Overview

All organisations continually evolve, so it comes as no surprise that their performance measurement systems go through various stages of evolution too. A European research report (Gates and Kulik, 1999) found that approximately three-quarters of companies investigated had changed their performance measurement systems during the previous three years and expected to keep changing them in the future.

In the 1980s, the impetus for change came from the belief that the focus of performance management was too historical. As a consequence, many organisations thought they were measuring the wrong things. In the 1990s, companies experienced difficulties in implementing measurement frameworks as well as worrying about measuring too much. Many of the issues from the 1990s remain relevant today, for example, what to measure, how to access data, whether to align rewards and so on.

A recent survey by the American Institute of Certified Public Accountants (AICPA) (Maisel, 2001) highlighted the circumstances that would cause the company to consider revising its performance measures. The drivers of change are listed below in descending order:

- decrease in profitability;
- change in strategy;
- enhance shareholder value;
- redesign of business processes;
- new technology;
- new competition;
- attract/retain people.

There is no doubt that the new markets and new strategies that have emerged over the last few years demand new and different performance measures. The so-called three Cs – customers, competitors and change – plus the amazing speed of technological change have had a profound effect on the way companies develop their measurement systems.
In fact, research has shown that there are often difficulties in using the data when looking at fundamental questions such as the relationship between employee or customer satisfaction and financial performance. The overall message seems to be that business success now relies on measuring both soft and hard areas of performance as well as establishing the link between the two.

A recent report published by CIMA outlined the various performance measurement philosophies adopted by 37 companies investigated in the course of research. It encompassed traditionally managed companies, those subscribing to value-based management and those with an explicit stakeholder management approach. It showed that, despite the academic and consultant literature on the subject, none of the companies used a particular technique in a dogmatic manner. The research concluded that no single approach shows any superiority in terms of optimising performance but this could be explained precisely by the fact that no company practised ‘pure’ performance measurement philosophy but a hybrid of whatever approach it perceived to be beneficial. It seems that the reality of performance measurement and management in UK companies seems to be a contingency approach, with the three most commonly identified contingent factors being:

- the environment within which the organisation operates, in particular the degree of competition an organisation faces in its marketplace;
- the organisation structure in terms of size and the degree of centralisation and decentralisation that an organisation possesses; and
- technological features of the organisation, i.e. the production process.

There seemed to be more similarities between companies in question than there were differences, especially in the prevalence of accounting-based performance measures such as profit, cash flow or the return on capital employed (ROCE). The use of non-accounting measures, although widely accepted in practice, seemed much more informal and ad hoc, almost superimposed on the formal accounting-based systems. The differences, therefore, were of emphasis and not of absolutes.

Effective performance measurement is of key importance in ensuring the successful implementation of an organisation’s strategy. It is about monitoring an organisation’s effectiveness in fulfilling its own predetermined goals or the requirements of stakeholders. In order to be successful, today’s company must perform better not simply in terms of cost but also in other dimensions such as quality, flexibility, value and so on. A performance measurement system that enables it to meet these demands successfully is essential as it helps ensure that decision-making at strategic and operational level is better informed and more effective. Comparison of outcomes against objectives enables the identification of problems so that timely corrective action can be taken.

Above all, measuring performance is an important tool of strategic analysis. Stakeholders will get a better indication of an organisation’s strategy from observing what it measures and does than from its declared goals or what it says it does.

Besides the proactive improvement of business and the optimisation of resources, an important aspect of the management accountant’s role is the provision of management information for performance measurement. By developing effective systems and making sure that the measures implemented are consistent with management techniques chosen, such as ABM, BPR or TQM, management accountants can make a significant contribution to the success of their organisations.

There is a wealth of literature on performance measurement and management. This briefing cannot cover the material in depth but aims to consider the characteristics of an effective system, discuss some common problems encountered in implementing them and identify some of the more recently developed tools and techniques from the Performance Prism to Strategic Enterprise Management.
Part 1 – Factors required for a successful performance measurement system

If a performance measurement system is to work successfully in an organisation, it is necessary to understand the contingent factors that need to be in place regardless of philosophical beliefs.

All approaches to performance measurement emphasise the alignment of objectives, measures, strategic decision-making and rewards. This is crucial, as it is not possible to measure performance unless it’s clear what an organisation is trying to achieve.

A sound performance measurement system will cascade down the organisation. It will be integrated with the overall business strategy and so ensure that all stakeholders are working together in the same direction. Following the identification of strategic objectives, an organisation should agree the key factors and activities that are critical to achieving the objectives and those areas in which the organisation must excel in order to ensure success. Underpinning the critical success factors will be activities or competencies that are essential to outperform the competition. Performance targets can then be developed for the activities. For example, customer care may be identified as a critical success factor. In turn, a fast response to complaints may be essential to achieve competitive advantage – and a performance measure such as response time can be established.

An executive team will need to agree on the leading set of performance indicators and ensure that they are discussed regularly and reviewed.

The environment in which any organisation operates is constantly changing, as we mentioned at the beginning. The strategic issues facing it will be continuously evolving as a response to the external environment and the performance measurement systems also need to change accordingly. Performance measures must be clearly linked to, and form a part of, the organisation’s strategy development cycle for this to work in practice.

For performance measures to be useful there must be a continuous cycle of comparison of actual results with the original plan. This then has to be fed back into the decision-making process. If, for example, service quality is identified as a key factor to be measured, there must also be mechanisms in place to identify variances from target, understand the causes of those variances and know how to correct them. If performance targets do not lead to action, there is no management control.

In addition, performance measures should be reviewed over time. In the light of results obtained, it may be appropriate to modify targets, either up or down, change the activities being measured or even modify the objectives. The information from the performance measures must be a stimulus to action.

In deploying a performance management system, organisations are enabling a single learning loop. In creating single-loop learning, organisations have an assumption of what their business is and go about improving their routine functions, i.e. running the business as well as it can be run today. In such a scenario, if profits are not as expected, an organisation may take various paths to remedy the situation, for example changes in prices, more advertising, improve levels of customer service etc. These actions fall within an organisation’s basic assumption of what its business is and what it takes to succeed. In trying to execute today’s strategy, organisations should not overlook double loop learning. In this paradigm, managers can challenge existing assumptions and the current business model (without being in a situation of crisis). Such organisational learning enables managers to consider the possibility that its resources might, for example, be useful in other businesses. Shell is a good example of an organisation that continually challenges its assumptions.

It is important to distinguish between the two types of learning. Single-loop learning is necessary to build core competencies and double-loop learning is necessary to adapt to changes in its environment and can be a primary driver of sustainable competitive advantage. Typically, many executives pay most attention to operational health rather than strategic health. Good operating performance does not necessarily indicate the future strategic health of a business and organisational learning enables a company to change before they have to. In order to reach this state, executives need a shared understanding of the need for future change. The following elements are required to facilitate this (Murray and Richardson, 1999):

- shared information about the likely future business environment, including major trends and developments;
- a shared sense of vision and strategic intent serving as a yardstick for evaluating strategy;
- a limited set of leading indicators that signal the need for strategic change;
- a set of enabling processes to ensure that appropriate decisions are taken and follow-through occurs.

An executive team will need to agree on the leading set of performance indicators and ensure that they are discussed regularly and reviewed.

While the financial performance is clearly of the utmost importance, it represents only one dimension of value and as such is inadequate in evaluating the strategic performance of an organisation in its entirety.
The problem with traditional accounting-based measures is that they are essentially backward looking and, in today’s volatile equity markets, a poor predictor of future performance. Second, accounting measures take no account of the intangible value drivers which can make up a significant part of a company’s market value, especially in knowledge-intensive companies that characterise the current economic environment. Third, the market’s fixation on bottom-line profit as the only indicator of performance pushes many managers into making short-term decisions in order to boost their earning streams. This has implications for the work of management accountants – as Lothian (1987) says, the consequence of this is ‘that managers seek information on profits at more frequent intervals, sometimes as often as weekly, to ensure that they will be on target with market expectations at the end of the year; external reporting mechanisms, in other words, are used by many organisations as ongoing management control reports, a role for which they were not designed’.

Many companies, however, still continue to employ the traditional accounting measures as opposed to any of the new approaches to performance measurement. When asked why, the companies involved in the CIMA research stated three main reasons for it:

1. The techniques were considered to be perfectly adequate to meet the needs of the business for the management of performance, especially when combined with the development of other measures along the lines of a balanced scorecard.
2. The measures used were appropriate for their major stakeholders and were sufficient to measure their performance. Some interviewees cited City pressure and external expectations.
3. The culture of the organisation itself is not conducive to the introduction of new measures and there is a lack of support for the adoption of new techniques even after some considerable investigation.

However, alternative perspectives are needed to satisfy the demands of multiple stakeholders. (Interestingly, even the companies with an overriding objective of shareholder value creation mention other stakeholders either in their mission statements, during interviews or both.)

Every performance measurement system should reflect the range of factors that contribute to success – including, for example, competitive performance, quality of service and innovation. To do this requires a range of financial and non-financial indicators. This breadth should be reflected throughout the organisation and replicated at every level.

Inevitably, there are problems associated with attempting to broaden the scope of your measurement system. For example, there may be integration problems as data is owned by different parts of the company – customer satisfaction by marketing, financial data by finance and so on. The advent of new technology has made the integration easier but problems are as likely to occur on strategic as on operational levels. See the section on Strategic Enterprise Management in Part 3.

If employees do not own the performance measurement system, it will not be used effectively. The implementation needs to be top-down so that those responsible for setting strategy can determine the objectives and develop appropriate top-level measures. However, where indicators are set for teams or individuals, they should ideally be involved with the process rather than have the measures imposed from above. A sense of ownership means that they are more likely to accept the targets and work towards achieving them. Being involved also has the added advantage of improving the understanding of the strategic aims throughout the organisation.

The AICPA survey highlighted the most frequent barriers to implementing and revising performance measurement systems and three out of four of the main ones are to do with people rather than systems of technology. Buy-in – that is the acceptance among employees and managers, ownership of results and resistance to change – actually came second with 18 per cent, followed by leadership and education and training. (The main challenge was measurement, that is, the ability to define and agree upon measures – see insight box 1).

Defined targets will generally encourage higher performance than where there are none. If accepted, the more demanding the target is, the resulting performance is likely to be better. Therefore, some adverse variances should be expected in a system that encourages improvements in performance. However, consistently punishing failures to meet targets is likely to lead to disillusionment and the building of slack into targets. Targets need to be sufficiently realistic to encourage performance but not so high as to become impossible to meet.

Measures also need to be seen as fair across the organisation. Where comparisons are made between different business units or departments, the equity of treatment becomes crucial.

Where performance measures are used to reward managers’ performance, the evaluation should include only the elements over which they directly control. CIMA research showed that in the companies researched, the executive reward schemes have a variety of bases upon which rewards are determined. They include overall business performance and personal performance, measured in financial or non-financial terms. Even when measures are based on wider objectives, the assessment of performance should not take account of changes in the
business environment over which managers have no control. If this is not the case, the reward system is likely to cause frustration and demotivate rather than encourage better performance.

Despite the differences in approach, there were nevertheless many similarities in the way companies rewarded executive performance, particularly in what they perceived as the need to maintain comparability of rewards with those provided in similar companies. The researchers conclude:

What comes across strongly for all companies, however, is that the most important basis for determining rewards is the effect of the performance upon shareholders. This tends to be measured most commonly in terms of EPS, share price or TSR, with measures such as profit also being important.

In the sample examined, this seems to apply to all companies regardless of what ‘philosophy’ of performance management they are pursuing.

A system that is over-complex will lead to bureaucracy and confusion. Recent developments in technology have meant that IT systems are now able to provide a plethora of statistics but, without care, this can lead to an overload of data with little meaningful information. For this reason, it is important to focus on what is key for the business in strategic terms rather than introducing indicators for everything which can be measured. There is a need for prioritising and discipline. Where a new issue arises and further indicators are developed, these should replace those that have become less important rather than adding to the existing set.

The measures need to be understood by, and communicated to, everyone in the organisation, which is another reason for keeping the system simple and straightforward to communicate. It is also important that where comparisons are made across the organisation, the same measure is interpreted in the same way throughout.

The reporting of results must also be clear and understandable. The use of pictures, graphs and trends can add to clarity, and enterprise resource planning software tends to make this task easier. Results and variances also need to be interpreted in order that causes of poor performance can be understood.

Insight box 1

AICPA’s performance measurement survey:
Barriers in creating/revising the performance measurement system;

The AICPA’s performance measurement practices survey, conducted in 2001, identified the most frequent barriers and challenges in creating/revising performance measurement systems (in order of importance):

- the ability to define and agree upon the measures, establish targets and budgets, collect, and make available the appropriate information;
- acceptance among employees and managers, ownership of results and resistance to change;
- senior management approval, executive support, and communications;
- education and training.

Part 2 – Common issues raised with performance measurement systems

Key drivers of success are not easily measured

Some factors, such as innovation or flexibility, are difficult to measure and the temptation is to avoid them. However, if they are key success factors and value drivers for the business they must be incorporated into the performance measures. This can often be done by measuring indirectly. For example, looking at the results of an innovation in terms of its impact on other aspects of performance such as quality or measuring the performance of the innovation process can give valuable information.

Some aspects may be measured informally or qualitatively. While quantitative measures are probably more useful because they allow comparability, information about some aspects of performance cannot be quantified and, therefore, has to be assessed qualitatively. Of particular interest to many organisations now is the issue of how intellectual capital – assets such as employee know-how, skills and creativity – can be measured. These assets are key to future success but cannot be measured using traditional indicators. It is possible to identify many other measures related to different types of intellectual capital, such as years of experience or service or the proportion of employees generating new ideas. A powerful way of presenting this information is via intellectual capital reports. A few companies such as Skandia have taken the lead in doing this.

The rise of intellectual capital statements has been driven by the decreasing information relevance of traditional financial statements. The new business environment is an
opportunity for accountants because their traditional financial background predisposes them towards new types of measurement systems that also emphasise non-financial performance measures. There is a role for accountants, and in particular management accountants, in classifying the intellectual (and intangible) assets in their organisation, identifying how they form intellectual capital and determining how they link to the overall strategic goals.

The role of management accountants as strategic business partners is crucial because of their involvement in strategy planning and implementation, increasing shareholder value and evaluating company performance. There has been much talk of intellectual capital recently but companies will not be effective in managing it unless they understand what constitutes knowledge and what companies must do to exploit it.

For more information on the managing and measuring of intellectual capital, please refer to CIMA’s Technical Briefing: Managing the Intellectual Capital within Today’s Knowledge-based Organisations.

One of the reasons why performance measurement systems turn out to be ineffective is because the employees’ behaviour does not support the company’s overall strategic objectives. This can happen when the strategy, objective and target-setting processes are not aligned – which may result in the wrong measures being in place.

Employees will generally act according to how they are measured, so over-emphasis on one facet of performance or the use of the wrong targets can create perverse incentives which lead to employees finding other ways of meeting the target. Game tactics and the resulting perverse behaviour has been a significant problem, particularly in the public sector. For example, the drive to reduce waiting lists in the NHS resulted in the distortion of clinical priorities with non-urgent patients who had been waiting a long time at the expense of other more urgent cases. In the commercial world gaming will ultimately lead to the destruction of shareholder value. For example, an over-emphasis on short-term profit in the face of City expectations can lead to short cuts, poor quality and blinkered decision-making. Tools such as the balanced scorecard can help to eliminate these problems.

The rejection of a performance measurement system can manifest itself in different ways. There may simply be resentment and resistance to the implementation of new measures, or a reluctance to collect the information needed. A lack of acceptance will occur if measures are seen as irrelevant to the individual’s job, or if they are imposed with no discussion.

Alternatively, individuals may appear to be performing well but are actually damaging the business. For exam-

The system conflicts with the culture of the organisation

The culture of the organisation can either enable or hinder attempts to manage and improve performance. An attempt to introduce a system of performance measurement in a culture where it’s not the performance that is being rewarded but factors such as political skill, seniority or age will undoubtedly fail. A culture must be developed in which an employee’s contribution to corporate goals and the fulfilment of strategy is valued. This in turn demands excellent communication and emphasis on actions – not words – which can demonstrate that it is goal attainment which is valued. The reward and recognition systems must be aligned with performance measurement. It also needs to be evident that the system can differentiate between levels of achievement and reward accordingly.

The choice of a particular performance measurement philosophy must be matched by the development and cultivation of a culture that can support it. For example, the advocates of a value-based management approach maintain that the shift to VBM will only work if the culture is conducive to decentralised decision-making (Bannister, and Jesuthasan, 1973). An article in the HBR (Haspeslagh et al., 2001) states that the reason most often cited for VBM’s failure was in fact cultural resistance to change and that managing for value is 20 per cent about numbers and 80 per cent about people.

Whatever approach to performance measurement is chosen, companies need to make explicit commitment to it (especially if drastic changes are being made to existing frameworks) and then invest heavily in the so-called ‘soft’ issues such as training.

The development process is too time-consuming or difficult

The process of analysis and development of the strategy, objectives and measures can appear daunting. However, if approached systematically and logically, the resultant investigations and discussions can be very informative in learning about the organisation and its environment. A systematic approach can be encouraged by the use of one of the structured tools available. The balanced scorecard approach, for example, incorporates a process of articulation, execution and monitoring of the strategy. Other approaches are considered below.
Part 3 – Frameworks for performance measurement and management

Many new frameworks and techniques have been developed recently to address some of the issues discussed in the preceding sections and in response to the rocketing interest in performance measurement in the last ten years or so. Some are described below. The techniques are not mutually exclusive; for example activity- and value-based measures can be used as indicators in a balanced scorecard, which can in turn be implemented using a strategic enterprise management system. Arguably, these frameworks add value by offering a different perspective on performance rather than a comprehensive one. This is a major reason for Cranfield University’s development of a different approach known as the performance prism which is also considered. In turn, these techniques are changing the way organisations are managed and their performance measured.

The value-based management (VBM) approach to performance management

VBM is a return to economic values in assessing the performance of the firm and places the concerns of shareholders above others. Ultimately, it maintains that an organisation’s strategy should be tested, based on whether it adds value for its shareholders. Value-based measures such as economic value added (EVA™, see note below) have developed as a way to measure shareholder value.

Shareholder value, a key corporate objective of many companies, is achieved when the return from capital employed in the business is greater than the cost of obtaining funds. Although it is widely accepted in the accounting community, shareholder value is not always taken into account in practice. Some managers are too often preoccupied with other objectives such as growth in turnover, size, accounting earnings and market share. However, although the pursuit of such objectives may benefit managers, it may also destroy shareholder value.

Traditionally performance in this area has been measured using accounting ratios such as earnings per share, return on capital employed and return on investment. However, these have been criticised for many reasons, including being backward-looking, open to manipulation or prone to difficulties due to different accounting procedures. EVA™ has been proposed as a better measure than traditional ratios to assess corporate performance and shareholder wealth creation. EVA™ is copyrighted by the US consultancy Stern Stewart and Co, and a simple definition is the ‘economic’ profit, or the difference between a company’s post-tax operating profit and the cost of capital invested in the business. A related measure is market value added (MVA) which is the difference between the total market capitalisation and the total capital invested. Stern Stewart argue that this measure of market value is advantageous because it considers market value in terms of returns achieved from the investment rather than simply investing as much capital as possible.

A suggested advantage of the VBM approach is that it ensures that a business has a single overriding financial objective. Performance measurement systems tend to have multiple measures stemming from multiple objectives. Therefore, conflicting objectives can lead to performance measures that require trade-offs. To some extent, the VBM approach does not require such trade-offs because shareholder value is the primary objective of the firm and all planning and control systems are consistent with this.

Different groups support different value-based metrics from EVA to cash-flow return on investment. CIMA research, published in 2001, revealed that a variety of VBM measures are used in practice from EVA, CFROI to total business returns, and each company adopted the technique in a unique manner. There is no one clearly preferred VBM measure. The research also showed that VBM measures are not always applied across the range of management processes, although advocates of VBM argue that they should be. For example, five of the fifteen companies involved in the research did not use VBM metrics for monitoring purposes. One company justified this on the basis that running the company for value creation required value principles to be used for decision-making but not necessarily for ex-post performance appraisal. Some companies talked about applying a broad value-based ‘system’ rather than worrying about the specifics. Interestingly, they also talked about the benefits of VBM as being primarily ‘subjective’ ones, such as better strategic planning or improvements in management capabilities rather than tangible improvements in companies’ financial performance.

The proponents of VBM such as Stern Stewart and Copeland argue that ultimately a VBM approach will lead to higher market value. Until recently, however, little research has been done in practice on the problems executives find in implementing this approach. A survey conducted in 1996 by Coopers and Lybrand indicated that VBM was neither widely used nor understood. The CIMA research, however, identified a number of problems and challenges associated with VBM adoption reported by the companies involved. These were:

- **Behavioural difficulties**, such as getting managers to understand the new measures, avoiding perverse short-termist behaviour and complexity.
- **Technical difficulties**, including getting the right data, volatility in WACC, the reliability of assumptions used.
- **Organisational difficulties**, such as overcoming internal resistance, particularly with City analysts retaining a focus on accounting-based information, the significant effort and time required for implementation and ensuring that implementation proceeds sufficiently quickly to maintain momentum.
The research also found that there was a great deal of similarity between companies that are managed according to VBM and traditional accounting principles. Both types of companies remain wedded to the use of traditional accounting measures as the principal, if not only, tool for measuring performance.

As mentioned above, there is much evidence to suggest that successful implementation of VBM-oriented performance measures requires a change in company culture. Using NPV as a decision-making criterion is not sufficient to make an organisation a VBM company. A recent research study conducted by Harvard Business School and supported by the Boston Consulting Group identified a number of managerial challenges to ensuring value-based management works. These include:

- an explicit commitment to VBM at board level;
- a training programme that enables employees to be convinced that VBM is the right approach for the company and how to support it;
- building ownership to support a VBM initiative. This can be achieved by using performance-related EVA targets;
- changing accounting and control systems to avoid accounting complexity. This involves identifying value drivers that have the greatest influence on economic profit, integrate budgeting with strategic planning and investing heavily in information systems, so that the data is available upon which to judge the impact on value of each business unit’s strategy.

There are also a number of problems with using value-based measures as a basis of an investment decision based on the problem of having to make arbitrary adjustments to standard accounting numbers. Stern and Stewart’s EVA model suggests up to 164 adjustments to accounting data to ensure against manipulation and arbitrariness. Critics have pointed out that these adjustments are both time-consuming and costly and many are based on decisions that are as subjective as the original accountant’s numbers.

The problem with using economic profit is that a risk-adjusted charge for the capital employed in business is required – known as the weighted average cost of capital (WACC). However, this has to be estimated. Copeland (2000) cites six factors that need to be considered if the estimated WACC is to be consistent with the suggested overall valuation approach and with the definition of the cash flow to be discounted. Under such circumstances, the room for error is considerable and a change in WACC of as little as 1 per cent can lead to different values of economic profit.

Ehrbar’s (1998) claim that EVA is a measure of those true profits is bold considering that the process of risk adjustment in calculating WACC is heavily criticised in its own right. The risk-adjusted rate method, for example, relies on an accurate assessment of the riskiness of a project.

Risk perception and judgement are bound to be, to some extent, subjective and susceptible to personal views (Arnold, 1998). The capital asset pricing model (CAPM) is often used to link together relevant risk and expected return for any security and is a theory which is used to measure risk and expected return and of a portfolio or collection of assets. This theory has been criticised because of its workability from a technical perspective, particularly measuring the beta value and the argument that it is investors’ expectations that are a more important factor that drive share prices (Arnold 1998, McMenamin 1999 and Davis 1996). There is a nagging doubt about whether beta completely explains returns. It is for this reason that value-based performance measures such as EVA and CFROI usually supplement, rather than replace, more traditional accounting-based performance measures.

For more information on VBM, see the CIMA publication Value-based Management, ed. Bob Scarlett, available from CIMA Publishing.

Activity-based costing and activity-based management

The development of activity-based costing (ABC) and activity-based management (ABM) has led to radical changes in cost management systems. The focus of ABC is on the activities and processes within an organisation and is based on the principle that by controlling the activities that consume resources, costs can be controlled at source. After ABC has provided accurate information about the true costs of those activities, ABM makes use of this information through value analysis and performance measures which support strategic and operational decision-making. Where ABM is implemented it can provide the data needs to plan and direct improvement activities and eliminate waste.


Balanced scorecard

The balanced scorecard is a tool, developed by Kaplan and Norton, to articulate, execute and monitor strategy using a mix of financial and non-financial measures. It is designed to translate vision and strategy into objectives and measures across four balanced perspectives: financial, customers, internal business processes and learning and growth. It, therefore, focuses on all the activities that generate financial results, rather than the financial side alone.

The scorecard depicts strategy as a series of cause-and-effect relationships between critical variables and gives a framework for ensuring that strategy is translated into a coherent set of performance measures. The use of a hierarchy of scorecards cascading through the organisation.
Field-based research in the US conducted in 2000 (Frigo, 2000) showed a number of factors associated with balanced scorecard adoption in organisations. Of significance was how balanced scorecard adopters tended to be more likely to have adopted ERP systems than non-balanced scorecard adopters. Furthermore, balanced scorecard adopters rated more highly the measure categories found in the balanced scorecard approach.

It is interesting to note, however, that some academic writers and senior executives argue that the over-concentration on improving accuracy of measures used can detract from the need to manage the business. Johnston and FitzGerald (2000) reported on an organisation that resisted this problem by using ‘good enough’ performance measures leading to innovation and improved results by using measurement as a facilitator rather than a raison d’être. It is argued that the balanced scorecard and other performance measurement frameworks have led to the use of more measures over which managers may have little or no influence. Measures have been devised simply to fit in with whatever framework is being used (Johnston and FitzGerald, 2000).

Whether this is due to the development of more structured and balanced approaches to performance measurement is debatable. But it is clear that performance measurement must lead to management action and accountability. This is not to say, however, that detailed measures and allocations are necessary to inform management, for example, whether overall costs are going up or down. Furthermore, the credence given to certain types of performance measure will depend on the type of company (i.e. brick and mortar, click and mortar, dot-coms), the industry sector and the growth stage it is in.

Balanced scorecard can act as both a control system and a management tool – in other words, it can be used for monitoring performance as well as for strategic planning. Its versatility may be one of the reasons why so many companies have chosen to adopt it – in fact, those examined in the course of CIMA research on shareholder or stakeholder value all used some form of the scorecard, often without any familiarity with the ideas of Kaplan and Norton. The researchers conclude by saying:

…the significant feature of this almost universal adoption of a balanced scorecard approach to performance management was the individuality of factors taken into account rather than the universal adoption of the technique.

It is only with a good understanding of your business, and how to use the balanced scorecard appropriately, that your organisation’s performance will improve. For more information, see the CIMA Technical Briefing, The Balanced Scorecard, An Overview, available from the Knowledge Bank on the CIMA website.
from the external environment in which it operates, and better business performance monitoring capability.

Fundamentally, SEM is about empowering people to run an organisation as efficiently as it can be run in the present. SEM will provide a systematic use of quantitative and qualitative measurement and logical tools for analysing and solving problems. It monitors the results of actions taken so to ensure an organisation can refine its existing processes and competencies.

A SEM system is an information system providing the support needed for the strategic management process. The basis of a typical SEM system will be a pool of data from a data warehouse which is then fed into a range of analytical tools. These tools include techniques such as shareholder value management, activity-based management and a balanced scorecard. The results from these applications can then be input to the strategic management process.

However, as Martin Fahy, author of the new CIMA book on SEM (Fahy, 2001) says:

It is important to appreciate that SEM is not some new magic technology. In fact (...) SEM as a management activity has been around for decades ever since firms began to recognise the need for better strategy formulation and execution. Finance professionals, such as management accountants, have been providing SEM type support for decades using spreadsheets, extract programmes and a lot of elbow grease. (...) The real killer application in SEM is that it releases finance professionals and others from the drudgery of monthly corporate monitoring and allows them to concentrate on more valuable analyses such as solving specific business problems and longer term direction/agenda setting.

The increasing interest in the SEM approach stems from the fact that inefficiencies in organisations are creating work. CIMA research (Fahy and Millea, 2001) reveals major deficiencies in systems in the finance function, with difficulty in integrating information from different systems reported by close to half of the businesses that responded to the CIMA SEM survey. Fifty-seven per cent of the 52 organisations that took part in the study also rated their systems, in the core area of performance reporting, as average or poor. Organisations that are already drowned in too much information need to have human resource and marketing departments talking to each other and having integrated systems would help achieve this.

CIMA’s SEM roundtable has created a purposeful environment in which the thinking behind SEM can be further developed. CIMA is taking the driving seat with SEM to ensure that this latest innovation does not become a technology-driven fad. CIMA aims to be at the forefront of helping finance professionals become true business partners, with our emphasis on financial managers having a wide set of business skills.

For more information see the CIMA website, at: www.cimaglobal.com/main/resources/developments/sem/

**Six Sigma**

Six Sigma is a performance measurement framework initially pioneered by Motorola but now adopted by companies as diverse as GE, Citigroup or Honda. The letter sigma δ, derived from the Greek alphabet, is used by statisticians to measure the variability of a process. Companies that advocate the Six Sigma approach measure their performance against a standard of 3 variations per million opportunities – which equates to getting things right 99.999 per cent of the time.

Essentially, Six Sigma is a management tool designed to cut waste and make better, cheaper or faster products or services. It does this by selecting an objective or a goal, measuring how well the company is doing against it in terms of variation and then making changes in order to achieve the Six Sigma standard. As one recent article put it, it is ‘a way of creating a closed-loop system to make continuous improvements in business processes’ (The Economist, 2 Feb 02).

The advocates of Six Sigma claim that it is more than a cost-cutting exercise in that the entire new infrastructure needs to be created in order to make sure the changes in value streams are supported throughout the business. This includes intensive training of the so-called black and green belts who provide technical leadership of the programme as well as explicit endorsement from the top through champions and sponsors. In addition, although it is focused on securing efficiency gains, it does this by identifying and eliminating non-value added waste rather than destroying value.

Although much of the Six Sigma literature is somewhat vague (possibly because much of it is written by consultants selling it), the basic idea of process improvement and re-engineering as a way of managing and improving performance is something companies should consider.

Six Sigma forms a part of a larger performance management model known as Define-Measure-Analyse-Improve-Control which Thomas Pyzdek (The Six Sigma Revolution, bettermanagement.com) summarises as follows:
The Performance Prism was recently developed by Cranfield University to reflect the need for organisations to consider the requirements of all stakeholders in the development of a performance measurement framework. Cranfield’s work is a response to the way other performance measurement approaches have downplayed the importance of some stakeholder groups. For example, it can be argued that the balanced scorecard approach largely ignores the role of suppliers and employees in an organisation’s performance. The Performance Prism, on the other hand, considers stakeholder groups that have been growing in power in recent years such as regulators, pressure groups and suppliers (particularly for organisations that outsource non-core activities), and enables an organisation to consider whether its corporate strategy can deliver stakeholder satisfaction. The premise for achieving stakeholder satisfaction is that shareholder value cannot be generated without it.

There are five linked facets of the Performance Prism framework. They prompt the following questions when defining performance measures:

1. **Stakeholder satisfaction** – who are our key stakeholders and what do they want and need?
2. **Strategies** – what strategies do we have to put in place to satisfy the wants and needs of these stakeholders?
3. **Processes** – what critical processes do we need to operate and enhance these processes?
4. **Capabilities** – what capabilities do we need to operate and enhance these processes?
5. **Stakeholder contribution** – what contributions do we require from our stakeholders if we are to maintain and develop these capabilities?

This approach provides a comprehensive and multifaceted framework which should help ensure that an organisation’s performance measurement framework provides a balanced picture of an organisation’s performance, measures all the areas of importance to an organisation’s success and can be applied at different levels of the organisation and through its hierarchy. In ensuring that the needs of stakeholders are satisfied, the Performance Prism approach is designed to ensure that:

- measures are used that track whether strategies have been implemented;
- measures can be used to communicate the strategies within an organisation;
- measures can be applied to incentivise implementation of strategy; and
- the measurement data can be analysed and used to challenge whether strategies are working as planned.

A fundamental difference offered in this approach is that the performance measures are not simply derived from strategy. To derive measures from strategy is to misunderstand fundamentally the purpose of measurement and the role of strategy (Neely and Adams). Where the process of strategic management is about determining the goals of the organisation and a plan of action to fulfil these goals, a performance measurement framework should inform management whether the organisation is going in the strategic direction set out.

Information on implementing the performance prism can be found by reading:


Also refer to:

www.performance prism.com or
www.som.cranfield.ac.uk/som/cbp/ for more information on the Performance Prism and the Catalogue of Performance Measures which is a reference guide for those
seeking information on how they might measure specific dimensions of performance. Containing over 200 measures, the catalogue details the main features of performance used in industry, explains how each of these measures can be operationalised and evaluates the strengths and weaknesses of each of the measures of performance. The measures in the catalogue have been classified according to the facet of the Performance Prism to which they apply.

**Reasons behind the choice of performance measures chosen in companies**

CIMA research (Cooper et al., 2001) entitled Shareholder or Stakeholder Value, which involved interviews with 37 FDs from The Times top 500 companies, provided an interesting insight to the choice of measures adopted in organisations.

Adopters of EVA tend to be aware of its limitations with FDs making the following comments:

‘If you are not careful you can get a short-term distortion.’

‘We have a saying here that profit is an opinion and cash is a fact. EVA is really at the profit end of the spectrum – made by an FD who preferred cash based measures such as CFROI and CAV.’

Those companies using CFROI acknowledge its complexity but argue it’s a price worth paying for greater accuracy. A comment from one FD was that ‘if you are smart enough for CFROI why waste your time with EVA?’

Other FDs recognised that CFROI is not complete and their organisations focused on TBR, which when used as a strategic measure is felt to provide a level playing field for the different businesses within the company.

Some companies were found to use TBR with CFROI and others used TBR and EVA. The important issue however was captured by one FD who said, ‘the concept of value provided the solution, since it required all businesses to demonstrate how they would achieve a 10 per cent improvement upon their starting point, irrespective of whether the starting point of one business was relatively high or not’.

The accuracy of the measure used as a proxy for value creation is not always a main concern however. One company focused on in the research used ROCE as its prime strategic and monitoring measure. This is despite criticism from many VBM advocates who believe it is a poor indicator of value creation.

ROCE was selected in this organisation because it was felt that it would provide the essence of shareholder value principles and because it was a measure already used and familiar to managers. The second stage of implementing the company’s shareholder value programme involved a move to the balanced business scorecard approach to encourage long-term growth.

Another organisation involved in this research spent time considering alternative approaches to performance measurement and the variety of methods used by City Institutions. Viewing this as an endless process and that there is no single perfect measure, they chose a measure (in this case CFROI) and started using it. The critical issue was to find a measure that helped improve business performance. CFROI was chosen in this instance because it was felt to be sufficiently understandable to operating managers while being consistent with the way in which top management viewed the key drivers of financial performance of the group. Other companies such as AT&T also believe that the CFROI model predicts shareholder value more accurately than any other models.

Research by the AICPA identified that the structural characteristics of an industry affect the selection and use of financial performance indicators. The more capital intensive the business, the more likely the use of ROCE and return on shareholders’ equity. Customer and product centric businesses are more likely to select revenues, growth, and profitability as primary measures.

**Part 4* – Is IT the key to successful performance measurement?**

* Information in Part 4 is based on research presented in ‘The Balanced Scorecard Software Report’ written by Bernard Marr and Andy Neely, Cranfield School of Management in association with Gartner, Inc., InfoEdge 2002

Performance measurement is on the agenda of executives today. The balanced scorecard (BSC) has been voted one of the most influential management ideas of this century. The latest data from various sources suggests that over 50 per cent of firms today have adopted a BSC. First introduced by Drs. Robert Kaplan and David Norton, in the early 1990s as an improved performance measurement system, the BSC has evolved to its current role as a strategic management system.

Robert Kaplan states: ‘As the scorecard has evolved into a strategy implementation and management system, organisations have recognised that they cannot get full benefit when it is communicated only via desktop application tools, such as Microsoft Excel spreadsheets, PowerPoint presentations, or Access databases.’ However, many organisations today run their scorecards from spreadsheets without utilising the full potential that software applications can offer today. More than two dozen
software vendors have developed powerful solutions for BSC implementations and until now there was no tool that helped organisations to find the matching software solution which meets their unique requirements.

Bernard Marr and Andy Neely from the Center for Business Performance at Cranfield School of Management have worked together with Gartner, the leading research firm, to create a world-wide in-depth report that evaluates all 28 software applications available today. IT plays a major role in any BSC implementation and facilitates data integration, data analysis and communication to an extent that cannot be achieved with desktop applications. However, the key to a successful BSC solution implementation is to have the right software that matches the organisational needs, culture and requirements. The authors of the Balanced Scorecard Software Report state: ‘It is important to know exactly what you want and what you don’t want in an application.’

The offerings are great and vary significantly among vendors and it is easy to fall into the trap of buying everything they offer. The problem is that this makes the implementation lengthy and more difficult, and may prevent people from using it because it is too complex.

The starting point for any selection process has to be the recognition that the different BSC software applications each has different strengths and weaknesses. Particular packages will be relevant for your organisation for particular reasons, while they may be completely inappropriate for others. So rather than worrying about the packages on the market, begin by thinking about what you need from your BSC software application in your organisation.

In order to achieve this the authors developed a decision framework with the following ten key criteria that need to be addressed when selecting the software solution for any BSC implementation (Marr and Neely, 2002):

1. Company and product
   - Do you have any requirements in terms of size, experience and expertise of the software vendor?
   - What are your budget limitations in terms of license fee, maintenance, implementation and training?

2. Scalability
   - Do I want full scalability?
   - Is it intended to roll out the solution globally?
   - Does the solution have the scalability in terms of programming, data handling and data dissemination?

3. Flexibility and customisation
   - Is the solution flexible enough?
   - Does it support other frameworks such as the EFQM or the Performance Prism?
   - Can it be personalised by users?
   - Does it include different views for analysts and executives?

4. Features and functions
   - Does it allow to assign owners to measures and tasks?
   - Do I want the solution to send reminder e-mails and warning signals?
   - What reporting capabilities does the solution have?

5. Communication
   - Is the software web enabled?
   - Does it integrate with e-mail?
   - Can I post comments?

6. Technical specifications
   - Does the software integrate with my existing IT infrastructure?
   - Can it extract data out of existing data sources?

7. User interface/data presentation
   - What are my requirements in terms of data presentation?
   - What kind of diagrams, tables and graphics do I need?

8. Analysis functionality
   - Do I require multidimensional analysis capabilities?
   - What kind of statistical functionality do I need?
   - Do I need trending and scenario planning?

9. Service
   - Is there a service partner in each of the countries we operate in?
   - What service requirements do I need?
   - Do I need implementation support?

10. Future
    - How often does the software gets updated?
    - What is the vendor’s vision about the future in performance measurement and does this fit my own vision?

Addressing these ten criteria allows organisations to develop their own catalogue of needs which can then be translated into a list of requirements to be sent to or compared with the offerings of all software vendors in the BSC software market.

Software vendors that offer a BSC or performance measurement software solution include: ABC Technology, Accure, Active Strategy, Cognos, Comshare , Corvu, Crystal Decision, Dialog Software, Ergometrics, Gentia, Hyperion, IC Visions, IFUA Horvath & Partner, Inphase, Online Development, Oracle, PB Views, Peoplesoft, Performance Soft, Procos, ProDacapo, QPR Software, SAP, SAS Institute, Show Business, Simpel, Solvision, Stratsys.

The marketplace for BSC software is growing and more and more software vendors enter the market for management applications. Some years back, only a handful of specialised vendors were able to offer software solutions for BSCs whereas today the marketplace has become crowded and it is not unusual to find more than twenty software
vendors at BSC conferences. For organisations looking for a software solution to implement their performance measurement system, it has become increasingly difficult to distinguish the different software vendors and their offerings. This section is intended to help to distinguish vendors and their products on a macro scale (how to position the products available in the market). It will not distinguish vendors on a micro-scale like the decision framework.

Based on the Decision Framework for Balanced Scorecard Tools (Buytendijk, 2001) and an earlier vendor type distinction (Marr et al., 2001) the Classification Model was developed to help organisations understand the different software products in the market. The Classification Model distinguishes the products in the following three different facets (see illustration):

- **Implementation** – What is the scope of the software implementation?
- **Integration** – How deeply is the software integrated with operational and management processes?
- **Customisation** – To what extent does the software need to be customised and need IT support/skills?

These are important categories that help understanding of where the different vendors place their products and might give organisations guidance in terms of products to look at. However, the software packages can be distinguished in many other categorisations and the Classification Model is just one way the authors consider most useful.

![Classification Model Diagram](image-url)

**Source:** Marr, B and Neely, A (2001), The Balanced Scorecard Software Report, Stamford CT, Gartner, Inc., and Cranfield School of Management.

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**Part 5 – References and further reading**

**References**

Buytendijk, F (2001), Balanced Scorecard Tools: comparing apples and oranges (DF-12-8143), Research Note, Gartner Group.
Cooper, S; Crowther, D; Davies, M and Davis, E W (2001), Shareholder or Stakeholder Value, CIMA.
Fahy, M and Millea, I (2001), Strategic Enterprise Management Systems: Some empirical evidence from the UK and Ireland (CIMA SEM Survey), CIMA.
Holloway, J; Hinton, M; Francis, G and Mayle, D (1999), Identifying Best Practice in Benchmarking, CIMA Publishing.
Marr, B and Neely, A (2002), The Balanced Scorecard Report, Stamford CT, Gartner, Inc., and Cranfield School of Management.
In addition to the recommendations in the previous section, there is a plethora of literature available on performance measurement and management. This is by no means a full list, but a starting point.

CIMA Technical Briefings, Executive Summaries and Guides
Available from the Knowledge Bank on the CIMA website at: www.cimaglobal.com/main/resources/knowledge/ or as hard copy from CIMA Publishing.

- Managing the intellectual capital within today’s knowledge-based organisation
  Considers why companies should be measuring and managing intellectual capital and how to do it.

- Setting effective performance indicators in a best value environment
  This guide has been prepared for use by local government staff to assist in understanding the value that may be gained from implementing effective performance indicators to monitor and manage performance levels.

- Performance reports for boards
  Practical guidance on the key principles of performance reporting to boards.

- Performance through people
  This brief guide has been prepared to illustrate some of the techniques and practices that managers can adopt as part of communication and training programmes.

- Performance in Management in Executive Agencies
  (see summary on website).

Publications

- Performance Management
  ed. J Coates, CIMA
  A collection of articles on the creation of a unified performance measurement system through which performance objectives may be established.

- Performance Measurement in Service Businesses
  L Fitzgerald et al, CIMA
  Explains the appropriate measures of business performance to support the creation of sustainable competitive advantage.

- Performance Measurement in Service Industries: Making it Work
  L Fitzgerald and P Moon, CIMA
  A step-by-step approach to designing and implementing performance measurement systems.

- Shareholder or Stakeholder Value: The Development of Indicators for the Control and Measurement of Performance
  S Cooper, D Crowther, M Davies and E W Davis, CIMA, 2001.

- The Balanced Scorecard: Translating Strategy into Action
  R Kaplan and D Norton, HBS Press.
  Demonstrates how senior executives can use the balanced scorecard to realise strategic objectives, hit future targets and evaluate performance.

  R Kaplan and D Norton, HBS Press.
  A sequel to The Balanced Scorecard: Translating Strategy into Action, using a range of examples from different organisations to show how the balanced scorecard has been used. Extracts have been published in the CIMA journal Financial Management as a series of articles, ‘Step on the gas’, ‘Balance without profit’, ‘Express delivery’, as detailed below.

Available from Amazon.co.uk:


Useful website:

Find out more about the Centre for Business Performance www.cranfield.ac.uk/som/cbp
The Performance Measurement Association

A global multi-disciplinary network for those interested in the theory and practice of performance measurement and management.

The Performance Measurement Association (PMA) is a global multi-disciplinary network, for both academics and practitioners, which focuses on the fields of performance measurement and management. The PMA was launched at the 2nd international PM conference, in July 2000, with the aim of formally bringing together the various disciplines and geographies of those interested in the topic. Its development and continued growth is overseen by a board of leading academics in the fields of performance measurement and management. The aims of the PMA are to:

- encourage the development of a multi-disciplinary community centred around performance measurement and management.
- provide networking opportunities for members of that community so that individuals can better understand the research that has been undertaken into the field of performance measurement and management on a worldwide basis.
- facilitate the exchange of information and ideas about theory and practice in the emerging field of performance measurement and management.
- encourage the exchange and joint development of teaching and education materials designed for practitioners in the field of performance measurement and management.
- enable the rapid transfer of ideas, concepts and insights in the field of performance measurement and management from academia to business and vice versa.

Now with over 1,000 members, the PMA is the leading global think tank and thought leadership forum for academics and practitioners in the field of performance measurement and management. The PMA represents a global hub for the latest ideas in all areas related to the area. Resources for the PMA include an online portal with its comprehensive links page, researcher database, key references resources, newsletter and conferences section. The PMA also hosts an online discussion forum, which is used by over 60 per cent of members and which facilitates discussions around performance measurement and management issues. The forum and PMA more generally represent a great opportunity to understand the latest trends on a truly global basis. The networking potential of the PMA is witnessed at its biannual international conference, which plays host to nearly 200 academics and practitioners from over 30 countries around the world, each bringing different disciplinary perspectives to the event. The next such event is due to be held in Boston, 17–19 July 2002.

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  SEM philosophy, p. 33

Further references can be obtained from CIMA’s Technical Advisory Service on telephone 020 8849 2259, fax 020 8849 2464 or via the website at: www.cimaglobal.com/members/resources/services/TAS

Glossary of terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>ABC</td>
<td>Activity-based costing</td>
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<tr>
<td>ABM</td>
<td>Activity-based management</td>
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<td>AICPA</td>
<td>American Institute of Certified Public Accountants</td>
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<td>BPR</td>
<td>Business process reengineering</td>
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<td>BSC</td>
<td>Balanced scorecard</td>
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<tr>
<td>CAPM</td>
<td>Capital asset pricing model</td>
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<tr>
<td>CFROI</td>
<td>Cash flow return on investment</td>
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<td>EFQM</td>
<td>European Foundation for Quality Management</td>
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<td>ERP</td>
<td>Enterprise resource planning</td>
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<tr>
<td>EPS</td>
<td>Earnings per share</td>
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<td>EVA</td>
<td>Economic value added</td>
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<td>MRP</td>
<td>Material requirements planning</td>
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<tr>
<td>MVA</td>
<td>Market value added</td>
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<td>ROCE</td>
<td>Return on capital employed</td>
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<td>SEM</td>
<td>Strategic enterprise management</td>
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<tr>
<td>TBR</td>
<td>Total business return</td>
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<td>TQM</td>
<td>Total quality management</td>
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<td>TSR</td>
<td>Total shareholder return</td>
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<td>VBM</td>
<td>Value-based management</td>
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<tr>
<td>WACC</td>
<td>Weighted average cost of capital</td>
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