,405	10.1%	210	248	++	+++	-	+

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

CONSUMER GOODS

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	CLOROX	USA	10,252	12,098	37.4%	139	164	++	++	+	++
2	HEINEKEN	NL	16,080	18,972	33.7%	116	137	-	++	-	+++
3	L'OREAL	F	41,659	49,118	29.9%	279	329	-	-	+	+++
4	PHILIP MORRIS	USA	110,473	130,288	28.2%	2,627	3,100	++	++	-	++
5	PROCTER & GAMBLE	USA	102,710	121,187	26.8%	1,527	1,802	++	++	-	++
6	GILLETTE	USA	44,963	53,052	27.7%	550	649	+	++	-	+++
7	COLGATE-PALMOLIVE	USA	23,084	27,241	27.1%	347	410	++	++	+	+
8	UNILEVER	NL	46,624	55,012	26.4%	1,304	1,010	++	+	++	-
9	COCA COLA	USA	140,015	165,204	26.1%	742	875	-	++	-	++
10	CAMPBELL SOUP	USA	20,720	24,458	25.5%	[illegible]	404	+++	++	++	-

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

INDUSTRIAL GOODS AND ENGINEERING

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	AUTONATION	USA	5,880	6,950	54.5%	- 264	- 311	+	-	++	+++
2	TYCO	USA	41,337	48,845	52.3%	402	474	+	++	-	+++
3	BRITISH AEROSPACE	UK	12,603	14,871	40.2%	785	926	+++	++	+++	-
4	BOMBARDIER	CN	6,128	7,231	34.7%	- 21	- 25	-	+	-	+++
5	AES	USA	7,242	8,544	33.1%	- 198	- 233	-	-	-	+++
6	WASTE MANAGEMENT INTERNATIONAL	USA	22,709	26,787	32.0%	768	906	+	-	+	+++
7	LOWE'S COMPANIES INC	USA	15,305	18,058	28.7%	202	238	++	++	-	+++
8	ILLINOIS TOOL WORKS	USA	12,295	14,507	25.8%	228	269	+	++	-	+++
9	GENERAL DYNAMICS	USA	6,338	7,478	23.8%	200	236	+++	+	+++	-
10	ALUSUISSE	CH	6,183	7,295	23.4%	257	304	++	++	+	++

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

INFORMATION/COMMUNICATION AND TELECOMMUNICATIONS

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash-Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	DELL	USA	78,996	93,337	152.8%	1,085	1,269	+++	++	+++	+++
2	SAP	D	17,987	21,228	90.6%	445	525	+++	-	+++	+++
3	NOKIA	FIN	48,687	57,446	78.8%	1,776	2,096	+++	+++	+++	++
4	MICROSOFT	USA	293,179	345,914	68.0%	2,178	2,570	-	++	-	+++
5	CISCO SYSTEMS	USA	124,241	146,592	66.8%	604	712	-	-	-	+++
6	COMPUWARE	USA	12,170	14,360	64.4%	226	267	+++	++	++	+++
7	SUN MICROSYSTEMS	USA	27,626	32,600	63.7%	464	548	++	++	++	+++
8	TELLABS	USA	11,208	13,225	63.3%	225	265	+++	+++	+	+++
9	EMC CORPORPORATION	USA	36,108	42,608	59.4%	370	439	++	++	-	+++
10	COMPAQ	USA	60,520	71,418	59.0%	-1,356	-1,600	-	-	-	+++

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

INSURANCE AND ASSURANCE

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	DAVE (in EURO)(1,2)	DAVE (in US$)(1,2)	Relative Importance of Value Drivers: ΔRROE(3)	EQUITY(4)
1	AEGON	NL	61,004	71,979	68.2%	521	615	++	+++
2	SWISS RE	CH	32,426	38,262	38.1%	1,203	1,420	+++	++
3	LEGAL & GENERAL	UK	13,987	16,495	36.6%	65	77	-	+++
4	FORTIS	B	24,547	28,965	36.2%	431	508	++	+++
5	PROGRESSIVE CORP.	USA	10,408	12,281	33.7%	75	88	-	+++
6	CIGNA	USA	13,533	15,968	33.0%	865	1,021	+++	++
7	AMERICAN INTERNATIONAL GROUP	USA	86,008	101,478	30.5%	979	1,155	++	+++
8	ING GROEP	NL	48,323	57,021	29.6%	266	314	+	+++
9	ZURICH ALLIED	CH	29,543	34,858	29.5%	265	312	++	+++
10	AMERICAN GENERAL CORPORATION	USA	16,607	19,605	29.4%	300	354	++	+++

(1) In million
(2) AVE – AVE
(3) RROE – RROE
(4) EQUITY – EQUITY

MEDIA AND ENTERTAINMENT

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash-Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	AMERICA ONLINE	USA	60,240	71,088	143.1%	146	173	++	++	+	+++
2	CLEAR CHANNEL COMMUNICATIONS	USA	12,172	14,362	63.0%	75	88	-	++	-	+++
3	CHANCELLOR MEDIA	USA	5,788	6,830	51.0%	-93	-110	-	-	-	+++
4	VNU	NL	6,016	7,100	34.7%	127	150	+	++	-	+++
5	WOLTERS KLUWER	NL	12,762	15,058	28.3%	239	282	-	++	-	+++
6	MCGRAW-HILL CO.	USA	8,498	10,027	28.2%	167	197	++	+	++	+
7	NEW YORK TIMES	USA	6,998	8,258	23.0%	237	280	+++	+++	+	++
8	TELE COMMUNICATIONS TCI GROUP	USA	22,204	26,198	21.5%	53	62	-	-	+	++
9	THOMSON	CN	12,067	14,238	21.0%	3	3	++	++	+++	+
10	COMCAST SPECIAL	USA	16,361	19,302	20.1%	-439	-518	-	-	+	+++

(1) In million
(2) CVA – CVA
(3) CFROI – CFROI
(4) Cash Flow Margin – Cash Flow Margin
(5) Asset Productivity – Asset Productivity
(6) Gross Investment / Gross Investment

PHARMACEUTICALS AND HEALTH CARE

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash-Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	PFIZER	USA	137,575	162,265	51.2%	785	928	++	++	-	+++
2	WARNER-LAMBERT	USA	57,357	67,775	49.5%	601	708	++	++	++	++
3	MEDTRONIC	USA	30,818	36,360	49.5%	256	307	++	++	+	+++
4	SCHERING-PLOUGH	USA	68,834	81,217	48.3%	712	840	++	++	++	++
5	ELI LILLY	USA	82,805	97,701	40.7%	919	1,084	+++	++	++	-
6	BRISTOL MYERS SQUIBB	USA	112,710	132,989	40.3%	1,206	1,423	++	+	++	+
7	SMITHKLINE BEECHAM	UK	65,740	77,573	37.1%	717	846	+++	++	++	-
8	MERCK	USA	148,993	175,720	36.0%	1,980	2,337	++	-	++	++
9	CARDINAL HEALTH	USA	12,912	15,234	35.3%	135	159	++	+	-	+++
10	SANOFI	F	15,171	17,900	35.2%	197	233	++	++	++	-

(1) In million (2) CVA – CVA (3) CFROI – CFROI (4) Cash Flow Margin – Cash Flow Margin (5) Asset Productivity – Asset Productivity (6) Gross Investment / Gross Investment

RETAIL

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash-Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	H&M	S	14,980	16,074	60.2%	147	174	++	++	-	+++
2	SAFEWAY	USA	25,117	29,635	62.0%	517	610	++	++	++	++
3	STAPLES	USA	11,381	13,429	54.0%	127	150	++	+	++	+++
4	RITE AID	USA	10,901	12,863	47.5%	11	13	+	+	-	+++
5	GAP	USA	27,163	32,050	40.3%	475	560	++	++	++	+++
6	PINAULT PRINTEMPS	F	19,121	22,561	45.6%	310	370	++	+	++	++
7	WALGREEN	USA	24,759	29,213	43.5%	209	247	+	+	+	+++
8	KROGER	USA	13,141	15,505	43.2%	232	274	++	+	-	++
9	DAYTON-HUDSON	USA	20,274	23,921	39.7%	303	357	++	+	++	++
10	AHOLD	NL	19,720	23,268	39.0%	354	417	+	+	-	+++

(1) In million (2) CVA – CVA (3) CFROI – CFROI (4) Cash Flow Margin – Cash Flow Margin (5) Asset Productivity – Asset Productivity (6) Gross Investment / Gross Investment

SERVICES

Rk	Company	Country	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash-Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	RANDSTAD	NL	5,299	6,252	58.3%	84	98	++	+	+	+++
2	SODEXHO ALLIANCE	F	6,372	7,518	40.5%	135	159	-	+	-	+++
3	COMPASS GROUP	UK	6,541	7,718	38.4%	75	88	-	-	+++	+++
4	CINTAS	USA	6,272	7,400	33.0%	47	56	+	+	+	+++
5	HAYS	UK	6,350	7,492	32.4%	133	157	++	-	++	+++
6	RENTOKIL INITIAL	UK	18,201	21,476	32.3%	352	416	-	-	-	+++
7	INTERPUBLIC	USA	9,390	11,087	32.0%	209	247	++	++	++	++
8	ADECCO	CH	6,613	7,803	27.0%	705	832	+++	+++	-	+++
9	SERVICEMASTER	USA	5,561	6,561	26.7%	102	120	+	+	-	+++
10	SERVICE CORP.	USA	8,321	9,818	26.2%	59	70	-	-	+	+++

(1) In million (2) CVA – CVA (3) CFROI – CFROI (4) Cash Flow Margin – Cash Flow Margin (5) Asset Productivity – Asset Productivity (6) Gross Investment / Gross Investment

TRAVEL, TRANSPORTATION AND TOURISM

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	CARNIVAL	USA	24,229	28,587	33.8%	337	397	++	+++	-	+++
2	US AIRWAYS	USA	3,853	4,548	32.2%	637	752	++	+++	+	+
3	ALITALIA	I	4,877	5,754	30.1%	407	479	++	++	-	+
4	KUONI REISEN	CH	1,013	1,195	27.0%	45	53	+++	+	+++	-
5	CONTINENTAL AIRLINES	USA	1,367	1,613	26.7%	769	907	+++	+++	-	++
6	ROYAL CARIBBEAN CRUISES	N	5,201	6,136	24.0%	16	19	-	++	-	+++
7	ACCOR	F	6,625	7,810	19.5%	91	107	+	+	+	-
8	LUFTHANSA	D	7,180	8,472	18.9%	543	640	++	++	+	+
9	SAIRGROUP	CH	2,440	2,879	17.2%	434	512	++	++	++	-
10	DELTA AIR LINES	USA	6,295	7,427	14.0%	1,236	1,460	++	+++	+	-

(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) $Cash\ Flow\ Margin_{1998} - Cash\ Flow\ Margin_{1993}$
(5) $Asset\ Productivity_{1998} - Asset\ Productivity_{1993}$
(6) $Gross\ Investment_{1998} / Gross\ Investment_{1993}$

UTILITIES

Rk	Company	Country	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash-Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	GAS NATURAL	E	15,553	18,353	40.8%	- 25	- 30	-	-	-	+++
2	WILLIAMS COMPANIES INC	USA	11,310	13,345	34.4%	- 149	- 176	-	-	+	+++
3	TRACTEBEL	B	14,049	16,577	28.8%	- 22	- 26	+	-	+	++
4	IBERDROLA	E	14,389	16,974	25.8%	69	81	-	-	-	+
5	EDISON	I	6,375	7,522	23.7%	147	174	+	-	+	+++
6	ELECTRABEL	B	20,390	24,058	23.1%	13	16	+	+	-	+
7	COASTAL	USA	6,322	7,459	21.2%	209	247	++	++	-	+
8	THAMES WATER	UK	5,630	6,643	21.1%	133	157	+	++	-	++
9	ENDESA	E	21,577	25,458	19.2%	- 1,373	- 1,620	-	++	-	+++
10	CONSOLIDATED EDISON INC	USA	10,452	12,333	17.0%	38	44	+	-	+	-

(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) $Cash\ Flow\ Margin_{1998} - Cash\ Flow\ Margin_{1993}$
(5) $Asset\ Productivity_{1998} - Asset\ Productivity_{1993}$
(6) $Gross\ Investment_{1998} / Gross\ Investment_{1993}$

Top 10 Performers by Country

AUSTRALIA

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	HARVEY NORMAN	retail	1,303	1,536	40.8%	10	12	+	-	+	+++
2	WESTFIELD	services	2,220	2,610	30.3%	20	23	+++	-	+++	-
3	BRAMBLES	services	4,700	5,550	29.2%	20	31	+	-	+	+
4	COMMONWEALTH BANK OF AUSTRALIA	banks	11,340	13,301	28.5%	371	438	++	NM	NM	+
5	SUNCORP-METWAY	banks	1,201	1,417	28.0%	75	80	++	NM	NM	+++
6	THE AUSTRALIAN GAS LIGHT COMPANY	utilities	2,007	2,368	26.4%	20	31	+	++	-	+++
7	LEND LEASE CORP.	services	5,788	6,820	24.8%	- 4	- 4	-	-	++	+++
8	WESTPAC BANK	banks	10,778	12,717	23.3%	685	800	+++	NM	NM	+
9	AUSTRALIA & NEW ZEALAND BANKING GROUP	banks	8,625	10,178	22.7%	302	402	++	NM	NM	++
10	NATIONAL AUSTRALIA BANK	banks	18,673	22,032	21.5%	309	364	+	NM	NM	+++

AUSTRIA

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	SEMPERIT	conglomerates	275	323	55.3%	25	21	++	+++	+	++
2	ÖSTERREICHISCHE ELEKTRIZITÄTSWIRTSCHAFTS AG	utilities	1,587	1,867	21.6%	416	388	-	-	-	+
3	AUSTRIAN AIRLINES	travel, transportation & tourism	581	673	19.2%	63	58	++	++	+	++
4	BWT	industrial goods & engineering	312	364	14.4%	2	2	-	-	-	+++
5	EVN	utilities	1,375	1,166	6.4%	30	29	-	-	+	+
6	OMV	chemicals	2,168	1,838	6.0%	255	216	+	++	+	-
7	VAI	industrial goods & engineering	172	146	4.2%	7	6	+	++	-	+++
8	FLUGHAFEN WIEN	services	601	586	2.1%	8	7	-	-	-	++
9	BBAG	consumer goods	421	358	1.0%	9	5	-	-	-	+
10	AUSTRIA MIKRO SYSTEME*	information/communication & telecommunication	90	81	-1.4%	18	10	-	-	-	-

BELGIUM

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	D'IETEREN	services	2,598	3,085	65.9%	187	220	+++	+++	-	-
2	UCB	pharmaceuticals & health care	7,668	9,047	53.7%	177	209	+++	+++	+	+
3	COLRUYT	retail	2,788	3,289	38.2%	20	29	++	-	++	+
4	FORTIS	insurance & assurance	24,547	28,963	30.2%	431	509	++	NM	NM	+++
5	BARCO	information/communication & telecommunication	2,065	3,400	35.0%	64	70	++	++	++	+++
6	KBC	banks	19,984	23,580	30.5%	60	82	+	NM	NM	++
7	TRACTEBEL	utilities	14,049	16,577	28.0%	- 22	- 20	+	-	+	++
8	ELECTRABEL	utilities	20,390	24,058	23.1%	13	10	+	+	-	+
9	ROYALE BELGE	insurance & assurance	5,513	6,505	22.7%	415	480	+++	NM	NM	++
10	TESSENDERLO	chemicals	1,434	1,692	21.7%	9	11	+		+	++

NM: Not Meaningful
(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) $\text{Cash Flow Margin}_{1998} - \text{Cash Flow Margin}_{1993}$
(5) $\text{Asset Productivity}_{1998} - \text{Asset Productivity}_{1993}$
(6) $\text{Gross Investment}_{1998} / \text{Gross Investment}_{1993}$

For banks and insurance companies the following expressions need to be replaced:

CVA	-> AVE
ΔCVA	-> ΔAVE
Gross Investment	-> Equity
CFROI	-> ROE
WACC	-> Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

FRANCE

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	ALTRAN TECHNOLOGIES INTERNATIONAL	services	2,016	2,379	65.7%	18	22	+++	+	++	+++
2	ATOS	information/communication & telecommunication	2,160	2,548	40.2%	48	57	+++	++	+++	+++
3	PINAULT PRINTEMPS	retail	19,121	22,561	45.0%	310	370	++	+	++	++
4	CAP GEMINI	information/communication & telecommunication	9,430	11,126	41.1%	119	140	++	+	+++	++
5	SODEXHO ALLIANCE	services	6,372	7,518	40.5%	130	150	-	+	-	+++
6	SYNTHELABO	Pharmaceuticals & health care	8,700	10,275	40.5%	138	163	++	++	+	++
7	DASSAULT AVIATION	industrial goods & engineering	1,760	2,079	30.9%	209	247	+++	++	+++	-
8	SANOFI	pharmaceuticals & health care	15,171	17,900	35.2%	197	232	++	++	++	-
9	PROMODES	retail	11,684	13,785	31.3%	0	7	-	-	-	+++
10	L'OREAL	consumer goods	41,620	49,116	29.7%	270	320			+	+++

GERMANY

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	SAP	information/communication & telecommunication	17,801	21,226	60.6%	465	525	+++	-	+++	+++
2	MLP	services	1,610	1,907	64.3%	90	106	+++	+++	++	+++
3	PORSCHE	automobiles & supply industry	1,700	2,009	30.8%	261	308	+++	+++	++	+
4	MANNESMANN	conglomerates	38,010	44,850	30.8%	1,204	1,401	++	++	+	+
5	VOLKSWAGEN	automobiles & supply industry	21,010	24,790	29.2%	3,808	4,593	++	++	++	++
6	BEIERSDORF	consumer goods	4,930	5,828	23.5%	61	72	+	-	++	+
7	HYPOVEREINSBANK	banks	25,795	30,435	21.7%	1,030	1,220	+++	NM	NM	+++
8	MUNICH RE	insurance & assurance	36,082	42,573	20.6%	209	247	++	NM	NM	+++
9	HENKEL	consumer goods	4,524	5,338	20.5%	378	440	++	+	+	++
10	GEHE	retail	4,286	5,058	20.5%	73	86			+++	+++

ITALY

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	BANCA FIDEURAM	banks	5,544	6,541	50.7%	119	140	+++	NM	NM	+++
2	BANCA POPOLARE BRESCIA	banks	2,411	2,845	43.3%	65	77	++	NM	NM	+++
3	BANCA INTESA	banks	11,401	13,452	43.1%	270	319	++	NM	NM	+++
4	ROLO BANCA 1473	banks	10,060	11,870	40.5%	393	464	+++	NM	NM	+++
5	UNICREDITO ITALIANO	banks	23,585	27,810	30.2%	209	340	++	NM	NM	+++
6	SONDEL	utilities	1,019	1,203	33.4%	23	27	+	-	+	+++
7	TELECOM ITALIA	information/communication & telecommunication	38,238	45,152	30.8%	3,051	3,600	+	-	+	+
8	ALITALIA	travel, transportation & tourism	4,877	5,754	30.1%	402	475	++	++	-	+
9	BANCA LOMBARDA	banks	1,448	1,709	29.1%	51	61	++	NM	NM	+++
10	SAN PAOLO IMI	banks	21,146	24,950	25.2%	504	595	++	NM	NM	+++

NM: Not Meaningful
(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) Cash Flow $Margin_{1998}$ - Cash Flow $Margin_{1993}$
(5) Asset $Productivity_{1998}$ - Asset $Productivity_{1993}$
(6) Gross $Investment_{1998}$ / Gross $Investment_{1993}$

For banks and insurance companies the following expressions need to be replaced:
CVA -> AVE
ΔCVA -> ΔAVE
Gross Investment -> Equity
CFROI -> ROE
WACC -> Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

NETHERLANDS

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	AEGON	insurance & assurance	61,104	71,509	66.7%	521	615	+++	NM	NM	+++
2	RANDSTAD	services	5,200	6,252	50.3%	84	90	++	+	+	+++
3	GETRONICS	information/communication & telecommunication	3,785	4,409	54.0%	64	75	++	+	++	+++
4	NUMICO	consumer goods	5,160	6,088	40.0%	94	111	++	++	+	+++
5	AHOLD	retail	19,720	23,208	30.0%	354	417	+	+	-	+++
6	LAURUS	retail	2,600	3,071	30.3%	52	61	++	-	+++	+++
7	VNU	media & entertainment	6,136	7,199	34.7%	127	150	+	++	-	+++
8	OCE	information/communication & telecommunication	2,535	2,991	34.2%	38	45	+	+	+	+++
9	HEINEKEN	consumer goods	16,190	18,072	33.7%	110	137	-	++	-	+++
10	AGR	Insurance & assurance	2,750	3,202	33.5%	40	57	++	NM	NM	+++

SPAIN

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	GAS NATURAL	utilities	13,860	16,355	49.8%	- 25	- 30	-	-	-	+++
2	BANCO BILBAO VIZCAYA	banks	27,310	32,230	48.7%	645	761	++	NM	NM	++
3	UNION FENOSA	utilities	4,405	5,304	38.5%	- 240	- 200	-	+	-	++
4	TABACALERA	consumer goods	3,962	4,674	37.7%	70	83	++	+	+++	++
5	CORPORACION FINANCIERA ALBA	conglomerates	1,940	2,300	35.1%	6	7	++	+++	-	-
6	TELEFONICA	information/communication & telecommunication	39,045	46,777	31.7%	1,563	1,845	++	++	+	++
7	BANCO SANTANDER	banks	19,837	23,409	30.2%	100	235	-	NM	NM	+++
8	BANCO CENTRAL HISPANOAMERICANO	banks	11,108	13,213	27.0%	200	303	++	NM	NM	+
9	AGUAS BARCELONA	utilities	2,606	3,078	27.2%	5	6	+	+	-	++
10	ZARDOYA OTIS	industrial goods & engineering	1,630	1,947	26.0%	19	22	+++	++	+++	

SWITZERLAND

Rk	Company	Industry	Market Value (in EURO)[1] 31/12/98	Market Value (in US$)[1] 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)[1,2]	ΔCVA (in US$)[1,2]	Relative Importance of Value Drivers: ΔCFROI[3]	ΔCash Flow Margin[4]	ΔAsset Productivity[5]	Gross Investment Growth[6]
1	SWISS RE	insurance & assurance	32,706	38,350	39.1%	1,205	1,400	+++	NM	NM	++
2	ZURICH ALLIED	insurance & assurance	29,543	34,858	29.5%	265	312	++	NM	NM	+++
3	NOVARTIS*	pharmaceuticals & health care	103,562	122,193	29.4%	- 852	- 1,006	-	-	+	-
4	ADECCO	services	6,613	7,803	27.9%	705	832	+++	+++	-	+++
5	KUONI REISEN	travel, transportation & tourism	1,013	1,195	27.6%	45	53	+++	+	+++	-
6	BALOISE	insurance & assurance	5,400	6,382	27.4%	271	319	++	NM	NM	-
7	RIETER HOLDING	industrial goods & engineering	1,120	1,320	23.9%	52	62	++	++	+	++
8	JULIUS BAER	banks	2,641	3,117	23.8%	84	99	++	NM	NM	++
9	ALUSUISSE	industrial goods & engineering	6,183	7,295	23.4%	257	303	++	++	+	++
10	ROCHE HOLDING	pharmaceuticals & health care	72,020	86,046	22.5%	200	236			+	+++

NM: Not Meaningful
(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) $\text{Cash Flow Margin}_{1998} - \text{Cash Flow Margin}_{1993}$
(5) $\text{Asset Productivity}_{1998} - \text{Asset Productivity}_{1993}$
(6) $\text{Gross Investment}_{1998} / \text{Gross Investment}_{1993}$

For banks and insurance companies the following expressions need to be replaced:

CVA	→ AVE
ΔCVA	→ ΔAVE
Gross Investment	→ Equity
CFROI	→ ROE
WACC	→ Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

UK

Rk	Company	Industry	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	BRITISH AEROSPACE	industrial goods & engineering	12,003	14,671	40.2%	783	923	+++	++	+++	-
2	VODAFONE	information/communication & telecommunication	42,361	40,081	40.0%	234	277	-	-	+	+++
3	LLOYDS TSB*	banks	65,103	76,021	38.8%	1,112	1,312	+	NM	NM	+++
4	SMITHKLINE BEECHAM	pharmaceuticals & health care	65,740	77,573	37.1%	717	840	+++	++	++	-
5	LEGAL & GENERAL	insurance & assurance	13,982	16,498	36.8%	65	77	-	NM	NM	+++
6	COMPASS GROUP	services	6,541	7,718	36.4%	75	88	-	-	+++	+++
7	HAYS	services	6,350	7,492	32.4%	133	157	++	-	++	+++
8	RENTOKIL INITIAL	services	18,201	21,476	32.3%	352	416	-	-	-	+++
9	BANK OF SCOTLAND	banks	12,442	14,680	29.8%	481	567	+++	NM	NM	+++
10	GKN	automobiles & supply industry	7,057	8,369	29.0%	557	657	+++	+++	++	

USA

Rk	Company	Industry	Market Value (in EURO)(1) 31/12/98	Market Value (in US$)(1) 31/12/98	TSR p.a. 94-98	ΔCVA (in EURO)(1,2)	ΔCVA (in US$)(1,2)	Relative Importance of Value Drivers: ΔCFROI(3)	ΔCash Flow Margin(4)	ΔAsset Productivity(5)	Gross Investment Growth(6)
1	DELL COMPUTER	information/communication & telecommunication	78,838	93,137	152.8%	1,088	1,284	+++	++	+++	+++
2	AMERICA ONLINE	media & entertainment	60,248	71,085	143.1%	148	175	++	++	+	+++
3	NETWORKS ASSOCIATES	information/communication & telecommunication	7,587	8,957	113.8%	66	78	-	-	-	+++
4	MICROSOFT	information/communication & telecommunication	293,173	346,014	68.0%	2,178	2,570	-	++	-	+++
5	CISCO SYSTEMS	information/communication & telecommunication	124,241	146,602	66.8%	604	713	-	-	-	+++
6	CHARLES SCHWAB	banks	19,097	22,533	64.7%	134	150	-	NM	NM	+++
7	COMPUWARE	information/communication & telecommunication	12,170	14,360	64.4%	220	267	+++	++	++	+++
8	CLEAR CHANNEL COMMUNICATIONS	media & entertainment	12,172	14,362	63.9%	75	88	-	++	-	+++
9	SUN MICROSYSTEMS	information/communication & telecommunication	27,020	32,596	63.7%	464	548	++	++	++	+++
10	TELLABS	information/communication & telecommunication	11,209	13,325	63.3%	225	265	+++	+++	+	+++

NM: Not Meaningful
(1) In million
(2) $CVA_{1998} - CVA_{1993}$
(3) $CFROI_{1998} - CFROI_{1993}$
(4) Cash Flow $Margin_{1998}$ - Cash Flow $Margin_{1993}$
(5) Asset $Productivity_{1998}$ - Asset $Productivity_{1993}$
(6) Gross $Investment_{1998}$ / Gross $Investment_{1993}$

For banks and insurance companies the following expressions need to be replaced:
CVA -> AVE
ΔCVA -> ΔAVE
Gross Investment -> Equity
CFROI -> ROE
WACC -> Cost of Equity

* We have less than five years of data for these companies due to major restructuring or inconsistencies in accounting practices

Methodology

The data in this study was taken from an analysis of the annual returns (plus share information data) of 5,316 companies around the world. These are the constituent companies of all Datastream's market indices and represent approximately 80% of the capitalisation of all the world's stockmarkets.

Out of this sample, 4,955 companies were classified according to industry. (In some sectors, only firms above a certain market capitalisation were included.) They were divided into 14 different categories:

- Automobiles and supply (€ 555 / $655)
- Banks (including brokerage firms) (€ 2,633 / $3,107)
- Chemicals (€ 413 / $487)
- Conglomerates (€ 742 / $875)
- Consumer goods (€ 1,508 / $1,779)
- Industrial goods (€ 1,717 / $2,026)
- Information, communications and telecommunications (€ 4,083 / $4,818)
- Insurance and assurance (€ 1,084 / $1,279)
- Media and entertainment (€ 452 / $533)
- Pharmaceuticals and healthcare (€ 1,712 / $2,020)
- Retail (€ 1,233 / $1,455)
- Services (€ 925 / $1,091)
- Transportation, travel and tourism (€ 155 / $183)
- Utilities (€ 756 / $892)

(The figures in brackets are the total market capitalisation of the companies in each sector - in billion euros and dollars.)

The total sample was then whittled down to include only those companies that had been listed on a stock exchange for five years or more. This reduced the sample size to 4,147.

These 4,147 ‘established’ companies were then ranked according to the annual average change of their total shareholder return (TSR) in the five years between the beginning of 1994 and the end of 1998.

Relative total shareholder return (RTSR) — the TSR adjusted for local market performance [1+ company TSR / 1+ local index TSR] — was also calculated for each company.

The main focus of the study was on TSR, not RTSR, on the grounds that most investors' perspective is international, at least among the markets covered by this study. Capital moves in search of the highest returns, wherever they may be. Investor decisions in these markets are not significantly influenced by local performance or by local country risk.

Each company's CVA (cash value added) was also calculated. This was the company’s profit minus its capital charge, the cost of all its capital during the period.

The change in CVA was then found to be closely correlated to the external value created. So CVA, an internal measure, was used as a proxy for TSR, an external measure.

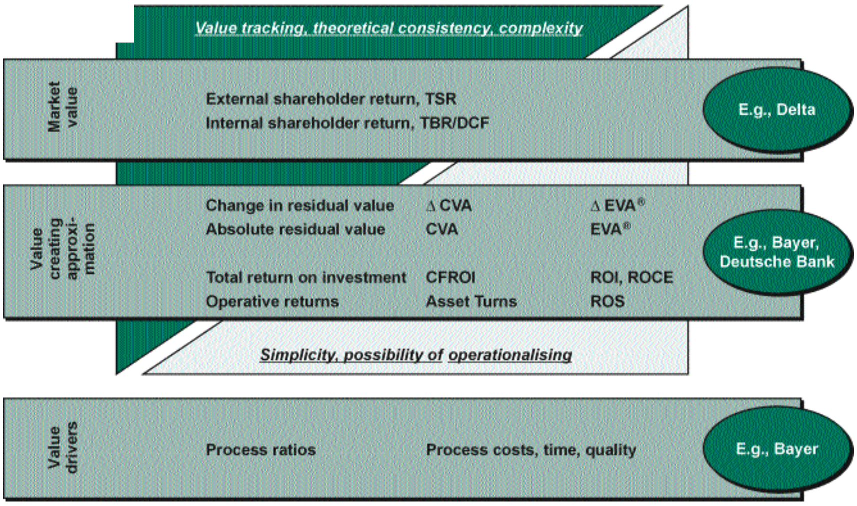
For a small number of companies, there is a deviation between the development of TSR and CVA over the five-year time frame. For example, companies record a relatively high TSR when they were privatised at a relatively low issuing share price and the stock market then adjusts the share price to the underlying performance. Thus, the Delta-CVA will produce a lower figure than the TSR, since the internal performance did not produce the same increase in value. Another deviation is caused when the internal performance slows down in the very last year of the study period. The internal performance is measured as the change between 1993 and 1998, while the TSR is an average yearly rate. Also, the share price sometimes does not fully reflect the change in internal performance yet. (Compaq is an example of a company affected in this way.)

Total Business Returns (TBR) is an alternative proxy to TSR. TBR simulates TSR by using a dynamic methodology that compares today's equity value with future equity values. The equity values are internally generated and based on adequate valuation methods. Of the two TSR proxies, CVA and TBR, CVA is the simpler one.

Exhibit 20

Topography Of Value Metrics

Example Overview



Source: BCG analysis

Exhibit 21

Total Business Return (TBR) is the Internal Analog to TSR

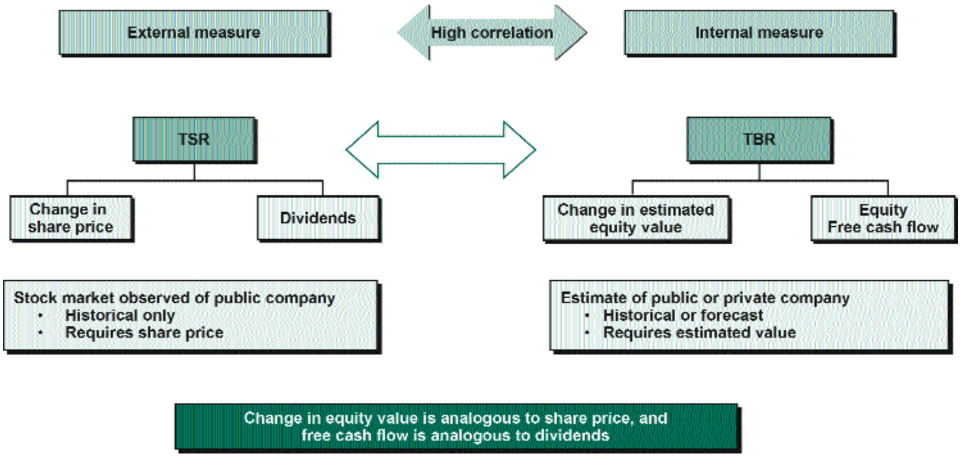
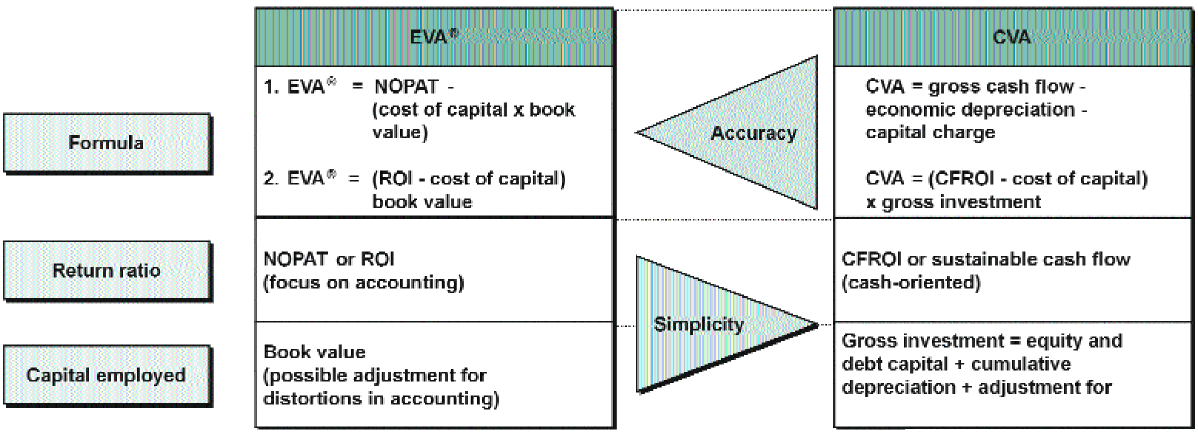


Exhibit 22

EVA® and CVA: Two Ends of a Continuum



The change in CVA (or 'residual income') is equal to the growth of investment multiplied by the original CFROI (the cash flow return on investment), plus the change in CFROI multiplied by all assets. The change in the CFROI, in turn, is equal to the change in the cash flow margin times the change in asset productivity.

Hence each company's CVA (and, by proxy, its TSR) is determined by three things: its cash flow margin, its asset productivity, and its growth in capital invested. The measure also takes into account changes in the cost of capital, but does not include the market's expectations of future performance.

Exhibit 23

CVA Expresses Residual Income

Concept . . .

1. Direct calculation
   CVA = gross cash flow – economic depreciation – capital charge
2. Indirect calculation
   CVA = (CFROI – cost of capital) x gross investment

with

Capital charge = cost of capital x gross investment

$$\text{CFROI} = \frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$$

. . . and example

Gross cash flow	150
Economic depreciation	50
CFROI	10%
Gross investment	1,000
Cost of capital	10%
Capital charge	100

1. CVA = 150 – 50 – 100 = 0
2. CVA = (10% – 10%) x 1,000 = 0

CVA is the residual cash flow minus the implicit cost of reinvestment and the cost of capital

Exhibit 24

CFROI Takes the Reserves for Future Investments into Account

Definition of CFROI

$$\text{CFROI} = \frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$$

Economic depreciation is the amount that has to be put aside annually to finance future replacement investments

Formula

$$\text{CFROI} = \frac{\text{Gross cash flow} - \text{Economic depreciation}}{\text{Gross investment}}$$

$$\text{Economic depreciation} = \frac{\text{WACC}}{(1 + \text{WACC})^n - 1} \times \text{Depreciable assets}$$

Definition of components

WACC =	Weighted average cost of capital
Gross cash flow =	Adjusted profit + interest expense + depreciation
Gross investment =	Net current assets + historical initial cost (possibly adjusted for inflation)
Asset life =	Economic operating life of the mix of assets
Nondepreciable assets =	Assets that flow back into the books at the end of their operating life

Example

Gross cash flow =	150
Gross investment =	1,000
Nondepreciable assets =	200
Asset life =	10 years

$$\text{Economic depreciation} = \frac{10\%}{(1 + 10\%)^{10} - 1} \times (1{,}000 - 200)$$

$$= 50$$

$$\text{CFROI} = \frac{150 - 50}{1{,}000} = \underline{10\%}$$

Each company was graded (with one, two or three stars) according to its improvement in these three areas over the five-year period.

Rankings were made of the top 100 companies in two regions (Worldwide and Europe), as measured by their average annual growth in TSR.

The top 10 companies in each of the 14 different industrial categories were also listed, as were the top 10 companies in each of the following countries:

• Australia	(€ 265 / $313)
• Austria	(€ 27 / $32)
• Belgium	(€ 192 / $227)
• France	(€ 747 / $881)
• Germany	(€ 910 / $1,074)
• Italy	(€ 427 / $504)
• The Netherlands	(€ 564 / $665)
• Spain	(€ 284 / $335)
• Switzerland	(€ 580 / $684)
• UK	(€ 1,841 / $2,172)
• US	(€ 9,339 / $11,019)

(The figure in brackets is the market capitalisation of all the companies in the sample from that country — in billions of euros and dollars.)

All monetary figures are quoted in both euros and dollars. The exchange rate used is taken on 4th January 1999.

Photo : THE IMAGE BANK Abrams/Lacagnina

The Boston Consulting Group

Amsterdam	Dallas	Los Angeles	Oslo	Tokyo
Atlanta	Düsseldorf	Madrid	Paris	Toronto
Auckland	Francfurt	Melbourne	San Francisco	Vienna
Bangkok	Hamburg	Mexico	São Paulo	Warsaw
Boston	Helsinki	Milan	Seoul	Washington
Brussels	Hong Kong	Monterrey	Shanghai	Zurich
Budapest	Jakarta	Moscow	Singapore	
Buenos Aires	Kuala Lumpur	Mumbai	Stockholm	
Copenhagen	Lisbon	Munich	Stuttgart	
Chicago	London	New York	Sydney	

BCG