SIR SHAIKH ABDUL BASIT

Advanced Performance Management (APM)

Index

Professional skills

Purpose of chapter

This chapter explains the content included within the professional skills syllabus area. This syllabus section is included in all Strategic Professional Options Exams syllabi.

The inclusion of this syllabus area reflects ACCA's continued focus on ensuring that the professional accountants of the future have the right blend of technical and professional skills, coupled with an ethical mindset. These professional skills will make candidates more employable, or if already in work, will enhance their opportunities for advancement.

More details can also be found in the professional skills section on the ACCA

website.

Content of the professional skills syllabus area

The Strategic Professional Options Exams will expect candidates to demonstrate the following Professional Skills:

- Communication
- Analysis and Evaluation*
- Scepticism (and Judgement) **
- Commercial Acumen

*Analysis and Evaluation have been combined into one overall skill, as it has been deemed that for the Options exams, analysis is done in order to arrive at a thorough and comprehensive evaluation of a matter.

** Judgement is added to the Scepticism descriptor for Advanced Audit and Assurance (AAA) only, as it is a defined requirement for auditors.

Each of the four professional skills has a number of leadership capabilities associated with it. The Strategic Professional Options Exams will use these capabilities to allocate marks in each exam question as appropriate.

Format of the exam, including professional skills

- The syllabus is assessed by a 3 hour 15 minutes computer based examination (CBE).
- The pass mark for all ACCA Qualification examinations is 50%.
- The technical syllabus sections are A, B, C and D.
- Syllabus section E is professional skills:
  - In terms of earning professional skills marks, the examining team will be looking for that skill to be evident in the technical points you make.
  - The professional skills marks will be attached to the overall question, rather than individual requirements.
  - Candidates are expected to think professionally across the whole of their response as the professional skills are interconnected and tied to the technical requirements. For example, a thorough evaluation of a matter may require challenges of assumptions/data to be made and also evidence from the organisational context to be used to support a recommendation which has to be commercially sound.
- For both technical and professional skills marks there will be slightly more marks available than the set amount for students to score, for example in a Section B question there are five professional skills marks, however those five marks could be scored from a possible seven marks.

Section A

Section A will always be a single 50-mark case study. The 50 marks will comprise of 40 technical marks and 10 professional skills marks.

Technical syllabus sections A, B and C are examinable is Section A.

All four of the professional skills will be examined in Section A. The professional skill "Communication" will only appear in the Section A question, because that is where a request for a specific format for the answer (i.e. a report format) will be made.

Section B

Section B will consist of two compulsory 25-mark questions. The 25 marks in each question will comprise of 20 technical marks and 5 professional skills marks.

In Section B, one question will include technical marks mainly from Syllabus section D. The other question will include technical marks from any other technical syllabus section(s).

Section B questions will contain a combination of professional skills appropriate to the question and the marks will not necessarily be an even split across the skills being tested. Each question will contain a minimum of two professional skills from Analysis and Evaluation, Scepticism and Commercial Acumen. Analysis and evaluation will be included in all APM questions.

Question presentation

The wording for the Professional Skills at the end the Section A question will be:

Professional marks will be awarded for the demonstration of skill in communication, analysis and evaluation, scepticism and commercial acumen in your answer.

For Section B questions, only the Professional Skills being tested in that question will appear, so for example:

Professional marks will be awarded for the demonstration of skill in analysis and evaluation and commercial acumen in your answer.

Details of the professional skills for APM

In the ACCA's detailed APM study guide, the professional skills are fully explained. This explanation is included and built upon below.

Communication

Detailed study guide explanation of "Communication"

Leadership capability	**Explanation**
Inform	Inform concisely, objectively and unambiguously, adopting a suitable style and format, using appropriate technology.
Persuade	Advise using compelling and logical arguments, demonstrating the ability to counter argue where appropriate.
Clarify and simplify	Clarify and simplify complex issues to convey relevant information in a way that adopts an appropriate tone and is easily understood by and reflects the requirements of the intended audience.

In summary, this means you have to express yourself clearly and convincingly through the appropriate medium while being sensitive to the needs of the intended audience. This means responding in a professional manner and adhering to any specific instructions made.

Analysis and Evaluation

Detailed study guide explanation of "Analysis and Evaluation"

Leadership capability	**Explanation**
Investigate	Investigate relevant information from a range of sources, using appropriate analytical techniques to estimate reasons and causes of issues, assist in decision-making and to identify opportunities or solutions.
Consider	Consider information, evidence and findings carefully, reflecting on their implications and how they can be used in the interests of the individual, business function, division and the wider organisational goals.
Assess and apply	Assess and apply appropriate judgement when considering organisational plans, initiatives or issues when making decisions; taking into account the implications of such decisions on the organisation and those affected.
Appraise	Appraise information objectively with a view to balancing the costs, risks, benefits and opportunities, before advising on or recommending appropriate solutions or decisions.

In summary, this means you firstly have to thoroughly investigate and research information from a variety of sources and logically process it with a view to prioritising activities and arriving at an appropriate conclusion or recommendation ("Analysis").

This analysis should form part of a comprehensive evaluation of a matter where you have to carefully assess situations, proposals and arguments in a balanced and cogent way, using professional and ethical judgement to predict future outcomes and consequences as a basis for sound decision-making ("Evaluation").

All APM questions will include this professional skill, as it is fundamental to performance management. It is common for APM questions to focus on the evaluation of a report, method, model, system, or technique, of which part may be the analysis of some data or information. It is important in APM to remember that any analysis or evaluation is contextual and must take into account the situation in which the organisation in the question operates.

Scepticism

Detailed study guide explanation of "Scepticism"

Leadership capability	**Explanation**
Explore	Explore the underlying reasons for key organisational plans, issues and decisions, applying the attitude of an enquiring mind, beyond what is immediately apparent.
Question	Question opinions, assertions and assumptions, by seeking justifications and obtaining sufficient

	evidence for either their support and acceptance or rejection.
Challenge and critically assess	Challenge and critically assess the information presented or decisions made, where this is clearly justified, in the wider professional, ethical, organisational, or public interest.

In summary, this means you have to explore, question and challenge information and views presented to you, recognising that all information is available or that there may be underlying bias, to fully understand business issues and to establish facts objectively, based on ethical and professional values.

In the APM exam, having a questioning approach is key for this skill.

Commercial Acumen

Detailed study guide explanation of "Commercial Acumen"

Leadership capability	Explanation
Demonstrate awareness	Demonstrate awareness of organisational and external factors, which will affect the measurement and management of an organisation's strategic objectives and operational activities.
Recognise key issues and use judgement	Recognise key issues in determining how to address or resolve problems and use judgement in proposing and recommending commercially viable solutions.
Show insight	Show insight and perception in understanding behavioural responses, process and system-related issues and wider organisational matters, demonstrating acumen in arriving at appropriate recommendations.

In summary, this means you have to show awareness of the wider business environment and external factors affecting business and use commercially sound judgement and insight to resolve issues, exploit opportunities and offer valid advice and realistic recommendations.

General advice from the ACCA examining team

- Make sure you include the most important, relevant, and crucial points relating to the requirement. Use your judgment to consider which points are the most convincing and compelling and only include additional less important points if you are not sure you have made enough valid points to achieve all the technical marks available for the requirement.
- Show deep/clear understanding of underlying or causal issues and integrate or link information from various parts of the scenario or different exhibits.
- Only make relevant points and try not to include superfluous information or make unsupported points. Bland statements with no application do not demonstrate professionalism nor does including information which does not address the requirements.
- Avoid repeating points already made. Professionally competent candidates do not needlessly repeat information. They may reinforce a previous point, but this is usually made as a development of a point rather than repetition.
- Address the requirements as written, taking particular notice of the verb used. Answering the question asked is an indication of your ability to read and comprehend instructions appropriately as is a demonstration of professionalism expected in the workplace.

- Show your ability to prioritise and make points in a logical and progressive way, building your response to a question.
- Structure and present your answers in a professional manner through faithfully simulating the task as would be expected of a professional accountant.
- Demonstrate evidence of your knowledge from previous learning or wider reading and apply this knowledge appropriately to strengthen arguments and make points more convincing.
- Demonstrating professionalism is not about linguistic eloquence or having an extensive vocabulary or having perfect grammar, it is about the ability to express points clearly, factually, and concisely and show credibility in what you are saying.

Time management and planning

For time management purposes, candidates should allocate time based on the technical marks available, as the professional skills marks should not be thought of as separate requirements. Remember professional skills marks are earned as you work through the technical marks by providing comprehensive and relevant responses to the technical requirements.

In terms of time management, it is important to use the approach that will suit you best:

- If 15 minutes are spent reading the examination requirements (it may be sensible to allocate time to this), your time allocation should be 2.25 minutes per mark (180/80). This gives 90 minutes for section A and 45 minutes for each section B question.
- If you do not allow a specific amount of time for reading and planning (a more straightforward approach but the risk is that you run out of time) your time allocation will be 2.4 minutes per mark (195/80). This gives 97 minutes for section A and 49 minutes for each section B question.
- If you plan to spend more or less time on reading and planning, your time allocation per mark will be different.

In terms of the technical requirements, you should consider how many marks there are for the requirement and then decide how many different points need to be made to achieve these marks. For the Strategic Professional Options examinations this is normally on the basis of one mark per point, possibly with an extra mark for more fully developing the same point.

Important Terms to understand

Mission Statement: A mission statement is a statement of the purpose of a company or organization.

Following will be included in Mission statement:

1. Purpose and aim(s) of the organization and define what the company is about.
2. The organization's primary stakeholders
3. How the organization provides value to these stakeholders
4. Distinguish the company from all others 5. Serve as framework to evaluate current activities

Benefits of mission statements

Prevent conflict	Communication of key cultural values	Reason for existence	Provides strategic direction

Drawbacks of mission statements

They might be unclear	Un-noticeable	Not represent the actual values	Lack sufficient external focus

Difference between mission and vision

Mission	Vision
1. Concerns what an organization is all about	1. Describes how the future will look if the organization achieves its mission
2. Gives the overall purpose of an organization	2. Describes a picture of the "preferred future

Critical Success Factors

CSFs are the areas in which business should win. These are good indicators about whether the business will achieve its primary objective or not.

Key Performances Indicator

KPI tells us whether the CFSs will be achieved or not.

Internal vs. External Factors: Every manager possesses internal Critical Success Factors (CSFs) linked to their department and the individuals they oversee:

These CSFs encompass a wide array of interests, ranging from human resource development to inventory control. The central feature of these internal CSFs is their focus on matters entirely within the manager's realm of influence and control. External CSFs pertain to issues that are typically beyond the manager's direct control, such as the availability or cost of vital raw materials or energy sources.

Monitoring vs. Constructing/Adapting: Managers holding operational responsibilities generally employ monitoring CSFs to oversee the performance of their segment within the organization. These CSFs are subject to ongoing observation and often have a financial orientation (e.g., real performance vs. budget or the present state of product or service transaction costs). Another CSF that can be monitored is the rate of employee turnover.

Managers with a more strategic focus may concentrate on constructing CSFs. Such managers engage in devising long-term organizational changes in response to the surrounding environment. Consequently, they require CSFs to gauge the organization's progress in the desired direction. Examples of such CSFs might include the count of successfully launched new products.

FINANCIAL PERFORMANCE MEASURES

Performance measurement is the process by which businesses, governments and other organizations can assess the performance of an employee, process, equipment or other factor to gauge progress is toward predetermined goals.

Financial performance measure

It includes ratio analysis which is used to measure the profitability, liquidity and risk faced by the organization. Following are the ratios that can be calculated:

PREVIOUS KNOWLEDGE (F5 RATIOS)

Profitability ratios

1. Return on capital employed

$$\frac{\text{Profit before interest and tax}}{\text{Capital employed}} \times 100$$

Where

Capital employed is = All assets – current liabilities

The ROCE will be further sub-divided into

2. Asset turnover

$$\frac{\text{Sales}}{\text{Capital employed}}$$

3. Operating profit

$$\frac{\text{Operating profit} \times 100}{\text{Sales}}$$

4. Gross profit margin

$$\frac{\text{Gross profit} \times 100}{\text{Sales}}$$

5. Net profit margin

$$\frac{\text{Net profit} \times 100}{\text{Sales}}$$

Liquidity ratios

1. Current ratio

Current assets
Current liabilities

2. Acid test ratio

(Current assets – stock)
Current liabilities

3. Inventory turnover in days

Inventory x 365 days
Cost of goods sold

4. Account receivables in days

Accounts receivable x 365 days
Credit sales

5. Accounts payables in days

Accounts payable x 365 days
Credit purchases/cost of goods sold

Risk related ratios

1. Financial gearing

Debt x 100
(Debt + equity)

Or

Debt x 100
Equity

Where debt = Long term loans + preference share capital

Where equity= Share capital + share premium + retained profit

2. Operational gearing

Contribution
Profit before interest & tax

Fixed cost
Total cost

Fixed cost
Variable cost

3. Interest cover

<u>Profit before interest & tax</u>
Finance cost

4. Dividend cover:

<u>Profit after interest & tax</u>
Dividend paid or to be paid

Note: When performing ratio analysis of the company following points should be considered.

1. Calculate ratio
2. Consider whether it has increased or decreased using comparatives
3. Explain the reason for such an increase or decrease
4. Given your conclusion if required

NEW MEASURES (P5 RATIOS)

1. **PROFITABILITY RATIOS**

A. **EBITDA**

Earnings before interest, tax, depreciation and amortization are a measure of a company's operating cash flow based on data from the company's income statement.

This earnings measure is of particular interest in cases where companies have:

1. Large amounts of fixed assets which are subject to heavy depreciation charges
2. Large amount of acquired intangible assets which are subject to large amortization
3. Charges or for companies with a significant amount of debt financing having high interest payments.

Advantages

1. Easy to calculate and understand
2. Depreciation and amortization is non-cash item and are subject to judgments such as useful lives and residual income so ignoring them allows a realistic comparison between different companies.
3. It is substitute of cash flow from operations so is good measure of underlying performance
4. Interest and tax being non-operating external cost so are irrelevant when measuring the performance of the business.
5. It is useful measure for all managers/departments that do not have the control over acquisition and financing decisions.

Disadvantages

1. It can be easily manipulated by changing the accounting policies relating to income recognition and capitalization of expense.

2. It does not take into account the cash flow relating to working capital or fixed asset replacement.

B. **EARNING PER SHARE**

It indicates the profit earned per share which is a good indicator for investor to decide whether the investment should be made or not. Companies often use a weighted average of shares outstanding over the reporting term.

$$\frac{\text{Profit after tax less preference dividends}}{\text{Weighted average number of ordinary share in issue}}$$

Advantages

1. Easy to calculate and understand
2. Enables comparison to be made between companies, sectors and period with the same organizations.

Disadvantages

1. Might be subject to manipulation due to changes in accounting policies
2. Study have shown that EPS has poor correlation with shareholder value

C. **Dividend Yield**

A financial ratio that shows how much a company pays out in dividends each year relative to its share price. In the absence of any capital gains, the dividend yield is the return on investment for a stock.

Dividend per share /Current share price x 100

D. **P/E ratio**

The P/E looks at the relationship between the stock price and the company's earnings. The P/E gives you an idea of what the market is willing to pay for the company's earnings. The higher the P/E the more the market is willing to pay for the company's earnings.

Share price/EPS

E. **Earning yield**

The earnings yield (which is the inverse of the P/E ratio) shows the percentage of each dollar invested in the stock that was earned by the company. The earnings yield is used by many investment managers to determine optimal asset allocations.

EPS/share price x 100%

2. **NET PRESENT VALUE**

It represents PV of all cash inflows less the PV of all cash outflows of a project. Any project that has positive NPV is considered acceptable.

Advantages

1. Considers time value of money

2. Has a good correlation with shareholder values who are concerned with longer term cash flows.
3. Decreases the probability of manipulation and subjective decision, as it is based on cash flows and not on accounting profit.
4. Considers the entire life of the project.
5. In case of mutually exclusive projects, it is a superior measure to IRR.
6. It can deal with non-conventional cash flows.
7. It is based on the assumption that re-investment is made at the cost of capital.
8. It can deal with changing interest rates.

Disadvantages

1. Difficult to calculate and understand.
2. The calculation is based on certain assumption such as timings and duration of the cash flows and appropriate cost of capital.
3. Unlike profit measure it is not a good measure for motivating the managers.

3. SENSITIVTY ANALYSIS

It is technique from which it is possible to identify the critical variables (such as sales price, material &labor cost) which if changed might affect the ultimate decisions (Brings the project NPV to 0). For example, if only a (say) 2% change is required in selling price before losses result an investor may think twice before proceeding.

Formula for NPV

$$\frac{\text{Net present Value}}{\text{PV of flows under considerations}}$$

4. Internal Rate of return (IRR)

It is used when there is uncertainty about the cost of capital. It represents the discount rate where NPV is 0. In other words, it represents the breakeven cost of capital. Any project having a greater IRR than the firm's cost of capital should be accepted.

Advantages

1. It is easy to understand as the IRR is simply compared to firm cost of capital
2. It considers time value of money and is not based on profit so there is less chances of manipulation.
3. It provides information about how risky is the project i.e., the sensitivity of the returns.

Disadvantages

1. Difficult to calculate.
2. It is not an absolute measure of profitability.
3. It is an estimate based on interpolation so any project having sensitive returns may be subject to wrong decision.

4. In case of mutually exclusive projects NPV is a superior measure to IRR.
5. non-conventional projects having different cash flow patterns may give rise to multiple IRR or no IRR.

5. Modified Internal Rate of Return

This represents the actual return generated by the project because it can deal with different borrowing and re-investment rates.

Steps

1. Find the terminal value of cash inflows from the project if invested at company's reinvestment rate.
2. MIRR will be the discount rate calculated to equate the terminal value to the present value of outflow at T0.

- **Other issues**

1. Short – termism

The objective of the performance measurement system is to judge the true performance of managers. However, if the rewards are attached with performance, this might lead to dysfunctional behavior by managers in which they will prefer short term benefits to gain rewards over the long-term benefits thus will take decision against the shareholders. Following are the ways to improve the performance measurement system

1. It should consider both financial and non-financial factors.
2. It should focus on both short- and long-term objectives
3. It should emphasis only on controllable factors.
4. It should link the manager's performance to company objectives.
5. Used NPV technique

Chapter: NON-FINANCIAL INDICATORS

INTRODUCTION

Non-financial performance measures are measures of a company's operations that are not based on financial statement numbers. These measures may use financial statement numbers, but they are also found in many other ways in the organization. In recent years non-financial measures have increasingly grown in importance for companies. A much greater influence has been placed on non-financial measures by investors and other shareholder groups. Today, in order for a company to compete, even survive, the company must use non-financial numbers in everyday operations. The main problem for companies is how to quantify their non-financial measures. In the previous topics emphasis was placed on financial performance indicators which is important for measuring financial performance of organizations but sole reliance on these indicators have certain disadvantages as well.

Weakness of Using Only Financial Measures

Traditional performance measurement was based almost exclusively on financial measures. Financial Performance Measures include metrics such as profit margins and return on capital employed, which were discussed in Chapter 9. However, since the 1980s, many companies have recognised that there are inherent weaknesses in focusing only on financial factors:

- They lead to an excessive focus on cost reduction. Short-term cost reductions may be achieved at the expense of long-term performance – due to the effect on staff morale, quality and other factors.
- Financial performance measures tend to have an internal focus; to compete successfully, an organisation needs to consider external factors such as the activities of customers and competitors.
- Financial measures are traditionally backwards-looking. Organisations must consider the future given the current dynamic business environment.
- Financial performance indicators ignore the drivers of business success. The things which drive business success are:
    - Quality
    - Delivery
    - Customer satisfaction
    - After-sales service
    - Employee satisfaction.

Examples of non-financial performance indicators that measure each of these drivers include:

- Quality: % of goods returned due to defects. (a low number would indicate better quality).
- Delivery: Time taken from ordering to receiving goods in days.
- Customer satisfaction: Number of repeat customers
- After-sales service: Time taken to resolve problems.

- Employee satisfaction: Staff turnover

- NFPIs drive businesses forward in the long run. Financial performance indicators may measure success, but they do not ensure success.

Since the 1980s, many companies developed non-financial performance indicators. These are used alongside financial performance measures to give a "rounder" picture of the performance of an organisation.

Links and Trade-offs

Financial and non-financial performance indicators interact even though they may measure different aspects of performance or activities.

If, for example, an organisation wishes to increase market share (an NFPI), it may reduce prices or make special offers available to customers. Such actions might increase market share in the short term, before competitors react, but is likely to lower profit margins (a financial measure).

Or suppose an organisation focuses on cost reduction and has an objective of 100% on-time deliveries to improve customer satisfaction. If there are production delays, orders may need to be delivered by courier to ensure on-time delivery, but this will increase delivery costs. There may therefore need to be a trade-off between the financial and non-financial aspects of performance.

Advantages of NFPIs

- Easier to calculate than financial measures, so they can be provided much more quickly (e.g. at the end of each shift).
- Flexibility – organisations can come up with any measures that are appropriate to their objectives.

Implications of Growing Emphasis on NFPIs

The popularity of NFPIs was driven by a more competitive environment in which organisations found that to compete, it was necessary to consider qualitative factors such as quality and customer satisfaction, not just producing at a lower cost.

Problems of Growing Emphasis on Non-Financial Performance Measures

- Organisations often ignored financial performance entirely – this is clearly not appropriate when the objective of an organisation is to maximise the wealth of its shareholders.
- Organisations developed too many NFPIs, many of which conflicted, confusing the managers trying to achieve them.
- It is often difficult to interpret or make decisions based on qualitative data.

Use of Balanced Scorecard Model

As a result of these problems, Kaplan and Norton came up with the idea of the Balanced Scorecard. The Balanced Scorecard encourages organisations to take a more balanced view of performance measures by choosing a small number of financial and non-financial key performance indicators (KPIs) that cover the most critical areas of the business. The Balanced Scorecard is covered later in *Chapter 15*.

Fitzgerald and Moon's Building Block Model

Although Fitzgerald and Moon's building block model is described later (see *Chapter 15*), it is worth mentioning here, as it includes financial and non-financial performance indicators. The building block model was conceived for use in service businesses and proposes measuring performance under six categories or dimensions, as follows:

Results

1. Profitability
2. Competitiveness (e.g. market share)

Determinants

1. Quality of service
2. Flexibility (i.e. the ability to customise the service to meet customer needs)
3. Resource utilisation
4. Innovation (e.g. developing new products).

Within each category of the building block model, the organisation must decide on appropriate performance measures.

The two dimensions of results will be influenced by the other four "determinants". For example, a high quality of service may lead to greater customer loyalty, increasing both market share (competitiveness) and profits.

- The determinants are likely **non-financial** (i.e., focusing on what drives success).
- The financial performance indicators measure success.

Non-Financial Performance Measures Relating to Employee

The value of an organisation's employees is not considered in an organisation's financial statements. However, for many organisations, particularly service organisations, the value of "human capital" may be very important.

Facets that organisations may wish to measure relating to employees include:

- **Knowledge and skills.** This may come from previous education and/or previous job experience.
- **Attitude.** In service industries in particular, it is important that employees demonstrate a positive and helpful attitude when dealing with customers or clients.
- **Morale.** Poor employee morale may affect the attitude of the employees. It may also lead to higher staff turnover. High staff turnover leads to additional recruitment and training costs for new staff to replace those who leave.

Performance Measures Relating to Quality

Quality of product or quality of service is far more important in a competitive environment. Many organisations compete on quality which is an important driver of long-term success.

Many companies have adopted total quality management programmes, monitoring quality at all stages of the production process. Total quality management is covered in greater detail later in this chapter.

Quality of Products

Possible measures of overall quality and customer satisfaction are as follows:

- Percentage of goods produced that are identified as being faulty before sale and have to be scrapped or reworked.
- Percentage of products sold that are returned because they do not meet required standards.
- Cost of fixing products under warranty claims.
- Customer retention rates. Crude indicators of loyalty of an organisation's customer base are sales and market share. More insightful information often comes from customers who have not been retained.

Quality of Services

Services are different to products, in that there is no tangible product, and what clients value about the service is not always so clear. Possible measures of the quality of service and customer satisfaction are as follows:

- **Number of complaints.** The problem with this measure is that it does not consider customers who were unhappy with the service but did not complain.
- **Number of repeat clients.** This is an objective measure of performance. If the customer is happy, he will come back for more.
- **Rankings from customer surveys.** The problem with these is that some customers may not complete the survey at all; others may do it quickly without really thinking. Therefore, its results may not be entirely reliable.
- **Rankings of customer attitude** performed by management or internal auditors by going "undercover" and pretending to be clients.

Access and Availability of Products and Services

These are critical aspects of performance, as customers may leave if they cannot obtain goods and services when they want to.

Interpreting Data on Qualitative Issues

Understanding the message provided by qualitative data usually requires a certain amount of judgement before any conclusions can be drawn about the meaning of the data.

If rankings indicate that customers are dissatisfied, it will be necessary to identify why. This may not always be clear from the data given.

Significance

Although it can be expensive for an organisation to develop and maintain a brand and a company profile, such intangibles can have a significant positive impact on organisational performance. That impact will depend on the extent to which the brand and profile have the following features:

- A recognisable name;
- High levels of customer loyalty;
- The perception of quality and luxury;
- Accompanying trademarks or patents/.

Brand Awareness

Brand Awareness vs Brand Loyalty

It is important to distinguish between brand awareness and brand loyalty.

- Brand awareness is the extent to which customers recognise and recall a brand. It reflects the brand's ability to attract new customers.
- Brand loyalty is the extent to which customers buy a product because of the brand and will continue to buy it. It reflects a brand's ability to retain customers.

Significance to Business

If customers do not know about an organisation, they will not buy from it, and hence one of the main objectives of an organisation is to grow brand awareness. For many organisations, their brands are the most valuable assets that they control.

A brand may:

- be the name of the company, in which case all products made by the company will benefit from it (e.g. the names of car manufacturers such as Mercedes-Benz); or
- relate to particular products (e.g. the Persil washing powder brand owned by Unilever).

Various benefits accrue to the organisation that owns the brand:

- The brand name differentiates the product, enabling the company to focus on its target market and possibly charge a premium price.
- If the brand relates to one product, that brand can be leveraged to other products (e.g. the cigarette brand Marlboro was used to launch various lines of men's clothing).
- The brand may lead to brand loyalty and therefore to repeat customers, ensuring success in the future.

Performance Management Issues

In order to maintain brand awareness, organisations must invest in advertising and publicity:

- It is important to select a method of advertising and locations appropriate for the brand's image. For example, companies that produce up-market country clothing often sponsor events such as horse-jumping competitions.
- The management accountant will have to prepare budgets for each type of promotion and judge their effectiveness by monitoring the additional revenue generated.

If the brand suggests quality, the organisation must have quality assurance and control procedures in place . The management accountant may provide financial and non-financial information (e.g., the number of defective products, information about quality costs).

Brand awareness and recognition can be measured by market research. Typically, surveys seek to determine the portion of the public that is aware of the brand, and those who are aware are asked about the image that the brand conveys to them.

Company Profile

A company profile is how an organisation appears to the outside world. As with brands, a favourable company profile can lead to increased sales, as consumers are attracted to buying from the company. If the company has a bad profile, this can lead to a fall in sales.

A bad company profile could be the result of the following:

- Bad quality of service (rude staff, delays in returning calls);
- Poor ethical or social behaviour;
- Poor quality of products.

Total Quality Management

Key Concepts

TQM is a philosophy of “get it right the first time every time”. It recognises that the costs of bad quality may exceed those of good quality.

- The aim is perfect quality (i.e. zero defects).
- There is dissatisfaction with the status quo. Even if a target of zero defects is not feasible, management and staff should believe it is possible to get it right next time.
- Every process has a process owner, and every person contributes to its improvement.
- Goods and services from a TQM system will be competitive on cost, flexible, delivered in a minimum time, backed up by guarantees and swift customer service.
- Successful implementation and running of a TQM system require education and training of all those involved in producing goods, from parts suppliers, through the workforce to the organisation's management.
- Training produces the benefits of reduced wastage, improved products and market position, increased sales and profits, waste elimination, shared aims, more contented employees and more satisfied customers.

Quality Costs

The cost of quality is the difference between the costs of producing, selling and supporting products/services and the equivalent costs if there were no failures during production.

Prevention costs

Investments in machinery, technology and education programmes are designed to reduce the number of defective products during production. For example:

- Customer surveys;

- Research of customer needs;
- Field trials;
- Quality education and training programmes;
- Supplier reviews;
- Investment in improved production equipment;
- Quality engineering;
- Quality circles.

Appraisal Costs

Costs of monitoring and inspecting products in terms of specified standards before the products are released to the customer. For example:

- Measurement equipment;
- Inspection and tests;
- Product quality audits;
- Process control monitoring;
- Test equipment expense.

Appraisal and Prevention costs are collectively called **conformance**".

Internal Failure Costs

Internal failure costs include:

- Re-work costs;
- Disposal of defective products; and
- Downtime due to quality problems.

External Failure Costs

External failure costs include:

- Complaint investigation and processing;
- Warranty claims;
- Cost of lost sales (e.g. due to loss of goodwill);
- Product recalls.

Internal and external failure costs are collectively called "**costs of non-conformance**".

Impact of TQM on Quality Costs

TQM will increase prevention costs but reduce internal and external costs to a greater extent.

Just-in-Time

Just-in-time (JIT) manufacturing – a manufacturing production method that aims to produce the required items at the required quality and in the quantities needed at the precise time they are required.

JIT manufacturing includes the following goals:

- Elimination of non-value-added activities
- Zero inventory
- Zero defects
- Batch sizes of one
- Zero breakdowns
- A 100% on-time delivery service.

These goals represent perfection and are unlikely to be achieved in practice.

Elimination of Non-Value-Added Activities

In a typical factory, the time taken to produce goods is made up of the following:

- Process time
- Inspection time
- Move time
- Storage time
- Queue time.

Non-value-added activities are any activities that do not add value to the product.

Of the above, only process time adds value to the final product. In many conventional companies, however, this typically accounted for less than 20% of the total cycle time.

Batch Sizes of One

Traditionally manufacturing was performed in large batches to reduce the costs of setups. These costs were incurred because it was necessary to set up the machines differently to produce various products. The problem with large batch sizes is that it leads to delays and large inventory.

In the just-in-time approach, the aim is to have batch sizes of one by having machines that do not need to be continually set up for different products – this can be assisted by cell-based manufacturing. Having batch sizes of only one saves costs and makes the producer more responsive to changes in customer demand.

Weaknesses of the Traditional Western Approach

The traditional Western approach to manufacturing was to produce maximum capacity. Production was driven by internal plans rather than external demand. This led to:

- Excessive holding of inventory – with the associated costs of storage and obsolescence;

- Delays between customer ordering products and the delivery of the products;
- Bottlenecks in the production process were not highlighted;
- A lack of flexibility in meeting changes in customer requirements.

JIT Production

A JIT system is driven by the demand for finished products whereby each component on a production line is only produced when needed for the next stage.

- A "pull through philosophy" – customer demand drives production.
- Requires careful planning of demand and production requirements.

JIT Purchasing

Matching the receipt of materials closely with usage so that raw material inventory is reduced to near zero levels.

- Achieved by having a series of small production units to which materials are delivered.
- A few dedicated suppliers deliver defect-free components on time two or three times per day.

Target Costing

In traditional cost-plus pricing models, the cost of a product is the starting point for calculating price; a profit margin is added to the unit cost. In a competitive world, such an approach may be unrealistic. The price calculated in this way may be too high for the market to accept.

Target costing is an approach that starts with the market price of a product. The required profit margin is deducted from this to calculate a target cost. The target cost is then compared to the actual (expected) cost, and ways are found to narrow the "gap" between the two.

Target costing is typically used during the design phase of a new product.

Steps in Target Costing

1. Determine the price the market will accept for the product based on market research. This may take into account the market share required.
2. Deduct a required profit margin from this price – this gives the target cost.
3. Estimate the actual cost of the product. If it is a new product, this will be an estimate.
4. Identify ways to narrow the gap between the actual cost of the product and the target cost.

Implications of Using Target Costing

- Target costing is not a pricing method. However, its use implies that old cost-plus pricing methods will not be used. Prices will be set based on external factors. This is likely to make the organisation more outward looking and competitive.
- It is often easier to eliminate costs during the design phase rather than later on during manufacture.

- When identifying methods to reduce costs, management considers the impact these will have on the quality of the final product.
- For performance measurement, target costing may provide a more relevant target than traditional standard costs. The target is based on the required profit level rather than some engineered cost, which may be arbitrary.

Narrowing the Target Cost Gap

Target costing relies on multi-disciplinary teams which discuss ways to reduce the gap between the actual (expected) cost and the target cost.

Some methods that have been used successfully in practice are as follows:

- Reconsider the design to eliminate non-value-added elements;
- Reduce the number of components or standardise components;
- Use less expensive materials;
- Employ a lower grade of staff on production;
- Invest in new technology;
- Outsource elements of the production or support activities;
- Reduce manning levels or redesign the workflow.

The following techniques may assist such methods:

- **Tear-down analysis** (reverse engineering) – involves examining a competitor's product to identify possible improvements or cost reductions.
- **Value engineering** – involves investigating the factors that affect the cost of a product or service. The aim is to improve the product design so that the same functions can be provided for a lower cost or eliminate functions that the customer does not value but increase costs.
- **Functional analysis** – involves identifying the attributes/functions of a product that customers value. The determination of a price that the customer is prepared to pay for each of these functions is then performed. It is dropped if the cost of providing the function exceeds its value.

There are some risks in implementing cost-reduction methods. For example, using less expensive materials might reduce the product's perceived quality, reducing the price customers are willing to pay. Using a lower grade of staff for production might lead to quality failures, especially if a high level of precision is required. Outsourcing solely for lower costs might lead to supply quality issues and potential loss of competitive advantage if essential components that drive value are also outsourced.

Kaizen Costing

"Kaizen" means continuous improvement. Kaizen costing is a technique of continually trying to reduce the cost of a product. The three main characteristics of kaizen costing are:

1. Setting standards and then continually improving these standards to achieve long-term sustainable improvements.

2. A focus on eliminating waste, improving processes and systems and improving productivity.
3. Involvement of all employees and all areas of the business.

Target costing is used to ascertain the required cost during a product's design phase. However, the target cost is simply the starting point for Kaizen costing.

Once manufacturing starts, actual costs are recorded regularly (i.e. monthly), and a new target is set for the next period based on the first period's actual cost minus target reductions.

Compared to standard costing, Kaizen costing is more challenging. In standard costing, the standard is based on current operating conditions, whereas under Kaizen costing, it is based on more efficient conditions than the present.

Improvements come from the following sources:

- Elimination of waste;
- Elimination of non-value-added activities;
- Improvements in the production cycle time.

Accounting Systems

Traditional management accounting systems include budgeting, costing, standard costing and variance analysis. Such systems will be inadequate to support the techniques mentioned above. The following changes may be required:

TQM

As management must be aware of quality costs, an analysis will be required based on the four cost-of-quality categories mentioned above. (Such costs are typically "invisible" within general overheads in traditional management accounting systems.)

It also may be appropriate to introduce activity-based management systems to calculate quality costs accurately. This involves showing costs analysed by activity rather than under traditional cost headings (see *Chapter 15*).

Kaizen Costing

To introduce kaizen costing, management will require an accounting system that can provide a functional analysis of the costs of producing a product.

- This will be used initially as a basis for calculating target cost.
- In subsequent years, small reductions in this target cost will need to be made.

This contrasts with the traditional standard cost, which may be applied for many years without revision. Also, the setting of a standard cost may be less detailed than the setting of a target cost.

JIT

In a traditional manufacturing environment, much time may be spent calculating the value of work in progress and finished products.

The accounting and logistics system must ensure the production systems meet planned demand. This will include:

- accurately predicting customer demand; and
- ensuring that all materials received from suppliers are of the right quality, as poor-quality materials may lead to bad production that will prevent the system from meeting planned production.

Meaning of Quality

The importance of management information systems and information technology's contribution to improving organisations' performance has been discussed in earlier chapters. Because management information systems are essential, they must be of good quality. In IT systems, quality can be taken to mean the following:

- **Functionality** – The system performs the tasks it was designed for; it conforms to the users' requirements and provides the required information in the format they want.
- **Reliability** – The systems are reliable. They do not continually break down. They are free from processing errors.
- **Usability** – The systems are easy to use. This implies user-friendly interfaces, well-designed menu structures, the availability of help, and warning messages to prevent accidental actions such as shutting down without saving data.
- **Build quality** – The system is flexible; it can be adjusted to satisfy changing business requirements.

Need for Quality

Quality is essential in management information systems for the following reasons:

- The system may be critical for operations. If the system is down, the business will be interrupted.
- Poor systems will provide poor-quality information, leading to poor decision-making.
- External stakeholders may be interested in the system (e.g. customers placing orders online). A poor system may lead to poor relations with these stakeholders.

Qualities of Good Information

Ultimately, an information system is judged on the quality of its insights.

Qualities of good information are:

- **A**ccurate – the information should be arithmetically correct or objective.
- **C**omplete – all relevant information should be included.
- **C**ost beneficial – the cost of obtaining the information should be less than the benefits.
- **U**ser targeted – it should address the user's needs and avoid information overload.
- **R**elevant – to the person to whom the information is given.
- **A**uthoritative – users need to be able to trust the information provided.

- **T**imely – the earlier the information is available, the more useful it is.
- **E**asy to use – excessive detail should be avoided, and tables and graphics should be used to convey summarised information.

⇒ **ACCURATE** acronym.

Meaning

Six Sigma is a quality improvement programme developed by Motorola, one of the world's largest telecommunications equipment manufacturers of the time, in the 1980s. Six Sigma quality aims to reduce the variation in process output so that there will be no more than 3.4 defects per million opportunities (DPMO).

Six Sigma has been used in both manufacturing and service industries.

5.2 Aims

There are two aims of achieving Six Sigma:

1. To improve customer satisfaction through better quality products and services; and
2. To reduce costs (e.g. of poor quality).

Six Sigma Methodology

Six Sigma focuses on business processes. The programme examines the existing approaches to identify what causes variations – in other words, what causes them to deviate from the required output. The methodology attempts to find ways of improving the process, using tools such as Business Process Re-engineering (*Chapter 4*) and benchmarking (*Chapter 1*).

Many versions of the Six Sigma methodology exist. Most of them are based on the DMAIC methodology (DMAIC is a mnemonic of the items in the method):

1. **Define the customer requirement/problem.** This is usually the factor that causes customer dissatisfaction. It could be some product quality issue, such as the number of products that break down within a few weeks, or it could be related to service, such as the number of delays in receiving a response to a query.
2. **Measure existing performance.** This typically involves measuring the number of occurrences of the problem identified in stage 1. Measurement often consists in sending out customer questionnaires.
3. **Analyse the existing process** – identify the key variables that cause the operations to deviate. At this point of the project, the team is trying to identify the root causes of the problems identified in steps 1 and 2.
4. **Improve** – generate solutions based on what was identified during the analysis stage and implement them. Priority is given to activities that could deliver the most significant wins first.
5. **Control** – develop monitoring processes for continued high-quality performance. This is concerned with monitoring performance after completing the project to check that the expected performance improvement has occurred.

Six Sigma also helps to drive innovation. For example, when an organisation understands what customers want but cannot satisfactorily eliminate mistakes or improve current products to match customers' expectations, it tends to innovate to retain the customer.

Advantages and Disadvantages

Advantages

- Improvements to processes are based on detailed analysis of processes rather than management's "gut feel" about how processes can be improved.
- Six Sigma projects involve managers from all parts of the business and external experts. This means that the projects are given proactive management, which gives them a greater chance of success.
- Cost savings – many companies have adopted Six Sigma and reported substantial cost savings.
- It focuses management on customer needs and meeting them.
- Provides detailed analysis of current processes, whereby redundant processes would be identified.

Disadvantages

- Focus on existing systems and data could stifle creativity and new process innovations.
- It is time-consuming and expensive.
- It requires a supportive culture from the organisation. In some organisations, management and staff may be sceptical about the benefits of such a programme.

Chapter: APPROACHES TO BUDGETING

INTRODUCTION

A budget is an estimate of costs, revenues, and resources over a specified period, reflecting a management's reading of future financial conditions. In other words a budget is quantified plan of action for a forth coming period providing a summary of probable expenditures and income for that period. The purposes of budgets are:

1. Budgeting process forces an organization to plan for future so that organization objectives are met.
2. It motivates employees and managers to improve their performance by setting targets for them.
3. Enable communication of ideas and plans throughout the organization.
4. Allows to co-ordinate activities to different departments.
5. Establish a system of control by comparing actual result with the budget and taking appropriate action.
6. Enable performance evaluation of different departments and managers.
7. It provides formal authorization to managers for expenditure, hiring staff and pursuing to achieve the plans.

BUDGETING METHODS

1. Fixed budget

Budget prepared at single activity level & remains unchanged regardless of actual activity. They set broad objectives for an organization and are good for controlling fixed cost.

2. Flexible budget

A budget prepared at no of activity levels including the actual activity level for budgetary control purpose. It is also called a flexed budget if prepared on the basis of actual activity level.

Advantages

1. It will enable like with like comparison leading to better performance evaluation.

Disadvantages

1. It may be difficult to separate fixed and variable cost
2. It may become very easy to move the original target resulting in loss of bonus

Difference between Fixed and Flexible budget

Fixed Budget

- Costs are not classified according to their variability
- It remains the same irrespective of the volume of business activity
- It assumes that conditions would remain static
- Actual and budgeted performance cannot be correctly compared if the volume of activity differs
- Budget has limited application

Flexible budget

- Costs are classified according to the nature of their variability

- It can be suitably retasted quickly to suit the changed conditions
- It is designed to change according to a change in the level of activity
- Comparison are realistic since the changed plan figure are placed against actual ones
- Budget has more application

3. Rolling or continuous budget

Budgets continuously updated by adding a further period and deducting the earliest period as opposed to periodic budgets. These budgets are suitable where forecast cannot be made accurately due to uncertain conditions for example change in organizational structure, changes in environmental and technological conditions and variations in inflation level or areas where tight control is needed.

Advantages

1. Realistic and accurate budgets are prepared as the element of uncertainty in reduced thus increasing the management motivation in achieving realistic budgets
2. Control will be based on recent plan
3. Forces management to take budgeting process seriously

Disadvantages

1. More costly and time consuming activity
2. Increase in budgeting work may lead to less control over the actual result.
3. Might have an off-putting effect on managers who would consider budgeting as a non-value adding activity due to frequent budgeting.

4. Incremental budget

Budget starts with previous period budget or actual result and adds or subtracts an incremental amount to cover inflation and known changes. It is reasonable procedure if current operations are effective, efficient and economical. Suitable in stable conditions where cost does not change, good cost control and discretionary cost in limited.

Advantages

1. Administratively quickest and easiest method as it is assumed that historical figures are acceptable and only increment needs to be justified
2. Prevents conflict between departmental managers since a consistent approach is adopted throughout the organization.

Disadvantages

1. Previous period problems and inefficiency may be incorporated into the next year budget
2. Uneconomic activities may be continued
3. In-efficient form of budget as it may encourage wasteful spending by managers just to make sure that their budget expenditure allowance is not reduced next year.

5. Zero based budget

With zero-based budgeting, the budgeting process starts from a base of zero, with no reference being made to the prior period's budget or actual performance as opposed to incremental budget. Every activity needs to be justified before being included in the next year budget on the assumption that each activity to which budget relates was being undertaken first time. Zero-based budgeting tries to achieve an optimal allocation of resources to the parts of the business where they are most needed. This budget is suitable in case of discretionary cost, for service departments and public sector organization. Following are the steps of zero based budgets:

Step 1: Managers should identify individual activities which need to be included in the budget.

Step 2: Decision package: is a document that states the purpose of the activity, analysis the cost of the activity and assess the consequences of not conducting the activity.

It is subdivided into two packages

1. Mutually exclusive package which includes different methods of achieving the same job
2. Incremental package divides the activity into a series of activities such as the basic package (minimum amount of work required for the activity) and additional packages (packages above the basic packages that will be done at an extra cost)

Step 3: evaluate and rank each package

Step 4: on the basis of ranking allocate the resources.

Advantages

1. Leads to more efficient allocation of resources
2. inefficient operations are removed and wasteful expenditure is avoided
3. It increases staff involvement at all levels leading to better communication and motivation.
4. Managers are forced to consider alternatives and develop a questioning attitude.

Disadvantages

1. More costly and time consuming activity
2. Ranking process can be subjective where benefits are of qualitative nature
3. It may emphasis on short term benefit at the expense of long term benefits
4. Organization may not have the required management skills or the information system to provide suitable information to construct decision packages.

IMPORTANT TERM TO UNDERSTAND BEFORE STARTING ACTIVITY BASED BUDGETS

Activity based costing

Activity-based costing (ABC) is a method of allocating overhead costs to products and services. It is based on the concept that "PRODUCT CONSUMES ACTIVITIES WHILE ACTIVITY CONSUMES RESOURCES AND CONSUMPTION OF RESOURCES DRIVES COST". It breaks the overheads into different types and each type is then absorbed into the product according to their rate of consumption, leading to a fair allocation of overheads. Abs allows managers to attribute costs to activities and products more accurately than traditional cost accounting methods. Following are the terms used in ABC:

1. Cost pools or activities: these are collecting places for cost which consumes resources that drives cost. Costs are first allocated to these cost pools and then are passed on to the products.
2. Cost driver or activity level: it is a factor which causes a change in the organization's major activities.

Examples of cost pools and cost drivers are as follows:

STEPS

1. Identify cost pools and their allocated cost
2. Identify logical cost drivers for each cost pools

3. Calculate overhead absorption rate for each cost pools
4. Absorb overheads into the individual products by using the rates calculated in step 3.

Advantages

1. It leads to fair allocation of overheads resulting in accurate cost and selling price of different products. Due to complete picture better pricing decision will be made and efforts will be made in the right direction towards right product.
2. It provides much better insight of cost and what drives overhead cost. With complete information about how cost is structured and incurred there is better chance to control cost (value analysis) and increase product profitability.
3. Better able to cope with the complexity of AMT environment for example wide product range, complex process are best dealt by identifying different cost drivers for different cost pools.
4. It covers all overheads not just production overheads for example distribution, marketing and customer cost.

Disadvantages

1. ABC requires the identification of cost pools and cost drivers which may be a time consuming activity.
2. It is important to find a realistic relationship between cost drivers and activities otherwise the desired benefit of ABC will not be achieved. Cost such as property and depreciation are difficult to relate to a realistic cost driver.
3. The ABC will not be beneficial in a manufacturing environment where overheads are related to production level or have small proportion in the overall cost.
4. Different cost accounting record will be required for an ABC requiring new information system.
5. The cost of buying, implementing and maintaining activity based system may exceed the benefits of operating them.

Activity based management

ABM is an integrated approach that allows management to focus on activities rather than cost in order to improve strategic and operational decisions. It includes driver analysis (why), activity analysis (what) and performance evaluation (how well) and uses ABC as a major source of information. It focuses on factors that cause an activity cost, what activities to use and how the activities have performed.

It helps in following decision making

Strategic (doing right things)

1. By using ABC information it helps in deciding which products to develop and which activities to use. This can also assist a company when considering the option of a new business or venture.
2. By using ABC information it becomes possible to identify profitable products and customers. As a result efforts will direct towards right customers and products. Also by using activity based cost data it is possible to take decision such as repricing products or elimination of unprofitable products.

Operational (doing things aright)

By using ABC information better in sight of cost and what drives cost will be available. This will allow controlling cost by identifying and improving value adding activities and eliminating al non-value adding activities

6. Activity-based budget

Method of budgeting based on activity framework and utilizing cost driver data in the budget setting and variance feedback processes. By using the principles of ABC it estimates the firm's future demand for resources and hence helps the firm to acquire these resources more efficiently.

Steps for ABB implementation

1. Estimate the production volume of individual products
2. Estimate the demand for activities
3. Identify the resources and its quantity to perform the activities
4. Take action to adjust the capacity of resources to match the projected supply.

Advantages

1. It draws attention to activities that drives cost which is important if overheads are high.
2. It provides useful basis for cost control by comparing actual results to expectation. Moreover it assumes that overhead are variable which can be controlled if activity is controlled.
3. Provides useful info for TQM by relating cost of an activity with the level service provided

Disadvantages

1. Considerable amount of time and effort might be needed to establish ABB.
2. Budget should be prepared on the basis of responsibility centers so it difficult to identify clear individual responsibility for activities.

BUDGET IN NOT FOR PROFIT ORGANIZATION

A non-profit organization (or just non-profit) is an organization that is not allowed to distribute any money that it makes to its owners as profit. For example schools, social clubs, sport governing bodies, hospital etc.

Factors that differentiate NFPO budgets with that of profit organization.

1. Unlike profit organization there is no single identifiable objective like maximization of profits. There will be multiple objectives such as controlling of cost, quality of the service for example.
2. Benefits are largely non-quantifiable such as social welfare.
3. Multiple stakeholders' objectives need to be considered. So there is need to priorities/comprises different objectives for example in case of school – students, staff, government, tax payers, trustees and contributors etc.
4. Funding comes mainly from government. Unlike profit organization there is weak link between obtaining funds and providing a service.

Budgeting approaches used in NFPO are

- Incremental approach
- Zero based approach
- Planned programme budgeting system

Planned programme budgeting system is a process that breaks work into different programmes designed to achieve various objectives. The resources used in programmes are efficient and cost effective. It may require the contribution of several departments towards a single programme.

CURRENT DEVELOPMENTS AND EMERGING ISSUES

DEVELOPMENTS IN MANAGEMENT ACCOUNTING

ENVIRONMENT MANAGEMENT ACCOUNTING (EMA) F5 Recap

• REASONS FOR THE EMERGENCE ENVIRONMENTAL MANAGEMENT ACCOUNTING

It is important for companies to recognize the importance of environmental awareness and management for the long term survival and profitability. Following are the reasons for emergence of EMA.

1. Society as a whole has become more environmentally aware so it is important to meet the needs and concerns of the customers relating to environment.
2. Environmental costs are becoming huge for some companies, particularly those operating in highly industrialized sectors such as oil production. In some cases, these costs can amount to more than 20% of operating costs. Such significant costs need to be managed.
3. Regulation is increasing worldwide at a rapid pace, with penalties for non-compliance also increasing accordingly.
4. Demonstrating as an environmental friendly company and managing these cost effectively to improve the public image

• ENVIRONMENTAL MANAGEMENT ACCOUNTING

Environmental management accounting is simply a specialized part of the management accounts that is concerned with the accounting information needs of managers in relation to corporate activities that affect the environment as well as environment related impacts on the corporation. It is important to note at this point that the focus of environmental management accounting is not all on purely financial costs. It includes consideration of matters such as:

1. Identifying and estimating the cost of environment related activities
2. Assign the likelihood and impact of environmental risk
3. Identifying and using environment related indicators.
4. Identifying and separately monitoring the usage and cost of resources such as water, electricity and fuel and to enable cost to be reduced.
5. The effect on the public image of the company from failure to comply with environmental regulations.

The effects of EMA on the company’s financial performances

1. Improved revenue by the sales of products and services which meets the environmental needs or concerns of the customers.
2. Cost reduction by efficient use of resources and improving the processes.
3. Increase in cost by complying with legal and regulatory requirement 4. Cost of failure resulting from fines and penalties.

• IDENTIFYING ENVIRONMENTAL COSTS

Much of the information that is needed to prepare environmental management accounts could actually be found in a business general ledger. A close review of it should reveal the costs of materials, utilities and waste disposal, at the least. The main problem is, however, that most of the costs will have to be found within the category of ‘general overheads’ if they are to be accurately identified. Identifying them could be a lengthy process, particularly in a large organization. The fact that environmental costs are often ‘hidden’ in this way makes it difficult for management to identify opportunities to cut environmental costs and yet it is crucial that they do so.

Environmental cost can be split into two categories Internal cost

1. Improved systems and checks in order to avoid penalties
2. Waste disposal cost
3. Product take back cost
4. Regulatory cost such as taxes
5. Upfront cost such as obtaining permits, site preparation cost and site study cost
6. Back end cost such as decommission cost, disposal of inventory.

External cost (This are borne by society at large because of company's activities)

1. Usage of energy and water
2. Forest degradation
3. Health care costs
4. Carbon emission cost

Governments are trying to convert this cost into internal cost by using taxes and regulations.

- **ACCOUNTING FOR ENVIRONMENTAL COSTS**

1. Input/outflow analysis

This technique records material inflows and balances this with outflows on the basis that, what comes in, must go out. So, if 100kg of materials have been bought and only 80kg of materials have been produced, for example, then the 20kg difference must be accounted for in some way. It may be, for example, that 10% of it has been sold as scrap and 90% of it is waste. By accounting for outputs in this way, both in terms of physical quantities and, at the end of the process, in monetary terms too, businesses are forced to focus on environmental costs.

2. Flow cost accounting

This technique uses not only material flows but also the organizational structure. It makes material flows transparent by looking at the physical quantities involved, their costs and their value. It divides the material flows into three categories: material, system and delivery and disposal. The values and costs of each of these three flows are then calculated. The aim of flow cost accounting is to reduce the quantity of materials which, as well as having a positive effect on the environment, should have a positive effect on a business' total costs in the long run.

3. Activity-based costing

ABC allocates internal costs to cost centers and cost drivers on the basis of the activities that give rise to the costs. In an environmental accounting context, it distinguishes between environment-related costs, which can be attributed to joint cost centers, and environment driven costs, which tend to be hidden in general overheads.

4. Lifecycle costing

Within the context of environmental accounting, lifecycle costing is a technique which requires the full environmental consequences, and, therefore, costs, arising from production of a product to be taken account across its whole lifecycle, literally 'from cradle to grave'.

Types Environmental related cost

1. Environmental protection cost: Cost arising due to activities undertaken in order to avoid the production of waste.
2. Environmental detection cost: Is a cost resulted to make sure that organization complies with regulatory standards.
3. Environmental internal failure cost: Cost resulted from activities that have produced waste which has not been discharged in to the environment.
4. Environmental external failure cost: Cost resulting from activities that have produced waste but which has been disposed out in the environment.

EMA & TQM

It is important to understand a vital link between EMA and TQM. A Good Environmental Management is major component TQM in which the aims will be zero pollution, zero waste, zero accidents and zero spill. Proper systems should be in place to ensure that the management performance as regard environment management.

LEAGUE TABLES

A league table, standings, ranking chart, or ladder is a chart or list which compares sports teams, institutions, nations or companies by ranking them in order of ability or achievement. A league table may list several related statistics, but they are generally sorted by the primary one that determines the rankings. Many industries and institutions may compete in league tables in order to help bring in new customers and clients. These are becoming popular in public sector as a performance management tool.

QUALITY

Quality is a measure of excellence or a state of being free from defects, deficiencies, significant variations and is the ability of your product to be able to satisfy your users. In today's highly competitive environment a quality product will provide a competitive advantage to those who struggle for it.

A proper quality management system should be implemented to ensure proper planning and controlling of activities so that products and services are according to the needs of customers. This can be achieved by having proper quality control and assurance system in place. Quality Control Quality Control is the implementation of regular testing procedures and routine steps to measure and ensure the quality of product.

Quality Assurance: Quality Assurance is the process that demonstrates your product is able to satisfy your users. This is usually done by an independent third party which measure whether the product is according to the quality standards established.

Types of Quality Cost

Quality Cost			
Conformance		Non Conformance	
Prevention Cost	Appraisal Cost	Internal Failure Cost	External Failure cost

Prevention Cost: Prevention costs relates to activities whose purpose is to reduce the number of defects in first place because it is much. Less costly to prevent a problem from ever happening than it is to find and correct the problem after it has occur.

Appraisal Cost: Appraisal costs relates to activities such as inspection and testing are incurred so that any defective parts and products should be caught as early as possible in the production process before the products are shipped to customers.

Internal Failure Cost: These costs result from identification of defects and conformance with the design specification before they are shipped to customers. These costs include scrap, rejected products, reworking of defective units, and downtime caused by quality problem. The more effective a company's appraisal activities the greater the chance of catching defects internally and the greater the level of internal failure costs.

External Failure Cost: Theses cost arises when a defective product is delivered to customer. External failure costs include warranty, repairs and replacements, product recalls, liability arising from legal actions against a company, and lost sales arising from a reputation for poor quality. The more the internal cost the less chances will be for external failure cost.

QUALITY PRACTICES

JIT	TQM	Target costing	Kaizen costing	Six sigma

Just In Time System

Just in time is a ‘pull’ system of production, so actual orders provide a signal for when a product should be manufactured. Demand-pull enables a firm to produce only what is required, in the correct quantity and at the correct time. It also has been described as an approach with the objective of producing the right part in the right place at the right time (in other words, “just in time”). JIT applies primarily to repetitive manufacturing processes in which the same products and components are produced over and over again. This means that stock levels of raw materials, components, work in progress and finished goods can be kept to a minimum. Supplies are delivered right to the production line only when they are needed.

It applies to both purchases with external suppliers (order is placed when customer places an order) and production within the organization (component is produced when required for next stage).

Advantages

- Lower stock holding means a reduction in storage space which saves rent and insurance costs
- As stock is only obtained when it is needed, less working capital is tied up in stock
- There is less likelihood of stock perishing, becoming obsolete or out of date
- Avoids the build-up of unsold finished product that can occur with sudden changes in demand
- Less time is spent on checking and re-working the product of others as the emphasis is on getting the work right first time.

Disadvantages

- There is little room for mistakes as minimal stock is kept for re-working faulty product
- Production is very reliant on suppliers and if stock is not delivered on time, the whole production schedule can be delayed
- There is no spare finished product available to meet unexpected orders, because all product is made to meet actual orders – however, JIT is a very responsive method of production

JIT Requires:

1. Elimination of all non-adding value activities such as waste.
2. Throughput rate should be high that is high rate of converting raw material into finished goods sales.
3. Minimizing inventory level thus its associated cost.
4. Competent and trained staff
5. Up-to-date machinery with proper maintenance plan.
6. Good long term relationship with suppliers to ensure reliable, high quality and timely availability of goods. Also such relationship will avoid frequent negotiation in prices and frequent check and inspection.

Total Quality Management

TQM is an approach to quality that emphasizes continuous improvement, a philosophy of "doing it right the first time" and striving for zero defects and elimination of all waste. More over a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives.

TQM functions on the premise that the quality of products and processes is the responsibility of everyone who is involved with the creation or consumption of the products or services offered by an organization such as involvement of management, workforce, suppliers, and even customers, in order to meet or exceed customer expectations.

Basic features of TQM

1. Continuous Improvement at all the times.
2. Involvement at levels of the organization that is from the employee to the CEO, with the responsibility of ensuring quality in their respective products and services, and management of their processes through the appropriate process improvement channels.
3. Aim more doing it right for the first time so preventing the errors before than occur resulting in more focus on prevention cost.

Target Costing

Target costing is defined as a cost management tool for reducing the overall cost of a product over its product life cycle. It reveals a direct link between the marketplace, corporate longterm profit goals, and cost management practices. In target costing the desired profit is subtracted from the target price to arrive at target cost which reflects what a new product should cost rather than what it does cost. Target costing is particularly popular among Japanese firms such as Toyota, Nissan, Toshiba and Daihatsu Motor in various industries such as automobile manufacturing, electronics.

Steps

1. Estimate the market price by conducting an external analysis which will identify customer's taste, demand for the product, competitor's products and other market conditions.
2. Identify the desired profit by return of capital employed orrate of return on sales.
3. Deduct the desired profit from the estimated selling price to arrive at target cost.
4. Calculate or compile the current estimated cost based on current cost level, process and technology.
5. Calculate the cost gap (difference between the current estimated cost and the target cost). Efforts will be made to close the cost gap by some form of cost reduction to ensure desired profit is achieved.

Features

1. Due to complete market awareness at initial phase, it allows customer requirements to be incorporated at design stage which will make it easy to market products once launched and will lead to the development of better pricing strategies.
2. It derives focus on planning, development and design stage where most of the cost is incurred thus allowing cost to be controlled at design stage. This creates a cost control environment at initial stage, diverting focus from recording to controlling of cost. Research has shown that 20% to 40% cost has been reduced using target costing depending on the type of product and market conditions.
3. New working ways will be identified to make sure target cost is achieved for example by de-skilling the process, joint working with suppliers to share information and enable cost reduction.
4. Target cost is set at an initial face (development) of the life cycle so considers the total cost associated with the product and gives a complete opportunity to control cost before the production stage.
5. It requires the involvement of staff from all function such as representatives from engineering, production, marketing and finance departments for brainstorming sessions and decision making about the product.

Ways to close gap

1. Using cheaper material without affecting quality
2. Review the entire supply chain to identify likely areas of cost saving for example obtaining quotations from suppliers
3. Using cheaper labor without compromising on quality or giving training to existing staff to improve productivity.
4. Purchasing part assembled components to cut down manufacturing operations
5. Increase the volume of production to benefit from economies of scale
6. Moving from labor to machine intensive environment to improve production efficiency
7. Using ABC technique for reducing overheads by identifying value added activities 8. Performing value analysis
8. Use JIT & TQM

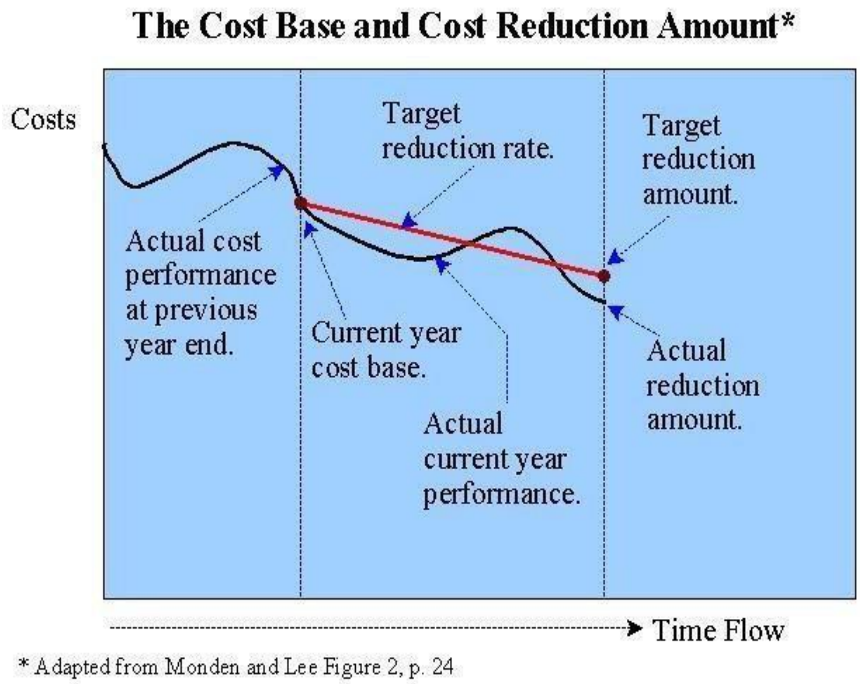
Kaizen costing: Kaizen costing is the process of continual cost reduction that occurs after a product design has been completed and is now in production. Cost reduction techniques can include working with suppliers to reduce the costs in their processes, or implementing less costly re-designs of the product, or reducing waste costs. It focuses on continuous improvement in performance not with radical approach but using incremental steps.

Following are the characteristics.

1. Continuous improvement leading to cost reduction

2. Tightening the standards on continues basis
3. Elimination of all kind of waste

1. Continuous improvement involves close examination and on the basis of that continuous improvement of existing processes. Changes made are not radical one like in BPR but incremental. As the aim is to go for perfection which is never achieved but such a focus will bring near to perfection. It is important to embed such continuous approach in the organization culture.
2. The standards are scrutinized continually so that cost reduction effects are incorporated into them on regular basis. This is done by functional analysis which is applied at the design stage for a new product, and a target cost for each function is set. The functional target costs are summed, and the result is a product target cost. After the first year of production for a new product, the actual cost of the previous period becomes the starting point for further cost reduction and whole process starts again.
3. The focus should be on eliminating all kind of waste on regular basis as this lead to cost reductions. Examples are as follows:



Over production	Unnecessary inventory	Production delays/idle time
Defective units	Transportation cost	Over-processing

Difference between standard costing and kaizen costing (CMSMTV)

Standard costing

1. It is a cost controlling technique.
2. It is based on the assumption that current manufacturing conditions are unchanged.
3. Staff is seen as major problem
4. The focus is on meeting cost performance standard.
5. Performance Targets (Standards) are set annually or semiannually.
6. Variance analysis means comparisons between standard and actual cost

Kaizen costing

1. It is a cost reduction technique.
2. It strives for continuous improvement in manufacturing conditions
3. Staff is seen as a source of improvement
4. The focus is on meeting cost reduction targets.
5. Cost reduction targets are set on a monthly basis.
6. Variance analysis means comparison between target cost reduction and actual cost reduction

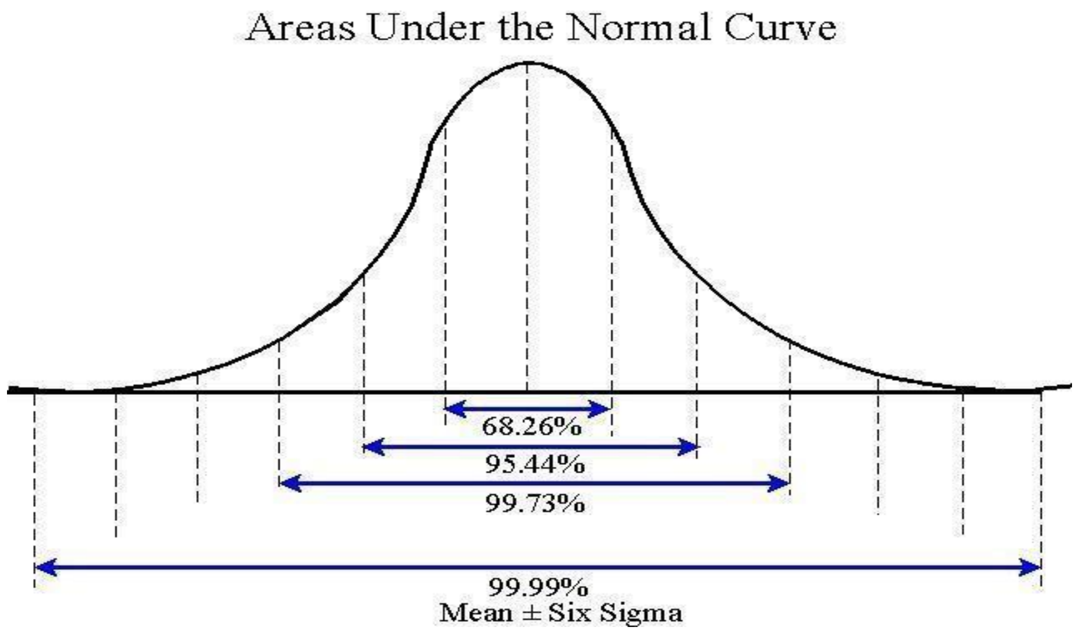
Six sigma model (Motorola developed six sigma methodology in mid-1980's)

Introduction

It is a disciplined approach that helps companies focus on developing and delivering near to perfect product. The central idea is to reduce the number of defects that go beyond the tolerance level which is done by measuring the number of defects in a process which then will be eliminated so that the company gets as close to zero defects.

Process of six sigma

The statistical representation of six sigma describes quantitatively how a process is performing. The sigma stands for standard deviation so six standard deviation are allowed in the process .to achieve six sigma, a process must not produce more than 3.4 defects per million opportunities. A six sigma defect is defined as anything outside of customer specifications. A six sigma opportunity is the total quantity of chances for a defect. If the process is within the six sigma this means the process is 99.99% accurate as illustrated below:



Uses of Six Sigma

Existing process DMAIC	New process DMADV
Both six sigma processes are executed by six sigma yellow belts, six sigma green belts and six sigma black belts, and are overseen by six sigma master black belts.	

Existing process: the six sigma DMAIC process (defines, measure, analyze, improve, control) is an improvement system for existing processes falling below specification and looking for incremental improvement.

- Define: Define the problem and the customer requirements. It is important to specifically define the problem. The customer requirement be divided into those that are the minimum that is acceptable, those that improve the customer's service experience and those that go beyond the customer's expectations. Also it is important to establish project goals that will determine what will be achieved and project team is establish with required resources.
- Measure: Measuring the current processes to see how it is performing and collect data that will determine the factors that have influence over the outcome of the process or identifies what is causing the quality problem. Such measurement will include measuring inputs (raw material), process elements (time, skills) and outputs and customer satisfaction.
- Analyze: The collected data is then analyzed to find root causes of the problems using statistical tools and fish bone analysis. Also such analyses will divide the process in to value adding, supporting activities for value adding activities and non-value adding activities.
- Improve: If the problem is real, the six sigma team identifies possible solutions to improve the process based on the data analysis.
- Control: Control planning, including data collection and control mechanisms is required on continuous basis. It is important to ensure that early deviations from the target do not materialize into process defects.

New process: the six sigma DMAMV process (define, measure, analyze, design, verify) is an improvement system used to develop new processes or products at six sigma quality levels. It can also be employed if a current process requires more than just incremental improvement.

Six sigma model advantages

1. Six sigma is driven by the customer and thus aims to achieve maximum customer satisfaction and minimizing the defects. It targets the customer delight and new innovative ways to exceed the customer expectations.
2. Implementation of six sigma methodology leads to rise of profitability and reduction in costs. Thus improvements achieved are directly related to financial results.

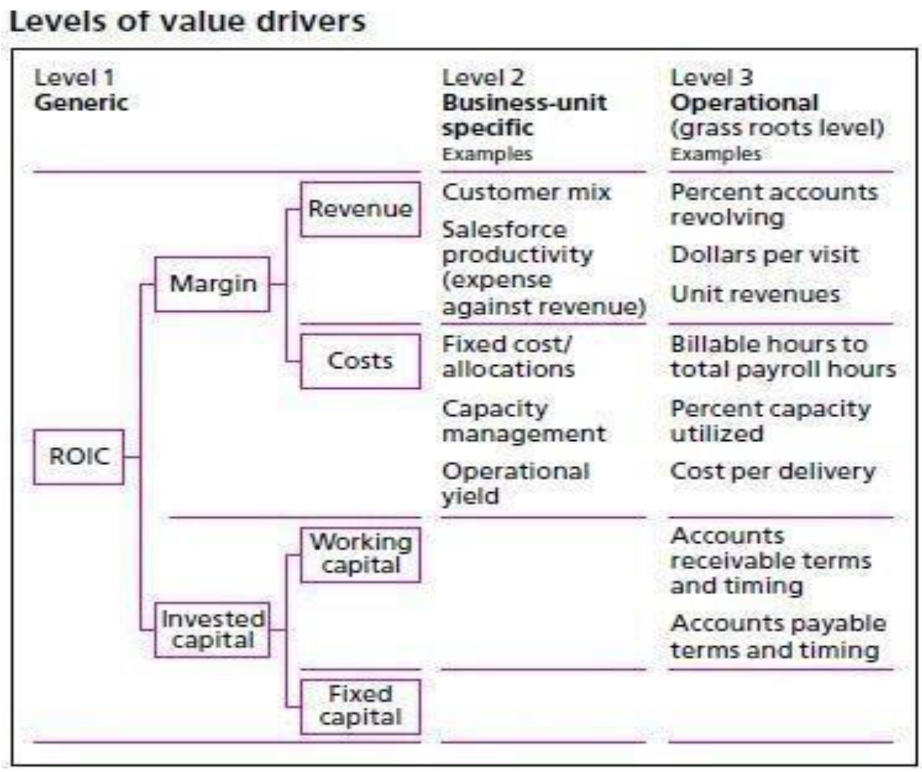
Six sigma model disadvantages

1. Applicability of six sigma is being argued among the six sigma critics. They opined that the quality standards should be according to specific task and measuring 3.4 defects per million as standard leads to more time spent in areas which are less profitable.
2. Six sigma gives emphasis on the rigidity of the process which basically contradicts the innovation and kills the creativity. The innovative approach implies deviations in production, the redundancy, the unusual solutions, insufficient study which are opposite to six sigma principles. 3. Six sigma implementation constantly require skilled man force. Thus control and employee dedication are hard to accomplish if it's not implemented regularly.

3. Six sigma set tight targets but still accepts some failure i.e. Unlike TQM it doesn't strive for zero defects.

Value based management

It is an approach which focuses on shareholder wealth creation by aligning the company's strategy, objectives and processes. The management should possess a value mindset at all the times i.e. it should be in their mind that ultimate financial objective is maximizing shareholder value and all other objectives such as environmental goals etc. are behind it. The management should continuously focus on performance variables which will improve the value of the company that is value drivers. There are three types of value drivers as shown by the below diagram:



Measures like ROCE and EPS were traditionally used to measure the shareholder value but none directly correlates to market value of the company. However value based management measures are direct measures of value creation which are as follows:

1. Economic value added (already discussed before)
2. Market value added MVA is calculated by accumulating EVA generated by organization over time. It represented the value added since the business started i.e. Over and above the money invested by the shareholders and debt holders. A positive MVA represents value addition whereas negative represent value destroyed.
3. Shareholder analysis. Share holder analysis is calculating the value of the whole business rather than a single investment by discounted cash flow techniques. Different valuation techniques could be used on the basis of further dividend growth, earnings and free cash flows.

VBM requires planning and target setting, performance measurement and incentive system to be in line with the value creation at all the levels of the organization. Furthermore it is also important to ensure that value based thinking is incorporated at all the levels of the management that is corporate, business unit and functional levels. The implementation of VBM involves four steps which are as follows:

1. Strategy should be developed at corporate and business unit level.
2. Short and long term performance targets are set in terms of key value drivers.
3. Budgets and actions plans will be established for the next year.
4. At last the performance measurement and incentive system is established to monitor the performance and motivate the employees to achieve targets.

Changes in PM due to internal and external factors

The performance management system is continuously adapting with the internal and external changes that are techniques and methods used 50 years ago are not same today for example. Following are the reasons and impact of changes on performance management systems.

1. Technological changes

Changes in technology have resulted in fast, accurate and real time performance information for managers. All such information can be analyzed in different way to counter different situations. However it has become a bit more challenging for the mangers as to how they use, interpret and acts in response to a situation due to more availability of data and information.

2. Increase in the scope of pm

A shift of focus from financial to non-financial performance resulted in techniques which focuses on both financial and non-financial such as balance score card and performance prism etc. More over there has also been a greater focus on every ones involvement within the organization in performance management system and even of those outside the organization.

3. Governance

The increasing focus on corporate governance due to corporate scandal has required the organization to demonstrate good corporate governance. Such a changed required organization’s performance management systems to measure and report on improvement in governance comply with legislation and regulation relating to performance reporting and fulfill the demand on external accountabilities.

Chapter - DIVISIONAL PERFORMANCE EVALUATION

Challenges with Divisional Structures

A feature of modern business is the division of an organisation into semi-autonomous units with devolved authority and responsibility. These units might be called divisions, subsidiaries, or strategic business units, but the principles applied to measure their performance are the same.

These units can be:

- cost centres – managers are responsible for decisions about costs;
- revenue centres – managers are responsible for decisions about revenue (and selling costs);
- profit centres – managers are responsible for decisions about costs and revenues; and
- investment centres – managers are responsible for decisions about costs, revenues, and asset investments.

A fully-fledged strategic business unit (SBU) would most likely be an investment centre, meaning it has the means and responsibility to make capital investments independently.

Before looking at how to measure divisional performance, it is worth considering the challenges that can arise in a divisional structure:

- Goal congruence – How to ensure that managers take decisions that are in the best interests of the organisation as a whole.
- Coordination – How to ensure the activities of divisions are aligned to ensure that overall corporate objectives are realised.
- Controllability – How to ensure divisional managers are only held accountable for the factors they can control. (The performance of the division and the performance of divisional managers must be dealt with separately.)
- Interdependence of divisions – How to measure performance when one division's performance may affect that of another.
- Head office costs – How to/whether to apportion central costs.
- Transfer prices – How to set these effectively.

Divisional performance measures must take into account and overcome these issues to ensure performance is measured appropriately.

Possible Measures

The measures used will depend on the type of business unit being monitored. It is dangerous to focus on one key measure of performance. A range of measures should be used to assess all elements of performance, both financial and non-financial − a balanced scorecard approach.

The range of measures could include:

- variance analysis (taking care to identify the controllability of and responsibility for each variance);
- ratio analysis;
- return on investment;

- residual income; and
- non-financial measures.

Ratio Analysis

Profitability Measures

- Net profit margin
- Gross profit margin
- Contribution margin
- Expenses as a percentage of sales

Liquidity Measures

- Current ratio
- Quick ratio
- Receivables collection period
- Payables payment period
- Inventory holding period

Other Measures

- Contribution per key factor/ limited resource
- Sales per employee
- Industry-specific

cost-related ratios such as:

  - transport cost per km
  - overheads per chargeable hour

Non-financial Measures

Non-financial measures include, for example:

- Staff turnover (also days lost through absenteeism).
- New customers gained.
- Proportion of repeat bookings.
- Orders received.
- Set-up times (also customer waiting times).
- New products developed.
- % returns.
- % rejects/reworks (or the number of complaints received).
- On-time deliveries, client contact hours, training time per employee.

Managerial and Divisional Performance

The principle of controllability means that when assessing the division manager's performance, only those items which are controllable by the manager should be included in the profit calculation. This "controllable" profit excludes expenses for which the manager is not responsible (e.g. the annual audit fee agreed by the head office).

When assessing the performance of a division, as opposed to the manager of the division, central management is interested in profit that relates directly to the division, so it can ascertain, for example, how profit would be affected if the division were to be closed down.

This "traceable" profit should exclude allocated costs because these costs do not relate directly to the division. However, traceable profit may include some direct expenses which are not controllable – so they are not included in the calculation of controllable profits.

- **Controllable profit** should be used to assess the *manager's* performance.
- **Traceable profit** should be used to assess the *division's* performance.

Return on investment (ROI) – the profit or gain on an activity for a period relative to the amount invested.

ROI is the divisional equivalent of ROCE used to evaluate the performance of a division or the manager of a division.

Profit is **before** interest and tax because interest is affected by financing decisions and tax is an appropriation.

Advantages of ROI

- Relative measure − easy to compare divisions with different scales of operation.
- Similar to ROCE used externally by analysts.
- Focuses attention on scarce capital resources.
- Encourages reduction in non-essential investment by:
    - selling off unused fixed assets; and
    - minimising the investment in working capital.
- Easily understood (especially by non-financial managers).
- Can be broken down into secondary ratios for more detailed analysis (i.e. profit margin and asset turnover).

Disadvantages

- Risk of dysfunctional decision-making (as seen in *Activity 1*).
- Definition of capital employed is subjective. For example, should non-current assets be valued using:

(a) carrying amount (i.e. net book value);

(b) historic cost; or (c) replacement cost?

Should leased assets and intangible assets be included?

- If net book value is used, ROI will become inflated over time because of depreciation. This may encourage managers to hold on to old, potentially inefficient, assets rather than investing in new ones.

- Risk of *window dressing*; boosting reported ROI by:

    - under investing; and/or

    - cutting discretionary costs (particularly if ROI is linked to bonus systems).

Residual income – pre-tax profit less **imputed** interest charge for capital invested.

Residual income focuses on the creation of wealth by deducting an imputed interest expense, which represents the cost of capital invested, from profit.

Advantages

- It reduces the problems associated with ROI (dysfunctional behaviour and holding on to old assets).

- A risk-adjusted cost of capital can be used to reflect different risk positions of different divisions.

Disadvantages

- Definition of Capital employed
- Effect of depreciation
- Window dressing
- Difficult to compare divisions of different sizes, because RI is an absolute measure. Organisations that deploy more capital are likely to generate more RI.
- Less easily understood than a percentage.

Effect of Depreciation

If capital employed is defined as net book value at the start of the year and straight-line depreciation is used.

- Then, over the life of an investment:

    - Capital employed will fall;

    - ROI and RI will tend to rise.

- Hence straight-line depreciation *inflates* reported performance over time, even if actual performance is constant.

- This can cause *dysfunctional decision making*, even if RI is used.

Conflict with NPV

Activity 4 shows the possible conflict between RI/ROI and NPV:

- Projects with positive NPV increase shareholder wealth and should be accepted.

- But if RI or ROI are used for divisional performance appraisal, and therefore divisional investment appraisal, positive NPV projects may be *rejected*.

This is because straight-line depreciation causes poor performance to be reported in early years, and high performance in later years.

Non-goal congruent decision making is likely to occur if managers are *myopic* (i.e. obsessed with short-term performance).

Using annuity-based depreciation can reduce the problem.

5.1 The Concept

EVA™ is a trademark of the Stern Stewart & Co consulting organisation.

EVA is a performance evaluation tool that can be used to appraise the performance of an organisation. It is similar to residual income in that a charge on capital is deducted from the profits in reaching economic value added.

The Rationale Behind EVA

Many organisations use profit as a measure of performance. However, profit does not consider the cost of the equity finance required to make the profit; it only considers the cost of debt finance. One commentator noted, "Until a business returns a profit greater than its cost of capital, it operates at a loss".

It is argued that adopting EVA as a performance measure for managers aligns managers' interests with the organisation's objective to maximise shareholder wealth. The EVA generated each year shows the wealth a business has created or destroyed during the year.

Net Operating Profit After Tax (NOPAT)

As the finance charge on capital employed is deducted from profits in the calculation of EVA, profit must be **before** interest, to avoid double counting in the cost of financing debt.

Because the cost of capital used in calculating the finance charge includes only the after-tax interest rate, after-tax interest is added back. This has the effect of showing the profit of the company as if it had no debt finance. There are two approaches to this:

1. Start with operating profit

Deduct the adjusted tax charge (because tax expense includes the tax benefit of interest) by adding interest multiplied by the tax rate to the tax charge; or

2. Start with profit after tax

Add back the net cost of interest. This is the interest charge multiplied by (1 − rate of corporate tax).

Need for Adjustments

In addition to the finance charge on capital, EVA differs from residual income in that it is based on economic profit rather than accounting profit. Its proponents believe that the way financial accountants calculate profit under GAAP (US GAAP, IFRS and similar accounting systems) does not reflect the true economic profit. Many adjustments are made to the accounting profit (and also to the equity shown in the statement of financial position) before EVA is calculated.

- To convert from accrual basis to cash basis. Investors are interested in cash flows, so non-cash items (e.g. allowances for trade receivables) should be eliminated.
- To capitalise spending on "market building" items (e.g. research, staff training and advertising) that has been expensed in the financial statements. Stern Stewart believes that financial reporting standards (e.g. IAS 38 *Intangible Assets*) are too strict and discourage managers from investing in items that bring long-term benefits.
- To ignore unusual items of profit or expenditure.

Investment in Intangibles

Under GAAP accounting, expenditure on research, advertising, staff training and similar items are not capitalised, but rather are expensed to profit or loss when incurred. Under EVA, such items are considered to be investments that will bring benefits in the future. Therefore, any such items expensed during the year should be added back to profit for the year, and to capital at the end of the year.

Amortisation of such items will also be required in future accounting periods when calculating EVA. No amortisation would have occurred in the GAAP profit, as these items were written off when they were incurred.

Depreciation

Accountants typically use methods such as straight-line depreciation. These do not reflect the real use of the asset over the period. Accounting depreciation should therefore be added back to profits and economic depreciation deducted instead.

Economic depreciation is the true change in value of the assets during the period.

A similar adjustment will be made to the value of non-current assets in the statement of financial position, and therefore to the capital employed figure.

Allowances and Provisions

The creation of allowances for bad and doubtful debts and provisions for deferred tax in financial accounting is too prudent, according to the proponents of EVA. Any increases in such provisions reflected in the profit or loss during the year should therefore be added back to profit in calculating EVA. Similarly the value of such provisions should be added to the capital employed figure in the statement of financial position.

Non-cash Expenses

Non-cash expenses such as impairment of goodwill are not real expenses according to EVA. They should therefore be added back to the profit or loss and the capital employed in the statement of financial position.

Tax expense

This is adjusted to "cash taxes" rather than the accruals based methods used in financial reporting.

Summary of Adjustments

The following table may help you to remember which adjustments are required. Be aware that for the calculation of the finance charge**, capital employed is taken at the start of the year,** so some of the adjustments to profit in the current year do not affect capital employed until the following year.

Finance Charge

- The finance charge in EVA calculations is the weighted average cost of capital (WACC) multiplied by the capital of the division. Here capital is taken to mean equity (net assets) plus long-term debt.
- WACC is an average cost of capital, which takes into account the various sources of finance used by the division, including equity capital and debt.
- It is normal to take capital at the **beginning** of a financial year, not at the end.
- The best approach is to start with capital employed (per the published financial statements) and then make the accounting adjustments

Interpretation and Use

Interpretation

Consider the following factors:

- Is it positive? If yes, the organisation or division is generating a return that is greater than that required by providers of finance. It is creating wealth.
- What is the trend over time? Is it increasing? Even if the trend is down, performance is still favourable if EVA is positive.
- Why has EVA changed? For individual projects, EVA is only really meaningful when considered over its lifespan. In early years, when the net book value of assets is higher, the finance charge may also be higher, leading to a lower EVA; in later years, the reverse is true.

Use as an Organisational Performance Measure

EVA should motivate directors to improve EVA and thereby maximise shareholder wealth in one of four ways:

1. Investing in divisions whose returns exceed the cost of capital.
2. Increasing the operating performance of existing divisions. This increases NOPAT without increasing the finance charge.
3. "Harvesting assets" by closing down under-performing divisions and either re-investing the proceeds in other divisions or returning cash to shareholders as a dividend.
4. Increasing the debt to equity ratio to reduce the WACC. Though clearly the company should not become over-geared.

Use as a Divisional Performance Measure

EVA can also be used as a performance evaluation tool for divisional managers. In decentralised organisations, divisions are effectively companies in their own right, with the head office acting as a parent. EVA therefore encourages divisional managers to maximise the wealth of their divisions.

Although divisional managers may not have sufficient autonomy to make decisions about financing or gearing (so will not be able to change the WACC), using EVA should ensure that divisional managers only invest in projects whose return exceeds the company's cost of capital.

Advantages and Disadvantages of Using EVA

Advantages of Using EVA

- Maximising EVA is consistent with maximising the wealth of shareholders, since it takes into account not only the profit, but also the finance charge associated with producing that profit.
- Companies that use EVA as a performance evaluation tool have increased their performance compared to companies that do not, according to Stern Stewart & Co. This is particularly the case where managers' remuneration packages are linked to the reported EVA.
- It is conceptually easy for non-financial managers to understand.
- It leads to goal congruence in the same way as residual income.

- It encourages managers to take a longer-term view since expenditure that brings long-term benefits is not treated as an expense, but capitalised.
- Profits are based on economic profits (i.e. cash) rather than accounting profits which can be manipulated (e.g. in the selection of accounting policies).
- EVA can be used as a single performance measure that replaces the confusion of multiple goals, such as revenue growth and profits growth.

Disadvantages of Using EVA

- The adjustments required may become complicated in practice.
- Estimating WACC can be difficult (e.g. the capital asset pricing model is not universally accepted for determining the cost of equity).
- As an absolute measure it is not so easy to compare divisions of different sizes.
- It is a short-term measure, so may still encourage managers to take a shorter-term view.

Evaluation of Methods

Types of Measures

- ROI is a **relative** measure, so it is useful for comparing the performance of different divisions of different sizes.
- Because residual income and EVA are **absolute** measures, using these to compare divisions of different sizes is more difficult. (Two divisions could have identical values for EVA or residual income, but if one were much larger than the other, it would be incorrect to conclude that both were performing equally well.)
- Calculating residual income or EVA as percentages of capital employed can overcome this weakness (by converting them to relative measures).

Goal Congruence

- ROI may lead to decisions that are not congruent with the goal of maximising shareholder wealth. For example, deciding not to invest in projects that reduce ROI even if they return more than the cost of capital (see *Activity 1*).
- Residual income and EVA over the longer term should lead to decisions that are congruent with maximising shareholder wealth, because projects that return more than the cost of capital also increase residual income and EVA.
- In the short term, however, there still may be goal **incongruence** if a project yields negative residual income or EVA in its early years (see *Activity 4*).

Overcoming Problems

ROI and residual income are based on accounting profits which suffer from the following problems:

- Managers may avoid investments in intangibles (research, marketing, etc) that cannot be capitalised under GAAP to achieve targets.
- Excessive cost-cutting to improve short-term ROI may weaken future competitiveness or store up costs for the future:
    - Reducing employee numbers may damage product quality or levels of customer service.

    - Deferring training may later require costly recruitment of more skilled employees.
- Profit has several definitions and may be impacted by accounting policies. EVA seeks to overcome these problems by making the adjustments detailed previously

Differences Between Residual Income and EVA

EVA is calculated similarly to residual income but constructed in such a way that maximising EVA can be set as a target. There are two main differences when calculating EVA and standard residual income:

- Residual income is accounting profit before interest and tax, less the finance charge. EVA is NOPAT less the finance charge.
- For residual income, the finance charge is based on the book values of equity and debt at the start of the year. For EVA, the finance charge is based on the adjusted values of equity and debt at the start of the year (i.e. after adjusting for EVA adjustments of prior years).

Chapter: ENVIRONMENTAL INFLUENCES

INTRODUCTION

There are different environmental influences that affect the organization. Such factors should be considered in order and appropriate action plan should be devised to counter them. Following are the factors that should be considered.

1. Continuous changes in business environment
2. External forces
3. Stake holder's impact
4. Ethical issues
5. Impact of government's policy

CONTINUOUS CHANGES IN BUSINESS ENVIRONMENT

1. The rapid change in business environment is mainly due to globalization and increase in the use on Information technology which required that introduction of new management accounting techniques and changes in the existing ones. Such a change also required changes in the roles of a management accountant, who now needs to consider a broader and strategic perspective than just operational perspectives. Such changes in roles and skills are as follows:
2. Good interpersonal and communication skills are required
3. A balanced focuses on financial and non-financial information and also needs to make use of existing techniques to a non-financial context.
4. Ensure efficient use on financial and other resources
5. Work in cross functional teams

1. Exogenous Variables

Exogenous (from the Greek words "exo" and "gen", meaning "outside" and "production") refers to an action or object coming from outside a system. From organization perspectives it means factors that originates from outside organization and are considers as uncontrollable factors examples includes government policy, economic and social factors. Due to the existence of such factors organizations are subject to risk and uncertainty.

Risk

It is the threat or probability that an action or event may or may not occur and will adversely or beneficially affect an organization's ability to achieve its objectives and whose probability of occurrence can be calculated.

Uncertainty

It is the situation where the nature of things is unknown, consequences are unknown, conditions or events are unpredictable and probabilities to possible outcomes cannot be assigned.

Types of decision makers

Risk seeker: Decision maker who is interested in the best outcomes no matter how small the chance that they may occur.

Risk neutral: Decision maker concerned with what will be the most likely outcome.

Risk averse: Decision maker who acts on the assumption that worst outcome might occur.

Sore loser: Decision maker who doesn't take failure well and blames everyone around them for their loss except themselves.

• **FOLLOWING ARE THE WAYS TO DEAL WITH RISK AND UNCERTAINTY**

1. Expected value (In case of risk) (Risk neutral)

Expected value is the weighted average value which is calculated by the sum of all possible values for a random variable, each value multiplied by its probability of occurrence. It is a long term average provided the event should occur over and over again.

Criticisms of expected value

1. The probabilities itself are estimate and therefore will be unreliable or inaccurate
2. Expected value are long term averages and may not be useful in one off decisions
3. Expected values do not consider the people's attitude toward risk.

2. Decision rule (in case of uncertainty)

I. Maximax (Risk taker) Select the maximum payoff, from the list of maximum payoffs. When applying Maximax rule in a payoff table the focus should be on decision alternatives. Criticisms of maximax

1. Over optimistic

2. Ignores probabilities

II. Maximin(Risk averse) Select the maximum payoff, from the list of minimum payoffs. When applying Maximin rule in a payoff table the focus should be on decision alternatives.

Criticisms of maximin

1. Defensive and conservative
2. Ignores probability
3. Do not consider opportunity to maximise profit

III. Minimax regret rule (Sore loser)

Select the minimum regret, from the list of maximum regrets. Regret is the opportunity lost by making wrong decisions. A regret or opportunity loss table will be prepared by focusing on the state of nature however for finding the answer the focus again will be on decision alternative.

3. Sensitivity analysis

It is technique from which it is possible to identify the critical variables (such as sales price, material & labour cost) which if changed might affect the ultimate decisions. For example if only a (say) 2% change is required in selling price before losses result an investor may think twice before proceeding. In other words it tells how vulnerable are the decisions from changes is any variable. Is it also called what-if-analysis.

Limitations

1. Ignores Probability
2. Cannot consider changes in multiple factors

4. Simulation models

Simulation models can be used to deal with decision making problems involving a number of uncertain variables. Computer models can be built to simulate real life scenarios. The models use random number tables to assign values to the uncertain variables that business is subject to.

EXTERNAL FORCES

Countering the external forces requires a thorough external analysis which can be performed at both macro environment and industry level.

Macro environment

The major external and uncontrollable factors that influence an organization's making, and affect its performance and strategies. These factors include the economic factors; demographics; legal, political, and social conditions; technological changes. The technique of PESTAL analysis can be used to consider such factors in detail and systematic way. PESTAL analysis breaks the environmental factors into six segments which are as follows:

- Political factors are how and to what degree a government intervenes in the economy. Specifically, political factors include areas such as tax policy, labor law, environmental law, trade restrictions, tariffs, and political stability. Political factors may also include goods and services which the government wants to provide or be provided (merit goods) and those that the government does not want to be provided (demerit goods). Political decisions can impact on many vital areas for business such as the education of the workforce, the health of the nation and the quality of the infrastructure of the economy such as the road and rail system.
- Economic factors include economic growth, interest rates, exchange rates and the inflation rate. These factors have major impacts on how businesses operate and make decisions. For example, interest rates affect a firm's cost of capital and therefore to what extent a business grows and expands. Exchange rates affect the costs of exporting goods and the supply and price of imported goods in an economy.
- Social factors include the cultural aspects and include health consciousness, population growth rate, age distribution, career attitudes and emphasis on safety. Trends in social factors affect the demand for a company's products and how that company operates. For example, an aging population may imply a smaller and less-willing workforce (thus increasing the cost of labor). The ageing population also has impact on demand: for example, demand for sheltered accommodation and medicines have increased whereas demand for toys is falling.
- Technological factors include technological aspects such as R&D activity, automation, technology incentives and the rate of technological change. They can determine barriers to entry, minimum efficient production level and influence outsourcing decisions. Furthermore, technological shifts can affect costs, quality, and lead to innovation of create new products and new processes
- Environmental factors include ecological and environmental aspects such as weather, climate, and climate change, which may especially affect industries such as tourism, farming, and insurance. Furthermore, growing awareness of the potential impacts of climate change and the general move towards more environmentally friendly products and processes is affecting how companies operate and the products they offer, both creating new markets and diminishing or destroying existing ones and creating business opportunities.
- Legal factors include discrimination law, consumer law, competition law, employment law, and health and safety law. These factors can affect how a company operates, its costs, and the demand for its products.

Industry level

Porter’s 5 forces model can be used to analysis the industry pressures, determine how attractive the industry is and is also used for assessing and analyzing the competitive strength and position of a corporation or business organization. According the this model the industry is influenced by five following factors:

1. **Threat of New Entrants:** New entrants to an industry can raise the level of competition, thereby reducing its attractiveness. The threat of new entrants largely depends on the barriers to entry. High entry barriers exist in some industries (e.g. Shipbuilding) whereas other industries are very easy to enter (e.g. Estate agency, restaurants). Key barriers to entry include Economies of scale, capital / investment requirements, Customer switching costs, Access to industry distribution channels, the likelihood of retaliation from existing industry players.
2. **Threat of Substitutes:** The presence of substitute products can lower industry attractiveness and profitability because they limit price levels. The threat of substitute products depends on buyers' willingness to substitute, the relative price and performance of substitutes, the costs of switching to substitutes.
3. **Bargaining Power of Suppliers:** Suppliers are the businesses that supply materials & other products into the industry. The cost of items bought from suppliers (e.g. Raw materials, components) can have a significant impact on a company's profitability. If suppliers have high bargaining power over a company, then in theory the company's industry is less attractive. The bargaining power of suppliers will be high when there are many buyers and few dominant suppliers, there are undifferentiated highly valued products, suppliers threaten to integrate forward into the industry (e.g. Brand manufacturers threatening to set up their own retail outlets), buyers do not threaten to integrate backwards into supply, the industry is not a key customer group to the suppliers.
4. **Bargaining Power of Buyers:** Buyers are the people / organizations who create demand in an industry. The bargaining power of buyers is greater when there are few dominant buyers and many sellers in the industry, products are standardized, Buyers threaten to integrate backward into the industry, suppliers do not threaten to integrate forward into the buyer's industry, and the industry is not a key supplying group for buyers.
5. **Intensity of Rivalry:** The intensity of rivalry between competitors in an industry will depend on:
   - The structure of competition - for example, rivalry is more intense where there are many small or equally sized competitors; rivalry is less when an industry has a clear market leader.
   - The structure of industry costs - for example, industries with high fixed costs encourage competitors to fill unused capacity by price cutting.
   - Degree of differentiation - industries where products are commodities (e.g. Steel, coal) have greater rivalry; industries where competitors can differentiate their products have less rivalry.
   - Switching costs - rivalry is reduced where buyers have high switching costs - i.e. there is a significant cost associated with the decision to buy a product from an alternative supplier.
   - Strategic objectives - when competitors are pursuing aggressive growth strategies, rivalry is more intense. Where competitors are "milking" profits in a mature industry, the degree of rivalry is less.
   - Exit barriers - when barriers to leaving an industry are high (e.g. The cost of closing down factories) - then competitors tend to exhibit greater rivalry.

The Stakeholder's impact

A person, group, or organization that has direct or indirect stake in an organization because it can affect or be affected by the organization's actions, objectives, and policies. Key stakeholders in a business organization include creditors, customers, directors, employees, government (and its agencies), owners (shareholders), suppliers, unions, and the community from which the business draws its resources. So it is important for an organization to understand their stakeholders and their needs to properly manage them. One way of managing stakeholders is by using Mendelow's matrix provides a way of mapping stakeholders based on the power to affect the organization and their interest in doing so. It identifies the responses which management needs to make to the stakeholders in the different quadrants.

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Power / Interest Matrix (Gardner et al. (1986)

		Level of Interest	
		Low	High
Power	Low	A Minimal effort	B Keep informed
	High	C Keep satisfied	D Key players

Minimal Effort

The company may require little or no effort to be focused on this group. The stakeholders pose no threat due to a lack of both interest and power so they accept what they are told and follow instructions.

Keep Informed

This group, although having a high interest, has little power to exercise control so they can be maintained through the management of information to keep them informed of company events otherwise they will gain power with other stakeholders.

Keep Satisfied

This group may or may not realize the degree of effect they have over the company and therefore must be kept satisfied. However, because of their low interest in events, they are unlikely to cause significant disruption but it is important to keep them reassured about the outcome of the strategy in advance in order to avoid them gaining interest.

Key players

The company must try to satisfy this group first and foremost as they have the power to affect the company and a high degree of likelihood that they will use their power. It is important to involve them in the planning process as they have the power to bring change if they are satisfied with the plans.

Stakeholder's conflict:

Organization may face conflicts between stakeholder's objectives and needs for example shareholders want increased profit but customer wants lower prices and employees' wants higher wages. Such conflicts can be managed by following ways:

1. **Prioritization:** The stakeholders should be priorities according to their power and interest as discussed above in Mendelow's matrix.
2. **Negotiation and satisficing:** The will negotiate and will go for satisficing rather than complete satisfaction i.e. finding the minimum acceptable outcome for each group.
3. **Sequential attention:** This includes focusing on different stakeholder group in different time periods
4. **Side payments:** This includes providing benefits to stakeholders other than wants they actual required.

5. **Exercise of power:** This involves resolution of conflict by senior figure simply on the basis of the power they possess.

ETHICAL ISSUES

Ethics are moral guidelines which govern good behavior. So behaving ethically is doing what is morally right. Behaving ethically in business is widely regarded as good business practice. Such a focus on ethics will make it easy to achieve the primary objective of maximization of shareholder's wealth. Examples include use of child labour and forced labour, ignoring health, safety and environmental standard, violation of the basic rights of workers and experiment on animals etc.

You will probably note the link between business ethics and corporate social responsibility (CSR). The two concepts are closely linked:

- A socially responsible firm should be an ethical firm
- An ethical firm should be socially responsible

However there is also a distinction between the two:

- Ethics is about morally correct behavior.
- CSR is about responsibility to all stakeholders and not just shareholders.

Corporate Social Responsibility means

- Conducting business in an ethical way and in the interests of the wider community
- Responding positively to emerging societal priorities and expectations
- A willingness to act ahead of regulatory confrontation
- Balancing shareholder interests against the interests of the wider community
- Being a good citizen in the community

Benefits of focusing on CSR

- Wining new business
- Increase customer retention
- Develop and enhance relationships with customers, suppliers and networks
- Attract, retain and maintain a happy workforce and be an Employer of Choice
- Save money on energy and operating costs and manage risk
- Differentiate yourself from your competitors
- Generate innovation and learning and enhance your influence
- Improve your business reputation and standing
- Provide access to investment and funding opportunities
- Generate positive publicity and media opportunities due to media interest in ethical business activities

Attitudes towards corporate ethics

1. **Amoral organization:** Such organization allows any actions that are in favor of the corporate aim without the fear of getting caught which is considered as a bad luck. There is no written code, no set of values other than own greed.
2. **Legalistic organization:** These are the organization that obeys the laws just for the sake that no harm should be on organization. Ethics is considered only when it becomes a problem and such problems will require the use of formal code of ethics.
3. **Responsive companies:** Such organization agrees that ethical behaviors will benefit them for example organization considering the staff welfare will be able to retain and attractive high

quality labour. If such organization has formal code of ethics then it will consider all stakeholders' concern.

4. **Emerging ethical:** They proactively take interest in business ethics. In such organization's ethical values are part of culture and code of ethics are action documents, ethical measures are in place and ethical audit and review commitment are also established.
5. **Ethical organization:** These have total ethical profile i.e. follows ethics completely.

Impact of Government policy and regulations.

Introduction The government policies will have an impact on the organization's performance and on their strategy. So it is important for the company's strategic team to have a thorough knowledge of the laws and regulations. There are many different types of law and regulations that can impact company such as environmental protection, labour and consumer protection, social and business legislations and taxation legislation etc. Moreover there are also specific laws and regulations for particular industries for example transport and food industries. For companies that are operating internationally have to face more legislation complexity for example there will be a conflict between domestic and host company laws. So it is a challenge now for the strategic teams to plan and devise proper action plan for political changes by:

1. Focusing on economic activities
2. Problems arising because of physical infrastructure and environment
3. Monitoring future government policies and action plans for example political party's conferences, commentaries of political analysts, actions of public pressures groups, international events and public interviews of party leaders etc.

We will now consider the impact of government policy and regulations in details.

1. Supply side policy

Supply side policy includes any policy that improves an economy's productive potential and its ability to produce by providing adequate, cost effective supply of materials, services and labour to an economy. It includes

1. Improve labour mobility will also have a positive effect on labour productivity, and on supply-side performance.
2. Better education and training to improve skills, flexibility, and mobility – also called human capital development. Spending on education and training is likely to improve labour productivity and is an essential supply-side policy option.
3. The adoption of performance-related pay in the public sector is also seen as an option for government to help improve overall productivity.
4. Using the tax system to provide incentives to help stimulate factor output, rather than to alter demand, is often seen as central to supply-side policy i.e. Reducing direct tax rates, including income and corporation tax. Lower income tax will act as an incentive for unemployed workers to join the labour market, or for existing workers to work harder. Lower corporation tax provides an incentive for entrepreneurs to start and so increase national output.
5. Promotion of greater competitionin labour markets, through the removal of restrictive practices, and labour market rigidities, such as the protection of employment.

2. Green policies/externalities

Is any [course of] action deliberately taken [or not taken] to manage human activities with a view to prevent, reduce, or mitigate harmful effects on nature and natural resources, and ensuring that man-made changes to the environment do not have harmful effects on humans. The example river pollution caused by manufacturer and motor vehicle pollution. Thus green policies focuses on problems arising from human impact on the environment, which retroacts onto human society by having a (negative) impact on human values such as good health or the 'clean and green' environment. Example includes government has used taxes to increase the real price of petrol and there is greater discussion in EU over the introduction on carbon tax.

3. Competition policy

These are the policies intended to prevent collusion among firms and to prevent individual firms from having excessive market power. Major forms include oversight of mergers and prevention of price fixing and market sharing in order to promote or maintain market competition by regulating anti-competitive conduct. The term competition policy, however, has a broader meaning, and refers to a set of measures and instruments used by governments that determine the overall conditions of competition that are likely to be met in specific markets. As such, competition law is a subset of competition policy.

Monopoly: A situation in which a single company owns all or nearly all of the market for a given type of product or service. This would happen in the case that there is a barrier to entry into the industry that allows the single company to operate without competition.

Advantages

- Research and Development. Supernormal Profit can be used to fund high cost capital investment spending. Successful research can be used for improved products and lower costs in the long term. E.g. Telecommunications and Pharmaceuticals.
- Economies of scale. Increased output will lead to a decrease in average costs of production. These can be passed on to consumers in the form of lower prices.
- International Competitiveness. A domestic firm may have Monopoly power in the domestic country but face effective competition in global markets. E.g. British Steel
- A firm may become a monopoly through being efficient and dynamic. A monopoly is thus a sign of success not inefficiency. For example - Google

Disadvantages

- Supernormal Profit: Higher Price and Lower Output than under Perfect Competition. This leads to a decline in consumer surplus.
- Allocative Inefficiency: A monopoly is allocatively inefficient because in monopoly the price is greater than MC.
- Production Inefficiency: It is argued that a monopoly has less incentive to cut costs because it doesn't face competition from other firms so a monopoly is productively inefficient because it produces output at a higher cost.
- Higher Prices to Suppliers: A monopoly may use its market power and pay lower prices to its suppliers. E.g. Supermarkets have been criticized for paying low prices to farmers.
- Diseconomies of Scale: It is possible that if a monopoly gets too big it may experience diseconomies of scale. - higher average costs because it gets too big.

Government Reponses to monopolies

- Self-regulation
- Nationalization
- Monopoly control
- Public regulation

3. Impact of macro-economic policy on business sectors

It is important that the macroeconomic policy to work properly, its instruments (fiscal and monetary) should impact the economy and business sector. Following are the impacts:

Aggregate demand

The macroeconomic policy will impact AD which is central to the determination of level of inflation and unemployment. An increase in AD will lead to inflation whereas a low AD will lead to unemployment.

Cost of business sector

Macroeconomic policy will impact the cost of business sectors by affecting exchange rates (raising the domestic prices of imported products), taxation (will increases the prices of products) and interest rates (cost of borrowing and investment).

Let's now consider the macroeconomics instrument in detail:

1. Fiscal policy

Fiscal policy is the government policy for dealing with the budget (especially with taxation and borrowing). In economics, fiscal policy is the use of government expenditure and revenue collection to influence the economy. It includes the aspect of Government economic policy dealing with tax, welfare payments and government expenditure. Government requires an adjustment between taxation, borrowing and spending.

Expenditure Government spends money in order to stimulate the economy. Such money would be raised either through taxes or borrowing. However to much economic stimulation will lead to inflation as people will compete for resources and services.

Taxation

Raising money through increasing taxation levels will affect public expenditure resulting in slow economic growth. However to stimulate economy taxation levels could be reduced but this should not reduce the government spending.

Borrowing & Repayment

In order to stimulate economy when taxation levels are not high government need to borrowings to spend more.

It is important to strike a balance between all three.

2. Monetary policy

Monetary policy is the process by which the monetary authority of a country controls the supply of money, often targeting a rate of interest for the purpose of promoting economic growth and stability. The official goals usually include relatively stable prices and low unemployment. Monetary theory provides insight into how to craft optimal monetary policy. It is referred to as either being expansionary or contractionary, where:

1. An expansionary policy increases the total supply of money in the economy more rapidly than usual. Expansionary policy is traditionally used to try to combat unemployment in a recession by lowering interest rates in order to promote consumer demand, encourage business to increase spending because it will be cheaper to borrow and saving do not earn a lot of interest.

2. Contractionary policy is intended to slow inflation in hopes of avoiding the resulting distortions and deterioration of asset values by reducing the size of money supply. Changes in monetary policy will affect the cost of borrowing, inflation levels, consumer demand and exchange rates.

Business integration The unification of one or more separate business functions into a single function. In includes aligning all aspects of the business to ensure maximum use of business resources so that objectives are achieved effectively. The frame work that we will use to understand business integrations and linkages is Porter's value chain model. The value chain model helps to analyze specific activities and their link and the value of these activities. It is subdivided into primary and secondary activities.

Primary activities

Inbound logistics. It includes receiving, storing inventory control and transportation planning of inputs to the systems.

Operations: This includes general operations of the business such as, machining, packaging, assembly, equipment maintenance and all other value adding activities that convert inputs into final products.

Outbound logistics: This includes activities required to deliver the final products to customers such as warehousing, order fulfillment, transportation and distribution management.

Marketing and sales: This includes activities that result in buyers purchasing the product such as advertising, promotion, pricing and retail management.

Service: These are the activities and create and enhance the product value such as training, customer support, installation, upgrading and spare parts management.

Support activities

Procurement: This includes procurement of input such as raw materials, servicing, spare parts, building and machines etc.

Technology development: This includes development of technology to support value chain activities such as R&D, Process design and redesign and automation.

Human resources management: This includes activities associated with recruiting, development, retention and compensation of employees.

Firm Infrastructure: This includes general management, planning management, legal, finance, accounting and quality management.

Advantages of Value chain

1. A big advantage is that the value chain is a very flexible strategy tool for looking at your business, your competitors and the respective places in the industry's value system.
2. The value chain can be used to diagnose and create competitive advantages on both cost and differentiation.
3. It helps you to understand the organization issues involved with the promise of making customer value commitments and promises because it focuses attention on the activities needed to deliver the value proposition.
4. Comparing your business model with your competitors using the value chain can give you a much deeper understanding of your strengths and weaknesses to be included in yourSwot analysis.

5. It can be used for assessing the performance of the overall process by setting targets and monitoring the actual performance.

Chapter - CHANGES IN BUSINESS STRUCTURE AND MANAGEMENT ACCOUNTING

Functional Form

1.1.1 Traditional Structure

This is the traditional structure of a business. Departments are defined by their function (sales, finance, production, etc).

An organisation chart for a functionally organised company might look like this:

Implications for Performance Management

The functional structure has significant implications for performance management:

- There is a need for coordination of all the departments. The directors would perform this coordinating role.
- The directors are likely to have responsibilities related to functional oversight and a high-level strategic role. They will therefore require detailed information from the levels below.
- Budgets and management accounts are likely to be based around the structure and so reinforce it. Each department will have its budget. Since most departments are cost centres, these budgets mostly show budgeted costs. Only directors will see budgets and actual reports that include profits.
- It may be difficult to see where profits or losses are made. It is unlikely that information would be available for profits by product, for example, since many of the organisation's costs would be considered overheads (e.g., financing costs).
- Approaches such as activity–based costing, which includes overhead costs in product costs, may be difficult to apply if functional information is siloed.
- It is difficult to see where value is added.

Divisionalised Form

Divisions are created whereby divisional managers can run their business area as they wish (decentralised and autonomous).

- Divisions may be based on geographical areas or along business/product lines.
- Typically, each division is organised along functional lines.

Each "division" may be a separate legal entity owned by the parent.

Implications for Performance Management

Divisional managers are likely to be given a large amount of autonomy. The head office would not be involved in operational matters and would only require high-level information, such as the division's return on investment.

The challenge for the head office is to ensure that the divisional directors are managing their divisions so that they contribute to achieving the organisation's goals as a whole. For commercial organisations, it is assumed that the organisation's primary objective is to maximise the owners' wealth. In this case, divisional managers must work towards this goal by only investing in projects that maximise stakeholders' wealth.

Information Needs of Divisional Organisations

In a divisional organisation, the head office does not require detailed management accounting information from the divisions. Instead, it will use higher-level measures to ensure the divisional managers achieve the organisation's objectives. For example:

- Return on investment;
- Residual income; and
- Economic value added

Non-financial KPIs may supplement such divisional performance measures (see Chapter 10 for details).

Divisional managers do require detailed information to enable them to manage their divisions. These managers are likely to define for themselves what management information they want.

Network Organisation

Types of Networks

A network organisation is a collection of autonomous business units which are coordinated centrally to behave as a single larger organisation:

- Internal networks are organisations that see their units as separate profit centres and encourage them to sell outside the organisation as well as inside. Corporate headquarters acts as a broker. The rationale is that if units have to work with prices set by the market, they will be more efficient.
- A stable network is an organisation that outsources much of its work.
- Dynamic networks outsource even more dramatically. A majority of the functions of the business will be outsourced, including core business activities, with the head office acting as a coordinator.

Implications for Performance Management

The use of outsourcing means that the management of the network organisation can avoid becoming involved in detailed control of the activities that have been outsourced.

Performance management is likely to focus on whether or not the partners are providing the appropriate level of quality for the price. The organisation may also be interested in ensuring its suppliers comply with its ethical standards.

Although outsourcing can make managing an organisation simpler in some senses, it can lead to additional challenges:

- Reliance on third parties to perform critical business processes. If they do not perform to the required quality or service level, this can adversely impact the organisation's reputation.
- There will be a loss of confidentiality as sharing business-sensitive data with the partners may be necessary.
- Performance measures and targets must be set and agreed upon with the partners. It may not be easy to monitor these accurately, as measurement may be performed by the partners, who will have an incentive to ensure that only good news is reported.

Information Requirements of Network Organisations

In a network organisation, the head office has a coordinating role. The information that would be required for such an organisation would primarily include the following:

- Non-financial performance indicators relating to the performance of the partners. For example, the quality of goods manufactured by partners and the number of on-time deliveries.
- Information about prices charged by the partners. These will likely be agreed upon in a service-level agreement.
- Compliance with the company's ethical, environmental, health, and safety standards by the partners.

Information about partners' performance will often be gained through integrated IT systems. Audits of suppliers can supplement this.

Accounting Needs of Traditional Manufacturing

Much of the management accounting literature and ideas were developed for manufacturing industries. However, service industries are becoming increasingly important parts of the economies of many countries. This section considers how the management accounting needs of the two differ.

The objectives of management accounting information in manufacturing industries can be categorised as follows:

- **Cost behaviour** – used for planning, controlling and costing for inventory valuation.
- **Quality of production** – this will be measured against the product specification.
- **Time taken** – manufacturing time, bottlenecks, etc., to gain more efficiency.
- **Innovation** – required in new products and new processes.
- **Valuation** – even in just-in-time manufacturing, there may be some inventory. Valuation may also be performed for other purposes, such as pricing.

Manufactured goods may be standardised – which makes the objectives above simpler to deal with.

Service Industries

There are four characteristics of services that make performance measurement more difficult than in manufacturing industries. These can be easily remembered with the mnemonic SHIP:

- **Simultaneity/inseparability:** services are consumed simultaneously as they are produced, which means that the organisation cannot stop the customer from experiencing poor service.
- **Heterogeneity/variability:** each service provided could be unique because people are involved, so the quality of services is challenging to standardise.
- **Intangibility:** a service cannot be touched or viewed, so it is difficult for customers to know in advance the quality of service they will receive.
- **Perishability:** services cannot be stored. Organisations must therefore have sufficient resources to produce adequate services to meet peak demand. This can have implications for resource utilisation, as the organisation will have the problem of unused capacity at non-peak times.

Management Accounting Needs in Services Industries

While the objectives of management accounting in services industries will be broadly the same as that of manufacturing industries, there are some differences:

- More emphasis on quality of service. However, the quality of service is more complicated to measure due to simultaneity and heterogeneity.
- Because of intangibility, it will be necessary to identify several quality measures.
- Many service industries provide "personalised service", based on the customer's specific needs. This makes it challenging to define a standard cost which could be used for variance analysis.
- A higher portion of the cost of a service may be overheads, which means activity based costing approaches may be more appropriate.
- More contact with customers. In a manufacturing environment, the product is made in the factory. In the service industry, the service is usually performed while the client is present.
- Because of perishability, the organisation must strike the correct balance between having sufficient resources to meet peak demand and being over-resourced. There is, therefore, likely to be an emphasis on resource utilisation measures.
- The appropriate cost unit may be harder to define in a service industry than in manufacturing. In a hospital, for example, the cost unit could be patients, beds or even doctors. A composite cost unit, such as bed-nights or passenger-kilometres, might need to be used.

The management accounting information for service industries may therefore include the following:

- Monetary information (i.e. information that may be expressed in money terms).
- Non-financial quantitative information (e.g. market share).
- Qualitative information (i.e. information that cannot be expressed in numbers).

Business Processes

Business processes are the activities that are carried out within an organisation. One process may spread across several departments.

Business process – a set of linked activities that take an input and transform it to create an output. Ideally, the transformation that occurs in the process should add value to the input and create an output that is more useful and effective to the recipient either upstream or downstream.

Also called a business method, a business process is a collection of interrelated tasks that solve a particular issue. There are three types of business processes:

- Management processes are the processes that govern the operation of a system. Typical management processes include "corporate governance" and "strategic management".
- Operational processes are the processes that constitute the core business and create the primary value stream. Typical operational processes are purchasing, manufacturing, marketing and sales.
- Supporting processes support the core processes, including accounting, recruitment and IT.

Business Process Re-engineering (BPR)

Business process re-engineering – the fundamental rethinking and redesign of business processes to achieve dramatic improvement in critical measures of performance such as cost, quality, service and speed.

When organisations began introducing computer systems, they were initially used to automate existing business processes. Hammer and Champy pointed out that organisations missed an opportunity to question whether those business processes were necessary, particularly in a computerised environment.

Hammer and Champy proposed business process re-engineering (BPR) as a way that organisations can achieve a considerable, one-off improvement in performance.

- BPR implies starting with a clean sheet of paper and designing the business processes from scratch.
- A business process should only be performed if it "adds value" (i.e. it does something the customer wants).
- Many processes performed in paper-based manual systems become unnecessary in computerised systems.
- BPR is not only about reducing costs. It is also concerned with allowing the organisation to respond more quickly to customers' needs.

Linked with BPR are "business automation" and "business rationalisation". BPR is not automation or rationalisation. It goes far beyond. The keywords are fundamental, radical, dramatic and process.

Business automation – using computerised working methods to speed up the process of existing tasks.

Business rationalisation – the streamlining of operating procedures to eliminate inefficiencies.

Principles of BPR

1. Process should be designed to achieve a desired **outcome** rather than focusing on existing **tasks**.

2. Personnel who use the **output** from a process should **perform** it. This reduces bottlenecks and delays.

3. Information gathering and processing should be performed at the same time.

4. **Geographically dispersed** resources should be treated as if they are **centralised**. This allows the benefits of centralisation to be obtained (e.g. economies of scale through central negotiation of supply contracts) without losing the benefits of decentralisation (e.g. flexibility and responsiveness).

5. Parallel activities should be **linked** rather than **integrated**. This would involve, for example, coordination between teams working on different aspects of a single process.

6. "Doers" should be allowed to be **self-managing**. The traditional distinction between workers and managers can be abolished: decision aids (e.g. expert systems) can be provided where required.

7. Information should be captured **once** at the **source**. Electronic distribution of information makes this possible.

Implementation of BPR

Various methodologies exist for re-engineering and redesigning business processes after identifying a project area. Davenport and Short (1990) prescribe a five-step approach:

1. Develop the business vision and process objectives: BPR is driven by a business vision, which implies specific business objectives (e.g. cost reduction, time reduction, output quality improvement, learning and empowerment).

2. Identify the processes to be redesigned: Most organisations use the *high-impact* approach, which focuses on the most critical processes or those that conflict most with the business vision. A few organisations use the *exhaustive* approach, which attempts to identify all the processes within an organisation and then prioritise them in the order of redesign urgency.

3. Understand and measure the existing processes: To avoid the repetition of old mistakes and to provide a baseline for future improvements.
4. Identify IT levers: Awareness of IT capabilities can and should influence process design.
5. Design and build a prototype of the new process: The actual design should not be viewed as the end of the BPR process. Instead, it should be viewed as a prototype with successive iterations.

The introduction of BPR can have the following effects on the organisation:

- The organisation structure may reflect process teams rather than functional departments.
- Staff roles may change from a limited number of tasks to multi-dimensional work.
- Staff will be empowered (e.g. front-line staff can make decisions without requiring authorisation from more senior staff).
- Performance measurement will change. Traditional measures that focus on particular departments (e.g. the costs of the marketing department against the budget) would no longer be consistent with the process view of BPR. Instead, performance measures will likely focus on the whole process and measure the operation's output against a target (e.g. the total cost of a sale). This may be assisted by activity-based management.

Influence of BPR on Systems Development

The implications of BPR for accounting systems include the following:

- Information systems must be based around processes, not departments, to facilitate performance measurement. This is likely to affect the design of responsibility centres.
- Systems may be shared across the organisation rather than having one system for each functional department.
- Reports will need to be based on the value-added activities.

Evaluation of BPR

BPR became very popular in the 1990s, particularly in the US. Although many organisations reported excellent performance improvements due to implementing BPR, others were disappointed with the results.

Advantages from many well-reported cases include the following:

- Eliminating bureaucratic procedures allowed service businesses to deal with customers more quickly. For example, a US life insurance company that took 22 days to process new applications reduced this to only five days after re-engineering.
- Reducing headcount and thereby saving costs. For example, Ford reduced the headcount in the accounts payable department by 75% by automating and reorganising the process of matching purchase orders with receiving documents and with invoices.
- Creating value (what the customer wants) and eliminating non-value-added activities. For example, Taco Bell grew from a $500-million revenue company in 1982 to a $3-billion company in 1992. Its re-engineering included increasing the seating capacity from 30% of the restaurant area to 70% and reducing the kitchen area from 70% to 30%. Regional managers were also eliminated, and restaurant managers were given profit and loss responsibility.

Criticisms of BPR include:

- Too much focus on efficiency and using BPR as a pretext for large-scale redundancies.

- The assumption implicit in BPR is that existing processes are not effective. This is not always the case.
- That BPR is simply a "buzzword" that became fashionable in the 1990s to describe something that was not new. For example, the changes made to the factory in the 1920s by Henry Ford were a type of BPR.

Business integration – the result of viewing an organisation as a linked group of business processes, adding value to the customer, rather than viewing it as a group of separate functional departments.

In traditional functionally organised companies, it is easy for the various departments to lose sight of the fact that they are working towards a common goal. **Business integration** attempts to look at the business processes holistically and to de-compartmentalise them.

Porter's Value Chain

Overview

Porter's value chain focuses on an organisation's value-added activities rather than its structure.

The Primary Activities

The primary activities of an organisation are related to producing the product or service of the organisation:

- Inbound logistics – receiving, handling and storing goods, materials and inputs for production;
- Operations – converting the inputs into the final product;
- Outbound logistics – delivering the product to the customer;
- Marketing and sales – informing customers about the product;
- After-sales service – repairing products, provision of replacement parts, etc.

The Secondary Activities

The secondary activities support the primary activities.

- Procurement –buying the inputs; evaluating reliability of supply; negotiating prices, management of lead times and quality standards;
- Technology development – product design, improving processes;
- Human resource management – recruiting, training, developing and rewarding people;
- Firm infrastructure – support activities such as management, finance, etc.

Use of the Value Chain

The value chain is a strategic planning model that management can use to analyse the critical success factors (CSFs) and coordinate the activities of the various activities. The linkages between primary and support activities can be clearly understood.

- The value chain identifies CSFs.
- It provides a structure for identifying cost drivers for ABC.
- It can be used to analyse rivals for comparison purposes.

McKinsey's 7S Framework

McKinsey's 7S framework is designed to assist organisations in assessing how the various organisational elements work together to achieve corporate strategy. The model focuses on seven internal factors. The model's idea is that these factors' objectives must be aligned for the organisation's effectiveness.

The factors are categorised as either "hard" or "soft" as follows:

Hard Factors

Hard factors are elements easily identified, defined and controlled by management.

- Strategy – the plan to achieve competitive advantage.
- Structure – the organisational structure.
- Systems – the organisation's daily activities and procedures.

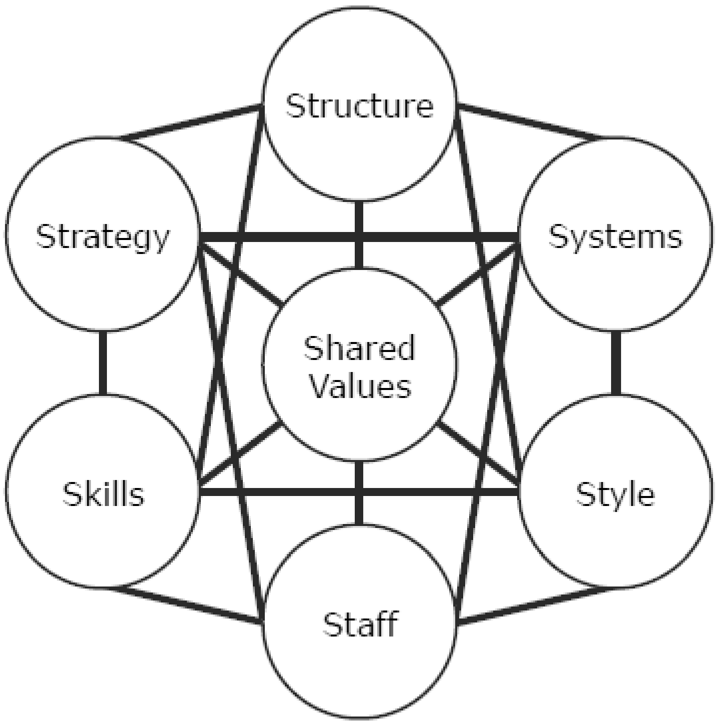
Soft Factors

Soft factors are more intangible, formless, and often influenced by corporate culture and the informal organisation. Management can take measures to influence soft factors but cannot control them directly.

- **Shared values** – the organisation's core values, including the culture and general work ethic.
- **Skills** – the specific skills and competencies of the people working for the organisation.
- **Style** – the style of leadership used.
- **Staff** – the staff who work for the organisation.

Using the 7S Framework

The framework is often depicted as follows, showing the interdependencies of the seven factors with shared values at the centre:



The model can be used to:

- Identify what areas need to be aligned; and
- Ensure that all the factors remain aligned during a restructuring or other change.

Information Systems

Information systems that were once thought of as a "back office" function are now recognised as strategic resources which support an organisation's strategy.

Information systems exist in a dynamic environment. Management should be aware of the need to update their information systems for the following reasons continually:

- The organisation may change considerably over time, requiring additional information to help manage new and changing areas.
- Advances in technology provide new ways of doing business and new forms of information systems.
- Organisations need to focus more and more on the external environment to see what is changing around them; they need information systems that can provide external and internal information.

This means that information systems' requirements will change over time. Therefore, organisations must continually refine and develop them to remain competitive.

Influence on Performance Measurement

How might changing an organisation's structure, culture and strategy influence adopting new performance measurement ideas?

Structure

Organisations that adopt a traditional, functional structure are less likely to embrace change and are less likely to adopt new performance measurement systems.

In heavily centralised structures, managers have insufficient authority to try new performance measurement methods and techniques.

More decentralised organisations, where line managers have more responsibility, are more likely to respond to change quickly and provide opportunities to try new techniques.

Culture

Bureaucratic cultures, in which job descriptions define tasks and work routines, are likely to restrict adoption of new ideas. On the other hand, more open and participative cultures are likely to encourage the adoption of new performance measurement methods and techniques.

The difficulty is in building the appropriate type of culture that best suits the organisation's needs. Management's role is to construct a performance evaluation system and employee interactions that enable the desired culture to flourish.

The Japanese developed many of the manufacturing ideas in the 1990s (e.g. Just-in-Time (JiT) and Total Quality Management (TQM)). This was partly because of geography and partly because of culture. The Japanese belief in continuous improvement promotes adopting new ideas, whereas an "if it works, don't fix it" culture will stifle new ideas.

Strategy

Organisations operating in competitive industries will be pressured to adopt the latest manufacturing technologies and supporting performance measurement systems.

Increasing focus on quality, innovation and customer satisfaction is a driver to adopt performance measurement methods and techniques which embrace non-financial measures such as the balanced scorecard and performance pyramid

Syllabus Coverage

Congratulations, you have covered the following Learning Outcomes:

A. Strategic Planning and Control

Changes in business structure and management accounting

1. Identify and discuss the particular information needs of organisations adopting a functional, divisional or network form and the implications for performance management.
2. Assess the changes to management accounting systems to reflect the needs of modern service oriented businesses compared with the needs of a traditional manufacturing industry.
3. Assess the influence of Business Process Re-engineering on systems development and improvements in organisational performance.
4. Analyse the role that performance management systems play in business integration using models such as the value chain and McKinsey's 7S's.
5. Discuss how changing an organisation's structure, culture and strategy will influence the adoption of new performance measurement methods and techniques.
6. Assess the need for businesses to continually refine and develop their management accounting and information systems if they are to maintain or improve their performance in an increasingly competitive and global market.

Chapter - IMPACT OF INFORMATION TECHNOLOGY

The developments in information technology have a significant impact on businesses and on strategic management accounting systems. Following are the recent developments in it:

1. Data warehouses

A collection of data designed to support management decision making. Data warehouses contain a wide variety of data that present a coherent picture of business conditions at a single point in time.

Development of a data warehouse includes development of systems to extract data from operating systems plus installation of a warehouse database system that provides managers flexible access to the data. The term data warehousing generally refers to the combination of many different databases across an entire enterprise. Such databases are then used to extract the data according to individual requirement. Such data warehouses can then be used for data mining which analyses the data to find unknown patterns and correlations with data.

2. Internet

A global network connecting millions of computers. More than 100 countries are linked into exchanges of data, news and opinions. Unlike online services, which are centrally controlled, the internet is decentralized by design. There are a variety of ways to access the internet. Internet provides access to vast of information and resources.

3. Intranet

An intranet is a private network that is contained within an enterprise and is accessible only by the organization's members, employees, or others with authorization. An intranet's web sites look and act just like any other web sites, but the firewall surrounding an intranet fends off unauthorized access. The main purpose of an intranet is to share company information and computing resources among employees. An intranet can also be used to facilitate working in groups and for teleconferences.

4. Extranet

An extranet is a computer network that allows controlled access from the outside, for specific business or educational purposes. In a business-to-business context, an extranet can be viewed as an extension of an organization's intranet that is extended to users outside the organization, usually partners, vendors, and suppliers, in isolation from all other internet users.

5. Networks

Organization connects their computers together to share data and devices using Lan and Wan. Local-area network (Lan) is a computer network that spans a relatively small area. Most Lans are confined to a single building or group of buildings; however, oneLan can be connected to other Lans over any distance via telephone lines and radio waves. A system of lans connected in this way is called a wide-area network (wan).

Need for continual developments

It is important for business to change them and continuously bring developments in their systems in order to make sure that they don’t become out of date. Following are the other reasons for a business to respond quickly and continuously.

1. Introduction of new accounting techniques such ABC, Backflush etc. Requires change in information systems.
2. Implementing JIT systems requires detailed information.
3. Increased competition and obtaining competitive advantage requires quick, relevant and detailed information.
4. Quick innovation of new products requires sophisticated manufacturing ways such as computer aided manufacturing
5. Increased focus of services and service industries requires new methods of costing for services. (service industries will be discussed below).

Needs of modern service industries

Services are intangible products such as accounting, banking, cleaning, consultancy, education, insurance, expertise, medical treatment, or transportation. Unlike manufacturing services are more subject to qualitative information due to its characteristic requirements which are as follows:

1. **Intangibility:** The services are intangible, with no substantial physical aspect to a service delivery where as in manufacturing the delivery is in physical form.
2. **Heterogeneity:** fundamental characteristic of services which results in variation from one service to another, or variation in the same service from day-to-day or from customer-to-customer.
3. **Simultaneity:** It refers to the idea that the production and consumption of a service occur simultaneously, making it impossible to produce and store a service prior to consumption.
4. **perishability:** perishability is relating to the fact that services cannot be stored. They must be consumed when offered; they cannot be held or stocked.

Measuring quality in services industries Unlike manufacturing in services industries there no substantial physical aspect to a service delivery so it is important to focus on

1. Comfort and ambience
2. Speed of delivery
3. Responsiveness and flexibility
4. Consistent quality.

Access to data and information technology

Traditional accounting systems which were less based on it used to result in late availability and slow processing of data thus affecting flexibility and responsiveness. Such problems of traditional system can be overcome by using modern accountings systems which are it based for example:

1. Inaccurate cost: traditional accounting system rarely used ABC instead preferred the use of absorption costing based on single oar. However incorporating ABC in modern systems can provide accurate and complete cost measurement.
2. Delays: traditional systems resulted in delays in due to manual recording, analyzing and comparison with budget which resulted in delay knowing the whether the actual result were different from budget. However the modern systems recording and processing is in real time allowing analysis and comparison on daily basis.

Use of RFID

RFID abbreviation is that “refers to any electronic device that uses radio waves to facilitate the communication of data for the purpose of identification, and sometimes to locate and/or sense the condition(s), of animate and inanimate objects. “Anything that communicates using radio waves needs to be able to identify and differentiate itself from other things.

RFID is also used by numerous other things:

1. The keys to open your car door;
2. The automatic payment passes used in toll booths;
3. Building access systems;
4. Passports, payment cards, and even student id cards;
5. Wireless sensors and mesh networks.
6. For inventory controlling and tracking

Chapter - PERFORMANCE MEASUREMENT IN NOT FOR PROFIT ORGANISATION

INTRODUCTION

An incorporated organization which exists for educational or charitable reasons, and from which its shareholders or trustees do not benefit financially. IT is neither a legal nor technical definition but generally refers to an organization that uses surplus revenues to achieve its goals rather than to distribute them as profit or dividends. Examples include schools, hospitals, charitable institutions, welfare societies, clubs, public libraries, resident welfare association, sports club etc.

Characteristic

1. The objective of such organizations is not to make profit but to provide service to its members and to the society in general.
2. The main source of income of these organizations is not the profit earned from purchase and sale of goods and services but is admissions fees, subscriptions, donations, grant-in-aid, etc.
3. These organizations are managed by a group of persons elected by the members from among themselves. This group is called managing committee.

These are of two types

- Private Sector Based
- Public Sector Based

Like a profit organization it is important to assess the performance of Not for profit organization. However following are the causes of concern.

Non Quantifiable Cost and Benefits	Uses of funds
Stakeholders objectives	Impact of politics

1. Non quantifiable cost & benefits

The benefits (customer satisfaction or increased staff morale) and the cost(reduced corporate image or adverse public perception) associated with these organizations are largely of qualitative in nature thus making it difficult to measure the performance. For example there will be no measurement scale; it will be difficult to justify the balance between cost and benefits obtained.

Solution

A cost and benefit analysis is the answer to the above problem by quantifying all cost and benefits in financial terms although doing this in very situation might not be very easy. For example increased staff morale, may lead to high productivity, which may lead to less overtime and adverse public perception will lead to fines and penalties or lower sales revenue.

1. Use of funds

In not for profit organization particularly public sector organizations, funding is the primary source of cash inflow (normally from governments) as they don't generate revenue. An expenditure budget is set according to which they use their funds. However such expenditure and funding structure has serious issues such as:

1. Funding is not correlated with more and quality of service provided.

2. In according to qualify for funding focus will be on targets which are not important from the organization's perspective.

Solution

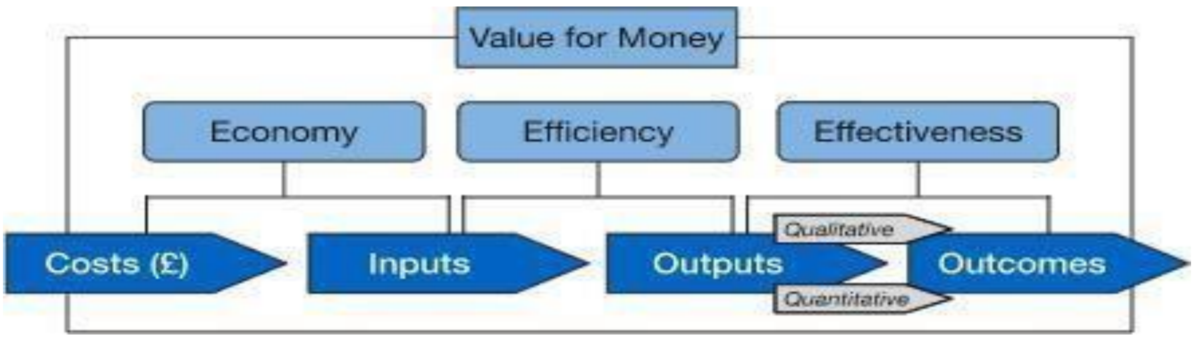
The concept of value for money is best for measuring the performance of not for profit organization which is based on three factors:

Economy is what goes into providing a service, such as the cost per hour of care workers or the rent per square meter of accommodation.

Efficiency is a measure of productivity i.e., how much you get out in relation to what is put in. For example, the number of people visited per home care worker per week or the amount of refuse collected per refuse-lorry.

Effectiveness is a measure of the impact that has been achieved, which can be either quantitative or qualitative. Examples include how many people were prevented from needing residential care through using home care services (quantitative), and feedback from different sections of the community with arrangements for tenant participation (qualitative). Outcomes should be equitable across communities, so effectiveness measures should include aspects of equity, as well as quality.

VFM is high when there is an optimum balance between all three elements - when costs are relatively low, productivity is high and successful outcomes have been achieved. The link between all three is shown by below diagram



VFM AUDIT: Independent audit of a not-for-profit organization conducted to assess the economy, efficiency and the effectiveness in the utilization of funds. It is employed where the standard commercial performance (profit oriented) measures cannot be used.

Multiple and diverse stakeholder's objectives

The NFP are subject to multiple objectives due to multiple stakeholders' involvement. Also the objectives are diverse as there are no single objectives of maximization of shareholder's wealth. So it is important to fulfill the needs of all the stakeholders.

Solution

Prioritization of objectives will overcome this problem but sometimes it will not be easy to set establish such priority so compromise between objectives will be required.

Impact of politics

Performance management in public sector organization suffers with the problem of political interference which may focus on short term political gain at the expense of long term organizational benefit. Funding might not be provided for improvement in service rather than to gain some political popularity or deliberately not incurring expense for service betterment due to political pressure. All such issues will not allow to assess a realistic performance of the company.

Chapter- STRATEGIC MANAGEMENT ACCOUNTING

THE PERFORMANCE HIERARCHY

1. Mission
2. Strategic plans and objectives (discussed below)
3. Tactical plans and objectives (discussed below)
4. Operational plans and targets (discussed below)

Mission Statement: A mission statement is a statement of the purpose of a company or organization.

Following will be included in Mission statement:

1. Purpose and aim(s) of the organization and define what the company is about.
2. The organization's primary stakeholders
3. How the organization provides value to these stakeholders
4. Distinguish the company from all others
5. Serve as framework to evaluate current activities

Benefits of mission statements

Prevent conflict	Communication of key cultural values	Reason for existence	Provides strategic direction

Drawbacks of mission statements

They might be Unclear	Un-noticeable	Not the Present actual Values	Lack sufficient external focus

Difference between mission and vision

A mission statement concerns what an organization is all about. A vision statement, on the other hand, describes how the future will look if the organization achieves its mission. A mission statement gives the overall purpose of an organization, while a vision statement describes a picture of the "preferred future."

Role of management accounting

Traditionally the focus of management accountant was limited who were responsible for financial controlling but in today's environment the focus is more strategically i.e. business support. The focus now is not just limited to number specialist but more of a generalist. Traditionally the management accountant was kept separate to operational side in order to ensure their independence in reporting accounting information to senior managers.

According to the study of Burns and Scapens the role of management accountant has changed over number of years and today accountant has become a hybrid accountant. According to this study there are three reasons for such a change which are as follows:

1. Technology: Traditionally the management accountant was one of the few people who had access to IT system in order to prepare financial reports. However in today environment due to sophisticated IT system data input and report generation can be

made from other organizational users which traditional was done by management accountant. So now the management accountant has become another user of the system, producing reports from data inputted by other departments.

2. Management structure: Due to delayering of management hierarchy the focus now has shifted to operational management who now are expected to have knowledge of budgeting and cost control even they are not finance specialist. They are expected to be accountable for their own budget and are responsible for cost under control. They also produce forecast based on the local knowledge together with the performance indicators to give statement of performance in relation to their own area. The role of management accountant is now as a second reporter to senior management, who then can link these financial report with the strategic consequences of the activities which have been undertaken.
3. Competition: Due to high competition the focus has now shifted from financial accounting to commercial orientation which required management accountant to have a more strategic focus and consider both financial and non-financial information. Also the focus now shifted from short term profit to future long term earning capacity of the company.

Strategic analysis tools

1. Swot analysis

A tool that identifies the strengths, weaknesses, opportunities and threats of an organization.. The method of Swot analysis is to take the information from an environmental analysis and separate it into internal (strengths and weaknesses) and external issues (opportunities and threats). The result of the analysis is a matrix of positive and negative factors for management to address:

	Positive factors	Negative factors
Internal factors	Strengths	Weaknesses
External factors	Opportunities	Threats

The key point to remember about Swot is that:

Strengths and weaknesses

- Are internal to the business
- Relate to the present situation

Opportunities and threats

- Are external to the business
- Relate to changes in the environment which will impact the business

Using SWOT analysis

There is no point producing a Swot analysis unless it is actioned. Swot analysis should be more than a list. It is an analytical technique to support strategic decisions.

2. Benchmarking

Benchmarking is the process of identifying "best practice" in relation to both products (including) and the processes by which those products are created and delivered. The search for "best practice" can take place both inside a particular industry, and also in other industries. The objective of benchmarking is to understand and evaluate the current position of organization in relation to "best practice" and to identify areas and means of performance improvement. Benchmarking is very useful in public sector organization (Chapter 4) which can be compared to private sector in order to identify areas of improvements. There are a number of different types of benchmarking.

Steps

1. Set objective and decide areas to bench mark
2. Identify key performance drivers and indicators These will be identified depending on the type of organization and area to be benchmarked for example public sector may focus on cost efficiency whereas private sector may focus on both cost and differentiation.
3. Select organization
4. Measure performance of organization involved
5. Compare performances
6. Specify improvements
7. Implement and monitor improvements

EFFECTIVNESS OF BENCHMARKING

1. It should be considered a learning exercise rather than measuring exercise
2. The influence of stakeholder towards improvement is important.
3. The economic pressure in some cases is also important to bring improvement
4. The focus should not be just on improving numbers being measured rather it should be on underlying performance. (DYSFUNCTIONAL BEHAVIOUR CHAPTER 3)

BENEFITS OF BENCHMARKING 1. It leads to the identification of gaps in performance 2. Provides opportunity to learn from the success of others 3. Allows applying best practices 4. Focus on continuous improvement 5. Decreases the feeling of self-satisfactions Gap analysis This is an analysis which identifies the gap between desired and expected performance. The purpose of gap analysis is to establish what the organization will achieve if it did nothing and what it wanted to achieve (The planning gap is most often measured in terms of demand but may also be reported in terms of net profit, return on capital employed etc.

The defined gap can be reduced by using Ansoff's Matrix (Chapter 3) i.e. by making different strategies which are as follows:

- Market penetration
- Market development
- Product development
- Diversification

The other strategies that can be used include efficiency strategies which are designed to increase profits (or throughput) by making better use of resources in order to reduce costs. Also it is possible to reduce a planning gap that is measured in terms of profit by divesting of loss-making business units. This would obviously not be the case where a planning gap is measured in terms of sales revenue.

Multiple objectives and strategic analysis

At strategic analysis stage multiple objectives identified then needs to be resolved. For example maximization of shareholder wealth, survival, quality of service and respect for environment etc. Such conflicts need to be resolved by converting them into SMART (specific, measurable, achievable, relevant and time bounded) targets.

STRATEGIC MANAGEMENT ACCOUNTING IN MULTINATIONAL ORGANIZATION

A multinational company is one that operates in more than one country so for effective strategic management accounting it is important to consider following factors:

1. Process specialization: It deals with locating certain types of activities in certain countries in order to get cost advantage for example many companies have shifted their manufacturing plants to china in order to benefit from low cost.
2. Product specialization: It deals with providing different countries with minor or major changes in standard product in order to fulfill the needs of local condition for example pizza hut have introduced pizza having local names.
3. Political issues: Multinational companies have to consider local political issues, laws and regulations and have to trade with these requirements.
4. Administrative issues: Multinational companies will be subject to exchange rate fluctuation, currency exchange controls and international tax treaties.

Chapter: PERFORMANCE MEASUREMENT SYSTEM

Why do organizations need information?

Managers need useful information for the following purposes:-

1. Decision making
2. Planning
3. Controlling

These functions are carried out at three different levels in organizations. (Discussed before)

Types of information

Quantitative information can be expressed in numerical terms.

Qualitative information is usually expressed in the form of opinions regarding employees, customers and suppliers. Importance of qualitative information cannot be underestimated and need to be considered in the decision making process.

Sources of information

Internal source: Information comes from within the organization.

External source: Information comes from outside the organization.

Qualities of good information

Good information has a number of specific qualities. The mnemonic ACCURATE is a useful way of remembering them.

A---Accurate C---Complete C---Cost beneficial U---Understandable R---Relevant A---Adaptable T---Timely E---Easy to use

These qualities should be kept in mind during the input, processing and output in systems.

Controls should also be exercised, the types of which are as follows:

Input controls

These ensure accuracy, completeness and validity of inputs into the system. These may contain measures for data verification for example control totals and limit checks.

Processing controls

These ensure that processing of data is accurate and complete. Passwords may be used to ensure security of data.

Output controls

The ensure accuracy, completeness and security of output. Examples include follow up on exception reports and batch controls to ensure all data is complete.

Enterprise resource planning is a business management software—usually a suite of integrated applications—that a company can use to collect, store, manage and interpret data from many business activities.

Planning and Information systems

Strategic planning sets the course of future for the organization. Information Systems used at this level are:

Executive Support Systems

An executive support system pools data from internal and external sources and makes information available to senior managers in an easy-to-use form. ESS helps senior managers make strategic, unstructured decisions.

Tactical/Middle Level

This is the level at which middle managers monitor and control resources. (eg cash flow forecasts, budgeting). DSS are used at this level.

Decision Support Systems

DSS combine data and analytical models or data analyses tools to support semi-structured and unstructured decision-making.

Operational

Day to day activities is tracked at this level (cash receipts, payments etc.). Information systems at this level are:

Transaction Processing Systems

A TPS performs and records routine transactions. Othersystems used at all levels of the organization are:

1. Management Information Systems MIS convert data from mainly internal sources into information (e.g. summary reports, exception, directing and controlling activities for which they are responsible)
2. Expert Systems An expert system is a computer program that captures human expertise in a limited domain of knowledge.

Open and Closed Systems

Closed System: A closed system is one which has no interaction whatsoever with the environment. It cannot receive input or produce outputs. Such a system is not practical as there needs to be interaction with the environment for any sort of growth to take place. This system:

1. Has a short life
2. Becomes irrelevant as environment changes

Open System: This system interacts with the environment hence both internal and external factors would be considered for this.

Contingency approach to Management Accounting would be relevant for an open system. This states that there is no universally applicable system for accounting in all circumstances. Five factors need to be considered:

- The external environment: whether it is static and stable or dynamic and uncertain,
- Competitive strategy: how Porter's five forces are applicable on low cost product/ differentiated product.
- Technology: Sophistication of accounting software
- Business units: Independence within the organization
- Knowledge and observability: Availability of required information

Lean Management information system: This is a philosophy of Management that involves cutting down unnecessary activities and eliminating wastage. This can be done through a quality control system that focuses on continuous improvement. Two elements of this system are:

- Just in time production and purchasing (JIT) (Discussed before)
- Total Quality Management (TQM) (Discussed before)

Joint Methods of expansion

- Joint venture: In this case, a new project based company is formed (only for that project) whose shares are owned by two or more business entities. This forms a separate business entity.
- Strategic alliance: An alliance between two or more business in which a separate business entity is not formed.
- Supply chain structure: An association between all customers and suppliers in a chain (producer, transporter, warehouse, retailer and so on) to increase the overall value throughout the chain.

Relationship between Performance Management and Performance Measurement

Performance Management is the system ensure that goals are consistently being met in an effective and efficient manner. Performance management can focus on the performance of an organization, a department, employee, or even the processes to build a product of service, as well as many other areas.

The way through which the achievement of objectives is evaluated and measured is known as Performance Measurement.

Behavioral aspects of Performance Measurement

Human Resource Management: HRM is the "strategic and coherent approach to the management of an organization's most valued asset."

Goals of HRM are: 4Cs

- Commitment
- Competence
- Congruence
- Cost-effectiveness

Victor Vroom's Expectancy Theory

This theory was amongst the process theories of motivation which answered the question:

"How can people be motivated?"

Vroom proposed a formula to determine the force of motivation that an individual would be felt by an individual:

F= V x e

Where:

F= force of motivation

V= valence representing preference for an outcome (can be 0, -1 or 1)

E= expectancy representing whether an individual expects that he will be able to achieve the outcome (can be 0 or 1)

Agency Theory

This theory revolves around the relationship between an agent and the principal. It suggested that the agent is only motivated to work if he or she has something to gain from it. In case of employee manager relationship, the manager would need to ensure that he uses the correct means to keep his subordinates motivated with a positive attitude towards work.

Hopwood identified three styles of performance appraisal for managers:

- Budget constrained style: In this case, focus is on the short term. There would be a negative impression if the manager is unable to control costs in the current term and cannot meet short term targets and there is no room for flexibility.
- Profit conscious style: The overall effectiveness of the manager with respect to long term organizational goals is appraised.
- Non accounting style: This focuses on the non-financial aspects of performance appraisal and is more general.

Performance Appraisal is required for two purposes.

1. Judgment

2. Development Obstacles to effective appraisal

1. Appraisal as confrontation: People may consider appraisal to be a confrontation or mismatch of ideas which may result in a lack of agreement on performance levels.
2. Appraisal as judgment: Subordinates may take their manager's word as the law and would not be open about their problems or needs as a negative atmosphere would be created.
3. Appraisal as chat: Many managers may be reluctant to criticize individuals and will hence conduct appraisal in an informal and friendly way which may undermine the importance of the appraisal process.
4. Appraisal as bureaucracy: In this case appraisal may be seen as a formal obligation that needs to be conducted to satisfy HR department.
5. Appraisal as unfinished business: Appraisal should be seen as ongoing and focused on future rather than just a duty to be done during the year.
6. Appraisal as an annual event: Performance targets set during annual appraisal meetings may become outdated and unnecessary. Appraisal should be a continuous process.

Hard and Soft Accountability:

Hard accountability will require:

1. Counting: i.e., converting activities and outcomes into numbers. For example, the number and percentage of new customers or the number and type of customer complaints.
2. Accounted for: i.e., reporting on activities and outcomes and providing a discussion of how and why they occurred as they have. For example, management reports might indicate, we achieved 20% new customers through promising a just-in-time delivery of orders (how) and 80% of complaints related to an inability to meet the JIT timetable because of internal failure of the pull-through system due to lack of a synchronised manufacturing system (why).
3. Held accountable for: where the person or group or team who is counted and accounted for is responsible not just for the accounting but also for the events and circumstances leading to the records. For example, being responsible for failure to meet unrealistic delivery promises to new customers and for failure to institute action such as the purchase of new assets and the training of personnel in order to try and bring the promises to fruition.

Soft accountability is through the recognition of human input and its role in shaping subjective evaluation, stressing human values and higher level goals.

Importance of Rewards

Rewards are required:

- To create a fair system of motivating employees
- To encourage better performance
- To create a pathway for promotions
- To control cost of salaries

Rewards are given in three ways:

- Basic pay
- Performance Related Pay
- Benefits

When setting rewards, the following factors need to be considered:

- Aspect of performance which needs to be measured so strategic objectives are met
- Rewards offered by others in the market
- Compliance with legislation

Wrong signals and inappropriate actions

- Misrepresentation: Window dressing or creative accounting creates a false positive impact on results
- Misinterpretation: Problem in understanding the market
- Short termism: Forgoing long term strategic objectives in favour of the short term(Myopia)
- Measure fixation: Focusing on measures that produce ineffective results
- Tunnel vision: Narrow focus-not looking at the broad picture
- Sub-optimization: Not achieving all the required objectives
- Ossification: Reluctant to adapt to change-focused on old methods
- Gaming: Gaming is dysfunctional behavior.

Accounting and accountability perspectives

Accounting and accountability perspectives as the basis of management control may be seen to require:

Hard accountability via financial and quantitative results. There is an ongoing debate as to the most appropriate set of results. For example, what type of budgeting should be used? Are standards and variances too static and should their use be replaced by an increased focus on measures of continuous improvement both internal and external to the business? This hard accountability will require:

Counting: i.e., converting activities and outcomes into numbers. For example, the number and percentage of new customers or the number and type of customer complaints.

Accounted for: i.e., reporting on activities and outcomes and providing a discussion of how and why they occurred as they have. For example, management reports might indicate, we achieved 20% new customers through promising a just-in-time delivery of orders (how) and 80% of complaints related to an inability to meet the JIT timetable because of internal failure of the pull-through system due to lack of a synchronised manufacturing system (why).

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Soft accountability through the recognition of human input and its role in shaping subjective evaluation, stressing human values and higher level goals.

consider the construction of the accountable person . This aims at self accountability by employees who will ACT in a way which mirrors their role in the system.

focus on the use and development of transferable skills such as communication, negotiation and motivation.

The degree of achievement of self-accountability is highly likely to be affected by the reward system. Individuals are likely to be motivated through financial and non-financial rewards such as their remuneration package and job-satisfaction respectively. The development of transferable skills in fostering self-accountability may be aided through a comprehensive training and development programme for all staff. It may also be fostered through the way in which employees are grouped in order to achieve specific business outcomes. For example, the formation of multidisciplinary project teams who will identify with the successful implementation of a specific project on behalf of the organisation. Also the concept of quality circles in a total quality environment where a group of employees are encouraged to discuss problems in the implementation of their range of tasks and ways in which improvement may be achieved.

EXPANDABLES NOTES!

INTEGRATED REPORTING

INTEGRATED REPORTING

IR is focused on showing the connectivity of strategic objectives, risk and performance to demonstrate how organizations create value. This means that organizations need to understand and report on all areas of performance and not just focus on short-term financial results.

The following IR Content Elements are particularly relevant to APM:

- •Organisational overview and the external environment -Opportunities and risks
- •Strategy and resource allocation
- •Business model
- •Performance
- •Future outlook

Organizational overview and the external environment

What does the organization aim to do? Who are the major stakeholders? Where is it located? How is it structured? What extemal events will affect if most?

Fairly obviously the organization's mission and objectives, stakeholder analysis, organization chart and a PEST analysis would be relevant to this section of the IR

Opportunities and risks

These must cover both internal and external matters. The traditional SWOT analysis usually categorizes opportunities and threats (risks) as external, but it is essential to also look internally.

Some risks can be quantified (for example, by expected values and sensitivity analysis)

The report should also mention how the risks are being managed and mitigated Strategy and resource allocation

Does the organization intend to develop new products, set up new factories or expand to new markets?

This section of the IR can make extensive use of Porter's models, BCG matrix

Business model

An organisation's business model is its system of transforming inputs, through its business activities, into outputs and outcomes that aims to fulfil the organisation's strategic purposes and create value over the short, medium and long term (IIRC).

Porter value chain, business process re-engineering, value-based management, activity-based management are also all methods that can influence an organisation's business model.

Performance

This area of IR addresses how an organization has performed against its strategy and what are its key outcomes.

It is also recognizes the importance of reporting on non-financial, qualitative results.

Examples include revenue, cash flow, customer satisfaction, brand loyalty. environmental impacts, etc.

Future outlook

An integrated report should answer the question: What challenges and uncertainties is the organisation likely to encounter in pursuing its strategy, and what are the potential implications for its business model and future performance?

PEST and a five forces analysis are likely to be particularly relevant here.

IR and capital (SIX TYPES)

- **Financial capital** e.g. shares, bonds or banknotes.
- **Manufactured capital** e.g. tools, machines and buildings
- **Intellectual capital** e.g. value of a company or organization's employee knowledge, business training and any proprietary information
- **Human capital** e.g. people's health, knowledge, skills and motivation
- **Social and relationship capital** e.g. Families, communities, businesses, trade unions, schools, and voluntary organizations
- **Natural capital** e.g. land, water, energy and those factors that absorb, neutralize or recycle wastes and processes -e.g. climate regulation, climate change, CO_2 emissions

STRATEGIC MANAGEMENT ACCOUNTING

PERFORMANCE MANAGEMENT:

Performance management means to manage the organization in such a way that it meets its objectives. It includes:

- Setting of objectives and goals.
- Planning on the attainment of its objectives.
- Setting aims and gauging its performances.
- Supervising and encouraging employees.
- Altering the business processes to remove non-value-added activities and to concentrate on customer's needs.
- Mitigating the risk faced by the organization

STRATEGIC PLANNING:

Strategic planning means planning happening at the top of the organization which affects the whole organization. These plannings tend to be long term (five to ten years). Its planning decisions include questions like should the organization open a new branch? Should it trade overseas? Or should it develop a new product.

STRATEGIC CONTROL:

Strategic control means monitoring the performance of the organisation in comparison with the strategic plan and taking appropriate measures if the organisation is not meeting its plans.

STRATEGIC MANAGEMENT ACCOUNTING:

It is described as:

- The use of information to back strategic planning and decision making in organisations;
- The use of external and internal information;
- The use of non-financial and financial information;
- The use of information to sustain the competitive advantages of an organisation.

ROLE OF PERFORMANCE MEASUREMENT:

Performance measurement comprises of the measurement of the performance of: an individual; a group of entities; a sector of an organisation; or a whole organisation.

POTENTIAL DIFFICULTIES IN MEASURING PERFORMANCE:

- Choosing suitable measures that are aligned with the objectives of the organisation;
- The performance measurement may not happen at all levels and might restrict itself to just strategic level
- Encouraging managers and employees to accomplish the objectives;
- Planning of what must be done if objectives are not accomplished.

ANTHONY MODEL:

Robert Anthony described three levels of management within an organisation:

Strategic management – deals in specifying goals and objectives for the organisation on a broader scale. It is usually long term (5 – 10 years)

Tactical management – deals in converting the strategic goals into reality and that the resources are used efficiently in doing it.

Operational management – deals with the daily tasks of an organisation.

PORTER'S GENERIC STRATEGIES:

Porter described two generic strategies for a strategic business unit (SBU) to produce competitive advantage in a market:

Cost leadership – producing the lowest costing products. This strategy is also known as "pile them high; sell them cheap"

Cost leadership can only be accomplished when targeting for a large market share. Methods used to achieve this strategy are:

- Manufacturing enough units to reach economies of scale;
- Using the latest technology;
- Taking advantage of the learning curve;
- Enhancing productivity;
- Minimising overhead cost; and
- Getting access to sources of supply.

Differentiation – manufacturing a product which is exclusive and different from competitors and then demanding a higher price for it.

A differentiation strategy accepts that competitive advantage can be achieved through particular features of a firm's products. These can be divided into three categories:

1. Breakthrough products (e.g. iPhone);
2. Improved products (e.g. microchips); and
3. Competitive products (e.g.BMW) which attract the customers because of its quality, status, design and price.

Firms may use several methods to differentiate:

1. Shape the image of the brand (e.g. 7up versus Sprite).
2. Incorporating special features in the product (e.g. Toyota hybrid cars).
3. Taking advantage of other activities of the value chain (e.g. Tesco and its close IT link with its suppliers through electronic data interchange).

After selecting the appropriate strategy, the competitive scope will be brought into view which encompasses the level of focus needed by the selected strategy.

Broad scope: – supplying products or services across wide range of sectors, price ranges, or geographical sites. This is usually used by large firms.

Narrow scope (focus): - Focusing on supplying products or services to a precise market or type of customer, also known as a niche. this is usually followed by small firms.

USE IN PERFORMANCE MANAGEMENT:

Cost leadership – performance management will be looking over the costs per unit of the products and making sure that this is kept low. Variance analysis and target costing may be used to analyze this.

Differentiation – performance management will be looking at the reasons of differentiation (e.g. if achieved by offering superior quality, performance management will focus on quality).

Competitive Scope – would impact the scope of performance measures as well, on whether they would be spread over a large range of products and sectors, or within a niche (focused segment) of the market.

RISK AND UNCERTAINITY

FORECASTING'S ROLE IN STRATEGIC PLANNING

The following are ways of incorporating risk and uncertainty in strategic planning:

1. Classifying the most substantial variables and modelling outcomes using simulation techniques.
2. Using risk-adjusted cost of capitals and using sensitivity analysis in investment appraisal decisions.
3. Scenario planning to assess alternative views of what might have happened and its effect.

RISK APPETITE:

the amount of risk an organization or a person is willing to accept.

Decision makers can be categorized into one of the following, based on their attitude towards risk:

Risk seekers are willing to accept a higher risk in return of higher rewards(e.g. a gambler).

Risk-neutral decision makers don't take risk into account and choose the option with the highest expected gain.

Risk-averse decision makers try refraining from taking risks. They will accept a minimal return in order to decrease risk.

DECISION RULES ADVANTAGES AND DISADVANTAGES

	ADVANTAGES	**DISADVANTAGES**
MAXIMAX	• The decision maker will earn the highest return if the best-case scenario takes place • It doesn't involve probabilities or scenario planning	• Decisions may be based on a high returns which actually has a very little probability of occurring. • It ignores all the worst case scenarios
MAXIMIN	• The decision maker will earn the minimum level of return • It doesn't involve probabilities or scenario planning	• It is so highly negative that the gains of the chosen strategy are likely to be very less. • This may lead to extra caution and foregoing possible good returns • There is no positive aspect to the maximin strategy.
MINIMAX	• The actual return will be practically close to what would have happened had the best decision been made • Opportunity losses contain more problem information	• Theoretically it is quite difficult to understand. • As for maximin, it may lead to excessive caution (although not as extreme).

	which leads to a more informed decision. • It doesn’t involve probabilities or scenario planning	
EXPECTED VALUE	• It reduces the information to a whole number for each scenario. • The concept of an average is easily understood. • Assigning probabilities alters an uncertainty issue into a risk. • Takes into account the expected variability of all outcomes.	• The probabilities may be tough to predict • The average may not agree to any of the possible outcomes. • It is inappropriate for "one-off" decisions. • The average gives no sign of the spread of possible results (i.e. it ignores risk).

PERFORMANCE HIERARCHY

ORGANSIATIONAL OBJECTIVES:

Corporate Goals: These are specific and tangible targets that explain how the organization's mission translates into practical outcomes for its primary stakeholder groups.

Subsidiary Goals: These objectives encompass various aspects of the organization's operations and often pertain to different stakeholder groups.

Unit Goals: Unit objectives are specific targets set for the individual operational departments within the organization.

These goals are designed to align with and contribute to the attainment of both subsidiary and corporate objectives.

ALTERNATIVE CLASSIFICATIONS

Internal v External

Every manager will possess internal Critical Success Factors (CSFs) that pertain to their department and the team they oversee. These internal CSFs can encompass a wide spectrum of interests, ranging from human resource development to inventory management.

The key distinguishing feature of internal CSFs is that they address matters entirely within the manager's realm of influence and control.

On the other hand, external CSFs are linked to issues that typically fall outside the manager's direct control, such as the accessibility or cost of crucial raw materials or energy sources.

Monitoring v Building/Adapting

Managers responsible for day-to-day operations typically employ Monitoring Critical Success Factors (CSFs) to keep a close watch on the performance of their specific organizational segments. These CSFs are continuously monitored and often revolve around financial metrics. In contrast, managers with a more strategic focus often prioritize Building CSFs. These managers engage in long-term planning to adapt the organization to its external environment. Consequently, they require CSFs to gauge how effectively the organization is evolving in the desired direction. Examples of such CSFs may include the number of new products successfully launched.

Here are some common CSFs identified across various industries:

Car Manufacturing:

- Emphasis on styling
- Efficient dealer network organization
- Stringent control of management costs

Food Processing:

- Introduction of new products
- Effective distribution channels
- Successful advertising campaigns

Life Insurance:

- Innovation in policies and products

Supermarkets:

- Product mix and availability

Additionally, here are some contemporary CSFs:

Embrace a customer-centric approach in our interactions with clients.

Strive for excellence in order fulfillment through continuous online process enhancements.

Align incentives and rewards with employee roles to boost employee satisfaction.

PERFORMANCE HIERARCHY

THE PERFORMANCE PLANNING GAP:

The performance planning gap can be defined as the difference between the organization's intended objectives and the anticipated outcome that would result if its ongoing activities remain unaltered.

RELATIVE IMPORTANCE OF PLANNING AND CONTROLLING ACTIVITIES:

Management accounting encompasses two primary functions:

Planning: Determining the organization's current situation, envisioning its ideal future state, and identifying the means to span the divide between the two is inherent to the planning process.

Controlling: It entails comparing actual performance with the planned objectives and taking corrective actions when deviations occur.

Control is equally vital to evaluate the organization's performance against these objectives and initiate corrective measures if necessary.

At the operational level, unit objectives are established. While some planning is involved to align these objectives with corporate goals, control activities take precedence to ensure the unit objectives are met. Successfully achieving these unit objectives increases the likelihood of meeting higher-level objectives.

PERFORMANCE MANAGEMENT AND CONTROL

TOP-DOWN VS BOTTOM-UP BUDGETING:

Top-down budgeting refers to a budgeting approach in which budgets are crafted centrally, typically by senior management. These budgets are then enforced upon lower-ranking managers.

On the other hand, bottom-up budgeting entails junior managers initially formulating their own budgets. These budgets are subsequently subject to review by the finance department and/or senior management. Some negotiation may occur before arriving at the final budget.

MC GREGORS THEORIES OF HUMAN BEHAVIOUR

McGregor's perspective suggests that the suitability of top-down or bottom-up budgeting depends on the characteristics of employees within an organization. McGregor categorizes employees into two groups known as Theory X and Theory Y:

Theory X Employees:

- Tend to have a dislike for work.
- Are generally averse to taking on responsibilities.
- Are primarily motivated by monetary incentives.
- Typically require clear directives and instructions.

Theory Y Employees:

- Exhibit a willingness to embrace responsibility.
- Desire to actively participate in decision-making processes.
- The type of employees an organization has can significantly impact its budgetary approach.

ACTIVITY BASED BUDGETING STEPS:

1. Estimate the expected output (units) for each product.

2. Identify the number of units of each activity that will be required to produce the output. This is based on knowledge of the relationships between the output and the activities that are required to be performed to produce the output.
3. Determine the resources needed to perform the activities required. This is based on knowledge of the drivers – the factors that influence the price of the activities.
4. If the current commitment of resources is such that too many or too few resources exist to perform the activities required in Step 2, adjust accordingly.

REVISION OF BUDGETS AND STANDARDS:

At the conclusion of a budget period, just before assessing the actual performance of an organization against the budget, it is common to consider revising the budget to account for unexpected environmental changes that were not foreseen during the initial budget preparation. This revision is necessary because the managers are usually appraised based on their performance relative to the budget. Using an inaccurate budget can be deemed unfair. The guiding principles for revising budgets are as follows:

- If an event arose during the budget period that was not in the manager's control due to which the budget was not achieved, it should be revised.
- If the budget made was unrealistic and couldn't be achieved then it should be revised
- Budget revisions should not be utilized as a means to conceal operational inefficiencies. Senior management should grant approval for revisions only when they are deemed appropriate and justified.

PLANNING AND OPERATIONAL VARIANCES:

When the actual operating environment diverges from the initial expectations set when establishing the original standard, management should contemplate the possibility of revising the standard, resulting in a revised standard.

where the situation remains unchanged, a reflective analysis might disclose the use of an unachievable standard, often known as an "ideal standard." In such cases, management should contemplate revising the standard.

The criteria for deciding whether to revise a standard are essentially analogous to those applied when revising a budget (as previously discussed).

The variances computed by comparing actual performance against the revised standard are termed operational variances (or operating variances). The method employed to calculate these variances mirrors the approach you've learned in your ACCA studies so far, with the sole difference being the utilization of a revised standard.

The distinction between the revised standard and the original standard gives rise to the planning variance (or budget revision variance). These variances can pertain to any aspect of the standard product specification or even sales and production volumes.

EVALUATION OF REVISION OF STANDARDS (ADVANTAGES)

- •It's important to differentiate between variances arising from poor planning or factors beyond one's control and those stemming from operational issues.
  - Adverse operational variances serve as a form of feedback control, signaling the need for corrective actions within processes.
  - Planning variances can serve as a basis for updating standards to align with current conditions.

- Managers may find their motivation boosted when they understand that their performance assessment will primarily consider variances within their control, namely operational variances.

EVALUATION OF REVISION OF STANDARDS (DISADVANTAGES)

- Additional data needs, such as market size information, may be necessary.
- This approach can be more time-intensive.
- Managers might argue that external factors caused all unfavorable variances while internal factors led to favorable variances, potentially implying manipulation of the revised standards.

MANIPULATION

The budgets and standards established at the start of the year may need modifications by yearend if they are unsuitable due to external factors which are not in the organization's control. It is crucial to exercise caution to ensure that budget revisions are carried out only when warranted. Managers who have not met their budget goals or have encountered adverse variances may attempt to conceal these issues by revising the budgets and standards. In practice, there may be discussions and deliberations within the organization about whether to revise a standard or a budget, leading to various viewpoints on the matter.

BEYOND BUDGETING MODEL:

Hope and Fraser suggest that the traditional budgetary control process should be replaced by the following system:

- Substituting financial objectives with targets founded on Key Performance Indicators (KPIs) and introducing "stretch goals" for planning purposes that are not tied to incentive programs.
- Evaluating managers based on comparisons with peers and industry benchmarks, and compensating them accordingly.
- Decentralizing the responsibility for planning, shifting it away from central authority.
- Efficiently managing resources to ensure they are available for promising opportunities.
- Employing rolling forecasts, performance rankings, and other KPIs as means to assess and govern performance, rather than relying solely on comparing actual performance against the budget.

EVALUATION OF BEYONG BUDGETING:

Advantages

- Divisional managers will likely experience heightened motivation as they are granted the autonomy to plan for their individual business units.
- This approach cultivates a competitive environment centered around success. By employing relative performance metrics and gauging performance against external benchmarks, managers are incentivized to prioritize surpassing competitors rather than outperforming their peers.
- It enables a quicker response to shifts in customer demands, as managers can promptly react to new opportunities and threats without being constrained by an outdated budget. Furthermore, resources can be allocated to the projects in which they were not entailed before.
- Performance evaluation extends beyond financial metrics, encompassing Key Performance Indicators (KPIs) that more accurately mirror the organization's overarching objectives.

- There is a heightened customer-centric focus among departments that provide support to other internal units.

Disadvantages

- This approach might face resistance if the organizational culture predominantly favors a command-and-control style of management, especially among senior leaders.
- It may not be appropriate for organizations which solely focus on financial controls

BUSINESS STRUCTURE

DIVISIONALISED FORM'S IMPLICATION ON PERFROMANCE MANAGEMENT:

Divisional managers are expected to be agreed to a great amount of sovereignty. The central office would not be involved in operational matters and so would only need high-level info, such as return on investment of the division. The task for the central office is to guarantee that the divisional directors are dealing with their divisions in a way that they contribute to accomplishing the goals of the organisation as a whole.

EVALUATION OF BPR:

While many organizations reported remarkable improvements in performance after implementing BPR, others were left disappointed with the outcomes. Notable advantages from several well-documented cases include:

- Streamlining bureaucratic procedures, enabling service businesses to interact with customers more swiftly.
- Reducing workforce size and consequently saving operational costs.
- Creating value by focusing on what customers truly desire and eliminating non-value- added activities.

Criticisms of BPR include:

- Excessive emphasis on efficiency and the utilization of BPR as a pretext for widespread layoffs.
- The implicit assumption within BPR that existing processes are inherently ineffective, which may not always be the case.
- The notion that BPR is merely a "buzzword" that gained popularity in the 1990s to describe something that wasn't actually novel. For instance, the alterations made to Henry Ford's factory in the 1920s could be considered a precursor to BPR.

MCKINSEY'S 7S FRAMEWORK:

McKinsey's 7S framework serves as a tool to help organizations evaluate how their internal elements collaborate to realize corporate strategy. This model concentrates on seven specific internal factors. The fundamental concept of this model is that the aims of these factors must be coordinated for the organization to operate efficiently.

These factors are classified into two categories: "hard" and "soft," as outlined below:

Hard Factors

Hard factors are those elements that are readily identifiable, definable, and manageable by the management:

Strategy: This encompasses the blueprint for achieving a competitive advantage.

Structure: Refers to the organizational arrangement and hierarchy.

Systems: Encompasses the day-to-day activities and established procedures within the organization.

Soft Factors

Soft factors are less tangible, taking on a more abstract and often culture-driven quality, shaped by the informal aspects of the organization. Management can exert influence over soft factors but cannot directly control them:

Shared Values: These encompass the fundamental values at the heart of the organization, including its culture and overall work ethos.

Skills: This pertains to the specific capabilities and competencies of the individuals comprising the organization's workforce.

Style: Refers to the leadership approach and management style employed within the organization.

Staff: Encompasses the personnel who constitute the organization's workforce.

Using the 7S Framework

The framework is frequently illustrated as follows, highlighting the interconnections among the seven factors, with shared values at the central core: This model can serve the following purposes:

- Identify the areas requiring alignment within the organization.
- Ensure the ongoing alignment of all factors, particularly during periods of restructuring or other significant changes.

ENVIRONMENTAL, SOCIAL AND GOVERNANCE FACTORS

INSTRUMENTAL VIEW:

The instrumental view is that the primary goal of corporate decisions is to achieve success in the market. In this perspective, stakeholder management serves as a tool or strategy employed by the company to attain this ultimate goal.

NORMITIVE VIEW: In this perspective, an organization sets forth the foundational ethical principles that extend beyond what solely benefits the company. These principles define how the organization will consider the concerns and viewpoints of various stakeholders. They serve as guiding principles that shape the organization's business practices, particularly in its interactions with stakeholders.

INTERNAL/EXTERNAL STAKEHOLDERS:

INTERNAL STAKEHOLDERS: entities working inside the organization (directors, employees)

EXTERNAL STAKEHOLDERS: entities working outside the organization (government, social groups)

A third classification, termed "connected," relates to stakeholders who are external to the organization but maintain an internal connection. These stakeholders, like shareholders, customers, suppliers, and lenders, typically share a financial link with the firm, meaning that transactions occur that impact both the organization and the stakeholder.

NARROW/WIDE STAKEHOLDERS:

Narrow stakeholders are those who experience the most significant impact from the organization's actions for example shareholders, management, employees, key suppliers, key customers, and the local community and environment.

Wide stakeholders are those who are less affected by the organization's actions for example government entities, minor suppliers and customers, as well as the broader community and environment.

PRIMARY/SECONDARY STAKEHOLDERS:

A primary stakeholder is an essential entity whose continued involvement is necessary for the organization's sustainability . Examples of primary stakeholders include shareholders, management, employees, major customers, major suppliers, government entities, and financial institutions.

In contrast, a secondary stakeholder is one whose impact on the organization's viability as a going concern is comparatively limited.

ACTIVE/PASSIVE STAKEHOLDERS:

Active stakeholders consist of individuals and entities like management, employees etc. They actively engage with and seek involvement in the organization's activities, often participating in policy-making and strategy. In contrast, The term "passive" does not mean a lack of interest or influence; but it signifies that these stakeholders usually do not actively participate in the organization's policy and strategy development, although they may still have significant interest and influence.

VOLUNTARY/INVOLUNTARY STAKEHOLDERS

Voluntary stakeholders are individuals or entities with the option to decide whether or not they engage with the organization. Involuntary stakeholders, on the other hand, have limited or no choice in their interactions with the organization.

LEGITIMATE/ILLEGITAMTE

Actions can be perceived as either moral or immoral based on one's perspective, making what appears acceptable to one person appear unacceptable to another. Stakeholders who maintain substantial economic ties with an organization are typically regarded as legitimate stakeholders. Conversely, other groups lacking such direct connections may be seen as illegitimate by some, and, consequently, not deemed worthy of recognition as stakeholders.

RECOGNIZED AND UNRECOGNIZED

Expanding on the categorization of legitimate and illegitimate stakeholders, there are cases where certain stakeholders are deemed illegitimate by the organization. As a result, these stakeholders may find it challenging to have their claims acknowledged by the organization. Consequently, decisions made by the organization are unlikely to consider unacknowledged stakeholders and those regarded as illegitimate.

KNOWN AND UNKNOWN

Stakeholders who are known to an organization are relatively straightforward to classify and engage with, as the organization is aware of their existence. Conversely, when a stakeholder is unknown, it becomes significantly more challenging to assess whether their claims can be considered as legitimate.

ENVIROMENTAL COSTS:

Conventional costs: These pertain to the expenses related to raw materials and energy that have environmental relevance.

Potentially hidden costs: These are costs that are documented but typically hidden within overheads, making management unaware of their impact.

Contingent costs: These involve contingent liabilities, expenses that may arise at a future date, such as anticipated cleanup costs. Image and relationship costs: These encompass the expenses associated with producing environmental reports and managing the organization's image and relationships with stakeholders.

INCREASING SCRUTINY AND INTEGRATION:

As the demand for integrated reporting, particularly in the domains of sustainability and Environmental, Social, and Governance (ESG) areas, continues to rise, management accountants are poised to play a more significant role in data collection and performance reporting within these realms.

Management accountants have a valuable opportunity to take a leading role in preparing sustainability reports and capturing non-financial information. They would serve as the custodians of Environmental Reporting (ER) and Environmental Management Accounting (EMA) protocols and bear primary responsibility for their implementation.

Accountants are well-positioned to assist companies in integrating sustainability into their corporate strategies.

They are integral to producing the management information that underpins internal strategies and external stakeholder reports. To effect meaningful change in business behavior, it's imperative to collect accurate, comprehensive, and reliable data.

Moreover, many accountants excel as team players and can collaborate effectively with colleagues across various business functions. This collaborative aspect is pivotal in sustainability reporting, which often demands input from all corners of the organization and integrates substantial non-financial data.

However, it's also essential for accountants to be willing to acquire new skills, particularly in developing verifiable non-financial metrics for issues that aren't easily monetized and in enhancing estimation techniques and forward planning, particularly for aspects that are more subjective than many traditional accounting measures, such as environmental or health impacts. The role of accountants has evolved from being historical performance reporters to becoming forecasters and business planners. This shift is expected to continue, notably as the financial services industry underscores that past performance is an inadequate predictor of future performance.

PERFORMANCE MANAGEMENT INFORMATION SYSTEM

MANAGEMENTS INFORMATION REQUIREMENTS

INTERNAL SOURCES

The primary sources of management information originating within the organization include:

Accounting System: This system provides details on costs and revenues and can offer sophisticated insights such as the cost of a product using activity-based costing.

Inventory System: It contains data regarding movements in and out of inventory. Payroll System: This system holds information about employee costs sorted by department.

Purchase Processing System: It contains information about suppliers, including invoices, addresses, key personnel, costs, and invoices received.

Sales Processing System: Often, it contains detailed information about all customer purchases and preferences. In retail businesses, loyalty card usage provides data on customers' buying behavior.

Qualitative Information: For instance, customer satisfaction data can be derived from customer surveys.

COSTS AND LIMITATIONS OF INTERNAL SOURCES

Information from internal sources is typically cost-effective to acquire because it already exists within the organization. The costs generally arise from designing reports or database queries to retrieve the information in the desired format. However, internally generated data may not suffice for strategic-level management, which often requires external information, such as economic forecasts.

EXTERNAL SOURCES External information is predominantly used for strategic purposes, encompassing data related to competitors, markets, the economy, and more.

Primary Information: Tailored information designed to meet the specific needs of an organization, which may include market research on new products or acquiring information about competitors' pricing strategies.

Secondary Information: Data created for general use rather than tailored for a specific organization. Examples include government statistics, country reports by consulting firms, business directories.

COSTS AND LIMITATIONS OF EXTERNAL DATA

External data is generally more expensive to obtain compared to internally generated data. Primary data, in particular, can entail significant costs. Reliable external data may require the purchase of relevant data sets, commissioning research from agencies, or conducting in-house research projects. It's important to note that much external data is accessible to competitors, thus may not confer a competitive advantage.

INTRANETS

An intranet is an organization's private internal network designed for sharing information within the organization. Access controls should be in place to ensure that employees only access information relevant to their roles.

INTERNET

The internet is a valuable source of information, including:

- Competitors' websites
- Online newspapers with archives
- Online databases containing information on potential customers

RELIABILITY OF INFORMATION

Reliability signifies that information accurately reflects reality and is devoid of bias. When assessing information from the various sources mentioned above, it is crucial to evaluate its reliability for decision-making purposes.

Information from internal sources is typically reliable, provided the organization's internal systems are dependable. Managers can verify any uncertain data since it originates from internal records.

External primary information is often more reliable than secondary data. Primary data is specifically prepared for the organization, typically devoid of bias. Secondary statistics may incorporate some bias. For example, government statistics might be influenced by the government's inclination to portray a positive image.

Information from the internet may not undergo the same level of scrutiny as data published in traditional formats. Published articles, for instance, undergo rigorous fact-checking. Internet-posted information may not be subject to similar levels of verification.

LONG-TERM PLANNING

Planning is the process of considering the future and making decisions in the present to ensure the organization's objectives are met. Long-term, or strategic, planning typically encompasses a time frame exceeding one year. Long-term planning often relies heavily on external information sources.

SHORT-TERM PLANNING

Short-term planning focuses on preparing for the upcoming 12-month period. An illustrative example of short-term planning is the annual budget. Short-term plans tend to be more intricate and detailed when compared to long-term plans.

INFORMATION FOR CONTROL

Control entails the process of evaluating the organization's actual performance against the budget or the planned objectives and initiating corrective measures when there are disparities between the actual performance and the plan.

ENTERPRISE RESOURCE PLANNING (ERP) SYSTEMS

An Enterprise Resource Planning (ERP) system is a collection of integrated software applications designed to facilitate the seamless flow of information throughout an entire organization by using a shared database.

An ERP system is engineered to unite the major functional areas of business processes into a single, "enterprise-wide" system to serve the entire organization. Typical modules include:

- Accounting and finance (general ledger)
- Inventory control
- Supply chain management (SCM)
- Material requirements planning (MRP)
- Customer relationship management (CRM)
- Increasingly, ERP systems also encompass HR management.

Benefits

- Senior managers can access all data from a single platform, granting them a more comprehensive view of the entire organization, leading to enhanced operational insights.
- Reduced data duplication, decreased data entry and reconciliation time, and fewer input errors.
- Cost savings (although the initial investment may be substantial). It saves time searching for information and lowers training costs as there is only one system.
- Mitigation of errors due to incorrect data usage (further reducing costs).
- Improved collaboration, as everyone has access to the organization-wide data they require.
- Enhanced analytics (e.g., customized KPIs) and faster reporting, facilitating decisionmaking (e.g., demand forecasting and labor budgeting). Access permissions to reports ensure that only relevant staff can access valuable data.
- Increased productivity, thanks to automated tedious tasks (e.g., monitoring inventory levels and order tracking) and the elimination of redundant tasks (e.g., data entry).
- Improved customer service and satisfaction through a better understanding of customer preferences and needs (e.g., order history).

- Simplified regulatory compliance, as built-in tools document information for reporting to the relevant governing body.
- Notable ERP software providers include Oracle, SAP, Sage, NetSuite, and Epicor.

IMPLICATIONS FOR THE MANAGEMENT ACCOUNTANT

A significant portion of management accounting information can be automatically generated (e.g., variances), reducing many routine tasks previously handled by management accountants. Non-financial managers can also enhance their accounting knowledge and generate their own reports. Management accountants are needed to interpret the information produced by the system. They must adopt a role as internal consultants rather than simply being scorekeepers.

ERP and BPR

Integrated ERP systems support organizations aiming to transition from a functional-based structure to a process-based structure. As such, ERP implementation often coincides with Business Process Reengineering (BPR) efforts in many organizations. ERP systems also align with performance management strategies like activity-based management.

LEAN PRODUCTION

Lean production embodies the following fundamental principles:

- Implementation of flexible production lines that can swiftly transition from producing one part to another with minimal setup time. This allows for the efficient handling of smaller batch sizes compared to conventional manufacturing.
- Encouraging increased employee participation in discussions focused on continuous improvement within the production process.
- Striving to eliminate non-value-adding activities, such as having supervisors or line managers overseeing workers without actively contributing to the work.
- Emphasis on identifying the root causes of defects and finding solutions to address them, rather than merely fixing faulty products.
- Building constructive relationships with suppliers, moving beyond the sole consideration of the lowest price. Suppliers play a vital role in enhancing the overall product quality.
- Establishing stronger connections with customers to gain a profound understanding of their needs and preferences. This engagement fosters a clearer comprehension of customer requirements.

LEAN INFORMATION SYSTEMS

When applying the lean principle to information systems, it implies that a lean information system exhibits the following attributes:

- Elimination of reports that do not add value. Users should be surveyed to ascertain if they still find these reports useful.
- Sending reports or emails exclusively to individuals for whom the information is relevant.
- Processing information without unnecessary delays.
- Elimination of data duplication, allowing information to be entered into the system only once.
- Continuous improvement of information systems.
- Ensuring flexibility within information systems to accommodate ad hoc reports and changes to regular reports.

THE 5SS OF LEAN

A tool employed to facilitate lean production is the "5Ss," which aims to minimize waste, enhance productivity, and reduce variations in production and output. The 5Ss, along with their original Japanese terms, are:

Structurise (Seiri, or Sort) – removing unnecessary items from the workplace.

Systemise (Seiton, or Set in order) – organizing items in the optimal location.

Sanitise (Seiso, or Shine) – continually inspecting the workplace for misplaced items and performing routine maintenance tasks.

Standardise (Seiketsu) – establishing standards and procedures once the workplace is decluttered and streamlined.

Self-discipline (Shitsuke, or Sustain) – embedding the model as part of the workplace routine.

Applying the 5Ss to information systems involves:

Sorting – eliminating redundant information or steps in the information flow.

Setting in order – identifying the most efficient methods for communicating information and the best structures for storing it.

Shining – ensuring that information is being utilized effectively.

Standardizing – implementing best practices such as routine report distribution lists.

Sustaining – cultivating a self-sustaining system where the above four S's are integrated into workflow, software, and operator training.

In summary, the application of the 5Ss should ensure that only valuable information is generated in a timely manner.

BENEFITS OF A LEAN INFORMATION SYSTEM

A lean information system offers several advantages, including:

- Providing information to support the entire value chain, which may involve linking information systems with those of business partners through electronic data interchange (EDI) to facilitate data sharing.
- Reducing the time wasted in trying to access information from the system.
- Minimizing time wasted due to inaccuracies or irrelevant data in the system.
- Presenting information more effectively to avoid information overload, which can obscure critical areas.
- Enhancing the speed and flow of information, ensuring that users do not have to wait for updates.

CONTINGENCY THEORY

The contingency theory of management accounting posits that there is no universally applicable accounting system suitable for all organizations under all circumstances. Instead, specific elements of an accounting system are linked with and can be effectively tailored to particular defined conditions.

According to the contingency theory of management accounting, the suitability of a management accounting system for an organization is contingent upon various specific factors inherent to the designing organization. The primary classes of these contingent variables can be categorized as:

External/Environmental
Competitive strategy and strategic mission
Technology
Firm and industry/Size and complexity
Human behavior/Culture

HUMAN BEHAVIOR:

When designing a management accounting system, it's crucial for management to consider how the system will impact the behavior of managers and staff affected by it.

Management accounting systems serve as a means of control, through which organizations aim to ensure that employees work toward achieving the organization's objectives. Several approaches to control can be employed:

Behavioral Controls: These controls involve closely monitoring employees to ensure they behave as expected.

Behavioral Constraints (Action Controls): These controls are designed to prevent individuals from engaging in actions they shouldn't. For example, setting financial limits for capital expenditure.

Personal and Cultural Controls: These controls focus on fostering a sense of solidarity and teamwork within the organization. Employees who aren't working toward the organization's goals are made to feel that they've let the "team" down.

Results or Output Controls: This approach involves comparing actual performance to predetermined targets. For example, assessing actual performance against budget to control departmental managers.

In general, management accounting systems often employ results or output controls to motivate individuals.

DATA SILO

Data silos refer to the isolation of data within an organization, where different groups or departments hold data that is not easily accessible or shared with other parts of the organization. This situation occurs when data is stored and managed independently within these groups, often leading to inefficiencies and challenges in utilizing data across the entire organization. Data silos can have several drawbacks, including:

Limited Enterprise-Level View: Data silos restrict the ability to have a comprehensive view of data at the enterprise level. This can hinder the organization's ability to make strategic decisions based on a holistic understanding of its operations.

Reduced Data Integrity and Reliability: Data within silos may not be kept up to date, and its accuracy and completeness may not be verified in a timely manner by operational workgroups. This can result in data inconsistencies and reduced data reliability.

Resource Wastage: Data silos can lead to duplication of resources, with multiple groups within the organization acquiring the same data services or conducting redundant analyses. This increases costs and can further reduce data integrity due to confusion regarding the most reliable and up-to-date data source.

Inhibited Collaboration: Data held in silos is often not directly transferable or comparable with data from other workgroups. This necessitates the translation, reformatting, or repackaging of data before it can be used by other parts of the organization, leading to delays, increased costs, and reduced data quality. Additionally, data protocols and processes may differ between workgroups, making it challenging to compare and interpret data. To address these issues, organizations should aim to break down data silos and implement data management practices that facilitate the sharing and integration of data across different departments and functional areas.

RECORDING AND PROCESSING SYSTEMS AND TECHNOLOGIES

BATCH PROCESSING:

Batch Processing refers to the execution of operations on a collection or set of data as a group. It involves the processing of multiple transactions in a single operation run, typically without the need for human intervention once the batch process has commenced.

REAL-TIME PROCESSING:

Real-Time Processing, on the other hand, involves carrying out operations on data or transactions immediately upon their reception, in a continuous and seamless manner. There is no delay between the receipt of the transaction, the initiation of data processing, and the recording of the output. This process is often automated.

RFID:

Benefits encompass:

- Enhanced efficiency in inventory counting and asset inspection, saving time.
- Provision of real-time physical quantities, ensuring up-to-date information.
- Timelier data availability for decision-making, especially in areas such as order placement.
- Faster locating of critical equipment items.
- Improved security by preventing assets from leaving the premises and restricting unauthorised access to designated assets.

UNIFIED CORPORATE DATABASES:

Unified Corporate Databases, which are multidimensional, multi-layered, and multidisciplinary databases storing information from all organizational functions in one centralized location, offer several advantages:

- Elimination of data redundancy through single-point data entry.
- Facilitation of information sharing across different functions.
- Simplified data security management due to consolidated data storage.

Key principles of Unified Corporate Databases include:

- Data consolidation in a single repository, often located on the cloud or network storage.
- Presentation of data as a unified database, even when sourced from various locations.
- The ability to query and manipulate data from diverse sources seamlessly.
- Accessibility to the unified database through various modules based on user requirements.

Many business automation and consultancy firms now offer solutions that leverage unified databases, granting users:

- Rights to access, use, and update shared information according to their roles and responsibilities.
- The convenience of single-entry transactions for various financial aspects, including bookkeeping, management accounting, financial reporting, and tax accounting.

- The capability to generate financial reports in compliance with different accounting standards (e.g., IFRS and national accounting rules) and in various currencies.

AI:

Artificial intelligence (AI) involves the utilization of machines to replicate human cognitive functions in learning and problem-solving. AI has a broad range of applications, including:

- Fraud protection
- Cybersecurity
- Virtual assistants, offering personalized suggestions
- Online customer support through AI chatbots
- Autonomous, self-driving vehicles

AI can significantly enhance business performance by:

- Enhancing customer services, such as employing virtual assistant programs to provide real-time support.
- Automating workloads, including the collection and analysis of data from smart sensors.
- Optimizing logistics, such as planning efficient transport routes.
- Increasing manufacturing output and efficiency by integrating industrial robots into production lines and teaching them labor-intensive or repetitive tasks.
- Preventing outages, for instance, using anomaly detection techniques to identify potential disruptive patterns like IT outages.
- Predicting performance milestones, such as response times for help desk calls, using AI applications.
- Predicting user behavior, like analyzing online patterns to detect credit card fraud or target relevant advertisements.
- Managing and analyzing data more efficiently, offering valuable insights into customer behavior.
- Enhancing marketing and advertising by tracking user behavior and automating routine marketing tasks.

KMS

Knowledge Management Systems (KMS) involve the systematic management of an organization's collective knowledge, converting information and experience into shared knowledge that can be widely disseminated. KMS is essential because as organizations grow, it becomes increasingly challenging to share the knowledge people possess, leading to inefficiencies, duplication of efforts, and missed opportunities. It's important to differentiate between data, information, and knowledge:

Data: Raw and unprocessed facts and figures.

Information: Data that has been processed into a more meaningful form.

Knowledge: Associated with identifying trends or patterns of behavior.

There are two primary types of knowledge:

Tacit knowledge: Knowledge stored in the mind, acquired through personal experience, intuition, emotions, and observations. It is often challenging to explain or codify for sharing.

Explicit knowledge: Knowledge in a formalized format that can be codified and transferred through documents, videos, manuals, etc., making it accessible to others.

A KMS serves as an audit of an organization's intellectual assets, identifying unique sources, critical functions, and potential bottlenecks that hinder the flow of knowledge. It involves processes governing the creation, dissemination, and utilization of knowledge. KMS complements other organizational initiatives such as total quality management.

A KMS is technology-intensive, typically based on an intranet application where explicit knowledge about processes, procedures, standards, products, customers, and policies is stored. Employees are encouraged to share their knowledge through this system, making it a convenient repository for explicit organizational knowledge. A KMS can enhance business performance in several ways:

Focuses on business processes, information management, and knowledge capture to meet critical business objectives at all levels, from individual to organizational. Improves workforce behaviors by facilitating collaboration and interaction with work-related knowledge.

Captures explicit project, team, and departmental knowledge efficiently and consistently, making it discoverable and reusable.

Requires top-down management support, with leaders setting an example for effective KMS use. Provides valuable information to new staff, reducing the time needed for job learning. Assists customer service centers in answering customer queries more effectively.

CRM

Customer Relationship Management (CRM) encompasses the practices, strategies, and technologies employed to effectively manage customer interactions and data, with the goal of enhancing customer service, retaining customers, and driving sales growth. CRM systems have evolved to include various functions that enhance their utility, including:

Workflow process automation, managing tasks, calendars, and alerts more efficiently. Contact center automation, which employs pre-recorded messages to assist in problem-solving. Marketing automation, automating the distribution of marketing materials to sales leads. Sales force automation, tracking all customer interactions, including emails, phone calls, and meetings.

Leveraging geolocation technology to base marketing campaigns on customers' physical locations.

CRM systems capture, analyze, and disseminate all relevant data resulting from customer and prospect interactions throughout the organization. This sharing of information helps organizations better address customer, product, and service needs. For instance, CRM can enhance various aspects of business:

Improving sales performance by:

- Focusing on high-quality leads and minimizing time spent on less promising prospects.
- Identifying and addressing weak points in the sales process, such as unanswered emails.
- Creating target customer profiles using data to find opportunities for upselling and rewarding loyal customers.

Enhancing business processes, such as:

- Identifying defective product batches based on customer complaints, which can lead to product recalls and replacements, ensuring product quality and customer satisfaction.

BIG DATA

- Volume
- Variety
- Veracity

- Velocity
- Value

In the realm of Big Data, traditional database and software applications often struggle to handle vast, complex, and variable datasets. However, as the capacity to leverage and analyze Big Data can significantly benefit businesses, there are now software solutions available to address these challenges.

Big Data analytics, the process of handling large datasets, encompasses various techniques and methods, including:

Data mining: Analyzing data to identify patterns and establish relationships, such as associations (linking multiple events), sequences (one event leading to another), and correlations.

Predictive analytics: A form of data mining that seeks to predict future events, such as forecasting the likelihood of someone upgrading a flight.

Text analytics: Scanning text, like emails and word processing documents, to extract valuable information. This could involve identifying keywords indicative of interest in a product or location.

Voice analytics: Similar to text analytics, but applied to audio content.

Statistical analytics: Utilized to identify trends, correlations, and shifts in behavior.

The insights obtained from these analytical approaches can result in numerous advantages for businesses, including:

- Enhanced marketing strategies.
- Improved customer service and relationship management.
- Increased customer loyalty.
- Enhanced competitive positioning.
- Improved operational efficiency.
- The discovery of new sources of revenue.

RISKS AND CHALLENGES :

The utilization of big data in commerce, especially in the context of marketing and CRM, offers various benefits. However, there are also notable risks and challenges associated with its implementation:

Cost: Establishing the necessary hardware and analytical software can be quite expensive. While costs are gradually decreasing, the initial investment can be significant.

Regulation: Concerns about the extent of data collection have prompted some countries and cultures to introduce regulations governing the collection, storage, and usage of data. Violating these regulations can result in severe reputational damage and punitive measures.

Loss and Theft of Data: Beyond regulatory repercussions, companies could face civil legal action if data is stolen, and individuals suffer harm as a result. For instance, the European Union has enacted the General Data Protection Regulation (GDPR) to address this issue.

Incorrect Data (Veracity): The accuracy and currency of data are crucial. Incorrect or outdated data can lead to erroneous conclusions. Even if the data is accurate, there is a risk of identifying spurious correlations, which can yield false positive results.

BIG DATA STRATEGIES:

Performance management encompasses the utilization of in-house transactional data sourced from a business's internal information systems for gauging performance through predefined inquiries.

It may incorporate the deployment of business intelligence tools. These platforms empower users to craft their own reports and inquiries, and delve deeper into the data for more comprehensive analysis.

EXPLORING DATA

Data exploration leverages transactional data as well but endeavors to forecast future behavior by uncovering characteristics that managers might not have previously taken into account. One of the methodologies employed in this process is cluster analysis, which can be utilized to pinpoint:

- customer (market) segments that may have eluded the awareness of marketing departments;
- patterns of behavior shared among individuals with comparable attributes.

ANALYZING SOCIAL DATA

Social analytics is concerned with assessing non-transactional data, especially the exposure an organization attains on social media platforms like Facebook and Twitter. Companies often employ social media for promoting new products and services. Social analytics typically gauges three key aspects of a business's social media presence:

Awareness – tracking the visibility of social media content (e.g., the number of views for a Facebook video).

Engagement – monitoring user-initiated interactions (e.g., the number of page visits).

Reach or word-of-mouth – assessing how often content is shared by users with others (e.g., the frequency of item sharing on Facebook).

UTILIZING DECISION SCIENCE

Decision science revolves around the examination of non-transactional data to facilitate informed decision-making. One application could involve introducing new product concepts and assessing their potential success by scrutinizing discussions about them on social media. Decision science can be augmented by various tools:

Crowdsourcing – acquiring ideas, services, or content through contributions from a large online community or specific user group.

Textual analysis – a data collection method that scrutinizes and interprets the attributes of written or visual messages.

Sentiment analysis – a specific form of textual analysis aimed at evaluating the collective mood of a community.

ETHICAL CONSIDERATIONS IN DATA ANALYTICS

When it comes to ethical issues in the realm of big data, the focus is extending beyond mere regulatory concerns. It is increasingly acknowledged that data, whether owned by an organization or being audited, must be handled with care and respect within a robust ethical framework.

By emphasizing ethics and data from the outset, organizations can better understand and manage any risks stemming from decisions made using analytical insights. The public must trust that the utilization of their data adheres to ethical standards and respects individual civil rights.

Inspecting inherent biases within machine algorithms is nearly impossible, given the complex and voluminous mathematical layers they contain. Therefore, programmers must be diligent in carefully limiting or eliminating social bias from training data sets. Algorithm designers can also introduce transparency into the process by having the algorithm generate reports explaining how it arrived at a particular decision and the weightage given to various data attributes.

IMPORTANCE OF PROFESSIONAL SCEPTICISM

Professional scepticism is a vital element when it comes to understanding changes in financial statements, identifying potential risks or errors. In the context of data analytics, developing a sense of data scepticism or curiosity is crucial. It prompts data professionals to question the data's origin, collection methods, and any potential gaps in the dataset.

Treating analytic computations as black boxes is no longer acceptable, particularly in scenarios where substantial reliance is placed on the outcomes, such as in the audit process. Approval must be granted for the use of tools with identified data flows, and a collaborative approach between data specialists and finance teams is imperative to leverage these tools effectively and extract meaningful insights within the context of diverse client situations and core processes.

DATA GOVERNANCE

Data governance involves the establishment of decision-making rights and an accountability framework to ensure proper behavior in the valuation, creation, consumption, and control of data and analytics. In essence, it is the framework that guides how an organization manages its data assets. Data governance, at its core, is primarily about data stewardship, ensuring the safeguarding and responsible use of data assets.

To enhance data quality and maintain data lineage, investing in technology is vital. This investment helps ensure that data remains of high quality, making it a crucial step in the data governance process.

DATA PROTECTION, PRIVACY, AND SECURITY - AN OVERVIEW

Data Protection:

Data protection is the process of ensuring the safeguarding of essential data, preventing its corruption, compromise, or loss, and providing the means to restore it to a functional state should it become inaccessible or unusable due to unforeseen events.

Data Privacy:

Data privacy, sometimes referred to as information privacy, is a facet of data protection that focuses on the proper handling of sensitive data. This encompasses personal data, confidential information such as certain financial and intellectual property data, and its protection against unauthorized access, meeting regulatory requirements, and maintaining data confidentiality and integrity.

Data Security:

Data security is the practice of safeguarding digital information throughout its entire lifecycle, protecting it from unauthorized access, corruption, or theft. It encompasses all aspects of information security, including physical security, administrative and access controls, logical security of software applications, and organizational policies and procedures.

THE CHALLENGES AND IMPORTANCE:

- Data privacy is a major challenge for various industries. Compliance with data protection regulations can often hinder operational efficiency, and organizations may find it challenging to navigate the regulatory landscape, especially in regions where guidance on best practices is lacking.

- Consumer awareness of data privacy's significance is growing, partly driven by public demand for stronger data protection measures. These regulations impose substantial fines for non- compliance, providing strong financial incentives for organizations to maintain data protection standards.
- While the use of big data can be ethical, the ways in which organizations handle analytics and data are under increased scrutiny, especially when individual behaviors intersect with third-party data. The ethical implications of data usage and the potential for privacy breaches are central concerns in the modern data-driven landscape.

CHALLENGES ASSOCIATED WITH NUMERICAL DATA

Numerical data is often considered more reliable than qualitative information; however, it can also be prone to issues that affect its accuracy and usefulness. These challenges include:

Incomplete Data: Numerical data may be incomplete, where certain elements or product lines are omitted from performance reports. This incompleteness can lead to an inaccurate assessment of overall performance.

Excessive Detail: Providing excessive detail on less significant aspects can obscure more critical points within a report. This overwhelming detail can hinder a clear understanding of the key findings.

Data Obsolescence: Rapidly changing environments can render numerical data out of date. This issue is particularly relevant in dynamic industries where data quickly becomes irrelevant.

Data Bias: Numerical data may be biased, especially when conclusions are drawn from nonrandom sample data. Biased data can lead to incorrect or skewed assessments.

Inconsistent Data Usage: Inconsistencies in how data is utilized can undermine the reliability of numerical data. For instance, if performance metrics are calculated using varying methods from one period to another, it can distort the overall assessment of performance.

THE ELEMENTS OF INTEGRATED REPORTING (IR)

A. Organizational Overview and External Environment: This section outlines what the organization does and the conditions and contexts in which it operates.
B. Governance: Explains how the governance or leadership structure of the organization supports its long-term value creation.
C. Business Model: Describes the fundamental framework of the organization's operations, including how it creates and delivers value.
D. Risks and Opportunities: Identifies the specific risks and opportunities that impact the organization's ability to create value over time and details how these are managed.
E. Strategy and Resource Allocation: Elaborates on the organization's strategic direction, where it aims to go, and the plans for reaching its objectives.
F. Performance: Assesses the extent to which the organization has achieved its strategic goals during the reporting period and how these achievements have impacted various forms of capital (financial, manufactured, intellectual, and human capital).
G. Outlook: Highlights the anticipated challenges and uncertainties the organization may face and their potential implications for the business model and future performance.

INFORMATION ON PERFORMANCE IN AN INTEGRATED REPORT

An Integrated Report (IR) encompasses both qualitative and quantitative information concerning the organization's performance. This may encompass the following:

Quantitative Indicators: These pertain to targets and risks and opportunities. The IR should elucidate the significance, implications, and the methods and assumptions used in compiling these indicators.

Connecting Past and Current Performance: The report establishes links between past and current performance, as well as between current performance and the organization's future outlook.

Key Performance Indicators (KPIs): These metrics merge financial measures with other components. For instance, it may include the ratio of greenhouse gas emissions to sales or other relevant combinations.

Regulatory Matters: The report explains regulatory issues that hold significant implications for operations.

Implications for Future Performance: This section discusses how the external environment, along with risks and opportunities, might affect the organization's ability to achieve its strategic objectives. It considers factors like the availability, quality, and affordability of the various forms of capital (e.g., skilled labor or natural resources).

Lead Indicators and Sensitivity Analyses: The IR may include lead indicators to anticipate future performance and sensitivity analyses to evaluate how variations in specific factors could impact results.

Forecasts or Projections: If forecasts or projections are presented, the report provides a summary of the assumptions that underlie them.

Performance Comparisons: To assess the current outlook, the report offers comparisons of actual performance against previously identified targets.

This comprehensive performance information is an integral part of an IR, providing stakeholders with insights into the organization's past achievements, present circumstances, and future prospects.

STRATEGIC PERFORMANCE MEASURES IN PRIVATE SECTOR

ROCE ADVANTAGES

- Easily calculable with readily available figures.
- Frequently employed by external analysts and investors.
- Relates earned profits to the capital invested in generating them.
- A higher ROCE typically results in greater shareholder wealth, aligning with the organization's primary goals.
- ROCE is a relative metric, enabling company performance comparisons.
- Capital can be determined using either book values or market values.

ROCE DISADVANTAGE

- The application of varying accounting policies can influence profits and capital employed.
- Managers might engage in actions to manipulate the metric, such as postponing investments in new plant and machinery, which could have adverse long-term effects on the organization.
- Profit maximization doesn't necessarily equate to maximizing shareholder wealth. For instance, a company may invest in projects with a net present value below zero but boost the company's profits.
- Research indicates a limited correlation between ROCE and shareholder value.

ADVANTAGES OF USING EPS AS A PERFORMANCE MEASURE

- It is easily understood by shareholders.
- The figures needed to calculate it are readily available.
- It is useful for comparing the performance of a company over time. Unlike total profits, EPS takes into account changes in the capital of the company.
- It enables comparisons to be made of different companies' share prices by using the Price Earnings (or PE) ratio. It is therefore widely used in the financial markets.

LIMITATIONS OF USING EPS AS A PERFORMANCE MEASURE

Earnings per share is a profit-based measure. It therefore suffers from all the disadvantages that apply to using profits as a measure of performance:

- Profits do not show how much wealth a company has created during the period, as they ignore the cost of equity finance. Economic value added is an example of a metric that aims to remedy this.
- Profits can be impacted by accounting policies in the short term (for example, inventory valuation policy); this clearly affects the reliability of EPS.
- Profit-based metrics can give a distorted view of performance (e.g. significant noncash expenses, such as provisions, reduce reported profit but do not decrease cash).
- Profits and EPS are historic measures based on annual results. Focus on annual profit may be detrimental to long-term growth (e.g. reducing R&D/marketing expenditure).
- Bottom-line profits figures may include unusual items of profit or loss.
- Research shows little correlation between EPS growth and shareholder value. In fact, total shareholder return may decrease even though profits are increasing.

INTERNAL RATE OF RETURN (IRR) AND MODIFIED INTERNAL RATE OF RETURN (MIRR)

Internal Rate of Return (IRR)

The IRR is the discount rate that results in a net present value (NPV) of zero for a project or investment. It signifies the maximum cost of capital at which the project remains economically viable.

To calculate the IRR, linear interpolation between two NPVs is employed, using the formula below:

Where:

A = Lower discount rate

B = Higher discount rate

NPV at rate A = Net Present Value at rate A

NPV at rate B = Net Present Value at rate B

Using the IRR for project decision-making has faced criticism because it assumes that any positive cash flows generated during the project's life are reinvested at the project's own rate of return, which is unrealistic. A more realistic assumption would be reinvestment at the company's weighted average cost of capital. Furthermore, when cash flows alternate, a project may have multiple internal rates of return, creating confusion for decision-makers.

MODIFIED INTERNAL RATE OF RETURN (MIRR)

The Modified Internal Rate of Return (MIRR) addresses the shortcomings of IRR by calculating the project's return over its lifespan in a more sophisticated manner:

- It assumes that cash inflows are reinvested at the company's weighted average cost of capital. The future value of these reinvested cash flows is calculated by compounding them using the company's cost of capital, resulting in a single cash inflow at the end of the project's last year.
- The present value of cash outflows is computed at the project's inception, representing the initial investment in the project.
- The MIRR is the rate that equates the present value of cash outflows to the net future value of inflows, providing a more accurate measure of project profitability.

ADVANTAGES OF MIRR:

Realistic Reinvestment Assumption:

MIRR differs from the standard IRR by adopting a more realistic reinvestment assumption. Instead of assuming that positive cash flows are reinvested within the project, MIRR considers that these cash flows are reinvested at the company's weighted average cost of capital. This adjustment makes MIRR a more dependable measure of the project's return, as it mirrors actual reinvestment practices.

Uniqueness: Even when the project's cash flows change direction multiple times, MIRR provides a distinct and easily interpretable rate. This uniqueness simplifies decision-making and eliminates potential confusion associated with having multiple IRRs in complex scenarios.

DIVISIONAL PERFORMANCE EVALUATION

In the contemporary business landscape, it's common practice to break down an organization into semi-autonomous units with delegated authority and responsibilities. These units are often referred to as divisions, subsidiaries, or strategic business units. The principles applied to measure their performance remain consistent. These units can take various forms:

Cost Centers: In these, managers are responsible for making decisions related to costs.

bHere, managers oversee decisions about revenue and associated selling costs.

Profit Centers: Managers in profit centers are accountable for decisions regarding both costs and revenues.

Investment Centers: These managers are responsible for decisions involving costs, revenues, and capital investments in assets.

A fully developed strategic business unit (SBU) typically functions as an investment center, equipped with the means and responsibility to make its own capital investments. Before digging into how to assess divisional performance, it's important to consider the challenges that may arise in a divisional structure:

Goal Congruence: Ensuring that managers make decisions that align with the best interests of the entire organization.

Coordination: Coordinating the activities of divisions to ensure that corporate objectives are achieved as a whole.

Controllability: Ensuring that divisional managers are held accountable only for factors they can effectively control. (The performance of the division and the performance of divisional managers must be addressed separately.)

Interdependence of Divisions: Determining how to measure performance when the performance of one division can influence another.

Head Office Costs: Deciding how or whether to allocate central costs.

Transfer Prices: Establishing effective transfer pricing mechanisms. Effective divisional performance measurement must address these challenges to ensure that performance is accurately evaluated. To evaluate a manager's performance, "controllable profit" is a suitable measure. This metric focuses on the profit elements that the manager has direct control or influence over. When assessing the performance of a division as a whole, "traceable profit" is the appropriate measure. Traceable profit takes into account all the profit elements directly related to the division's activities.

For Manager

ROI equals Controllable profit over Capital employed times 100

For Division

ROI equals Traceable profit over Capital employed times 100

For Manager

	$	
Controllable profit	X	
Imputed interest charge		(X)
Residual income	X	

For Division

	$
Traceable profit	X
Imputed interest charge	(X)
Residual income	X

APPLICATION AS AN ORGANISATIONAL PERFORMANCE MEASURE

Economic Value Added (EVA) serves as a motivational tool for directors, urging them to enhance EVA and, consequently, boost shareholder wealth through four primary avenues:

- Allocating investments in divisions where returns surpass the cost of capital.
- Amplifying the operational performance of existing divisions, thereby increasing Net Operating Profit After Tax (NOPAT) without escalating the finance charge.
- "Harvesting assets" by closing down underperforming divisions. The proceeds from this action can be reinvested in more promising divisions or distributed to shareholders as dividends.
- Adjusting the debt-to-equity ratio to reduce the Weighted Average Cost of Capital (WACC). However, it's vital to maintain a balanced level of debt to avoid overleveraging.

UTILIZATION AS A DIVISIONAL PERFORMANCE METRIC

EVA can also be employed as an assessment tool for divisional managers within decentralized organizations, where divisions function as independent entities under the umbrella of the corporate head office. In this context, EVA encourages divisional managers to focus on maximizing the wealth generated by their respective divisions.

While divisional managers may not have full autonomy to alter financing or leverage decisions, employing EVA ensures that these managers invest only in projects with returns that surpass the company's cost of capital.

APPRAISAL OF METHODOLOGIES

Categories of Metrics

Return on Investment (ROI) is a relative metric, making it valuable for assessing the performance of various divisions regardless of their size differences.

However, in the case of residual income and Economic Value Added (EVA), which are absolute metrics, comparing divisions of varying sizes poses more challenges. These metrics may yield identical values for two divisions, but if one of these divisions is significantly larger than the other, it would be erroneous to conclude that both are performing at an equivalent level. To address this limitation, one can compute residual income or EVA as percentages of the capital employed, effectively converting them into relative metrics.

HARMONY WITH OBJECTIVES

Return on Investment (ROI) can lead to decisions that do not align with the objective of maximizing shareholder wealth. For instance, a decision not to invest in projects that reduce ROI, even if they yield returns greater than the cost of capital, can be observed. In contrast, residual income and Economic Value Added (EVA) tend to result in decisions that are in line with the goal of maximizing shareholder wealth, especially in the long term. This is because projects that provide returns exceeding the cost of capital also contribute positively to residual income and EVA.

However, it's worth noting that in the short term, goal incongruence may still exist if a project generates negative residual income or EVA during its initial years

ADDRESSING CHALLENGES

ROI and residual income rely on accounting profits, which are subject to various challenges: Managers may avoid investments in intangible assets (like research or marketing) that cannot be capitalized under Generally Accepted Accounting Principles (GAAP) to meet ROI targets. Excessive cost-cutting to improve short-term ROI might compromise future competitiveness or create deferred costs. For example:

- Reducing the workforce may negatively affect product quality or customer service.
- Delaying employee training may necessitate costly recruitment of more skilled staff in the future.
- Profit has multiple definitions and can be influenced by accounting policies. EVA aims to mitigate these issues by implementing the adjustments outlined earlier.

DIFFERENCES BETWEEN RESIDUAL INCOME AND EVA

Economic Value Added (EVA) and standard residual income are calculated in a similar manner, but EVA is structured in such a way that maximizing EVA can be established as an objective. There are two primary distinctions when computing EVA and regular residual income:

- Residual income is determined as accounting profit before interest and tax, minus the finance charge. EVA is computed as Net Operating Profit After Tax (NOPAT) minus the finance charge.
- For residual income, the finance charge is based on the book values of equity and debt at the beginning of the year. In contrast, for EVA, the finance charge is determined based on the adjusted values of equity and debt at the beginning of the year, considering EVA adjustments from prior years.

NFPO’s

BENCHMARKING:

Theoretically, benchmarking in the public sector should result in performance improvements due to the following factors:

- Benchmarking offers the opportunity to gain insights from the practices of other organizations, as previously discussed.
- When an organization's actual performance is poor and benchmarking highlights this, the organization faces pressure from stakeholders to enhance its performance.
- It was discovered that, even when benchmarking had identified significant room for improvement, it had not led to substantial performance enhancements.

the following issues were pinpointed, which they argued are relatively common in the public sector:

- In the public sector, benchmarking often focuses solely on comparing performance indicators against best practices without delving into how the best-practice organizations achieve those superior performance indicators.
- Not all public sector managers are motivated to improve their performance, even when benchmarking reveals a significant performance gap relative to best practices.
- The expectation of pressure from stakeholders to enhance poor performance was relatively weak.
- In certain public sector institutions where customers can switch between providers, economic pressure is exerted on underperforming organizations to improve (e.g., state-run universities). However, customers may struggle to interpret benchmarking scores, and the costs of switching providers may be high.
- Many of the potential weaknesses of performance measurement systems discussed in a previous chapter also apply to public sector benchmarking, including "measure fixation" (organizations focusing on improving reported scores without enhancing the underlying organization) and "tunnel vision" (organizations concentrating solely on benchmarked scores at the expense of other crucial objectives).

LEAGUE TABLES

Advantages:

• League tables promote competition, incentivizing managers to strive for improvements in their organization's performance.

• They condense various characteristics into a single number or rank, simplifying the process for stakeholders to assess overall performance.

Disadvantages:

- League tables can lead to heightened levels of dysfunctional behavior, including measure fixation and tunnel vision, as performance evaluation relies on a single final score without offering further analysis of the full range of performance metrics.
- They may overlook crucial distinctions among the organizations being evaluated. For instance, in schools, exam results are influenced not only by the school's performance but also by various external factors, such as the students' abilities and socioeconomic conditions. These factors are disregarded in league tables.
- League tables do not establish any standards for defining acceptable behavior.

RATIONALE FOR USING TARGETS

Enhanced Performance

- Utilizing performance targets in the public sector is predicated on the belief that when managers are aware of the expectations set for them, they are more likely to perform at an elevated level. Performance management systems in the public sector typically encompass the following steps:
- Identifying objectives based on the organization's mission statement, with key targets established for each objective.
- Developing strategies to facilitate the achievement of these targets.
- Evaluating actual performance against the predefined targets.
- Requiring managers to account for any variances between actual performance and the targets.

Accountability

Another rationale for employing targets is accountability. In the public sector, organization managers function as agents who act on behalf of the general public, the principal (often represented by the government on behalf of the public). Accountability discussions often revolve around whether managers have conducted themselves ethically (i.e., they have not misappropriated the funds allocated to them) and can provide an account of their expenditure. Equally important is evaluating how effectively the agent has performed. Disclosing performance information is a crucial element of the principal-agent relationship within the public sector.

Emphasis on Outputs

Over Inputs In numerous countries, the focus of performance reporting has shifted from reporting inputs to reporting outcomes. This change encourages management to devote less time to tracking how funds were spent and where they were allocated and instead prioritize what has been accomplished. To make this approach effective, it is essential to establish clear objectives and set unambiguous and attainable performance standards.

Correlation with Reward Schemes

Performance-related pay systems are often introduced in conjunction with performance targets. Bonuses are provided when specific targets are achieved, aiming to enhance employee performance and consequently, organizational performance.

CHALLENGES IN EMPLOYING TARGETS IN THE PUBLIC SECTOR

- In public sector entities, establishing a direct connection between intentions and outcomes can be more complex. For instance, in a hospital, mortality rates may be influenced by numerous factors that fall outside the hospital's sphere of control.
- Quantifying objectives in the public sector may pose challenges. How does one gauge the effectiveness of the local fire brigade, for instance?
- The focus on targets may prompt managers to concentrate solely on what is being measured, potentially disregarding qualitative aspects that aren't subject to measurement.
- If systems are rigidly implemented without considering local peculiarities or specific circumstances relevant to the organizations being evaluated, issues like data manipulation, tunnel vision, and suboptimal decision-making may arise.
- Frequently, these systems can become empty rituals, where management superficially adheres to the process of defining missions, objectives, and target setting but fails to effect actual improvements.

ADVANTAGES OF THE VFM FRAMEWORK

Enhanced Resource Allocation: The VFM framework can lead to improved resource allocation, directing more resources to organizations that perform better in the future.

Demonstration of Value: It helps showcase the value of the work performed to stakeholders, allowing resources to be directed towards areas valued more by taxpayers.

Cost Savings and Increased Funding: Implementing the VFM framework can result in cost savings and potentially contribute to higher levels of funding.

Better Services and Cost Reduction: It encourages decisions aimed at providing better services while simultaneously reducing costs.

POTENTIAL CHALLENGES WITH THE VFM FRAMEWORK

Conflicting 3Es: The three dimensions of economy, efficiency, and effectiveness (3Es) may sometimes conflict with each other. For instance, in the context of a school, an economical approach might suggest that schools with a higher student-to-teacher ratio are better, but this could negatively affect the quality of education or effectiveness.

Difficulty Measuring Inputs: Accurately measuring inputs can be challenging. In the healthcare sector, for example, precisely measuring the funds used in hospital departments may be complex.

Delayed Outcomes: There can be a time gap between the delivery of a service and the final outcome. For instance, students may spend a decade in a school, and it may not be clear whether they have received an appropriate education until they leave and pursue their desired career or further education.

Adjusting for Operational Differences: When VFM measures are used to compare different organizations, such as hospitals, adjustments are needed to account for varying operational constraints. For example, salary levels may significantly differ based on the locations where hospitals are situated, potentially giving an advantage to those in lower-cost areas.

Incomplete Implementation: In practice, VFM performance systems may not be fully comprehensive due to the complexity of real-world situations. This doesn't imply they lack value, but suggests that additional work is required to refine and complete them.

NON-FINANCIAL PERFORMANCE INDICATORS AND QUALITY

BENEFITS OF NON-FINANCIAL PERFORMANCE INDICATORS (NFPIS)

Quick Calculation: NFPIs are typically easier and faster to calculate compared to financial measures, making it feasible to provide updates at shorter intervals, such as the end of each shift.

Flexibility: Organizations have the flexibility to design and employ any measures that align with their specific objectives and needs, allowing them to tailor the indicators to their unique circumstances.

Non-financial performance measures related to employees are essential for assessing an organization's human capital and its impact on performance. Some aspects that organizations may want to measure include:

Knowledge and Skills: This encompasses the education and job experience that employees bring to the organization. Assessing the knowledge and skills of the workforce is crucial, especially in knowledge-based industries.

Attitude: In customer-centric industries, employee attitude plays a critical role. Ensuring that employees exhibit a positive and helpful attitude when interacting with customers or clients can significantly affect customer satisfaction and loyalty.

Morale: Employee morale is a vital component of workplace culture. Low morale can negatively impact attitudes, performance, and lead to higher turnover rates. Elevated turnover rates result in additional recruitment and training costs as new employees replace those who leave. Non-financial performance measures allow organizations to gauge these aspects of their workforce, helping them make informed decisions and strategies to enhance human capital and overall performance.

PERFORMANCE MEASURES IN RELATION TO QUALITY

In a competitive environment, the quality of products and services becomes a pivotal factor for organizations. Many companies emphasize quality as a crucial driver of long-term success and employ total quality management (TQM) programs to ensure quality at every stage of production and service delivery.

Quality of Products

To gauge the quality of products and customer satisfaction, organizations may employ various measures, including:

Percentage of Defective Goods: The ratio of faulty products identified before sale that must be discarded or reworked.

Product Return Rate: The proportion of products sold that are returned because they fail to meet required standards.

Cost of Warranty Claims: The expenses associated with fixing products under warranty claims.

Customer Retention Rates: Indicators of customer loyalty based on retained customers. While sales and market share are rudimentary, valuable insights often come from understanding the reasons customers stay with an organization.

QUALITY OF SERVICES

Measuring the quality of services and customer satisfaction, especially for intangible services, can be challenging. Possible metrics include:

Number of Complaints: While a common measure, it does not consider dissatisfied customers who choose not to complain.

Number of Repeat Clients: A straightforward measure of performance. Satisfied customers are more likely to return.

Customer Survey Rankings: Feedback from customer surveys can provide insights into service quality. However, the reliability of survey results may vary.

Rankings by Internal Auditors: Management or internal auditors can assess customer attitudes by posing as clients and experiencing the service firsthand.

ACCESS AND AVAILABILITY OF PRODUCTS AND SERVICES

In addition to quality, the accessibility and availability of products and services are essential performance aspects. If customers cannot obtain goods and services when needed, they may seek alternatives or leave altogether.

INTERPRETING QUALITATIVE DATA

often necessitates a degree of judgment to discern the underlying message conveyed by the data. For instance, if rankings suggest customer dissatisfaction, it becomes crucial to investigate the reasons behind their dissatisfaction. These reasons may not always be readily apparent solely from the provided data.

BRAND AWARENESS

Brand awareness is a critical aspect of a company's success, and it involves the ability of customers to recognize and recall a brand. It should not be confused with brand loyalty, which is about customers repeatedly purchasing a product because of their attachment to the brand. For businesses, brand awareness is crucial because if customers are not aware of an organization or its products, they are unlikely to make purchases. Brands are often the most valuable assets a company possesses. Brands can encompass a company's name, benefiting all its products, or be related to specific products.

Owning a strong brand can provide several advantages:

Differentiation: A well-known brand helps a company stand out in the market, allowing it to target specific customer segments and potentially charge premium prices.

Brand Extension: A successful brand can be leveraged to introduce new products or services. For instance, Marlboro, a cigarette brand, expanded into men's clothing.

Customer Loyalty: Brands can foster loyalty among customers, leading to repeat purchases and long-term success.

Maintaining brand awareness typically requires investment in advertising and publicity. Companies must choose appropriate advertising methods and locations that align with the brand's image. The management accountant may play a role in preparing budgets for various promotional activities and evaluating their effectiveness in generating additional revenue. For brands associated with quality, organizations need quality control measures to ensure consistent product quality. The management accountant may contribute by providing financial information about quality costs and non-financial information regarding the number of defective products.

To assess brand awareness and recognition, market research, often through surveys, is used. These surveys aim to determine what portion of the public is aware of the brand and to gather feedback on the brand's image among those who recognize it.

IMPLICATIONS OF TRANSFER PRICING

- Target costing is not a pricing method in itself but implies a shift away from traditional cost-plus pricing methods. Instead, prices are determined based on external factors, which makes the organization more competitive and outward-looking.
- Target costing promotes cost reduction during the design phase, which is more effective than attempting cost reduction during the later manufacturing stages.
- When seeking cost reduction methods, management also considers the potential impact on the final product's quality.
- In terms of performance measurement, target costing offers a more relevant target than traditional standard costs. The target in target costing is based on the required profit level, rather than arbitrary engineered costs. This approach aligns more closely with profit objectives and can enhance performance management.

These methods can be supported by various techniques, including:

Tear Down Analysis (Reverse Engineering): This process involves disassembling a competitor's product to identify potential improvements or cost reductions. By closely examining the product's components and design, an organization can gain insights into how to enhance their own products and reduce costs.

Value Engineering: Value engineering focuses on investigating the factors that influence the cost of a product or service. The objective is to improve the product's design so that it can deliver the same functions at a lower cost. This may involve eliminating functions that customers do not value but that contribute to higher costs.

Functional Analysis: Functional analysis aims to identify the attributes or functions of a product that customers truly value. It involves determining the price that customers are willing to pay for each of these functions. If the cost of providing a particular function exceeds the value customers place on it, then that function may be eliminated or modified to align with customer preferences and cost constraints.

ACCOUNTING SYSTEMS

To support modern techniques like Total Quality Management (TQM), Kaizen Costing, and JustIn-Time (JIT) manufacturing, traditional management accounting systems may need to undergo significant changes. Here's a brief overview of the required adjustments:

Total Quality Management (TQM): TQM involves a thorough understanding of quality costs, which are often hidden within general overheads in traditional accounting systems. To accommodate TQM, organizations should consider implementing an activity-based management system. This system provides a detailed breakdown of costs by activity, allowing for accurate calculation and management of quality costs. This way, the four categories of quality costs (prevention, appraisal, internal failure, and external failure) can be properly analyzed and controlled.

Kaizen Costing: Kaizen costing necessitates an accounting system capable of providing functional cost analysis for producing a product. Initially, this analysis is used to establish a target cost. In subsequent periods, continuous small reductions in the target cost must be achieved. This approach differs from traditional standard costing, which tends to be static and less detailed in setting a single standard cost.

Just-In-Time (JIT) Manufacturing: In JIT manufacturing, the focus is on minimizing work-inprogress and finished product inventories, making complex valuations unnecessary. The accounting and logistics systems should prioritize ensuring that production systems can meet planned demand. This includes accurate demand prediction and stringent quality control measures for incoming materials.

Poor-quality materials can disrupt production and hinder the JIT system from meeting its production targets. Adapting accounting systems to support these modern techniques requires a shift from traditional, static accounting practices to more dynamic and responsive systems that can accommodate the principles of continuous improvement, cost reduction, and quality management.

MEANING OF QUALITY

In the context of information technology (IT) systems, quality refers to several key aspects:

Functionality: The system effectively performs the tasks it was designed for. It aligns with the requirements and expectations of the users, providing the necessary information in the desired format.

Reliability: Reliable systems are stable and dependable. They do not frequently experience breakdowns or errors during operation. Users can trust that the system will function consistently.

Usability: Usable systems are designed with the user experience in mind. They have userfriendly interfaces, intuitive menu structures, and helpful features like user support or warning messages. Usability ensures that users can interact with the system easily and efficiently.

Build Quality: A system with good build quality is flexible and adaptable. It can be modified or updated as business requirements change over time. This adaptability is crucial for ensuring that the system remains relevant and effective as the organization evolves. In summary, quality in IT systems encompasses functionality, reliability, usability, and build quality, all of which are essential for ensuring that the systems effectively support an organization's operations and objectives.

QUALITIES OF GOOD INFORMATION

The qualities of good information are often summarized by the acronym "ACCURATE," which stands for:

Accurate: Information should be arithmetically correct and based on objective, reliable data. It should be free from errors or inaccuracies.

Complete: All relevant information should be included. It should provide a comprehensive view of the subject, leaving no critical details or data gaps.

Cost Beneficial: The cost of obtaining the information should be justified by the benefits it provides. It should offer value for the resources invested in acquiring and using it. User-Targeted: Information should be tailored to the needs of the user, avoiding unnecessary complexity or information overload. It should be presented in a format that is understandable and relevant to the user.

Relevant: The information should be directly applicable and pertinent to the person or entity for whom it is intended. Irrelevant data should be filtered out.

Authoritative: Users should be able to trust the source and reliability of the information provided. Authoritative information comes from credible and trustworthy sources.

Timely: Information is most valuable when it is available promptly. Timeliness is essential for making informed decisions and taking timely actions.

Easy to Use: Excessive detail should be avoided, and information should be presented in a user-friendly manner. Tables, graphics, and summaries can help convey information effectively. These qualities ensure that the information is of high quality and can be relied upon for making informed decisions and taking appropriate actions.

HUMAN ASPECTS OF PERFORMANCE MANAGEMENT

HRM RELEVANCE TO PM

Human resource management (HRM) is a strategic approach to managing employment relations, focusing on the idea that leveraging the capabilities of people is essential for gaining a competitive advantage. According to Bratton and Gold, HRM encompasses various activities, including:

Recruitment: Acquiring the appropriate number of employees with the necessary skills and qualifications to meet organizational needs.

Training and Development: Managing programs to enhance and update the skills and knowledge of employees, ensuring they remain relevant and effective in their roles.

Employee Motivation: Implementing strategies to inspire and engage employees, thereby promoting a positive work environment and job satisfaction.

Performance Monitoring: Evaluating the performance of employees through processes such as performance appraisals, providing feedback, and setting goals for improvement.

HRM plays a crucial role in optimizing an organization's workforce, aligning it with the company's strategic objectives, and ultimately achieving a competitive edge in the marketplace.

STAFF RECRUITMENT

Recruiting the right staff is of paramount importance for organizations due to several key reasons:

Implementation of Strategy: Employees play a pivotal role in executing the organization's strategy. However, they may also have their own personal objectives that might conflict with the organizational strategy. Therefore, hiring individuals who align with and support the organization's goals is crucial.

Operational Impact: Success at the operational level is critical for the overall achievement of an organization's strategic objectives. Factors such as employees' attitudes toward product quality and customer relationships significantly influence the operational success of a company.

Ethical Behavior: The behavior of employees can significantly affect the organization's performance. Unethical or dishonest actions by staff can lead to detrimental consequences for the organization's reputation and success.

Organizational Culture: Many companies have distinct organizational cultures that influence their values, work environment, and overall identity. It is essential to recruit individuals who not only possess the necessary skills but also fit well within the existing culture and can contribute positively to it.

Recruitment is not a one-size-fits-all process; it should be tailored to align with the organization's strategy and operational requirements:

Differentiation Strategy: In cases where an organization pursues a differentiation strategy, it will need to hire highly-skilled staff capable of delivering the exceptional service or product quality that differentiation entails.

Cost Leadership Strategy: When an organization follows a cost leadership strategy, the focus is on minimizing costs. In this scenario, recruiting lower-skilled employees who can efficiently perform repetitive tasks becomes crucial.

Overall, the recruitment process should be thoughtfully designed to ensure that employees at the operational level possess the requisite skills, qualifications, and experience needed to contribute to the organization's strategic objectives effectively.

Staff appraisals are a crucial component of managing employees within an organization. These appraisals serve several important purposes, which can be summarized as follows:

Improving Individual Performance: The primary objective of staff appraisals is to enhance the performance of individual employees. By addressing an individual's strengths and weaknesses, these appraisals aim to ensure that every employee is operating at their full potential. Improved individual performance subsequently leads to increased organizational efficiency and effectiveness.

Key Elements of an Appraisal: A typical staff appraisal encompasses the following components:

Review of past performance: Reflecting on an individual's achievements and areas for improvement.

Discussion of future goals and targets: Establishing objectives for the upcoming period.

Evaluation of rewards: Determining how employees will be compensated, which may include pay raises, bonuses, or other incentives.

MONITORING STAFF

Staff appraisals can be conducted using various methods:

Top-Down: Employees are evaluated by their immediate supervisors.

Bottom-Up: Employees provide feedback on their managers.

180-Degree: Both the superior and subordinate evaluate each other.

Peer: Colleagues assess each other's performance.

360-Degree: All individuals within the organization, including peers, subordinates, and supervisors, participate in mutual evaluations. Individuals often have their unique objectives when undergoing appraisals. These objectives include:

Comparing Performance: Understanding how their performance measures up against established targets.

Recognition of Merit: Recognizing noteworthy work carried out during the appraisal period.

Basis for Compensation: Establishing the foundation for determining pay and other forms of compensation.

Alignment with Organizational Goals: Defining how their work aligns with the organization's objectives.

Future Employment: Deciding on the employee's future within the organization, which may involve retaining their current position, relocating, receiving a promotion, or opting for early retirement.

Setting Key Results: Identifying the specific outcomes an employee must achieve within a defined timeframe.

Training and Development Needs: Identifying areas where the employee requires further training and development.

Appraisals can positively impact business performance by fostering motivation and efficiency in the following ways:

Increased Motivation and Efficiency: Employees are likely to be more motivated and efficient when they perceive that their achievements are recognized and rewarded.

Meeting Developmental Needs: Addressing employees' developmental needs leads to higher motivation and efficiency.

Goal Alignment: Organizational performance improves when employees achieve goals that are aligned with the organization's objectives.

Conversely, staff appraisals can have a demotivating and counterproductive effect if employees:

- Feel criticized during the process.
- Believe the appraisal was conducted unfairly.
- See no value or purpose in the appraisal process.
- Effective staff appraisals should aim to motivate employees, improve their performance, and ensure that organizational goals and employee objectives are well-aligned.

PM OF HUMAN RESOURCE

To effectively manage performance, an organization must break down its strategic objectives into increasingly detailed sub-objectives. This breakdown should continue until employees' performance can be evaluated against personal goals and targets that align with and bolster the organization's broader strategy. These individual goals and objectives are typically established during the Human Resource Management (HRM) appraisal process, resulting in the integration of HRM with the organization's strategic direction.

As a component of the organization's performance management system, employees' actual performance is assessed and juxtaposed against their designated goals and targets. To facilitate this evaluation, it's imperative to define appropriate performance indicators or measures that serve as benchmarks for assessing performance.

REWARD METHODS

Rewards within an organization can be classified as either extrinsic or intrinsic:

Extrinsic Rewards: These are tangible incentives that employees receive for their performance. They include items such as salaries, bonuses, promotions, and benefits.

Intrinsic Rewards: Intrinsic rewards, on the other hand, are intangible aspects of motivation that come from within the individual. These include factors like personal responsibility, recognition, and a sense of accomplishment and self-esteem derived from the work itself. Extrinsic rewards, particularly material rewards, can be further categorized into three main types:

Base Pay: This refers to the fixed, regular salary an employee receives. It is typically the standard compensation that is not directly tied to an individual's performance.

Performance-Related Pay: Performance-related pay is variable compensation linked to an individual's or team's performance. The level of pay is determined by how well performance matches specific goals or targets that have been pre-agreed upon. This could include various forms of bonuses, commissions, or incentives tied to achievements.

Indirect Pay: Indirect pay consists of benefits and perks that are provided in addition to the base pay and performance-related pay. These benefits can encompass contributions to pensions, child care services, health insurance, or any other supplementary benefits that enhance the overall compensation package.

INDIVIDUAL BONUSES BASED ON ACHIEVEMENT OF TARGETS

Individuals are given targets to aim for, and if they meet those milestones, they are paid bonuses (typically in the form of cash).

Benefits of Specific Bonus Plans

Because the bonus plan will have made their goals clear to them, the individuals will know what is expected of them. Employee motivation will come from the bonus program.

Possible Drawbacks of Special Bonus Plans

- The people can have a short-term performance perspective, focusing on earning the bonus for the current year and neglecting the future.
- Choosing the right goal might be challenging.
- People may overlook factors that are not measured in favor of what is being measured. this is tunnel vision.

Once the goal is reached, there won't be any improvement until it's updated and made more difficult every year.

Employees' risk attitudes could not coincide with the organization's. Employees tend to be more risk cautious and steer clear of activities that could put them in danger of failing to meet their goals, even if such activities align with the risk tolerance of other stakeholders.

PERFORMANCE IMPROVEMENT SCHEMES

There are four phases to this more dynamic individual bonus scheme:

- investigating and determining performance benchmarks.
- letting the employees know what the goals are and deciding on the bonus that will be awarded should the goal be met. Cash bonuses are not as good as non-cash ones.
- rewarding players for reaching their goals.
- reestablishing the benchmark for the upcoming year. The next year should see an even higher bar set in order to guarantee ongoing progress.

The lack of cash payout for bonuses allows the plan to be more flexible by allowing for the payment of additional bonuses when deemed necessary, without having to take pay parity or potential labor union issues into account.

Benefits

The benefits of individual bonus plans are the same, plus:

- Goals are predicated on benchmarking activities that have been completed. This results in goals that are fair but difficult.
- Every year, the goal is revised, which promotes ongoing development.
- Businesses that have used this strategy have claimed significant profit improvements as a consequence of doing so.

Negative aspects

- Establishing and running such schemes takes a lot of time.
- They might not consider variables that are beyond the person's control.
- Once more, staff members' risk attitudes could not coincide with those of the company.

PROFIT RELATED PAY SCHEMES

Employee bonuses are given out depending on how profitable the company is.

Benefits

• These programs direct members' attention toward cutting expenses and raising earnings. They ought to inspire employees.

Negative aspects

- They might push managers to adopt a short-term perspective, such as reducing quality spending in order to increase earnings this year (which could have a negative impact on years to come).
- Setting the right profit target could cause management to introduce some leeway in the budget.
- Employees won't recognize the connection between their work and the earnings, especially those in administration and at lower levels.
- They might inspire inventive bookkeeping techniques.
- Profit maximization and shareholder wealth maximization are two different objectives.
- Once more, there's a chance that management, staff, and other stakeholders have different risk attitudes.

SHARE OPTIONS

Senior executives are typically linked to share option schemes, wherein they are granted the opportunity to purchase business shares at a certain price at a later time. The executives will profit if the share price rises since they will have purchased their shares at the option price and sold them on the stock market for the higher price.

Benefits

- They match the interests of the shareholders with those of the participants, maximizing the company's wealth through an increase in share price.
- Given that their worth is contingent upon the share price in the future, they can persuade one to adopt a longer-term perspective.
- Since there may be a requirement that the person be still employed on the day the options become exercisable, they are a helpful tool for "locking in" good employees.

Negative aspects

- Junior staff members who might believe they have no influence on the company's share price might find them inappropriate.
- The stock market environment has a significant impact on share price, thus management cannot control it totally.
- Numerous authors contend that the risk assumed by share option holders is not comparable to the risk faced by shareholders.
- When the share price rises, shareholders profit, and when it falls, the value of their investment decreases.
- If the price of shares increases, holders of share options likewise profit; but, if the price of shares decreases, they lose nothing

GROUP BONUS SCHEMES

These programs pay bonuses to a group of managers and staff members if they meet predetermined goals. Both financial and non-financial ones could apply.

benefits:

- Since there would be a bonus for everyone, they ought to encourage teamwork.
- Since everyone gains when goals are accomplished, they might be seen as more equitable.

negative aspects:

- It might be harder to set reasonable goals that are demanding but not overwhelming.
- Individuals within the group who contribute less are rewarded for the efforts of the others.

REWARD SCHEME DESIGN PRINCIPLES

As such, the following guidelines ought to be taken into account while creating a rewards program to guarantee that it enhances the efficiency of the company:

- It ought to provide people with a genuine motivation. Employee motivation should come from the prospective rewards.
- The areas that are being measured ought to be under the employee's authority.
- The methodology for determining the reward ought to be transparent.
- The plan should be economical, meaning that the bonuses paid for the effort should be more than offset by the possible gains from improved performance.

FRASER AND HOPE

However, Hope and Frazer caution against "gaming" by tying rewards to predetermined performance goals. Managers whose compensation is based on set goals in particular could be motivated to:

- bargain for "lowest targets and highest rewards," which will underestimate the organization's capacity;
- act immorally (for example, by practicing fraudulent accounting) in order to meet goals.

For this reason, Hope and Fraser propose separating the planning from the target-setting phases and basing rewards on comparable benchmarks and targets. For instance, instead of giving a sales manager a dollar sales target, set a market share (%) aim. In absolute terms, more is anticipated if the market rises. This increases controllability since the sales manager can still exercise control over whether he attains the desired market share, even while he cannot be held accountable for changes in the general market.

LINKING REWARDS TO PM

Benefits

- A well-thought-out incentive program ought to influence managers' behavior in a way that aligns with the organization's strategic goals.
- There is evidence to support the idea that having a reward system in place encourages people to perform well.
- Talented people that add value to the organization may be drawn in and kept on through a rewards program.
- By incorporating KPIs into the performance incentives system, employees are better able to comprehend the goals of the company as well as the performance components that lead to its success.
- An incentive program that works will create an atmosphere where workers are motivated to keep improving.
- Share-based compensation plans may incentivize managers to adopt a longer-term perspective.

THINGS TO THINK ABOUT

Objectives predicated on work or outcomes? For example, it can be challenging to measure the effect of administrative staff members' work.

Financial or non-financial incentives? To each person, money might mean different things. More job stability, which comes from better organizational performance and adopting a longer-term perspective, is preferred by certain individuals. In this case, share option plans would be motivating.

Are rewards promised explicitly or implicitly? Explicit incentives are prizes for performance that are given out according to the results of performance measures over a predetermined time frame. Although they are simple to comprehend, they give management little leeway. Any type of compensation that is explicitly attached to the accomplishment of a performance target, like a bonus, is an example of an explicit reward.

Opportunities for promotions, actual and possibly permanent improvements in merit pay, and, most fundamentally, keeping one's employment are all sources of implicit incentives.

Possible Drawbacks

- Numerous empirical findings imply that incentive programs may contribute to dysfunctional behavior. For instance: Adding wiggle room to budgets to make them more manageable and guarantee the bonus gets paid.
- making decisions that compromise the company's long-term objectives in order to meet the necessary aim.
- Team spirit may be discouraged by individual reward schemes.
- If performance-related compensation makes up a sizable amount of an employee's salary, stress levels may be elevated.
- Should goals be determined by the success of an individual, a team, a division, or the entire organization?
- Reward programs often gauge performance. They don't always quantify the effort. This may be unjust, especially if there is some outside influence on the outcomes.
- Workers' risk appetite may be impacted when they prioritize attaining their rewards. If employees' risk preferences do not match those of the organization's stakeholders or if the risks they assume differ from the organization's, this could have negative effects. Workers could start to take more chances or become too cautious and risk averse.

SYSTEMS OF ACCOUNTABILITY AND REWARD

Reward systems ought to offer a way to keep an eye on an agent's performance and encourage them to fulfill their obligations. The following actions ought to support accountability:

- Make sure the principals and agents understand the variety of performance metrics that will be applied.
- Make sure the advantages of the performance metrics have been determined.
- Identify and comprehend any possible issues with the application of performance metrics.
- Decide how to get around any possible issues.

Accounting systems are essential for ensuring that the agent is held responsible to the principal. To hold a department manager accountable for the portion of the organization he oversees, for instance, budgeted performance might be compared to actual performance.

HARD ACCOUNTABILITY

Financial and quantitative data are used in hard accountability. It needs the following characteristics:

- Counting (adding the quantity of client complaints, for example).
- Explaining the numbers, or explaining how and why they happened.
- Holding someone accountable for the statistics means determining who has responsibility for both the events that have transpired and the preparation of the accounting information.

SOFT ACCOUNTABILITY

The human inputs into the system are the main focus of soft accountability. It involves evaluating people subjectively and taking into account how behavior of people influences the accomplishment of the organization's objectives.

WHAT MEASURES GETS DONE:

The American academic, management consultant, and author Peter Drucker is credited with saying "What gets measured gets done". Drucker talked about the value of setting goals for an organization in his 1954 book "The Practice of Management" so that staff members and management know what has to be done. "What gets measured gets done" refers to the idea that if managers and staff are held accountable for their work, they will make an effort to perform effectively. Something could be disregarded if it is not measured. To make sure that workers are concentrating on the appropriate things, it is crucial to choose targets carefully. In the event that "what gets measured gets done," there might be advantages. "What gets measured gets done" should contribute to improved performance in important areas if an employee's goals are congruent with the organization's goals and vital success factors.

SHORT TERM AND LONG TERM PERFORMANCE MEASURES

The difference between concentrating on short-term performance targets and longer-term aims can be seen in the budget-constrained and profit-conscious methods.

Performance evaluations that prioritize cost containment and short-term financial performance will result from management practices that are budget-constrained. Managers' performance in meeting immediate goals, such budgets, will be evaluated.

In contrast, managers that adopt a profit-conscious management style will have their performance measured primarily based on long-term profitability and performance, with an emphasis on how well they can help the organization achieve its long-term goals, including growing its market share.

Focusing on the longer term may have a detrimental impact on shorter term performance, just as a concentration on the short term may have a bad impact on long term performance.

ORGANISATIONAL CULTURE

A different method of categorizing organizational culture would be to see it as a continuum, with Financial Control Culture at one end and Excellence/Service Culture at the other, similar to Handy's stereotypes of "power, role, task, and people cultures". These align with the extremes of Porter's generic strategies, "Differentiation" and "Least cost producer"

FINANCIAL CONTROL STRUCTURE

The foundation of this culture is the idea that efficiency is the key to success. These kinds of organizations are probably going to choose a strict, hierarchical management style. The budget serves as the primary instrument for management control, and managers' primary goal is to stick to it.

The short-term interests of shareholders will be the focus of the accounting system. Among these would be the application of the subsequent performance metrics:

- return on invested capital;
- profitability of products;
- Evaluation of monthly performance based on a comparison of budgeted and actual results.

In these kinds of organizations, managers are motivated to boost productivity within their own department, regardless of how it may affect other departments.

EXCELLENCE/ SERVICE CULTURE

This culture is predicated on the idea that exceeding customer expectations is essential to success. Teams are emphasized in these organizations. The goal of management is to build customer-satisfying teams and provide them with a great deal of freedom in how they carry out their duties. The management accounting system in these kinds of organizations is more likely to highlight the following performance indicators:

- Analysis of customer profitability; Brand, knowledge, and other intangible asset values;
- performance evaluation in relation to peers, benchmarks, and previous years as opposed to predetermined goals established at the beginning of the year;

- employing a strategy akin to the Balanced Scorecard, in which success is measured primarily by other criteria than financial performance.

ALTERNATIVE VIEWS OF PERFORMANCE MANAGEMENT

SETTING MEASURES AND PERFORMANCE TARGETS

In every one of the four viewpoints, management must determine:

- **Goals:** What are the primary goals?
- **Crucial success factors (CSFs):** what needs to be done well in order to fulfill goals?
- How can performance be assessed in relation to the essential success characteristics using key performance indicators (KPIs)?
- What kind of goals are possible for any measure?
- **Initiatives:** What steps could be implemented to make the measures better?

LEADING AND LAGGING INDICATORS

The cause and effect components of performance measurement piqued the curiosity of Kaplan and Norton. Decisions have an impact even after they are taken, as demonstrated by lagging indicators. This is the term used to describe the financial metrics that represent the outcome of previous choices in the balanced scorecard. Forward-looking indicators determine future financial results. These are the metrics for measuring non-financial performance that have to do with clients, internal operations, and development and learning.

BALANCED SCORECARD

Benefits

The balanced scorecard does not limit its focus to financial performance metrics; instead, it evaluates performance across multiple dimensions. As a result, it offers a more complete view of the effectiveness of an organization. This ought to promote a performance management philosophy that is longer-term.

There is a connection to the organization's strategy. The mission and overarching goals of the organization should serve as the basis for each perspective's goals. As a result, strategic objectives and actions are related.

Negative aspects

The narrow scope of the balanced scorecard takes a few stakeholders into account. It is possible to argue that the learning and growth perspectives take into account the demands of employees in addition to the needs of shareholders and consumers through the financial and customer perspectives. Other stakeholders are not taken into account, though.

CHOOSING RELEVANT MEASURES

The metrics selected ought to gauge the organization's performance vis-à-vis its plan. The organization might need to do this by converting high-level goals into operational goals. By choosing too many measures, organizations should also prevent information overload. Many less-relevant indicators are probably less effective than a limited number of well chosen KPIs.

Resolving Conflicts

A few measures might not agree with one another. Improving product quality will boost consumer happiness, but in the near run, this could mean lower profitability. To address these kinds of disagreements, senior-level choices will need to be made.

Cultural Shift

It could be necessary to implement a new management culture, especially if the company has historically relied mostly on financial performance management methods. Some managers may be skeptical of the balanced scorecard, therefore it's critical to educate managers and employees on the goals and advantages of the system. It's possible that managers need instruction in interpreting non-financial metrics.

Establishing Goals

Setting targets will be essential after the metrics have been determined, allowing managers to understand what is expected of them. For instance, the danger that managers may settle for the lowest targets and whether or not they should be involved in determining their own goals. In general, goals should be challenging for the management but still attainable.

STEPS IN ABM

The same procedures as for ABC apply when putting an ABM system into place:

- List the main tasks that the organization completes. Major activities can be categorized based on factors like estimated cost or time spent on them.
- Assign expenses to every activity's cost pool. Similar to how indirect costs are allocated using absorption costing, all indirect costs must be allocated using a suitable basis to the specific activities to which they correspond.
- Identify the key activity's cost driver for each.

EVALUATION OF ABM

Organizations with a large range of products and/or high indirect expenses gain the most from ABM.

However, there are drawbacks to using it:

- It just concentrates on the tasks it already completes and ignores outside influences.
- Although it is assumed that all overhead costs are variable, some are fixed, meaning that cutting activities won't result in a savings.
- Its implementation is costly and intricate.
- Determining the proper activities and drivers could be challenging.
- Employees who are unfamiliar with the ABM system may oppose its introduction. Training is one way to get over such problems.
- The application of cost per driver as a performance metric has the potential to induce dysfunctional conduct. In order to increase the number of orders and so lower the cost per order, management may, in response to demand to lower the cost per order, divide a larger order into two or three parts. This would occur without actually lowering the company's costs.

THE VBM APPROACH

Traditional performance evaluation systems, which are centered on earnings, according to VBM proponents, fail to direct management's attention toward wealth maximization because

- The opportunity cost of capital is not included in profits;

- Cash flow, a more accurate metric, is not the same as profits; and
- The implementation of profit-based metrics may result in short-termism, whereby managers prioritize maximizing current profits over future earnings and cash flows by making investments at a lower cost.

VBM therefore needs:

- the determination of the drivers of value, or the elements that influence an organization's worth; and
- an emphasis on these drivers at all organizational levels (strategic, tactical, and operational) in order to raise the organization's worth.

SPREADSHEET MODELLING

Since there will be numerous forecast variables involved in calculating EVA (or other valuebased metrics), such as growth in revenue, forecast capital expenditure and depreciation, corporate tax rate, interest rate on issued debt, etc., spreadsheet modeling is a crucial tool for the management accountant in value-based marketing.

Spreadsheets will make it easier to:

- Use a scenario analysis to examine how various economic hypotheses impact various value drivers and, ultimately, the company's worth.
- a single financial model that incorporates management procedures and performance measures from numerous business divisions. This can power a dashboard that shows operational-level indicators, like the timeliness of receivables and payables and the proportion of billable hours to total hours, to track performance.
- proportion of used capacity.
- This data can be used by managers across the organization to make better decisions and manage performance.

EVALUATION OF VBM

Advantages

- The main advantage of Value-Based Investing (VBM) is that it places more emphasis on value than profit, which might mitigate the inclination to make decisions that may provide short-term gains but may have unfavorable long-term effects.
- Profit-based performance indicators look backward, whereas value-based performance measures look forward. The performance of an organization in the past and its anticipated future are of interest to shareholders.

Possible Issues

- It takes high-quality information that is timely, accurate, and dependable for VBM to be beneficial. Non-financial indicators are frequently important value drivers, and they can mark a big shift for accounting-based management information systems. A MIS update can be a costly undertaking.
- An organization's structure may need to alter in order to better align it with valuegenerating operations. This may be costly, inconvenient, and time-consuming.
- A shift in culture may be necessary for a VBM program to succeed. For employees, the new goals, performance standards, and incentive programs may represent a significant shift. Every management and worker must comprehend the value that each of their responsibilities contributes.

- Using VBM carries the risk of turning it into a practice of "value veneering," or valuing everything but making no changes. It is crucial that the new measures and targets address the organization's specific operational problems.

IS VBM SUITABLE?

The following are factors to take into account when determining whether VBM is the right solution in a certain situation:

- Is there any proof that the value to shareholders is declining? or that "the returns to shareholders are unsatisfactory"? If so, concentrating on shareholder value through VBM could help reverse the situation.
- Which key performance indicator does the organization currently use? The primary goal of the company is not in line with shareholder value when employing a profitbased metric like ROCE.
- What goals do the business units of the corporation have? Business unit managers will be more concerned with making short-term profits than with creating long-term value if their main goal is to meet profit-based metrics, such as net profit margin.

COMPLEX BUSINESS STRUCTURES

JOINT VENTURES

Motivations for Forming Joint Ventures: Joint ventures allow the participants to split expenses, risks, and knowledge.

Organizations are able to overcome weaknesses and share strengths. For instance, in a joint venture between Toyota and General Motors, Toyota assumed control of GM's US manufacturing. Through this partnership, Toyota was able to get around prohibitions on importing its vehicles into the US and GM was able to take advantage of Toyota's production procedures.

With a local venturer, it allows organizations to penetrate new markets. The foreign venturer's experience is advantageous to the local venturer. This might be the only way for a foreign business to enter the market lawfully in some nations.

Problems with Performance Management

- In a joint venture, the control enjoyed by each side would be less compared to a 100% ownership. The venturers must have mutual trust in order to succeed.
- All parties involved in the initiative must first define and approve the project's goals. Later disputes may be avoided as a result. Disagreements on goals lead to the failure of many projects.
- The venture's management structure must be established.
- It is possible to assign a designated management team to report to the venturers; or
- Each venturer's managers take part in running the business.
- Pre-agreed performance measuring indicators must be accompanied with planning and reporting structures.
- If the parties do not wish to share information or if their systems are not integrated, reporting of information—such as profits or losses—may provide challenges.
- If the parties have divergent perspectives on risk, risk management may prove to be challenging. Parties may also hold divergent opinions about quality and cost management.
- Information that is sensitive to business dealings may raise concerns regarding confidentiality.

- Because joint ventures are co-evolving, it is impossible to include every potential future scenario in a joint venture agreement, and new problems could emerge later on that were not anticipated at the outset.

STRATEGIC ALLIANCE

A strategic alliance is an agreement between two or more organizations to work together on a project that will benefit both parties while maintaining their individual identities. Organizations within a strategic alliance maintain their autonomy and, as such, their own protocols, customs, and goals. Therefore, if partners have distinct goals and cultures, there may be different approaches to control and performance management.

It is more challenging to implement common performance measures and to gather and analyze management data in this kind of intricate organizational structure. Concerns about disclosing private business information to support performance management are also likely to exist with joint ventures.

VIRTUAL ORGANISATIONS

A virtual organization builds a network of connections that enable it to outsource commercial operations that others can complete more effectively or profitably. Research and development, production, distribution, and sales are examples of services that can be outsourced, freeing up the virtual organization to concentrate on its core skills, such design and marketing. In the heart of the organization, a small number of executives known as the "core" manage all internal operations directly and arrange connections with other organizations that carry out other key tasks. Performance management faces additional difficulties in virtual organizations since management's authority over core company operations differs greatly from that of a traditional corporation.

PLANNING

Unlike traditional planning, which solely involves cooperation with internal departments, planning necessitates coordination with external partners. Setting goals for partners will be necessary throughout the planning phase. It will be necessary to clarify frequently used phrases precisely to avoid misunderstandings. Since the partners would pre-agree on the prices for the items and services they will supply, there may be less need for comprehensive budgets. There will be a greater focus on quality.

Performance Control and Measuring

- Because teleworkers operate from home, managing them is more challenging. Seeing when they logged on to the systems might make it easy to keep an eye on when they were working, but this will be complicated by problems like system outages or people who are logged on but aren't actually working. Staff output and work quality will be areas of special emphasis. More reliance on production controls or cultural controls will be required from management.
- In cases where essential activities are outsourced, there may be direct consumer interaction between one or more partners. It is imperative for the organization to devise strategies for managing operations in this domain to guarantee the provision of adequate service and product quality. Service-level agreements with metrics outlining minimum service levels could accomplish this.
- System connectivity could be required.
- Performance measurement could be challenging. Although partners may have targets, the organization and the partner will almost certainly measure actual performance separately. Reconciliation might be necessary if the measurements between the two organizations differ.
- It will be necessary to specify metrics precisely.

COMPLEX SUPPLY CHAIN STRUCTURES

In intricate supply chains, like those found in the production of computers or automobiles, manufacturers depend on their suppliers to supply essential parts, such ignition or braking systems, for their products. Alliances can also be formed with independent businesses that offer complementary goods.

Impact on Management of Performance

- The success of the products is the network of alliances' shared objective, thus there should be no conflicts. Nonetheless, the following problems must be handled by alliance members:
- quality of every other important network component. A single component failing might cause the others to lose sales and reputation.
- Parts compatibility. Ensuring compatibility will unavoidably result in the exchange of private technical information. Intellectual property must be protected from copying and transfer by means of controls like patents.
- Moving to another supplier could come with significant switching charges in the event of subpar performance.
- Partners in one coalition could be rivals in another.

OTHER COMPLEX STRUCTUES

FRANCHISING

- A franchisee pays a franchisor a fee to have the use of a business name and format in a certain area. This is known as franchising.
- The franchisee manages what is essentially a separate franchiser branch.
- Typically, the franchiser makes sure that the profits of these branches don't get eaten up by one another.
- A significant amount of control over the franchisee's operations and procedures is exercised by the franchisor.
- Licensing is the process by which a licensor grants permission for other (usually smaller) organizations to utilize its trademarks, software, logos, or intellectual property (like Microsoft Office). In exchange for a royalty, which is typically a portion of sales, the licensee has the right to use the licensed property
- Typically, licenses are non-exclusive, meaning they can be sold to several rival businesses that cater to the same market.
- Although it does not have influence over the licensee's commercial activities, the licensor maintains control over how its property is used.

PROBLEMS WITH PERFORMANCE MANAGEMENT

- The quality of the franchisee or licensee must be observed by the franchisor or licensor. A subpar good or service can damage a brand's reputation and consequently its value.
- In order to guarantee that licensees and franchisees correctly determine the royalties that they must pay as stipulated in the contract, controls are required.

Past papers

March/June 2016	September/December 2016	March/June 2017
Section A **Flack Supermarkets (Flack)** • the performance report • the introduction of the two measures of revenue and operating profit per square metre • the proposal to change the divisional performance measure. • the expected return on capital employed • proposed new information system **Section B** **Cuthbert** • the proposed use of BPR • the effectiveness of the current reward systems **Dibble** • activity based costing activity based costing, costing basis	**Section A** **Monza Pharma (Monza)** • the problems of using a balanced scorecard • the choice of the current performance measures and the consulting firm's proposed performance measures • effect of choosing different profit and capital measurements • current quality costs in the manufacturing division • new information system **Section B** **Framiltone** • current year budget to the end • traditional incremental budgeting to a system of rolling budgets **Alflonnso** • activity based costing • the average net profit • environmental management accounting (EMA)	**Section A** **Dargeboard services** • the links between the current key performance indicators and its missions. • The assumptions and definitions used in the calculation of the current set of key performance indicators. • Aspects of reporting in the performance dashboard. • how the building block model works. • the two reward schemes **Pitlane Electronic Components (Pitlane)** • the cost gap per unit • which target costing would help financial performance objective • Kaizen costing to help the Booster project achieve the financial performance objective **Section C** **Nelson, Jody and Nigel (NJN)** • warehouse information system (WIS) • eliminate the different types of waste identified under lean principles. • application of each of the 5Ss

September/December 2017	March/June 2018	September/December 2018
Section A **Thyme Engine Products (Thyme)** • Award winning performance dashboard • role of the management accountant • target cost gap • costs of quality **Section B** **Chicory** • financial performance • the problems of using the benchmarking **Tosemary and Rhyme Hospital (TRH)** • non-financial performance indicators • performance measures the management style	**Section A** **Chiven Stores (Chiven)** • the performance report • three new performance measures • performance measures and systems • e development of Big Data and its potential impact **Section B** **Luvij** • the factors which might limit the usefulness of the external information • board on the potential problems with the measurement **Bazeele** • value-based management approach • adopt a value-based management approach. generated economic value	**Section A** **Rezillos Engineering (Rezillos)** • the performance reporting system • Criticism of the customer survey results • Methods of benchmarking **Section B** **Zones** • Lynch and Cross performance pyramid • measure and manage operational performance • the six sigma methodology **Sberry** • risk appetites • risk and uncertainty analysis techniques the external environment

March/June 19	September/December 2019	March/june 2020
Section A **Folt Manufacturing** • key performance indicators • work on target costing • quality cost areas • management of quality within the outsourcing contract. **Section B** **Vunderg** • activity based management (ABM) • limitations of using the ABM method **Cortinas Retail Clothing (CRC)** • current budgeting system to ABB budgeted cost and the actual cost	**Section A** **Arkaig Manufacturing (Arkaig)** • performance reporting • introduction of economic value added (EVA™); • the performance hierarchy • value chain analysis **Section B** **Veyatie** • the customer satisfaction data • the balanced scorecard **Daldorn** • performance measures • the decision rule evaluation of the appropriateness of the numerical technique	**Section A** **Achilty Retail (Achilty)** • Current performance reporting. • Other proposed performance indicators. • The changing role of the management accountant. • opportunities and risks of introducing a new data warehouse. **Section B** **Totaig** • implementation of Step 2 of VBM • the difficulties of using EVA™ as a performance indicator **Coruisk** • the changes in the areas of purchasing and production in order to supply goods a cost of quality report

September/December 2020	March/June 2021	September/December 2021
Section A **Deeland Police** • critical success factors and key performance indicators • the value for money service • use of non-financial performance indicators • league tables in measuring the performance **Section B** **Clonyard** • soft elements of the McKinsey 7S model • the introduction of an ERPS **Roan University (Roan)** • measuring performance • appropriate performance measure	**Section A** **Fearties** • key performance indicators (KPIs) and the introduction of the balanced scorecard • the problems associated with measuring and managing performance using non-financial performance indicators • Hopwood's styles • the management setting of targets **Section B** **Freeze** • the quantitative K Score model • risk of corporate failure. • the most important indicators of corporate failure **Jolt** • the BPR proposal • the development of its information systems BPR proposal and consequently on business performance.	**Secrion A** **Fiag Bicycles** Report to CEO to respond to his instructions for work on: Performance reporting Consultant's report Issue on performance measurement **Section B** **Harry Keyboards** • Headings of a performance pyramid link together to aid analysis of the performance indicators. • Complete the analysis and evaluate the performance indicators. • Reliability of the non financial indicators. **Gaddon** • Risk of corporate failure and usefulness of using qualitative models. • liquidity indicators are important in accessing the likelihood of corporate failure. • The factors which have led to the company finding itself in this position.

Professional Level – Options Module

Advanced Performance Management

March/June 2016 – Sample Questions

Time allowed
Reading and planning: 15 minutes
Writing: 3 hours

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 12 and 13.

Do NOT open this question paper until instructed by the supervisor.

During reading and planning time only the question paper may be annotated. You must NOT write in your answer booklet until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Paper P5

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Flack Supermarkets (Flack) is a multi-national listed business operating in several developing countries. The business is divided into two divisions: Metro, which runs smaller stores in the densely populated centres of cities and Hyper, which runs the large supermarkets situated on the edges of cities. Flack sells food, clothing and some other household goods.

WHAT IS THE PROBLEM/CHALLENGE/OPPORTUNITY?

Competition between supermarkets is intense in all of Flack's markets and so there is a constant need to review and improve their management and operations. The board has asked for a review of their performance report to see if it is fit for the purpose of achieving the company's mission of being:

'…the first choice for customers by providing the right balance of quality and service at a competitive price. We will achieve this through acting in the long-term interests of our stakeholders: earning customer loyalty, utilising all our resources and serving our shareholders' interests.' Which models come to mind?

This report is used at Flack's board level for their annual review. The divisional boards have their own reports. Also, there has been criticism of the board of Flack in the financial press that they are 'short-termist' and so the board wants your evaluation of the performance report to include comments on this. A copy of the most recent report is provided as an example at Appendix 1. appraise the indicators

TWO NEW PERFORMANCE MEASURES TO GAUGE THE EFFECTIVE USE OF RESOURCES

The board is considering introducing two new performance measures to address the objective of 'utilising all our resources'. These are revenue and operating profit per square metre. The CEO also wants an evaluation of these two measures explaining how they might address this aspect of the mission, what those ratios currently are and how they could be used to manage business performance. There is information in Appendix 1 to assist in this work.

set period targets

APPRAISE CURRENT CAPITAL UTILISATION

There have been disagreements between Flack's divisional management about capital allocation. The divisions have had capital made available to them. Both sets of divisional managers always seem to want more capital in order to open more stores but historically have been reluctant to invest in refurbishing existing stores. The board is unsure of capital spending priorities given that the press comments about Flack included criticism of the 'run-down' look of a number of their stores. The board wants your comments on the effectiveness of the current divisional performance measure of divisional operating profit and the possibility of replacing this with residual income in the light of these problems.

ASSESSMENT OF EXPECTED RETURN AS A MEASURE OF HOW EFFICIENTLY CAPITAL IS BEING USED

As the company is opening many new stores, the board also wants an assessment of the use of expected return on capital employed (ROCE) as a tool for deciding on new store openings, illustrating this using the data in Appendix 2 on one new store proposal. The focus of comments should be on the use of an expected value not on the use of return on capital employed, as this is widely used and understood in the retail industry.

NEW INFORMATION TO SUPPORT CUSTOMER RELATIONSHIP MANAGEMENT AND SALES PROMOTION

Finally, the CEO has proposed to the board that a new information system be introduced. She wishes to spend $100m on creating a loyalty card programme with a data warehouse collecting information from customers' cards regarding their purchases. Her plan is to use this information to target advertising, product range choices and price offers more efficiently than at present.

Required:

Write a report to the board of Flack to:

(i) **Evaluate the performance report of Flack, using the example provided in Appendix 1, as requested by the board.** (14 marks)

(ii) **Evaluate the introduction of the two measures of revenue and operating profit per square metre, as requested by the CEO.** (8 marks)

(iii) **Assess the proposal to change the divisional performance measure.** The new measure has to change to reflect the CSF

Note: No calculations of the current values are required. (8 marks)

(iv) **Calculate the expected return on capital employed for the new store and assess the use of this tool for decision-making at Flack.** (8 marks)

What specific aspects of business performance need to be improved?

(v) **Explain how the proposed new information system can help to improve business performance at Flack.**

Refer to the mission (3rd paragrapgh) (8 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

What is the structure of the "how" answer?
- Identify what is required to improve/solve the problem
- Assess the new system's features
- Link the system's features to the requirements
- Evaluate the potential outcome using
i) "would" and "could" instead of "will" to show conditional, when discussing potential outcomes contingent on management action (the situational enablers);
ii) use "will" when discussing outcomes inherent in the system - its design capabilities - independent of management action. The design capabilities (inherent enablers) are what the system is designed to do.

(50 marks)

Appendix 1 Board's performance report

Flack Year to 31 March

	Metro Budget 2016 $'000	Metro Actual 2016 $'000	Hyper Budget 2016 $'000	Hyper Actual 2016 $'000	Flack Budget 2016 $'000	Flack Actual 2016 $'000	Flack Actual 2015 $'000	Change on PY
Revenue								
Food	1,093,521	1,104,567	5,431,277	5,542,119	6,524,798	6,646,686	6,513,752	2·04%
Clothes	765,465	773,197	3,801,894	3,879,483	4,567,359	4,652,680	4,536,363	2·56%
Other goods	328,056	331,370	1,629,383	1,662,636	1,957,439	1,994,006	1,964,096	1·52%
Total	2,187,042	2,209,134	10,862,554	11,084,238	13,049,596	13,293,372	13,014,211	2·15%
Cost of sales	1,994,583	2,014,730	10,199,937	10,408,099	12,194,520	12,422,829	12,186,796	1·94%
Gross profit	192,459	194,404	662,617	676,139	855,076	870,543	827,415	5·21%
Gross margins		8·80%		6·10%		6·55%		
Other operating costs	34,993	35,346	173,801	177,348	208,794	212,694	208,227	
Operating profit	157,466	159,058	488,816	498,791	646,282	657,849	619,188	6·24%
Operating margins		7·20%		4·50%		4·95%		
Finance costs					76,993	79,760	75,482	
Group profit before tax					**569,289**	**578,089**	**543,706**	6·32%
Tax					142,322	144,522	135,926	
Group profit after tax					**426,967**	**433,567**	**407,780**	6·32%
Total shareholder return						3·10%	2·70%	
Return on capital employed	13·2%	13·3%	13·2%	13·5%	13·2%	13·4%	13·2%	
Number of stores		533		208				
Total square metres		161,227		841,967				

Appendix 2 New store

The following data has been forecast by the marketing department for the new store based on Flack's existing experience. There are three possible scenarios:

Demand scenarios	Low	Medium	High
Revenue ($m)	12·5	13	13·5
Probability (%)	20	50	30
Forecast operating margin (%)	4·1	4·3	4·4

The new store is expected to cost $4·2m to buy, fit out and stock. The target ROCE for Flack has been set at 13%.

Section B – TWO questions ONLY to be attempted

2 Cuthbert is based in Ceeland and manufactures jackets for use in very cold environments by mountaineers and skiers. It also supplies the armed forces in several countries with variants of existing products, customised by the use of different coloured fabrics, labels and special fastenings for carrying equipment. Cuthbert incurs high costs on design and advertising in order to maintain the reputation of the brand.

Each jacket is made up of different shaped pieces of fabric called 'components'. These components are purchased by Cuthbert from an external supplier. The external supplier is responsible for ensuring the quality of the components and the number of purchased components found to be defective is negligible. The cost of the components forms 80% of the direct cost of each jacket, and the prices charged by Cuthbert's supplier for the components are the lowest in the industry. There are three stages to the production process of each jacket, which are each located in different parts of the factory:

Stage 1 – Sewing
The fabric components are sewn together by a machinist. Any manufacturing defects occurring after sewing has begun cannot be rectified, and finished garments found to be defective are heavily discounted, or in the case of bespoke variants, destroyed.

Stage 2 – Assembly
The garments are filled with insulating material and sewn together for the final time.

Stage 3 – Finishing
Labels, fastenings and zips are sewn to the finished garments. Though the process for attaching each of these is similar, machinists prefer to work only on labels, fastenings or zips to maximise the quantity which they can sew each hour.

Jackets are produced in batches of a particular style in a range of sizes. Throughout production, the components required for each batch of jackets are accompanied by a paper batch card which records the production processes which each batch has undergone. The batch cards are input into a production spreadsheet so that the stage of completion of each batch can be monitored and the position of each batch in the factory is recorded.

There are 60 machinists working in the sewing department, and 40 in each of the assembly and finishing departments. All the machinists are managed by 10 supervisors whose duties include updating the batch cards for work done and inputting this into a spreadsheet, as well as checking the quality of work done by machinists. The supervisors report to the factory manager, who has overall responsibility for the production process.

Machinists are paid an hourly wage and a bonus according to how many items they sew each week, which usually comprises 60% of their total weekly wages.

Supervisors receive an hourly wage and a bonus according to how many items their team sews each week. The factory manager receives the same monthly salary regardless of production output. All employees are awarded a 5% annual bonus if Cuthbert achieves its budgeted net profit for the year.

Recently, a large emergency order of jackets for the Ceeland army was cancelled by the customer as it was not delivered on time due to the following quality problems and other issues in the production process:

- A supervisor had forgotten to input several batch cards and as a result batches of fabric components were lost in the factory and replacements had to be purchased.
- There were machinists available to sew buttons onto the jackets, but there was only one machinist available who had been trained to sew zips. This caused further delay to production of the batch.
- When the quality of the jackets was checked prior to despatch, many of them were found to be sewn incorrectly as the work had been rushed. By this time the agreed delivery date had already passed, and it was too late to produce a replacement batch.

This was the latest in a series of problems in production at Cuthbert, and the directors have decided to use business process reengineering (BPR) in order to radically change the production process.

The proposal being considered as an application of BPR is the adoption of 'team working' in the factory, the three main elements of which are as follows:

1. Production lines would re-organise into teams, where **all** operations on a particular product type are performed in one place by a dedicated team of machinists.
2. Each team of machinists would be responsible for the quality of the finished jacket, and for the first time, machinists would be encouraged to bring about improvements in the production process. There would no longer be the need to employ supervisors and the existing supervisors would join the teams of machinists.
3. The number of batches in production would be automatically tracked by the use of radio frequency identification (RFID) tags attached to each jacket. This would eliminate the need for paper batch cards, which are currently input into a spreadsheet by the supervisors.

You have been asked as a performance management consultant to advise the board on whether business process reengineering could help Cuthbert overcome the problems in its production process.

Required:

(a) Advise how the proposed use of BPR would influence the operational performance of Cuthbert. (14 marks)

(b) Evaluate the effectiveness of the current reward systems at Cuthbert, and recommend and justify how these systems would need to change if the BPR project goes ahead. (11 marks)

(25 marks)

3 Dibble is formed of two autonomous divisions, Timber and Steel, and manufactures components for use in the construction industry. Dibble has always absorbed production overheads to the cost of each product on the basis of machine hours.

Timber Division

Timber Division manufactures timber frames used to support the roofs of new houses. The timber, which is purchased pre-cut to the correct length, is assembled into the finished frame by a factory worker who fastens the components together. Timber Division manufactures six standard sizes of frame which is sufficient for use in most newly built houses.

Steel Division

Steel Division manufactures steel frames and roof supports for use in small commercial buildings such as shops and restaurants. There is a large range of products, and many customers also specify bespoke designs for short production runs or one-off building projects. Steel is cut and drilled using the division's own programmable computer aided manufacturing machinery (CAM), and is bolted together or welded by hand.

Steel Division's strategy is to produce novel bespoke products at a price comparable to the simpler and more conventional products offered by its competitors. For example, many of Steel Division's customers choose to have steel covered in one of a wide variety of coloured paints and other protective coatings at the end of the production process. This is performed off-site by a subcontractor, after which the product is returned to Steel Division for despatch to the customer. Customers are charged the subcontractor's cost plus a 10% mark up for choosing this option. The board of Steel Division has admitted that this pricing structure may be too simplistic, and that it is unsure of the overall profitability of sales of some groups of products or sectors of the market.

Recently, several customers have complained that incorrectly applied paint has flaked off the steel after only a few months' use. More seriously, a fast food restaurant has commenced litigation with Dibble after it had to close for a week while steel roof frames supplied by Steel Division were repainted. Following this, the production manager has proposed increasing the number of staff inspecting the quality of coating on the frames, and purchasing expensive imaging machinery to make inspection more efficient.

quality costs

The chief executive officer (CEO) at Dibble has approached you as a performance management expert for your advice. 'At a conference recently', he told you, 'I watched a presentation by a CEO at a similar business to ours talking about the advantages and disadvantages of using activity based costing (ABC) and how over several years the adoption of activity based management (ABM) had helped them to improve both strategic and operational performance.'

'I don't want you to do any detailed calculations at this stage, but I'd like to know more about ABC and ABM, and know whether they would be useful for Dibble', he said.

You are provided with extracts of the most recent management accounts for Timber and Steel Divisions:

Division ($000)	**Timber**	**Steel**
Revenue	25,815	20,605
Materials	12,000	10,100
Direct labour	4,500	850
Subcontract costs	75	650
Analysis of production overheads ($000)		
Set up time for CAM machinery	–	575
Machining time	–	2,777
Storage of goods awaiting or returned from subcontractors	120	395
Transfer of goods to and from subcontractors	50	300
Inspection and testing	35	425
Total production overheads	205	4,472
Gross profit	9,035	4,533

Required:

(a) (i) Advise the CEO how activity based costing could be implemented. (4 marks)

(ii) Assess whether it may be more appropriate to use activity based costing in Timber and Steel Divisions than the costing basis currently used. (8 marks)

(b) Advise the CEO how activity based management could be used to improve business performance in Dibble. (13 marks)

(25 marks)

4 Universities in Teeland have three stated objectives:

1. To improve the overall standard of education of citizens in Teeland.
2. To engage in high quality academic research.
3. To provide well-qualified university graduates to meet the needs of the graduate jobs market in Teeland.

Each university is funded by a fixed sum of money from the Teeland government according to the number of students studying there. In addition, universities receive extra funds from the government and also from other organisations, such as large businesses and charities. These funds are used to support academic research.

Following the onset of an economic recession, the Teeland government has stated its intention to reduce spending on publicly funded services such as the universities. One senior politician, following his recent visit to neighbouring Veeland, was controversially quoted as saying:

'The universities in Veeland offer much better value for money for the citizens there compared to our universities here in Teeland. There are 25 students for each member of academic staff in Veeland, whereas in Teeland, the average number is 16, and yet, the standard of education of citizens is much higher in Veeland. The Veeland government sets targets for many aspects of the services delivered by all the universities in Veeland. Furthermore, league tables of the performance of individual universities are published on the internet, and university leaders are given bonuses if their university falls within the top quarter of the league table. In Veeland, the system of performance measurement of the universities is considered so important that there is a special government department of 150 staff just to measure it.'

He went on to add, 'I want to see a similar system of league tables, targets and bonuses for university leaders being introduced here in Teeland. To appear near the top of the league tables, I think we should expect each university to increase the number of graduates entering graduate jobs by at least 5% each year. I would also like to see other steps taken to increase value for money, such as reducing the number of academic staff in each university and reducing the salary of newly recruited academic staff.'

You have been asked to advise the Teeland government on the measurement of value for money of the universities and the proposed introduction of league tables for comparing their performance. Appendix A contains details and existing performance data relating to four of the best known universities in Teeland.

Northcity University is famous for its high teaching standards and outstanding academic research in all subjects. As such, it attracts the most able students from all parts of the world to study there.

Southcity University is a large university in the capital city of Teeland and offers courses in a wide range of subjects, though most of the funding it receives for academic research is for science and technology in which it is particularly successful.

Eastcity University is a small university specialising in the teaching of arts and humanities subjects such as history and geography.

Westcity University currently offers less strict entry standards to students to attract students from more diverse backgrounds, who may not normally have the opportunity of a university education.

Appendix A

Existing university performance data

	North	South	East	West
Number of students	17,600	30,400	5,200	11,200
Number of academic staff	1,750	2,400	485	625
Entry requirements[1]	100	77	72	48
Total annual payroll cost of academic staff	$109m	$149m	$20m	$37m
Graduate jobs filled each year[2]	4,180	6,555	1,154	1,750
Funds received for academic research	$491m	$474m	$26m	$14m
TSOR survey rating[3]	84%	76%	73%	90%
Position in league table[4]	1	11	14	21

Key to performance data

[1] – Entry requirements represent students' average attainment in examinations prior to entering university. The entry requirement of the highest ranking university is scored as 100, with the score of all other universities being in proportion to that score.

[2] – The number of graduates each year who go on to further study or who begin jobs normally undertaken by university graduates. In Teeland, students attend university for an average of 3·2 years.

[3] – The TSOR (Teeland students overall satisfaction rating) survey is undertaken by the Teeland government to assess students' overall satisfaction with the standard of teaching, the social and support aspects of university life and their optimism for their own future job prospects.

[4] – The education department of the Teeland government has produced a provisional league table ranking the overall performance of each of the 45 universities in Teeland, with 1 being the highest ranking university. This has been compiled using a number of performance measures, weighted according to what the government believes are the most important of these measures.

Required:

(a) Advise the Teeland government how it could assess the value for money of the universities in Teeland, using the performance data in Appendix A. (12 marks)

(b) Assess the potential benefits of league tables for improving the performance of universities in Teeland and discuss the problems of implementing the proposal to introduce league tables. (13 marks)

(25 marks)

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Professional Level – Options Module

Advanced Performance Management

September/December 2016 – Sample Questions

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 12 and 13.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Paper P5

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Monza Pharma (Monza) is a developer and manufacturer of medical drugs, based in Beeland but selling its products all over the world. As a listed company, the overall objective of the company is to maximise the return to shareholders and it has used return on capital employed (ROCE) as its performance measure for this objective. There has often been comment at board meetings that it is good to have one, easily-understood measure for consideration.

The company has three divisions:

– the drug development division develops new drug compounds, taking these through the regulatory systems of different countries until they are approved for sale;
– the manufacturing division then makes these compounds;
– the sales division then sells them.

Monza's share price has underperformed compared to the market and the health sector in the last two years. The chief executive officer (CEO) has identified that its current performance measures are too narrow and is implementing a balanced scorecard (BSC) approach to address this problem. The current performance measures are:

– Return on capital employed
– Average cost to develop a new drug
– Revenue growth

The CEO engaged a well-known consulting firm who recommended the use of a BSC. The consultants began by agreeing with the board of Monza that the objective for the organisation's medium-term strategy was as follows:

– Create shareholder value by:

Innovating in drug development
Efficiency in drug manufacturing
Success in selling their products

The consulting firm has presented an interim report with the following proposed performance measures:

– Financial:	ROCE
– Customer:	Revenue growth
– Internal business process:	Average cost to develop a new drug
– Learning and growth:	Training days provided for employees each year

The CEO and the lead consultant have had a disagreement about the quality and cost of this work and as a result the consultants have been dismissed. The CEO has commented that the proposed measures lack insight into the business and do not appear to tackle issues at strategic, tactical and operational levels.

The CEO has decided to take this work in-house and has asked you as the performance management expert in the finance department to assist him by writing a report to the board to cover a number of areas. First, following the disagreement with the consultants, the CEO is worried that the consultants may not have been clear about the problems of using the BSC in their rush to persuade Monza to use their services.

Second, he wants you to evaluate the choice of performance measures currently used by Monza and those proposed by the consulting firm.

Third, there has been a debate at board level about how ROCE should be calculated. The marketing director stated that she was not sure what profit figure (of at least four which were available) should be used and why, especially given the large variation in result which this gives. She also wondered what the effect would be of using equity rather than all capital to calculate a return on investment. Some basic data has been provided in Appendix 1 to assist you in quantifying and evaluating these possibilities.

In addition to these concerns, the board is considering introducing a total quality management approach within Monza. Obviously, quality of output is critical in such a heavily regulated industry where the products can be a matter of life and death. There has been discussion about testing this idea within the manufacturing division. The CEO wants to understand, first, the costs associated with quality issues within that division. To aid your analysis, he has supplied some detailed information in Appendix 2. Next, the board requires an outline evaluation of how a total quality management (TQM) approach would fit within the manufacturing division.

Finally, the drug development divisional managers have been lobbying for a new information system which will assist their research chemists in identifying new drug compounds for testing. The new system will need to be capable of performing calculations and simulations which require high computational power and memory but will also need to have access to external data sources so that these scientists can keep up with developments in the field and identify new opportunities. The CEO is worried about the cost of such a new system and wants to know how it would fit within the existing lean management approach within that division.

Required:

Write a report to the board of Monza to:

(i) Assess the problems of using a balanced scorecard at Monza. (8 marks)

(ii) Evaluate the choice of the current performance measures and the consulting firm's proposed performance measures for Monza. (12 marks)

(iii) Evaluate the effect of choosing different profit and capital measurements for different measures of return on investment and recommend a suitable approach for Monza. (11 marks)

(iv) Analyse the current quality costs in the manufacturing division and then briefly discuss how implementation of total quality management would affect the division. (10 marks)

(v) Briefly advise on how the drug development division can aim to make the new information system 'lean'. (5 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Financial data for Monza for the most recent accounting period

	$m
Revenue	8,001
Costs	2,460
Gross profit	5,541
Other costs	3,248
Restructuring costs	482
Operating profit	1,811
Finance costs	266
Profit before tax	1,545
Tax	419
Profit after tax	1,126

Capital structure from the statement of financial position

Shareholders' equity	1,161
Long-term debt	8,739

Note: Restructuring costs relate to a major project which completed during the period.

Appendix 2

Cost information for the manufacturing division for the most recent accounting period

1. Batches rejected at factory valued at $17m which have a scrap value of $4m.
2. Training of factory staff which cost $8m.
3. Regulatory fines costing $5m (due to drug compounds being outside the specified range of mix of chemical ingredients).
4. Discounts given following customer complaints due to late delivery costing $22m.
5. Factory product testing department cost $12m.
6. Cost of raw materials was $1,008m.

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Question 2 begins on page 6.

Section B – TWO questions ONLY to be attempted

2 Framiltone is a food manufacturer based in Ceeland, whose objective is to maximise shareholder wealth. Framiltone has two divisions: Dairy division and Luxury division. Framiltone began manufacturing dairy foods 20 years ago and Dairy division, representing 60% of total revenue, is still the larger of Framiltone's two divisions.

Dairy division

This division manufactures cheeses and milk-based desserts. The market in Ceeland for these products is saturated, with little opportunity for growth. Dairy division has, however, agreed profitable fixed price agreements to supply all the major supermarket chains in Ceeland for the next three years. The division has also agreed long-term fixed volume and price contracts with suppliers of milk, which is by far the most significant raw material used by the division.

In contrast to Luxury division, Dairy division does not operate its own fleet of delivery vehicles, but instead subcontracts this to a third party distribution company. The terms of the contract provide that the distribution company can pass on some increases in fuel costs to Framiltone. These increases are capped at 0·5% annually and are agreed prior to the finalisation of each year's budget.

Production volumes have shown less than 0·5% growth over the last five years. Dairy division managers have invested in modern production plant and its production is known to be the most efficient and consistent in the industry.

Luxury division

This division was set up two years ago to provide an opportunity for growth which is absent from the dairy foods sector. Luxury division produces high quality foods using unusual, rare and expensive ingredients, many of which are imported from neighbouring Veeland. The product range changes frequently according to consumer tastes and the availability and price of ingredients. All Luxury division's products are distributed using its own fleet of delivery vehicles.

Since the company began, Framiltone has used a traditional incremental budgeting process. Annual budgets for each division are set by the company's head office after some consultation with divisional managers, who currently have little experience of setting their own budgets. Performance of each division, and of divisional managers, is appraised against these budgets. For many years, Framiltone managed to achieve the budgets set, but last year managers at Luxury division complained that they were unable to achieve their budget due to factors beyond their control. A wet growing season in Veeland had reduced the harvest of key ingredients in Luxury's products, significantly increasing their cost. As a result, revenue and gross margins fell sharply and the division failed to achieve its operating profit target for the year.

Framiltone has just appointed a new CEO at the end of Q1 of the current year. He has called you as a performance management expert for your advice.

'In my last job in the retail fashion industry, we used rolling budgets, where the annual budget was updated to reflect the results of every quarter's trading. That gives a more realistic target, providing a better basis on which to appraise divisional performance. Do you think we should use a similar system for all divisions at Framiltone?', he asked.

You have obtained the current year budget for Luxury division and the division's Q1 actual trading results (Appendix 1) and notes outlining expectations of divisional key costs and revenues for the rest of the year (Appendix 2).

Appendix 1

Luxury division current year budget

C$'000	Q1	Q2	Q3	Q4	Total	Q1 Actual
Revenue	10,000	12,000	11,000	7,000	40,000	10,400
Cost of sales	(6,100)	(7,120)	(6,460)	(4,720)	(24,400)	(6,240)
Gross profit	3,900	4,880	4,540	2,280	15,600	4,160
Distribution costs	(600)	(720)	(660)	(420)	(2,400)	(624)
Administration costs	(2,300)	(2,300)	(2,300)	(2,300)	(9,200)	(2,296)
Operating profit	1,000	1,860	1,580	(440)	4,000	1,240

Appendix 2

Expected key costs and revenues for remainder of the current year

1. Sales volumes are expected to be 2% higher each quarter than forecast in the current budget.
2. Average selling price per unit is expected to increase by 1·5% from the beginning of Q3.
3. The exchange rate between the Ceeland Dollar (C$) and the Veeland Dollar (V$) is predicted to change at the beginning of Q2 to C$1·00 buys V$1·50. For several years up to the end of Q1, C$1·00 has been equivalent to V$1·40 and this exchange rate has been used when producing the current year budget. Food produced in the Luxury division is despatched immediately upon production and Framiltone holds minimal inventory. The cost of ingredients imported from Veeland represents 50% of the division's cost of sales and suppliers invoice goods in V$.
4. The rate of tax levied by the Ceeland government on the cost of fuel which Luxury uses to power its fleet of delivery vehicles is due to increase from 60%, which it has been for many years, to 63% at the beginning of quarter 3. 70% of the division's distribution costs are represented by the cost of fuel for delivery vehicles.
5. The CEO has initiated a programme of overhead cost reductions and savings of 2·5% from the budgeted administration costs are expected from the beginning of Q2. Q3 administration costs are expected to be a further 2·5% lower than in Q2, with a further 2·5% saving in Q4 over the Q3 costs.

Required:

(a) Using the data in the appendices, recalculate the current year budget to the end of the current year and briefly comment on the overall impact of this on the expected operating profit for the year. (12 marks)

(b) Evaluate whether a move from traditional incremental budgeting to a system of rolling budgets would be appropriate for Dairy and Luxury divisions. (13 marks)

(25 marks)

3 Alflonnso is a large producer of industrial chemicals, with divisions in 25 countries. The agrochemicals division produces a chemical pesticide, known internally as 'ALF', to control pests in a crop which is of worldwide significance, economically and for food production. Pesticides such as ALF only remain effective for a limited time, after which pests become resistant to them and a replacement product needs to be found. A scientific study has shown that the current variant, ALF6, is becoming ineffective in controlling pests and in some places, it has accumulated in the soil to levels which may significantly reduce crop yields in the future if it is continued to be used. The agrochemicals division is evaluating three new products to find one replacement for ALF6.

ALF7

ALF7 is produced by a small chemical modification to the existing product and requires little research and development (R&D) resources to develop it. As it is closely related to the current variant, it is only expected to remain effective, and in use, for three years. It is unclear whether ALF7 will accumulate in the soil in the same way as ALF6 does.

Red

Red is a new type of pesticide which will incur large amounts of R&D expenditure to develop a commercial version. In addition, the agrochemicals division will have to fund a long-term scientific study into the effect of Red on the environment at a cost of $4m for each of the 15 years that the product will be in use, and for five years afterwards.

Production of Red generates large amounts of toxic by-products which must be treated in the division's waste treatment facility. The production plant used to produce Red must also be decommissioned for cleaning, at an estimated cost of $45m, at the end of the life of the product.

Green

Green is a form of a naturally occurring chemical, thought to be safe and not to accumulate in the environment. It is expected to remain in use for eight years. Production of Green requires relatively large amounts of energy. Significant R&D expenditure is also needed to produce an effective version, as Green remains active in the environment for only a short time. Because of this, Green is unsuitable for use in climates where crop production is already difficult.

The Global Food Production Organisation (GFPO) is a non-governmental organisation which funds new ways to increase global crop production, especially in regions where food for human consumption is already scarce. The GFPO has agreed to make a significant contribution to the R&D costs of producing a replacement for ALF6, but will be unwilling to contribute to the R&D costs for Green because it cannot be used in every region. Similarly, a number of governments, in countries where Alflonnso has licences to operate its other chemical businesses, have warned the company of the potential public disapproval should the agrochemical division choose to replace ALF6 with a product unsuitable for use in areas where food production is scarce.

The newly appointed chief financial officer (CFO) for the agrochemicals division has asked you as a performance management consultant for your advice. 'One of our analysts in the agrochemicals division', she said, 'has produced a single period statement of profit or loss (Appendix 1) to show the profitability of the three new products we are considering as replacements for ALF6.'

'I think the analyst's calculations are too simplistic', she continued. 'The costs of the waste treatment are apportioned based on the expected revenue of the new products. This is consistent with Alflonnso's traditional group accounting policy, but I don't think this gives an accurate costing for the new products. Also, I watched a presentation recently about the use of lifecycle costing and also how environmental management accounting (EMA) can help reduce costs in the categories of conventional, contingent and reputation costs and as a result improve performance.'

Appendix 1

Single period statement of profit or loss for the replacement products for ALF6[1]

	ALF7	Red	Green
Revenue per litre ($)	8·00	13·00	11·00
Quantity sold and produced (million litres)	100	85	75
	$m	$m	$m
Revenue	800	1,105	825
Direct material, labour and energy	(524)	(724)	(565)
Factory overheads	(80)	(122)	(74)
Environmental study	–	(4)	–
Waste treatment of toxic by-products[2]	(54)	(63)	(71)
Net profit[3]	142	192	115
Average profit per litre ($)	1·42	2·26	1·53

Notes to the statement of profit or loss:

[1] – All figures exclude the contribution from the GFPO towards the R&D costs of the new product.

[2] – Waste treatment is an overhead cost incurred in the division's waste treatment facility. Currently, costs of waste treatment are apportioned to products according to expected revenue. The total annual cost of the waste treatment facility, which processes a total of 55m litres of waste each year, is $300m. Any waste treatment capacity not used by any of the three new products can be used to treat waste created during the manufacture of other products in the division. One litre of waste by-product is produced for every 12·5 litres of ALF7 produced, for every 2·5 litres of Red produced and for every 100 litres of Green.

[3] – R&D costs are incurred in the division's R&D facility. In accordance with the group's accounting policy, R&D expenditure is not currently apportioned to individual products. The annual cost of the R&D facility is $60m and has a total of 30,400 R&D hours available, of which 800 hours would be required to develop ALF7, 8,500 hours to develop Red, and 4,000 hours to develop Green.

Required:

(a) (i) Explain how activity based costing may help the agrochemicals division in assessing the profitability of the three new products. (5 marks)

(ii) Using activity based costing, and excluding the value of the grant from the GFPO, calculate the total R&D costs and waste treatment costs of the three new products. (3 marks)

(b) Using your answers from part (a) (ii), calculate the average net profit per litre of each of the three alternative new products over their expected lifecycles and comment on the results. (9 marks)

(c) Advise how environmental management accounting (EMA) may help improve the performance of the agrochemicals division. (8 marks)

(25 marks)

4 Laudan Advertising Agency (LAA) is based in Geeland and has three autonomous subsidiaries: A, B and C. All three subsidiaries are profit centres and LAA seeks to maximise the long-term wealth of its shareholders. A is based in Geeland, while both B and C are located in other parts of the world. LAA is a highly respected advertising agency, which in the last five years has created advertising campaigns for 25 of the world's top 100 most recognised brands. LAA's four key objectives published on its website are:

– To delight our clients by the quality of our work
– Provide excellent value for money to our clients
– Give our clients access to specialist and local knowledge
– Ensure our clients return to us time after time

There are three main functions within LAA:

1. Campaign management, which involves researching and understanding clients' requirements and budgets and designing a suitable advertising campaign for them.

2. Creative design, which is where the visual appearance of the advert and graphics are created.

3. Media buying, which negotiates prices with, and buys advertising time and space from, magazine and newspaper publishers, internet search engines and TV companies.

Each subsidiary has its own department for campaign management and for media buying. Only A, however, has a creative design department.

The directors at LAA believe that without visually appealing design, any advertising campaign is unlikely to be successful and meet the expectations of the client. They identified the importance of being able to produce high quality creative design as a critical success factor for the business. Two years ago, they decided to concentrate all of LAA's creative design at a 'centre of design excellence' within A. The intention was to improve the quality of creative design within the business by giving staff access to the latest design technology, and by attracting the most talented designers to work there.

To encourage the three subsidiaries to use the internal creative design department within A, instead of external third party design agencies, the directors created a new additional key performance indicator on which to appraise the performance of all subsidiaries and of subsidiary managers:

– All subsidiaries, including A, must purchase at least 90% of creative design work internally from A.

Prior to the introduction of this performance indicator, 40% of creative design work in each of the three subsidiaries was purchased from external design agencies.

The directors of LAA have become concerned that the introduction of the new key performance indicator may be causing managers to operate in ways which are not helping to meet LAA's stated objectives. They have asked for comments from subsidiary managers (Appendix 1) about whether they have met the 90% target in the most recent period and if not, to explain why this is.

Appendix 1

Subsidiary managers' comments on achievement of KPI for 90% creative design work purchased internally

Subsidiary A
'A purchased 86% of design work from our internal design department in the period. It would have been almost 100%, but we won a large order for a new client who operates in a specialised industry of which we have no experience. As a result, we had to use the services of a specialised external design agency, which was much more expensive than using our in-house team.'

Subsidiary B
'B purchased 62% of design work internally in the period. Though the quality of the designs is very good, they were more appealing to consumers in Geeland than here in Veeland, where B operates. The internal design department did not seem to understand consumer preferences in Veeland, and many of their designs were rejected by a key client of ours. As a result, an important advertising campaign missed key deadlines, by which time the internal design department had insufficient capacity to finish the work and we had to use an external agency.

'As there is no formal transfer pricing policy in place at LAA, the basis of the transfer price charged by the internal design department is also unclear to us. It appears to be based on full cost of the design work, including apportioned overheads and an allowance for bad debts and marketing expenses, plus a very substantial mark up. We have spent a long time trying to negotiate this price with A, which is much more expensive than external designers. Furthermore, we are currently being investigated by the tax authorities here in Veeland who have indicated that the prices charged by A for design do seem well in excess of market rates.'

Subsidiary C

'C purchased 91% of design work from the internal design department in the period, as well as achieving all our other performance targets. A key client of ours ran a major advertising campaign during the period. We used the internal design department for the first time for this campaign, instead of the usual external agency that we have used in the past for work for this client. The client was very unhappy with the extra cost that this incurred, as the number of design hours and the hourly rate was much higher than for previous campaigns. The internal design department refused to reduce the price after long negotiations and we had to give a large discount to the client before they would settle our invoice. As a result, our gross profit margin for the period was significantly reduced.

'It would be much fairer if the transfer price charged by A was based on the market price of the services provided.'

Required:

(a) Evaluate how the following help LAA to manage performance in order to achieve its stated objectives:

(i) identifying the critical success factor of producing high quality creative design, and
(ii) setting the key performance indicator for the requirement to purchase 90% of design work internally.
(8 marks)

(b) Assess the need for a formal transfer pricing policy at LAA. (9 marks)

(c) Advise the directors whether LAA should use a market value transfer price as suggested by the manager of subsidiary C. (8 marks)

(25 marks)

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Professional Level – Options Module

Advanced Performance Management

March/June 2017 – Sample Questions

Paper P5

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 10 and 11.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Dargeboard Services (DS), a listed company, provides facilities management (FM) services where it manages such activities as cleaning, security, catering and building services on behalf of its clients. Clients can outsource to DS a single activity or often outsource all of these aspects in a full service contract.

The mission of DS is 'to give the shareholders maintainable, profitable growth by developing the best talent to provide world-class services with maximum efficiency.'

The board have asked the chief executive officer (CEO) to review the effectiveness of Dargeboard's systems for performance measurement and management. She has turned to you to begin this process by considering the strategic performance dashboard of DS. She has supplied the most recent example in Appendix 1.

She wants a report to the board which will cover three aspects of strategic performance reporting at DS. First, it should address whether the current set of key performance indicators (KPIs) measure the achievement of the mission by showing how each one links to all or part of the mission. She does not want suggestions of new indicators. Second, taking each of the current indicators in turn she wants the assumptions underlying the calculation of the indicators examined. There has been a suggestion made in the press that DS is producing a biased set of results aimed to mislead the markets. This would then artificially boost the share price and so boost the value of the senior management's share holdings. Third, the report should evaluate the other presentational aspects of the dashboard against best practice.

The idea of employee share ownership has always been at the heart of DS' remuneration schemes. Its aim is to support an entrepreneurial culture and is a key differentiator in the market for new employees. The current reward system grants shares based on the appraisal of the individual by the line manager against vague categories such as leadership and entrepreneurship. The results of this scheme have been that only about 5% of staff received their maximum possible bonus in previous years and half of them received no bonus at all. Increasingly, this has led to the staff ignoring the reward scheme and describing it as 'only for the bosses' favourite people'.

In response to this, the board have been discussing methods of analysing and improving the rewards system at DS. One non-executive director suggested using Fitzgerald and Moon's building block model. The CEO was asked to consider this as a project separate from the issues of performance measurement mentioned above. She will select suitable indicators from the dimensions but currently needs you to explain to the board what is meant by results and determinants in this context and how the dimensions link to standards and targets. Finally, she believes that there are two types of reward scheme which might suit DS and wants an evaluation of their relative strengths and weaknesses. The scheme details are given in Appendix 2.

Required:

Write a report to the board to:

(i) Evaluate the links between the current key performance indicators at DS in Appendix 1 and its mission. (8 marks)

(ii) Assess the assumptions and definitions used in the calculation of the current set of key performance indicators in Appendix 1. (12 marks)

(iii) Evaluate the other aspects of reporting in the DS performance dashboard given at Appendix 1. (8 marks)

(iv) Explain how the building block model works as required by the CEO. (6 marks)

(v) Assess the two reward schemes given in Appendix 2. (12 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Dargeboard Services: Strategic performance dashboard

Year to 31 December 2016

	Cleaning	Security	Catering	Building services	Full service	Total	Total 2015
Operating profit margin	6·5%	6·4%	6·5%	4·9%	5·9%	5·9%	5·8%
Secured revenue	76%	85%	92%	88%	93%	88%	87%
Management retention	86%	74%	87%	82%	89%	85%	87%
Order book ($m)	1,160	875	357	1,553	3,359	7,304	6,807
Organic revenue growth	7·1%	4·3%	5·0%	8·1%	7·9%	7·2%	4·6%
ROCE						17·2%	16%

KPI definitions and notes

1. Cleaning, security, catering and building services headings are for single service contracts.
2. No commentary is provided as the CEO talks the board through the dashboard at each board meeting.
3. Secured revenue is long-term recurring revenue. This is the percentage of budgeted revenue which is already contracted. The budget is often not completed until well into the year as it is a complex process. In 2016, the original budget showed revenue of $1,565m with the final budget signed off at the end of Q1 showing $1,460m. The secured (contracted) revenue for the period was $1,285m. The accounts show a year end revenue of $1,542m.
4. Management retention is the percentage of managers who were still employed throughout the whole year. The figure only includes those employees on full-time contracts (about 65% of all managers).
5. Order book is the total cash value of future contracted revenue. DS has contracts which run up to 10 years into the future.
6. Operating profit margin. This excludes exceptional items such as the reorganisation of the catering business which cost $55m in 2016, where revenue was $245m.
7. Organic revenue growth is calculated by using the total revenue figure as reported in the accounts. It includes net acquisitions which brought in revenue of $48m in 2016.
8. Return on capital employed (ROCE). Capital employed is total assets less current liabilities from the statement of financial position.

Appendix 2

The CEO is considering two schemes, one based on the current scheme and a new scheme.

Scheme 1 (based on the current scheme)

The reward system grants shares in DS based on the appraisal of the individual by the line manager against vague categories (leadership and entrepreneurship). The line managers have been informed that their bonus will in turn be partly dependent on how well they perform this appraisal. The expectation will be that as a result, 20% of staff will receive their maximum possible bonus and 20% will receive no bonus.

Scheme 2 (the new one)

Under scheme 2, employee targets are to be derived from the strategic indicators depending on the employee's area of responsibility. The senior management (with help from line management where appropriate) will cascade down the strategic indicators to the relevant operational or tactical level for that employee.

There will be five targets set by senior and line management in consultation and the employee will then get up to 50% on top of their basic salary as a bonus (10 percentage points for each of the targets achieved).

Section B – TWO questions ONLY to be attempted

2 Pitlane Electronic Components (Pitlane) manufactures components for use in the electricity distribution network in Deeland. Demand from Pitlane's biggest customer, to replace identical but worn out components, has been constant for many years. Pitlane has recently renewed an exclusive long-term supply agreement with this customer, who has always agreed to buy the components for their total standard cost plus a fixed profit margin of 15%. Variances between standard and actual costs of the components are negligible. Pitlane runs several production lines in two factories located in different areas of Deeland. The factories' layout is poorly designed and the production process requires components to be transported around and between the factories.

The Deeland government wants to encourage renewable electricity generation. It is offering a three-year subsidy scheme, beginning in 2018, for consumers to have solar panels installed on the roofs of their homes. As an added incentive, businesses will be exempt from tax on profits made on the sale of solar panels and related components.

To take advantage of this scheme, Pitlane has built a prototype of a new electrical component, known as the 'Booster', which increases the output from domestic solar panels. The Booster will be sold to installers of solar panels and not directly to consumers. Pitlane's marketing department has estimated market data for the duration of the scheme based on a similar scheme in Veeland (Appendix 1). As a result of its products being unchanged for many years, Pitlane has little recent experience of developing new products and estimating costs and potential revenues from them. It is expected that many competitor products will be launched during the scheme, at the end of which demand is expected to fall greatly, and production of the Booster will discontinue.

Pitlane's shareholders insist that for the Booster project to go ahead, it must meet the financial performance objective of achieving a 15% net profit margin, after all costs, for the duration of the scheme.

The Booster's total fixed costs during the scheme are estimated to be \$10m, including \$2·8m upfront development costs to enable the Booster to communicate the amount of solar energy generated directly to consumers' smartphones via an app. The product development team at Pitlane believes this feature, and the use of highest quality packaging, will allow it to charge 10% more that the average price of its competitors. The marketing team, however, has questioned the overall value of these two features and whether customers would be prepared to pay extra for them, as most of the Deeland population do not yet own smartphones.

Pitlane has estimated the direct costs for the Booster (Appendix 2). The largest direct cost is for the four main sub-components. These are bought in bulk from six different suppliers in Deeland, though all are readily available from suppliers worldwide. The sub-components are fragile. During production of the Booster prototype, many sub-components were found to be damaged during the production process by workers incorrectly assembling them. This resulted in the completed prototype Boosters being scrapped after testing by the quality control department. The manufacturing director is concerned that the incorrect assembly of sub-components by workers may mean that it may not be profitable for Pitlane to start full scale production of Boosters. To counteract these quality problems, Pitlane will employ more highly skilled workers, who are paid around 30% more than most other workers in the business which is accounted for in the cost estimate given in Appendix 2. Pitlane staff have never been encouraged to suggest any ways to improve the manufacturing process.

Pitlane's directors are concerned that the Booster project will not meet the shareholders' financial performance objective. They have asked you, as a consultant experienced in target costing, Kaizen costing and other Japanese business practices, for your advice.

Required:

(a) Calculate the cost gap per unit in each of the three years of the Booster's life, taking into account all estimated costs. (6 marks)

(b) Advise on the extent to which target costing would help Pitlane to achieve the financial performance objective set by the shareholders. (12 marks)

(c) Advise Pitlane how Kaizen costing may be used to help the Booster project achieve the financial performance objective set by the shareholders. (7 marks)

(25 marks)

Appendix 1 – Estimated market data for Booster

	2018	2019	2020
Total market size (units)	600,000	500,000	460,000
Average price of competitors products ($/unit)	180	170	160
Booster market share of total market	10%	15%	20%

Appendix 2 – Estimated unit direct cost of Booster

	$
Sub-components	94
Assembly labour	21
Packaging	10
Distribution	2
Internal transport and handling	7
Total	134

3 Nelson, Jody and Nigel (NJN) operates a warehouse and distribution centre, storing and distributing 5,000 product lines on behalf of its client, an overseas sports equipment manufacturer.

NJN receives goods in shipping containers, which should include a packing list of the items they contain. Sometimes, packing lists are lost in transit and the manufacturer is asked for duplicates. Packing lists are manually input into NJN's warehouse information system (WIS) in batches, usually within 48 hours of the goods being received. Goods are first unpacked into a sorting area, and later moved to wherever there is available warehouse space once the packing list has been input. The WIS records the location within the warehouse where each item is located. The client's customers, who are retail stores, place orders by email, and do not currently have access to real-time inventory levels in NJN's warehouse.

Each morning picking lists are printed in the warehouse office. These lists show the quantities of items to be picked and the items' 12 digit product codes. Staff use these codes to retrieve items from the warehouse locations for despatch to retailers. In 8% of picking lists, at least one item is not in the location or does not have the quantity specified by the WIS. As a result, the item is not despatched, or the wrong item is picked. A small team investigates these discrepancies, using special reports which the warehouse manager extracts from the WIS. The team manually reconciles quantities of missing items in the warehouse to the sports equipment manufacturer's own records of the items which should be in inventory. If missing items cannot be found, the customer is informed via an email that they are unavailable.

The sports equipment manufacturer has a service level agreement with NJN, covering the accuracy of picking and the proportion of customers' orders successfully fulfilled. NJN's performance on these has deteriorated, especially when there is increased seasonal demand for certain products. At these times staff are under increased pressure to pick items quickly, and so picking accuracy deteriorates and absenteeism increases. There have also been accidents where goods have not been safely placed or safely picked from warehouse locations at busy times. These accidents have resulted in minor injuries to some employees.

The sports equipment manufacturer has threatened to end NJN's contract if performance does not improve. In response, NJN has recruited more staff to investigate discrepancies between items physically in warehouse locations, and those shown on the WIS at busy periods. It has also begun a series of cyclical inventory counts where every product line is counted every month to correct the quantities and locations shown on the WIS. NJN has rented an additional nearby warehouse in which to sort incoming items before they are put away.

NJN has hired a management consultant who is an expert in 'lean' principles and the application of these to management information systems. She believes that the WIS is wasteful, not adding value to the business or to its customers, and has suggested that NJN would benefit from the application of lean principles to this system.

She has suggested three proposals:

– that NJN reorganise the warehouse by storing high volume items close to the despatch area,
– shut down the additional warehouse, and
– discontinue the cyclical inventory counts.

To help with the adoption of lean principles in the warehouse reorganisation, the management consultant recommends NJN apply the '5Ss'* of lean principles, and she has suggested performance metrics which can be used to evaluate NJN's progress towards adopting these (Appendix 1).

*Structurise, Systemise, Sanitise, Standardise, Self-discipline.

Required:

(a) Assess whether NJN's existing warehouse information system (WIS) is effective in reducing waste and adding value in NJN's workflow. (10 marks)

(b) Advise whether the three proposals suggested by the management consultant will help to eliminate the different types of waste identified under lean principles. (6 marks)

(c) Evaluate whether the application of each of the 5Ss following the warehouse reorganisation at NJN is adequately measured by the performance metrics in Appendix 1. (9 marks)

(25 marks)

Appendix 1 – Performance measures for 5Ss relating to warehouse reorganisation

1. Warehouse manager's daily assessment of the tidiness of the warehouse on a scale of 1–10.
2. The proportion of inventory not stored in order of its alphabetical description with products with names beginning with 'A' nearest the despatch area and 'Z' furthest away.
3. The number of accidents caused by goods being incorrectly stored or picked.

4 Jenson, Lewis and Webb (JLW) manufactures tubes of acrylic paint for sale to artists and craft shops in Kayland and Seeland. JLW has two divisions, Domestic division and Export division, both based in Kayland. All costs are incurred in Kayland Dollars ($KL). Domestic division is an investment centre and sells only to customers in Kayland. Export division is a profit centre and exports all its products to Seeland, where customers are invoiced in Seeland Pounds (£SL), at prices fixed at the start of the year. The objective of JLW is to maximise shareholder wealth.

At the beginning of the year ended 31 December 2016, the head office at JLW purchased new production machinery for Export division for $KL2·5m, which significantly increased the production efficiency of the division. Managers at Domestic division were considering purchasing a similar machine, but decided to delay the purchase until the beginning of the following financial year. On 30 June 2016 the $KL weakened by 15% against the £SL, after which the exchange rate between the two currencies has remained unchanged.

The managers of the two divisions are currently appraised on the performance of their own divisions, and are awarded a large bonus if the net profit margin of their division exceeds 8% for the year. Extracts from the management accounts for the year ended 31 December 2016 for both divisions are given in Appendix 1. On being told that she would not be receiving a bonus for the financial year, the manager of Export division has commented that she has had difficulty in understanding the bonus calculations for her division as it is not based on traceable profit, which would consider only items which relate directly to the division. She also does not believe it is appropriate that the net profit margin used to appraise her performance is the same as 'that which is used to evaluate the performance of Export division itself'. She has asked for a meeting with the directors to discuss this further.

JLW's directors intend to award divisional managers' bonuses on the basis of net profit margin achieved in 2016 as planned, but have asked you as a performance management consultant for your advice on the comments of the Export division manager in advance of their meeting with her. One director has also suggested that, in future, economic value added (EVA™) may be a good way to evaluate and compare the performance of the two divisions. You are asked for your advice on this too, but you have been specifically asked not to attempt a calculation of EVA™.

Required:

(a) Evaluate the comments of the Export division manager that the net profit margin used to appraise her own performance should be different from that used to appraise the performance of Export division itself. (7 marks)

(b) Recommend, using appropriate calculations, whether the manager of Export division should receive her bonus for the year. (8 marks)

(c) Advise whether the use of economic value added (EVA™) is an appropriate measure of performance of the two divisions. You are not required to perform an EVA™ calculation. (10 marks)

(25 marks)

Appendix 1 – Extracts from management accounts for year ended 31 December 2016

$KL'000	Export division	Domestic division
Revenue[1]	8,000	12,000
Cost of sales	(4,800)	(7,800)
Gross profit	3,200	4,200
Depreciation	(395)	(45)
Allocated head office costs	(360)	(540)
Other overheads[2]	(1,900)	(2,300)
Net profit	545	1,315
Net profit margin on revenue	6·8 %	11·0 %
Capital employed[3]	6,500	8,500

[1] Revenue accrues evenly over the financial year.

[2] Other overheads for Domestic division include the creation of a bad debt provision equivalent to $KL75,000 for a wholesale customer who had financial difficulties during the year, and $KL90,000 for advertising a new range of paints launched at the end of the year.

[3] JLW is financed in equal proportions by debt and equity. The cost of equity is 8% and the after tax cost of debt is 5%.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Professional Level – Options Module

Advanced Performance Management

September/December 2017 – Sample Questions

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 12 and 13.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Paper P5

Think Ahead ACCA

The Association of Chartered Certified Accountants

This is a blank page.
The question paper begins on page 3.

Section A – This ONE question is compulsory and MUST be attempted

1 Thyme Engine Products (Thyme) manufactures jet aircraft engines for the commercial aircraft market. This is a worldwide business although Thyme's production and development are all based in the country of Beeland. Thyme is a listed company and its stated overall objective is to be 'a world-class jet engine manufacturer trusted by our customers to deliver excellent products'. Its promise to its shareholders is that it will maximise their returns. The strategy to achieve this is to use world-class engineering to design engines and high quality production and customer service in order to drive profitable growth.

Thyme's share price has recently suffered as a result of the failure of a new engine design which led to large cash losses and a difficulty in obtaining new financing. There has also been a bribery scandal involving a senior manager and one of its key customers. As a result, a new chief executive officer (CEO) has been employed and she has begun a major review of systems at Thyme.

The first area which the CEO wants to examine is the information given to the board for strategic decision-making in both the planning and controlling of the business. The government of Beeland has been encouraging information sharing between businesses and has recently sponsored awards for management accounting. The winner of the engineering sector has produced a sample dashboard template (with dummy figures) for an annual review and this is given in Appendix 1. The CEO realised that the winner had a very similar overall objective and strategies to Thyme and wants to know what it is about this dashboard that helped it win the award. She does not want a new dashboard for Thyme at this stage but there may be some useful, specific comments to make about the contents of the dashboard given Thyme's recent problems.

The CEO has also recently been reading about integrated reporting and in the light of this review of the dashboard, the CEO has also asked for your views on how integrated reporting might impact on the type of information prepared by the company's management accountants.

As high quality engineering products lie at the heart of Thyme's competitive advantage, there has been a total quality management (TQM) approach to the management of all resources and relationships throughout the business. Thyme currently has a project under consideration to develop a new simple jet engine which would compete in the crowded market for small corporate jets. In order to compete in this market, it is believed that a target costing approach to this new engine would be beneficial. The CEO wants you to calculate the target cost gap for the new engine using the data in Appendix 2. Next, she wants to know how the use of target costing would fit within the existing TQM approach for this new engine.

The new engine project has further raised the profile of quality as a broad issue at Thyme and the CEO wants your advice on the costs associated with quality. She needs to know the cost of each of the four categories of quality costs. She has gathered data in Appendix 3 for this exercise. She is happy that she has identified that prevention costs are complete but is worried that some of the possible costs for the other three categories are missing and needs suggestions of cost areas to be examined to identify these missing items. Finally, she needs advice on the relative importance to Thyme of each of the four categories.

Required:

Write a report to the CEO of Thyme to:

(i) Evaluate why the dashboard in Appendix 1 was award winning, as requested by the CEO. (15 marks)

(ii) Explain broadly the role of the management accountant in providing information for integrated reporting. (6 marks)

(iii) Calculate the target cost gap for the new engine (using the data in Appendix 2) and assess how the use of this target cost will fit within the TQM approach. (12 marks)

(iv) Categorise and calculate the costs of quality at Thyme (given in Appendix 3). Suggest cost areas to be examined as required by the CEO, and evaluate the relative importance of each category to Thyme. (13 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

[P.T.O.

Appendix 1

Award winning performance dashboard

Report for the year to June 2017

	2015	2016	2017	Budget variance 2017	Growth 2016 to 2017	Budget 2018
Financial						
Revenue ($m)	10,652	11,213	11,500	234F	2·6%	11,776
Operating profit margin	16·2%	16·8%	17·2%	0·2 percentage points F	0·4 percentage points	17·2%
EVA™	746	774	815	48F	5·3%	803
Total shareholder return	6·5%	6·8%	11·1%	4·5 percentage points F	4·3 percentage points	7·5%
Design						
Class leading products in:						
fuel efficiency	3	3	3	0		3
noise levels	2	2	3	1F		3
chemical emissions	1	2	3	1F		3
Manufacturing						
Percentage of orders right first time	92·0%	92·4%	93·7%	0·7 percentage points F		93·0%
Delivery						
Deliveries on time	88·0%	89·9%	88·2%	0·2 percentage points F		88·0%
Market share (as percentage of market leader)	33·0%	35·2%	38·1%	1·1 percentage points F		39·0%

Commentary:

The revenue growth of the business remains strong above the average growth for the sector of 1·5%.

EVA™ is positive and growing indicating increased shareholder wealth.

Healthy and continuing growth in market share reflects an increased number of class-leading products and improvements in 'right on time' service to customers.

There have been no major new business risks arising during the period while market volume growth continues as expected.

Appendix 2

New jet engine

		$'000/engine
Competitor price		2,500
Raw materials		200
Subcomponents bought in		600
Skilled labour		625
General labour		125
Production overheads		275
Planned profit margin	15%	

Notes:

1. Design and development has cost $120m and the engine is expected to sell approximately 1,200 units over its lifetime.
2. Sales and marketing costs are expected to be approximately 20% of the selling price.
3. The planned selling price is expected to match the competitor's price with the brand reputation of Thyme providing the competitive edge.

Appendix 3

Quality costs identified in current year

	$m
Repairs and replacements under customer warranties	223
Customer relationship management – complaint handling	56
Performance testing of final assembly	110
Performance testing of subcomponents from suppliers	28
Costs of re-inspection after repairs arising from final assembly testing	95
Training in quality control	11
Maintenance of inspection equipment	36

Notes:

1. The company spent $92m in the year buying higher quality raw materials to use in manufacture.
2. The company's revenue was $11,500m in the current year.

Section B – TWO questions ONLY to be attempted

2 Chicory operates a chain of depots in Deeland, supplying and fitting tyres and other vehicle parts to lorries, buses and agricultural vehicles. Chicory's objective is to maximise shareholder wealth. Due to a slowdown in the Deeland economy, Chicory's recent performance has been weak. An unsuccessful acquisition has also caused cash flow problems and a write-off of goodwill of $24·7m in the year to 30 June 2017.

The board has commissioned a benchmarking exercise to help improve Chicory's performance. This exercise will involve comparison of a range of financial and other operational performance indicators against Fennel, a similar business in Veeland. Fennel has agreed to share some recently available performance data with Chicory as they operate in different countries. The reason Fennel was chosen as a benchmark is that as well as supplying and fitting tyres and parts to heavy vehicles, a large part of Fennel's business involves supplying electricity to charging points to recharge electric cars. Fennel installs and operates the charging points in public places, and users pay Fennel for the electricity they use. The board of Chicory intends to follow a similar business model as the use of electric cars is increasing in Deeland.

The Veeland economy is growing strongly. Electric car use there has increased rapidly in the last two years, encouraged by tax incentives for businesses, like Fennel, to install and operate charging points. The Veeland government has also underwritten loans taken out by businesses to finance this technology, which has enabled Fennel to borrow funds for the significant capital investment required. The cost of components used in the charging points is falling rapidly. Capitalisation of development costs related to this technology is permitted in Veeland, but not in Deeland. In 2015, Fennel invested heavily in IT systems which significantly improved performance by increasing the availability of parts in its depots, and reducing inventories.

Chicory uses return on average capital employed (ROCE) as its main financial performance indicator, and this is to be benchmarked against Fennel. One board member suggested that, though it may have some disadvantages, EBITDA (earnings before interest, tax, depreciation and amortisation) could have advantages as a performance measure over the existing measure, and should also be included in the benchmarking exercise.

You have been given the most recently available financial data for both businesses in Appendix 1, with the data for Fennel being converted into $ from its home currency.

Required:

(a) Evaluate the relative financial performance of Chicory against Fennel using the two financial performance measures identified in the benchmarking exercise and evaluate their use as performance measures in this situation.

(i) ROCE. (6 marks)

(ii) EBITDA. (10 marks)

(b) Advise Chicory on the problems of using the benchmarking exercise with Fennel as a way to improve performance. (9 marks)

(25 marks)

Appendix 1

Benchmark data ($)

Extract from statement of financial position

	30 June 17	31 December 15
End of year	**Chicory**	**Fennel**[1]
Total assets	140·0	296·0
Current liabilities	(81·0)	(120·0)
Beginning of year[1]	**Chicory**	**Fennel**
Total assets	138·0	290·0
Current liabilities	(60·0)	(120·0)

Income statement

	30 June 17	31 December 15
	Chicory	**Fennel**
Revenue	175·1	350·0
Cost of sales	(130·1)	(299·0)
Gross profit	45·0	51·0
Administrative expenses	(11·0)	(25·0)
Write off of goodwill	(24·7)	–
Operating profit[2]	9·3	26·0
Interest payable	(1·8)	(8·0)
Profit before tax	7·5	18·0
Tax	(3·0)	(1·0)
Net profit	4·5	17·0

Notes

[1] $6m of new capital was introduced into Fennel on 31 March 2015. Normally, new net investment is spread evenly over the year.

[2] Operating profit is after charging depreciation of non-current assets of $18m in Chicory, and $25m in Fennel.

3 Tosemary and Rhyme Hospital (TRH) is a small hospital for the treatment of patients with only minor injuries. Patients arriving at TRH with more serious injuries are referred to a larger hospital nearby. Those with minor injuries are admitted into TRH and wait to be seen by a doctor. After treatment, most patients leave the hospital and need not return. If their treatment has failed, however, they are re-admitted for additional treatment.

Patients do not have to pay for treatment at TRH, which is a not-for-profit, public sector hospital. It is funded entirely by the government from taxation and a fixed level of funding is received from the government each year. It is up to TRH to allocate its funding to different areas, such as doctors' salaries, medicines and all other costs required to run a hospital.

TRH's objectives are:

– to give prompt access to high quality medical treatment for patients
– to provide value for money for the taxpayer, as measured by the '3Es' framework of economy, efficiency and effectiveness
– to contribute to medical science by developing innovative ways to deliver treatment to patients.

It has been suggested to TRH that the hospital has inadequate performance measurement systems in place to assess whether it is achieving its objectives, and that insufficient attention is given to the importance of non-financial performance indicators. You have been asked for your advice, and have met with some of the doctors to get their opinions.

One senior doctor has told you, 'I think TRH always delivers value for money. We've always achieved our total financial budgets. Doctors here work much longer hours than colleagues in other hospitals, often without being paid for working overtime. There is not enough government funding to recruit more doctors. At busy times, we've started referring more patients arriving at TRH to the larger hospital nearby. This has helped reduce average waiting times. Patients arriving at TRH are now seen by a doctor within 3 hours 50 minutes rather than 4 hours as was previously the case. So, we're already doing all we can. I don't know how much time we spend developing innovative ways to deliver treatment to patients though, as most of the performance data we doctors receive relates to financial targets.'

Recent performance data for TRH and national average information has been provided in Appendix 1. This is indicative of the data which the doctors at TRH receive.

Required:

(a) Explain why non-financial performance indicators are particularly important to measure the performance of not-for-profit organisations such as TRH. (5 marks)

(b) Justify one performance measure for each of the components of the value for money framework used at TRH and, using that measure evaluate whether TRH is delivering value for money. (10 marks)

(c) Evaluate the extent to which the management style at TRH can be said to be budget constrained and advise on the implications of this approach for managing TRH's performance. (10 marks)

(25 marks)

Appendix 1

Data for the year ended 31 August 2017

	TRH	National average[1]
Number of doctors	25	24
Total doctors' salaries including overtime	\$3·75m	\$4·20m
Total doctors' salaries budget including overtime	\$3·75m	\$3·20m
Number of patients treated	24,375	20,000
Average staff satisfaction rating[2]	9%	89%
Number of patients re-admitted	1,830	300

Notes

[1] National average for other public sector minor injuries hospitals.

[2] Staff satisfaction rating was obtained by conducting a survey of all 25 doctors. A survey score of 100% represents 'totally satisfied', and a score of 0% represents totally unsatisfied.

4 Sweet Cicely (SC) manufactures sweets and confectionery and has delivered stable but modest increases to the shareholder wealth for many years. Following a change in ownership, the new shareholders are keen to increase the long-term performance of the business and are prepared to accept a high level of risk to achieve this.

SC is considering setting up a factory to manufacture chocolate bars. There are three options (1, 2 and 3) for the size and output capacity of the new chocolate factory. SC must choose a size most suited to the expected demand for its products. As well as the impact of the quality, branding and pricing of its products, demand for SC chocolate bars will be influenced by external factors such as consumer tastes for chocolate over other sweets, and even the suggested health benefits of certain types of chocolate.

A high-cost ingredient in chocolate bars is cocoa, a commodity traded on international markets. The market price of cocoa fluctuates with worldwide demand. Due to economic growth, chocolate consumption is rising in many countries, where it was once considered a luxury. In some countries, however, governments are considering introducing additional taxes on products containing sugar in order to reduce the consumption of chocolate and confectionery products. Being derived from an agricultural crop, the availability and price of cocoa is also influenced by climatic conditions, soil erosion, and disease. Conflicts and political instability in cocoa growing regions can also restrict its availability. Recent technological advances in the production of cocoa, such as the use of genetically modified crops, promise higher yields from cocoa plants in the near future.

You have been asked to help SC choose one of the three options for the new chocolate factory. One board member told you: 'The board proposed expanding into cake manufacturing several years ago. With hindsight, our planning on that proposal was poor. We sold only slightly fewer cakes than expected, but hadn't realised how sensitive our operating profit would be to a small change in demand. The previous shareholders thought problems in the cake business would put their dividends at risk, so SC stopped manufacturing cakes, barely a year after it started. The board does not want to repeat these mistakes. We want to minimise the opportunity cost of making the wrong decision about the size of the new chocolate factory.'

Appendix 1 shows the net present values for the three options discounted at SC's current cost of capital. Appendix 2 shows the expected operating profit generated by the three options in the first year of the project, according to the market price of cocoa, and assuming an annual demand of 70 million chocolate bars.

Required:

(a) Advise SC why decisions, such as what size of chocolate factory to build, must include consideration of risk and uncertainty, and evaluate the use of PEST analysis in managing the risk and uncertainty surrounding the project. (14 marks)

(b) Using the data in Appendix 1, explain which of the three options for the new chocolate factory would be preferred by the board and the new shareholders according to their respective risk appetites. (6 marks)

(c) Using the data in Appendix 2, recommend which of the three options for the new chocolate factory a risk neutral investor would choose, and explain any problems with the approach used to make the choice. (5 marks)

(25 marks)

Appendix 1

Net present values for the three options discounted at SC's current cost of capital ($m)

	Option 1	Option 2	Option 3
Annual demand for chocolate bars			
50 million	4·0	(8·0)	(32·0)
60 million	6·0	16·0	(24·0)
70 million	6·0	16·0	17·0

Appendix 2

Expected operating profit generated by the three options in the first year of the project, assuming an annual demand of 70 million chocolate bars ($m)

Probability	Market price of cocoa ($ per ton)	Option 1	Option 2	Option 3
0·3	2,500	3·0	5·0	7·0
0·4	3,000	0·5	2·0	1·5
0·3	3,500	(2·0)	(1·0)	(2·0)

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1-(1+r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Professional Level – Options Module

Advanced Performance Management

March/June 2018 – Sample Questions

P5 ACCA

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – TWO questions ONLY to be attempted

Present Value and Annuity Tables are on pages 9 and 10.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Paper P5

Think Ahead ACCA

The Association of Chartered Certified Accountants

This is a blank page.
The question paper begins on page 3.

Section A – This ONE question is compulsory and MUST be attempted

1 Chiven Stores (Chiven) is a listed clothing retailer in Beeland. Its overall aim is 'to become the largest clothing retailer in Beeland and deliver exceptional value to its shareholders'. It has recently dropped down the clothing retailer rankings from fourth to fifth largest. Shareholders have expressed concern at the lack of dividend growth at a time when spending in the Beeland clothing market has been growing.

There has been a recent change of chief executive officer (CEO) and the new CEO has identified that the performance reporting at Chiven is not fit for the needs of the business. She has asked you to prepare a report to the board to address the performance measurement and management issues which she sees as most important. Her plan is to achieve the overall aim by 'maximising our opportunities from new technology and increasing our currently small web presence'. She wants a detailed evaluation of the current performance report which is used by the board for its annual review of the business (Appendix 1). She wants this task split into two parts: first, evaluate the existing set of measures and their presentation and then second, add three new measures which you believe address key issues for the business but are not currently on the report. She has stated that the report does not need a commentary as she and the finance director talk through the report in detail with the board.

In an additional effort to drive improvement and gain competitive advantage for Chiven, the board has decided to use the value chain as a business integration tool. The CEO has provided a copy of the value chain diagram which was discussed at the last board meeting (Appendix 2). She believes that further improvements in Chiven's performance can be achieved through simplification of the supply chain. The CEO believes that this has implications for the performance measurement and information systems at Chiven and wants your report to address this as well.

Finally, the CEO has already identified one important reason for Chiven's poor performance and that is its failure to make use of 'Big Data' in relation to Chiven's web sales. She believes that the board does not understand the implications of the volume, velocity and variety of this data for the business and wants you to write a guide for them. She is aware that this is a new and rapidly developing area for most businesses, so she considers that the board should also be briefed about its risks and challenges.

The CEO wants a report which she can present to the board to address these various performance issues at Chiven.

Required:

Write a report to the board of Chiven to:

(i) Evaluate the performance report in Appendix 1 as requested. (20 marks)

(ii) Using the data in Appendix 1, recommend (with appropriate calculation and justification) three new performance measures for Chiven as requested. (8 marks)

(iii) Advise on appropriate performance measures and systems for Chiven when using the value chain approach to simplify the supply chain. (7 marks)

(iv) Discuss the development of Big Data and its potential impact on Chiven's information systems, including the risks and challenges it presents. (11 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Chiven Stores
Annual performance report for year ended March 2018

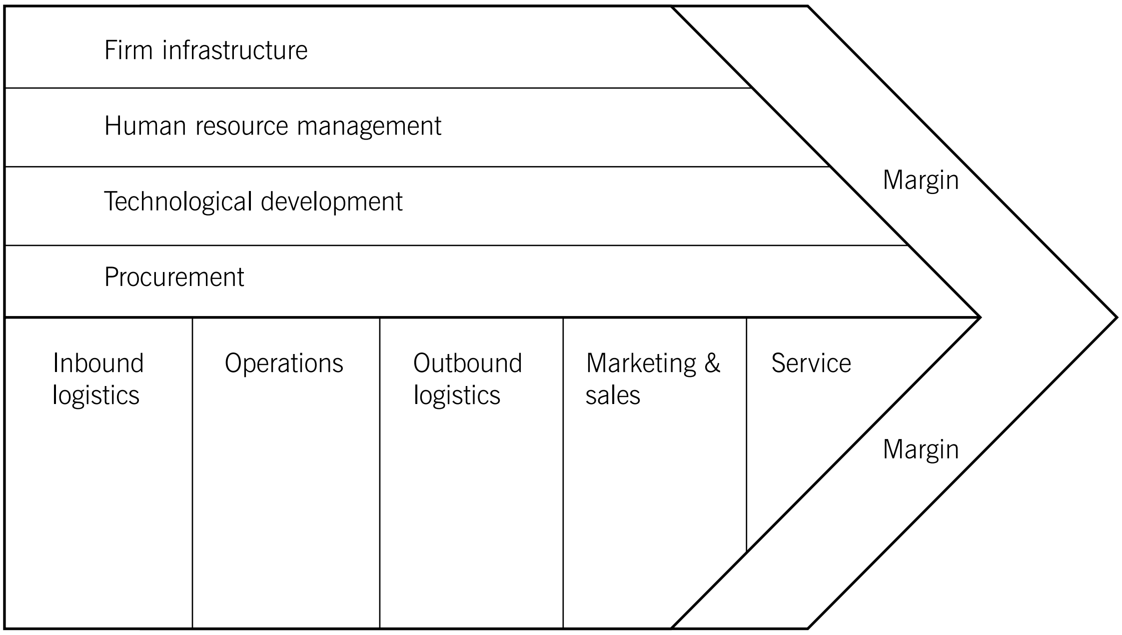
Revenue ($m)		**Region**	**A**	**B**	**C**	**Total**	**2018 Total**	**2017 Total**
Clothing								
	Men's		178	356	178	712		
	Women's		297	593	297	1,187		
	Children's		119	237	119	475		
		Total	594	1,186	594		2,374	2,351
Other								
	Men's		19	39	19	77		
	Women's		32	65	32	129		
	Children's		13	26	13	52		
		Total	64	130	64		258	255
						Total	2,632	2,606

Operating profit margin (%)		**Region**	**A**	**B**	**C**		**2018 Total**	**2017 Total**
Clothing								
	Men's		15·5	15·7	15·2			
	Women's		16·2	16·3	15·9			
	Children's		18·1	18·3	18·0			
Other								
	Men's		15·5	15·8	15·2			
	Women's		16·2	16·4	15·8			
	Children's		18·1	18·2	17·8			
						Overall	16·5	16·5

	2018	2017
Number of stores	542	540
EPS ($)	0·56	0·56
Dividend per share ($)	0·28	0·28
EVA™ ($m)	21	24
Inventory turnover rate (days)	32	32
Average number of product lines bought per supplier	66	64
Floor space (square metres)	850,000	828,000
Market share (%)	9·8	10·1
Number of employees	40,500	39,400
Number of suppliers	161	161
ROCE (%)	8·3	8·5
Number of accidents in stores	256	255
Average queuing time for customers (seconds)	125	128
WACC (%)	5·8	5·7
Average time between customer entry and employee greeting (seconds)	248	232
Inventory obsolescence/loss write-downs ($m)	25	25

Appendix 2

Value chain diagram



Section B – TWO questions ONLY to be attempted

2 Luvij manufactures high quality, luxury women's footwear. It sells its products on its own website and also to small independent retailers. In order to monitor performance and aid decision-making, Luvij collects sales data on all of its footwear ranges and feedback on its designs from customers and retailers. In addition, to ensure that prices remain competitive, Luvij has a team of staff to monitor the prices of similar products on competitors' websites and to identify design trends in the market, which change frequently, and from season to season. Generating new footwear designs consistent with changing market trends is a critical success factor for Luvij. The large volume of data collected is entered into a complex spreadsheet by one data entry clerk.

Luvij operates a functional structure with different departments for sales, production, purchasing and design. The spreadsheet is sent by email to the senior manager of each of these departments at the end of each quarter. The senior manager for the sales, production and buying departments are expected to generate the relevant sales, production and purchasing forecasts by analysing information contained in the spreadsheet. The senior manager of the design department uses the information to generate new footwear designs consistent with market trends.

Luvij has a strategic objective to become the market leader in the sale of high quality, children's footwear to small independent footwear retailers. It has already invested heavily in market research and developing innovative designs. To reduce the risks of not achieving this strategic objective, for example, by having insufficient capacity to produce a larger range of footwear styles, the board is considering entering into a joint venture with Shirville.

Shirville is a large manufacturer of exclusively children's footwear. Its advanced manufacturing machinery and production techniques mean that it can produce the high volumes required to supply supermarkets and chain stores* found on the main streets of most towns and cities. Shirville's objective for the joint venture is to utilise spare production capacity it has in a factory which it holds on a lease which expires in three years.

One recently appointed board member at Luvij has commented, 'I believe that the external information on market trends and competitors' prices compiled in the quarterly spreadsheet is of limited usefulness as I have heard complaints from managers that they have difficulty understanding the large volume of data given to them, and that they often receive this too late. The company I worked for in my previous job used a unified corporate database to share information in real time across all parts of the business. A similar unified corporate database may be useful for Luvij. I am also concerned about the potential problems of measuring and managing the performance of the joint venture with Shirville. The fact that the two businesses have different objectives is just one example of why these problems may occur, though there will also be other reasons.'

*Chain stores are large retailers with multiple stores based in different locations.

Required:

(a) Explain the factors which might limit the usefulness of the external information currently used by Luvij, and evaluate how the use of a unified corporate database could help to overcome these limitations. (15 marks)

(b) Advise the board on the potential problems with the measurement and management of the performance of the joint venture with Shirville. (10 marks)

(25 marks)

3 Bazeele hires out plant and machinery to small firms working in the construction industry. Bazeele's senior managers, including the chief executive officer (CEO), have worked in the business since it was established 30 years ago, and they own the majority of the shares. During that time, Bazeele has acquired many smaller plant hire businesses. Of these business units, those which have underperformed after acquisition have either been sold on or restructured, for example, to increase their operating margins. Bazeele has recently diversified by hiring out large items of plant to large construction firms working on major infrastructure projects. These projects can last for up to 10 years. Strong growth in the general economy has increased the number of these large projects and has also led to a predicted large increase in bank interest rates.

The shareholders' objective is for Bazeele to maintain its historic return on capital employed (ROCE). Managers at business units are given the objective of maintaining net profit margins of their own business units. Similarly, managers at individual branches of business units are given the same objective according to their own areas of responsibility.

Following two years of poor performance, it has been suggested to the CEO that Bazeele would benefit from adopting a value-based management (VBM) approach.

The CEO requires your advice and has said, 'The shareholders are unsure what VBM is, whether it will benefit Bazeele, and what changes the business would need to make if it were to adopt it. All managers in the business are already clear what their objectives are. For example, one business unit manager recently postponed some expensive staff training on improving customer satisfaction, which I believe was the correct decision. Our recent poor performance has meant we cannot afford this sort of expenditure, especially as we have no information on what levels of customer satisfaction actually are. Personally, I dislike change, but would not object to the adoption of VBM if it was thought to be beneficial for Bazeele. The shareholders have heard that economic value added (EVA™) can be used to measure whether Bazeele has created or destroyed value for its shareholders, but this has not yet been calculated.'

Details of the company's recent performance are given in Appendix 1.

Required:

(a) Evaluate whether a value-based management approach is appropriate for Bazeele. (7 marks)

(b) Explain to the CEO what changes Bazeele would need to make to its performance measurement and performance management systems if it were to adopt a value-based management approach. (7 marks)

(c) Using the information in Appendix 1, advise the CEO whether Bazeele has generated economic value for its shareholders. (11 marks)

(25 marks)

Appendix 1 – Notes from Bazeele's management accounts for the most recent year end

1. Net profit after tax for the year: $10m
2. Capital employed at the start of the year: $250m
3. The interest charge for the year was $15m on a variable rate loan with an interest rate of 10%. Bazeele is funded 60% by debt and 40% by equity. The cost of equity is 12%. Bazeele pays tax at a rate of 20%.
4. The depreciation charge for non-current assets for the year was $6·0m; the economic depreciation of which was $14·0m. At the start of the period, the accumulated economic depreciation of non-current assets exceeded its accounting depreciation by $16·0m.
5. Brought forward at the start of the year was a provision of $4·8m which was made in respect of a debt owed by a customer who has since repaid it.
6. Within the current profit or loss account there is an expense for $0·6m for advertising in trade magazines. This led to several enquiries from new customers involved in large infrastructure projects, which has resulted in Bazeele signing at least two large contracts after the end of the accounting period.

4 Laurel and Parsley (LP) is an architectural consultancy firm, specialising in the design of large commercial buildings. Due to an economic recession, which began in late 2017, demand for LP's services fell dramatically, and there was insufficient work for all of the firm's consultants. LP's chief executive officer (CEO) believes that the recession will be short and that LP should do all it can to retain its highly skilled and experienced workforce ready for when demand increases after the end of the recession. The rest of the board believe that the firm should cut the size of the workforce until that time, as LP already has an operational gearing ratio 50% higher than its main rival.

Despite the board's objections, the CEO asked for LP to prepare bids for work on non-commercial building projects, which have so far been unaffected by the recession. Though LP had little track record in designing non-commercial residential buildings, it successfully tendered a fixed fee for the design work on a large housing development. As the finance director had been absent due to illness for a year, the CEO prepared and submitted the bid himself. To meet the tight deadlines for submission of the bid, this was done at a time when most of the board were taking their annual holidays.

It quickly became apparent that the staff resources required for the housing development project were much greater than the CEO had anticipated in the bid. In the rush to submit the bid and start work, staff were not given clear milestones for completion of the project, or individual performance targets. This has led to staff working long hours, morale has fallen, and several experienced employees have since left the firm. The project is well behind schedule, and LP's client has said it will take legal action against the firm to recover any financial losses caused by the delay.

It has been suggested to the board that LP may be at risk of corporate failure, as it has score of 47 using the Argenti A Score model, which is shown in Appendix 1.

Required:

(a) Using Argenti's A Score model, evaluate whether LP is at risk of corporate failure. (12 marks)

(b) Advise LP what performance management systems are needed in order to improve performance in respect of each of the mistakes and symptoms you have identified in part (a). (7 marks)

(c) Evaluate the usefulness of using qualitative models such as the Argenti A Score in predicting corporate failure. (6 marks)

(25 marks)

Appendix 1

Argenti A-Score model

Defects

↓

Mistakes

↓

Symptoms

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\dfrac{1-(1+r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Strategic Professional – Options

Advanced Performance Management (APM)

Wednesday 5 December 2018

APM ACCA

APM

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – BOTH questions are compulsory and MUST be attempted

Present Value and Annuity Tables are on pages 10 and 11.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Rezillos: Company information

Rezillos Engineering (Rezillos) is a listed company, manufacturing pumps and valves for use in the chemical industries. These highly engineered components must be integrated into Rezillos' customers' own plant and equipment. The company has grown significantly via acquisition in the last 20 years to become a worldwide business.

The overall objective of the company is 'to deliver sustainable growth in value to the shareholders by working in partnership with customers to deliver innovative and value-for-money solutions utilising the skills of the highly-trained workforce.'

The chief executive officer (CEO) has recognised that the company has been so focused on making acquisitions that it has not improved other aspects of management. He has asked you to produce a report for the board of Rezillos to cover a number of areas.

Performance reporting system

The CEO would like an evaluation of the performance reporting system used at the strategic board level by Rezillos. The current performance report used for the annual review at board meetings is given as an example (Appendix 1).

Customer survey

At the most recent round of meetings with stock market analysts, the board has been criticised about a customer survey whose results were announced at these meetings. The criticisms centred on the method of calculation, sampling and the disclosures in the press release. The board of Rezillos is concerned by the impact of this on their reputation in the market and needs to understand whether the criticism is justified. The press release and some further internal details about the method and the results of the customer survey are given in Appendix 2.

Benchmarking proposal

Rezillos has three divisions based in its three countries of operation (Beeland, Teeland and Veeland). In order to drive forward the integration of the divisions, the CEO has decided that they should be benchmarked against each other. He is aware that this is not the only method of benchmarking and so, initially, wants you to provide an understanding of the different types of benchmarking and an evaluation of the usefulness of the proposed type of benchmarking for the divisions. Finally, he has supplied data in Appendix 3 to allow you to complete the benchmarking exercise and comment on the metrics used and the results.

It is now 1 December 20X8.

Required:

Write a report to the board of Rezillos to:

(a) Evaluate the performance reporting system as requested. (13 marks)

(b) Assess the analysts' criticisms of the customer survey results in Appendix 2. (9 marks)

(c) Respond to the CEO's request for work on:

(i) the method of divisional benchmarking proposed; and (9 marks)

(ii) benchmarking the three divisions. (15 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Rezillos	Year to 30 September							
	Beeland	Teeland	Veeland	Total	Total	Growth	Profit as a % of revenue	
							Company	Industry average
	20X8 $m	20X8 $m	20X8 $m	20X8 $m	20X7 $m			
Revenue	738	2,030	923	3,691	3,504	5·34%		
Cost of sales	497	1,391	601	2,489	2,363			
Gross profit	241	639	322	1,202	1,141		32·6%	29·8%
Other operating costs								
Selling and distribution costs	89	208	101	398	380			
Administration costs (note 1)	74	171	83	328	321			
Total	163	379	184	726	701			
Operating profit	78	260	138	476	440	8·18%	12·9%	9·7%
Finance costs				88	88			
Group profit before tax				388	352		10·5%	
Tax				78	71			
Group profit after tax				310	281		8·4%	
Return on capital employed (ROCE)				8·64%				

Note

1 Administration costs contain an allocation of product development costs to each division.

Appendix 2

Press release from Rezillos: Customer survey results

Rezillos has performed an extensive survey of its customer base and is proud to announce an average customer rating of 7·0 (out of 10). This bears positive comparison with a leading competitor of Rezillos who performed a survey last year scoring an average rating of 6·0.

The survey asked for a customer rating on a scale of 0 to 10, where 10 was exceptional, 5 was good and 0 was unacceptable.

End of press release

Extract from Rezillos internal document on calculation of customer rating

The survey was carried out by the staff at head office who sampled customers from all three divisions.

Raw data

Customer number	Rating	Account size ($m)	Division
1	10	1·5	Beeland
2	9	3·3	Beeland
3	9	2·1	Beeland
4	6	6·4	Beeland
5	6	152·0	Teeland
6	6	11·2	Beeland
7	6	10·5	Beeland
8	6	74·0	Veeland
9	5	21·0	Veeland

Other notes:

1 The company has 180 customers in total.

2 The customer number is an identification number for administrative purposes.

3 Each division has its own marketing and customer support function although product development is a head office function.

Appendix 3 (all data is for 20X8 unless otherwise stated)

The benchmarking exercise is partly complete with the metrics requiring to be calculated identified by question marks.

	Beeland	Teeland	Veeland
Benchmarking metrics			
Growth of market	8·5%	3·2%	5·0%
Revenue growth	12·5%	3·2%	4·8%
Operating margin	10·6%	12·8%	15·0%
Inventory days	162	162	?
Order book growth	5·2%	5·3%	?
Number of face-to-face interactions with division's top 10 key customers	260	120	40
Percentage of revenue from new products introduced in the last three years	24·9%	29·0%	?
Reduction in incident rate	3·4%	0·0%	?
Utilisation of learning and development programme	1·20	1·26	?

Notes

1 The industry standard method of calculating incident rate is:

Incident rate = number of incidents per year x 200,000/number of employee labour hours paid

2 The company's employees work on average 40 hours per week for 50 weeks per year.

3 Utilisation of learning and development programme is measured by the number of training days per employee.

4 Key customers are designated by the divisional management.

5 A single inventory management system has been implemented across the whole company.

The following data has been collected to assist in the completion of the benchmarking exercise:

	Veeland
Revenue from new products introduced in the last three years ($m)	163
Cost of sales ($m)	601
Inventory ($m)	267
Number of incidents (20X8)	68
Number of incidents (20X7)	74
Number of employees (20X8)	6,600
Number of employees (20X7)	6,250
Order book ($m) 20X8	932
Order book ($m) 20X7	885
Number of training days	6,450

Section B – BOTH questions are compulsory and MUST be attempted

2 Zones: Company information

Zones is an overnight parcel delivery business. Since it was founded by the current CEO, it has grown rapidly due to a boom in online shopping. It now operates 1,000 delivery vehicles of various sizes. Recently, financial performance and market share have deteriorated. Zones has had no clear corporate vision, an excessive focus on financial objectives and inadequate systems to measure and manage performance of the underlying processes driving its financial performance.

Business model

Zones' collection and delivery service uses delivery vehicles to transport parcels to and from local depots and individual addresses. Vehicles may also pick up parcels from the addresses to which they deliver. Each time the vehicle calls to pick up or deliver parcels is known as a stop, and the time of day for each stop is booked in advance. At the end of each day, vehicles, along with any parcels not delivered, return to the depot. Regardless of who pays for the service, Zones regards anyone to whom it delivers, or from whom it picks up parcels, as a customer. In the long term, the requirements of both of these groups for a competitively priced, reliable and flexible service will be similar.

Performance improvement proposals

The CEO believes that reductions in customer satisfaction and flexibility, caused by a decline in operational performance, may have led to the recent deterioration in financial performance and market share. It has been suggested that Zones use the Lynch and Cross performance pyramid (Appendix 1) to reverse this deterioration, and three new measures for operational performance have been suggested in Appendix 2. The CEO has stated that Zones' corporate vision should be:

'To increase shareholder wealth by becoming the leading overnight parcel delivery business, providing quality, reliability and value for customers.'

It is also proposed to use the DMAIC (define, measure, analyse, improve and control) method to implement the six sigma methodology to improve the quality of delivery. Two measures have been defined in Appendix 3 which may help improve Zones' delivery performance.

Required:

(a) Advise the CEO how the Lynch and Cross performance pyramid can help Zones achieve its corporate vision. (7 marks)

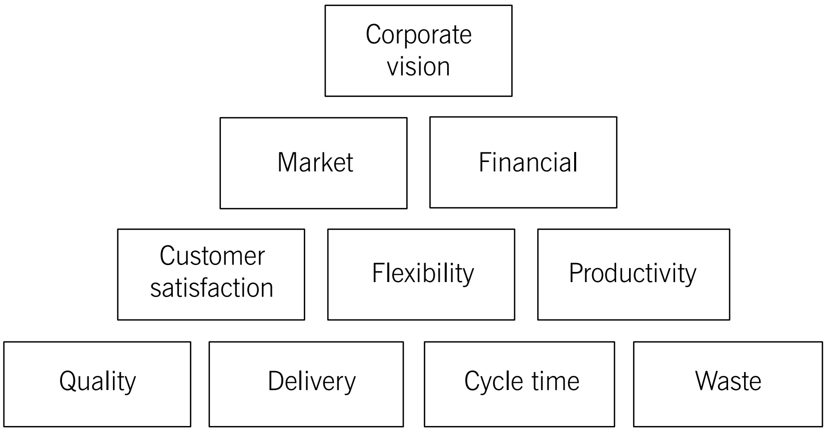
(b) Using the performance pyramid, evaluate the extent to which the suggested new measures in Appendix 2 can be used to measure and manage operational performance at Zones. (9 marks)

(c) Advise whether the two measures defined in Appendix 3 are suitable for use in the DMAIC method to implement the six sigma methodology in order to improve delivery performance. (9 marks)

(25 marks)

Appendix 1

Lynch and Cross performance pyramid



Appendix 2

Suggested new measures for operational performance

Measure	Description
Vehicle utilisation	Average utilisation of all vehicle capacity. This is measured by taking the average of vehicle load as a percentage of capacity when the vehicle leaves the depot at the beginning of each day and the vehicle load as a percentage of capacity when the vehicle returns to the depot at the end of each day. Capacity is measured either according to the internal volume or the length of the vehicle, depending on the type of vehicle being used.
Fuel consumption	Average litres of fuel per kilometre travelled for all vehicles.
On-time stops	Percentage of stops made within 30 minutes* of the booked time.

* Zones receives complaints from customers relating to deliveries not made on time. Of these, less than 0·0001% relate to deliveries made within 30 minutes of the booked time.

Appendix 3

Suggested new measures for improving quality of delivery using the DMAIC methodology

Measure	Description
On-time stops	Percentage of stops made within 10 minutes of the booked time.
Failed deliveries	Percentage of deliveries which cannot be made due to the customer being unavailable to take the delivery, or by parcels being incorrectly addressed. Currently, 5% of deliveries are failed and have to be returned to the depot.

3 Sberry: Company information

Sberry manufactures products which have a short lifecycle due to technological obsolescence. It aims to keep each product in production for at least 18 months so that it can recover the high cost of product development and make an acceptable profit before the product becomes obsolete. Sberry has always manufactured its products in its home country of Deeland, from where all materials are also sourced.

Sales opportunity in Kayland

An opportunity has been identified to export one of three newly developed products, Red, Blue and Green, to Kayland, due to citizens' increasing levels of income there. The rate of technological obsolescence is slower in Kayland than in Deeland. The estimated levels of demand, selling prices and costs of the three products are shown in Appendix 1.

Stakeholders' views on the risks of the Kayland opportunity

Three of Sberry's key stakeholder groups, employees, directors and shareholders, have been consulted for their views on the proposal to export to Kayland and, in particular, on which of the three newly developed products to export there.

The employees have a cautious approach to the proposal following the recent failure of another product launch. That product was withdrawn as it breached poorly understood safety regulations and a number of employees lost their jobs as a result.

The directors, all of whom are individually wealthy, have served on the board for many years and are keen to earn the large bonus which is currently offered solely on the total profit made by the new product over its lifecycle.

The shareholders neither avoid nor seek risk, but they are keen that the company considers the external environment in Kayland in order to maximise performance there, whichever of the products is chosen to be exported. They have asked for a PEST* analysis of the environment in Kayland to be produced. A first draft of this has indicated that the exchange rate between the Deeland dollar (D$) and the Kayland dollar (K$) is a key economic factor which may affect performance.

*Political, economic, socio-cultural and technological

Required:

(a) Advise which of the three newly developed products each of the three key stakeholder groups would choose to export to Kayland based on their respective risk appetites. (14 marks)

(b) Explain the problems of using the risk and uncertainty analysis techniques which you have used in part (a). (5 marks)

(c) Advise the shareholders how analysing the external environment in Kayland using a PEST analysis can help Sberry maximise its performance there. You are NOT required to produce a PEST analysis. (6 marks)

(25 marks)

Appendix 1

Estimated levels of demand, selling prices and costs of the three newly developed[1] products

	Red	**Blue**	**Green**
Total demand (units)[2]	50,000	60,000	160,000
Selling price (K$)[3]	8·00	9·00	6·00
Total unit cost (D$)[4]	2·40	3·00	2·50

Notes to the appendix

[1] Development costs are sunk costs and can be ignored.

[2] The estimated product life of each of the three products is the same and the total demand is for the whole life of the product.

[3] The current exchange rate between the D$ and the K$ is D$1·00 = K$2·00. Sberry's finance director has estimated that over the life of the product there is a 75% probability that the average exchange rate of the D$ will strengthen by 10% against the K$, and a 25% probability that the average exchange rate of the D$ will weaken by 10% against the K$.

[4] At the current exchange rate, 50% of the total costs for each product is for materials which are imported from Kayland and invoiced in K$. There will be no opening or closing inventory, whichever of the three new products is chosen.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Strategic Professional – Options

Advanced Performance Management (APM)

March/June 2019 – Sample Questions

APM ACCA

APM

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – BOTH questions are compulsory and MUST be attempted

Present Value and Annuity Tables are on pages 8 and 9.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Folt Manufacturing: Company information

Folt Manufacturing (Folt) is a company, which is majority owned by its management team. A number of years ago, it was bought out of a larger multinational business by the management team. The management were supported by a venture capital firm, who provided the remaining equity and now supply all the debt required by the business at market rates. The business manufactures and sells digital imaging devices for use in a variety of industrial situations. A key component in its products is the image processing software which is included. Folt has a small team of software developers who are beginning to gain a reputation for innovative solutions.

Folt has faced increasing pressure in its home market of Beeland from manufacturers in countries with lower cost bases. As a result, it has decided to invest in developing its image processing software rather than compete on the manufacturing of the hardware (the imaging devices). It will continue to sell the imaging devices but the manufacturing will be outsourced.

Folt's overall objective is unchanged and it is 'to provide an adequate return to its capital providers while growing the business into a world-class supplier in its areas of expertise'. The chief executive officer (CEO) has identified three factors which are critical success factors (CSFs) to achieving this objective. These are:

1. Keep capital providers satisfied;
2. Build a world-class software development team; and
3. Ensure that quality of the imaging devices meets market standards.

Performance measurement system

The CEO requires assistance from a performance management expert to create an appropriate performance measurement system for Folt. First, he needs recommendations of suitably justified key performance indicators (KPIs) for each CSF. The CEO has indicated that there should be a maximum of two KPIs per CSF in order to avoid information overload. Then, he wants an assessment of the use of this group of KPIs to measure the strategic performance of Folt.

Outsourced manufacturing: Initial plans

The company has selected a suitable manufacturer for the outsourced work. Xela Manufacturing (Xela) is based in Ceeland, which is a much lower cost environment than Beeland. Folt is preparing to enter into detailed contract negotiations with Xela.

The manufacturing will be done under licence from Folt. This means that Folt supplies the product designs but retains the intellectual rights to them and Xela manufactures to agreed standards of quality. Xela then despatches the devices back to Folt who add the software, package the product and send it to their customers. The quality standards will be set by the service level agreements (SLAs) which will be agreed in the contract.

In preparation for these negotiations, the CEO needs advice on the following three critical areas (target costing, responsibility for quality areas and sources of information) for the negotiation of the agreement.

Target costing

The CEO realises that he needs to understand the cost structure of the products in order to have a firm basis for price negotiation with Xela. He has heard that target costing could be helpful. Therefore, he needs to know how target costing works and how it might be used in this situation. In order to clarify the explanation, he has gathered information (Appendix 1) on one product (Product 123) which requires a redesign before being relaunched into the market. He wants an example calculation of the target cost gap and an explanation of how the result of this would impact on negotiations with Xela.

Responsibility for quality areas

The maintenance of existing quality is a critical concern for Folt, since it will focus on software as the key selling point but this will not be sufficient for market success if the hardware does not meet market standards. The CEO wants to understand, in terms of the four areas of quality costs, how responsibility for each area should be attributed between Folt and Xela.

Sources of information

Folt has appropriate information systems in place for its existing manufacturing operation. The CEO and board are happy with their operation at present. However, Xela has indicated that its current information systems are purely financial, aiming to collect the required information for its financial reporting duties. The CEO is worried about this and wants an assessment of the impact of this on the management of quality within the contract.

It is now 1 September 20X5.

Required:

Write a report to the CEO of Folt Manufacturing (Folt) to:

(i) Recommend the key performance indicators and evaluate them as required by the chief executive officer (CEO). (16 marks)

(ii) Respond to the CEO's request for work on target costing. (10 marks)

(iii) Explain the four quality cost areas and evaluate how to divide responsibilities for these under the outsourcing contract. (11 marks)

(iv) Assess the impact of the sources of information on the management of quality within the outsourcing contract. (9 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Information on Product 123

The company aims for a profit margin of 20% on Product 123. Target price is $175 per unit, based on sales and marketing department research.

Cost details:

1. The remaining commercial life of the product is two years.
2. It is estimated that 250,000 units will be sold over the remaining life of the product.
3. Materials cost $37 per unit.
4. Each unit will take 0·5 hours of labour at an average cost of $25 per hour.
5. Each unit will use 1·1 hours of machine time at an average cost (including overheads) of $32 per hour.
6. Packaging and delivery will cost $8 per unit.
7. The design costs of the unit are expected to total $2m.
8. Inspections cost $100,000 per annum – the redesign will not affect this.
9. The rate of failed products, either spotted by customers or by the inspection team, is expected to remain at 2·5%.
10. Failed products will be reworked at an average cost of $20 per unit.
11. The software package supplied by Folt costs $40 per unit.

Section B – BOTH questions are compulsory and MUST be attempted

2 Vunderg: Company information

Vunderg manufactures windows and related products. The overheads in the business are high and primarily relate to procurement, customer administration and product design. Procurement and customer administration overheads relate to all of Vunderg's product groups. Design overheads currently relate to only two product groups, glasshouses and conservatories. Vunderg's current costing system has been in use for a long time and absorbs overheads into product costs on a direct labour hours basis. The current costing system does not involve identifying the factors which drive the costs of the company's activities and allocating overheads to products based on their usage of those factors.

Current product range

Windows
For many years, Vunderg has manufactured UPVC window frames used for residential house building. Vunderg buys the glass from an external supplier, inserts it into a frame and sells the completed window units to a small number of large construction companies. These window units all have standard designs, specifications and sizes. This market is very competitive, and Vunderg must offer a complete range of windows for sale to the construction companies.

Glasshouses
Five years ago, Vunderg developed a range of small garden glasshouses, for non-commercial use, made of attractive and high quality materials. After initial quality problems due to the use of materials and manufacturing methods new to Vunderg, glasshouse production is now efficient, quality is high and the glasshouses now command premium prices. The glasshouses are sold nationwide through 40 retailers, who vary significantly in the size of orders they place and the level of customer support and trade discounts which they receive from Vunderg. As a result, the profitability of selling to different retailers, or types of retailer, varies significantly.

Conservatories
More recently, Vunderg began manufacturing conservatories* using the same materials as its glasshouse range. These conservatories are expensive and are made to measure for individual customers' houses. There are a wide range of finishes and options available to choose from. Conservatories which match garden glasshouses have become popular with customers who can afford them. Unlike Vunderg's other products, these are sold directly to individual home owners.

* Conservatories are structures made mainly of glass, which are attached to the side of residential houses. They form an additional room in a house and are popular in cool climates.

Future product development

Vunderg is looking to move into another new market soon, as the market for making windows for houses is now saturated. This new market will be the manufacture and design of large windows to be installed in the entrance halls of large, prestigious commercial buildings. These will be bespoke items, designed and manufactured to customers' own specifications.

Recent performance

The CEO is concerned by a recent fall in overall net profit margin despite modest revenue growth and good control of direct costs. In particular, he has said, 'The conservatories part of the business may not be as profitable as its positive contribution (Appendix 1) may suggest. For example, our procurement department spends a lot of time sourcing special materials and finishes requested by customers. Many conservatories have leaked in the rain so we have to rectify these faults and work on a new design to prevent this happening. As we have only basic information systems, it is unclear how much some of these activities are costing. Over 20% of our factory space is dedicated to manufacturing conservatories. We may be better off discontinuing these products.'

The CEO has some experience of activity based costing (ABC) in a previous role and believes that activity based management (ABM) could help to improve Vunderg's strategic performance. He is keen to know what the limitations are of using the ABM method for Vunderg's products and customer types and the problems with its implementation before he makes a decision to implement it.

It is now 1 September 20X5.

Required:

(a) Advise the CEO how activity based management (ABM) could help improve the strategic performance of Vunderg. (13 marks)

(b) As required by the CEO, assess the limitations of using the ABM method for Vunderg's products and customer types and the problems with its implementation. (12 marks)

(25 marks)

Appendix 1

Contribution by product type for the year ended 30 June 20X5

Product type	No. of units sold	Total contribution ($'000)
Windows	175,000	9,800
Glasshouses	3,800	969
Conservatories	650	910

3 Cortinas Retail Clothing (CRC): Company information

CRC started as a clothing retailer 20 years ago with one store. The business expanded steadily and had 10 stores after 18 years of trading. Since then, the rate of expansion has increased rapidly with an average of four stores opening per year.

CRC is planning to open its first large out of town store soon and is also considering the acquisition of a food retailing business. Both of these will be supplied with items using CRC's existing central warehouse.

Introduction of RFID system

At the beginning of the 20X5 accounting year, to cope with this rapid growth, CRC acquired a RFID (radio frequency identification device) system at its single central warehouse. This was to help manage inventory more effectively and speed up the processes for receiving items from suppliers and despatching them to stores. Items are still moved manually by staff in the CRC warehouse where there is little automation compared to competitors. There has been some resistance from staff to the RFID system, which they find difficult to use. CRC is currently trying to reduce the number of suppliers it has to help increase efficiency in the warehouse.

Budgeting system

The budget setting process has remained unchanged since CRC was formed. All managers prepare draft budgets using spreadsheets and submit them to the CRC board for approval. Managers use the previous year results as a starting point when drafting the budgets and increase the variable costs in line with any anticipated growth in volumes. For example, when preparing the budget for the year ending 30 June 20X6, the manager of the central warehouse used the actual costs of running the warehouse from the previous year and increased them all by the same percentage. This was to reflect an anticipated increase in volumes in 20X6 over 20X5. Managers are appraised on their performance against the approved budgets.

CRC has needed all its financial resources to fund its expansion and so it has only old and basic IT systems which are not enterprise resource planning systems, unified databases or networked systems.

It has been suggested to the CRC board that the current system of budgeting is no longer suitable and that the business should move to activity-based budgeting (ABB). The CEO has asked you to evaluate the potential introduction of ABB at CRC.

Central warehouse activity in July 20X5

The board has never seen an activity-based budget before and is unsure how it could be used to explain variances between actual and budgeted performance in the central warehouse. As an example, they would like to see how an activity-based budget for the year ending 30 June 20X6 could be used to explain variances from the actual results for the month of July 20X5.

The two key activities which drive costs in the central warehouse are receipts of items into the goods inwards section and despatches of items from the goods outwards section. A receipt into good inwards involves accepting a delivery of items from a supplier, tagging those items and putting them away in the warehouse. Receipts from suppliers contain variable numbers of individual items. Despatches of items from goods outwards are to CRC's own retail stores. Cost driver rates for these two activities will be used to set monthly cost budgets for the warehouse.

The board asked an analyst to prepare an activity-based budget for the central warehouse for the year ending 30 June 20X6. The analyst has collected relevant information on the costs for the year needed to prepare the activity-based budget and has begun the work (Appendix 1).

The total annual cost relating to goods inwards needs to be determined. This should be used to calculate the budgeted cost of each receipt into goods inwards, in order to explain the variance between the budgeted cost and the actual cost of receipts of goods inwards for the month of July 20X5. The analyst has already correctly included the costs of the warehouse manager's salary and the lease of the RFID system into the incomplete activity-based budget in Appendix 1. The board has asked you to complete the analyst's work.

To enable you to complete your calculations, you are told that in July 20X5 there were 650 receipts into goods inwards. These receipts contained 100,000 items, which is the same as the budgeted number of items for the month. The actual total cost of activities driven by receipts into goods inwards for the month was $18,000.

It is now 1 September 20X5.

Required:

(a) Evaluate whether CRC should move from its current budgeting system to ABB. (13 marks)

(b) Complete the analyst's work in Appendix 1 as required by the board and explain the variance between the budgeted cost and the actual cost for each receipt into goods inwards for July 20X5. (12 marks)

(25 marks)

Appendix 1

Analyst's incomplete activity-based budget for the central warehouse for YE 30 June 20X6.

	Total	Goods inwards	Goods outwards	Other
	$	$	$	$
Warehouse manager's salary[1]	55,000	–	–	55,000
Lease of RFID system[2]	75,000	45,000	30,000	–
RFID tagging[3]				
Warehouse staff wages[4]				
Heating and lighting[5]				

Sub-total cost of activities driven by the receipt of goods inwards

Analyst's notes

Relevant information on costs in the central warehouse for the year ending 30 June 20X6

1. The cost of the warehouse manager's salary relates to all sections of the warehouse and cannot be apportioned directly to goods inwards or goods outwards.
2. The cost for the RFID system is invoiced by a lease company. 60% of this cost is allocated to goods inwards and the remainder relates to goods outwards.
3. The cost of RFID tagging is the wages cost for specially trained staff, known as taggers. Their only job is to attach RFID tags to items when they are received, before the items are put away in the warehouse. All items received are RFID tagged and the costs of tagging are allocated entirely to the cost of goods inwards. Each tagger can attach 35,000 tags per month and is paid an annual salary of $24,000. The cost of each individual RFID tag is negligible.
4. There were 12 full-time warehouse staff throughout the year to 30 June 20X5 who were each paid an annual salary of $22,500. Two more staff will be recruited at the beginning of the new budget year. 50% of the warehouse staff work in goods inwards and 50% in goods outwards.
5. The cost of heating and lighting relates to all sections of the warehouse and cannot be apportioned directly to goods inwards or goods outwards. The actual heating and lighting cost for last year was $10,000 and the warehouse manager has proposed a budget of $10,500 for the coming year. The general cost of inflation though is expected to be zero.
6. The annual number of receipts into goods inwards expected is 9,000, containing a total of 1,200,000 items. These are expected to occur evenly over the year.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Strategic Professional – Options

Advanced Performance Management (APM)

September/December 2019 – Sample Questions

APM ACCA

APM

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – BOTH questions are compulsory and MUST be attempted

Present Value and Annuity Tables are on pages 10 and 11.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Think Ahead ACCA

The Association of Chartered Certified Accountants

This is a blank page.
The question paper begins on page 3.

Section A – This ONE question is compulsory and MUST be attempted

1 Company information

Arkaig Manufacturing (Arkaig) is a world-leading, listed manufacturer of production machinery for other industries. It has customers in the mining, cement and chemicals sectors and seeks to provide them with the equipment, software and service for their products.

The aim of Arkaig is 'to maximise shareholder wealth by providing world-class, tailored automation solutions, which use technology innovatively, show improved machine downtime and reduced energy consumption for our customers.' This is supported by an entrepreneurial culture among all employees who should 'treat the business as if they owned it'.

Strategic internal performance reporting

There has been criticism of the business' current performance reporting by one of the directors at a recent board meeting. However, the chief executive officer (CEO) believes that the reporting system, which he put in place two years ago, is an excellent one.

In preparation for the next board meeting, the CEO needs an evaluation of the current report. As an example, a recent report used by the board for its strategic review is given in Appendix 1. The CEO stressed that it was the report and not the performance of the business which should be evaluated.

Economic value added

Another criticism of the performance management of Arkaig was that it lacked an over-arching measure of performance. As a result, the CEO is considering the introduction of economic value added (EVA™) to replace return on capital employed (ROCE) as a principal performance measure. The CEO wants to present this idea at the next board meeting and so needs an illustrative calculation of EVA™ along with a brief explanation of its benefits as a replacement for ROCE. The data in Appendix 2 should be used for the calculation.

Performance hierarchy

The earlier work requested focuses on the strategic level of the organisation and the CEO is keen to ensure that the other levels of the organisation (tactical and operational) do not get ignored in this discussion. However, before undertaking any specific work, he wants to make a presentation at the next board meeting. Therefore, he wants you to provide him with a brief description of the nature of the information required for performance measurement at these three different levels and explain how this information is influenced by the extent of planning and controlling activity at each of the levels of the performance hierarchy. He wants examples which would be relevant to Arkaig to illustrate these points in order that the presentation is made more concrete for the directors. He will then prepare the slides for the presentation himself.

Value chain

In order to analyse the operational aspects of Arkaig, the CEO has employed a consultant to produce a value chain analysis (Appendix 3). The value chain analysis has highlighted certain critical activities within Arkaig where there was concern about the performance management aspects. The CEO would like you to assess the performance management implications of the consultant's comments on the critical areas identified for Arkaig.

Required:

It is now 1 September 20X5.

Write a report to the chief executive officer (CEO) of Arkaig to respond to his instructions for work on the following areas:

(i) the performance reporting at Arkaig; (11 marks)

(ii) the introduction of economic value added (EVA™); (15 marks)

(iii) the information requested on the performance hierarchy; (10 marks)

(iv) the value chain analysis prepared by the consultant. (10 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Arkaig: Strategic performance report

	Mining	Cement	Chemicals	Total	Previous year Total	Industry average
	Year ended 30 June 20X5					
	20X5	20X5	20X5	20X5	20X4	
Orders ($m)	5,204	6,898	5,900	18,002	17,878	
Revenue ($m)	5,100	6,756	5,784	17,640	18,166	
Revenue growth (%)	0	–1·8	–6·5	–2·9		
Net profit ($m)	220	350	302	872	798	
Net profit margin (%)	4·3	5·2	5·2	4·9	4·4	4·6
ROCE (%)	16·1	17·3	17·4	16·8	15·7	15

Commentary:
1. The company has increased its return on capital employed on the previous year and exceeded the industry benchmark.
2. Revenue has fallen by 2·9% on the previous year but the order book has grown by 0·7%, indicating sustained sales levels going forward.
3. The net profit margin has increased to 4·9%, again exceeding the industry benchmark of 4·6%.
4. The company has continued to emphasise its entrepreneurial culture to its employees.

Appendix 2

Economic value added

The following details have been gathered for the 20X5 EVA™ calculation:

1. The operating profit of Arkaig was $3,175m. This includes a depreciation charge of $1,780m.
2. Amortisation charges of $95m in the year have been incurred.
3. The corporation tax rate is 25%. Tax of $694m was paid in the year.
4. The company has spent $90m this year and each year for the previous 10 years on long-term brand building.
5. The economic depreciation for the year is estimated to be $1,907m.
6. This year and each year for the previous 10 years, economic depreciation has included a $10m write-down of the value of brand building.
7. Research and development expenditure of $705m was incurred in the period leading to an economic asset of $4,233m at the year end.
8. Interest paid in the period was $213m.
9. Capital employed during the period (from the statement of financial position):

	$m
Opening	19,404
Change in period	977
Closing	20,381

10. Costs of capital:

Equity	12·0%
Debt (pre-tax)	3·8%

11. Gearing: 45% debt/(equity + debt)

Appendix 3

Value chain analysis

Primary activities:
– Inbound logistics (receiving, handling and storing inputs) – Warehouse and distribution operations are controlled by an old information system which feeds into operations management information.
– Operations – Not a critical area of concern at present.
– Outbound logistics (delivering the product to customers) – Warehouse and distribution operations are controlled by an old information system which is fed from operations management information.
– Marketing and sales – Not a critical area of concern at present.
– After-sales service – This is an important area of revenue generation for Arkaig. However, certain directors are worried about over-focusing on this activity.

Secondary activities:
– Procurement – Not a critical area of concern at present.
– Technology development – Not a critical area of concern at present.
– Human resource management – Arkaig aims to recruit, retain and motivate staff who can fit with its entrepreneurial culture.
– Firm infrastructure (planning, finance, quality control, legal matters) – Not a critical area of concern at present.

Note: The areas noted as not critical do not require comment.

Section B – BOTH questions are compulsory and MUST be attempted

2 Company information

Veyatie is a fashion clothing retailer which caters for both male and female customers of all adult age groups. Veyatie has 10 retail stores. The company's information systems are basic for a business of its size and focus solely on financial information.

Veyatie's strategic objectives are 'To maximise shareholder wealth by increasing the number of retail stores, making our customers completely satisfied, ensuring our stores are attractive and offering the widest range of fashion clothing in our market.'

The Veyatie board has seen little need for non-financial performance indicators (NFPIs) so far, preferring instead to focus attention on cost control and working capital management. As a result, all senior managers are appraised against targets for operating profit margin, inventory turnover and the current ratio.

Customer satisfaction

Following a period of poor financial performance, Veyatie began collecting data on one aspect of non-financial performance, customer satisfaction, as the board had been advised that this is a key driver of financial performance.

The data collection began at the start of Quarter 3 20X3 and there is now data available for two complete years (Appendix 1). Veyatie has found it difficult to interpret this qualitative data and also the trends in this data. Some board members question its usefulness and propose reverting back to reporting just the financial indicators which they are used to.

Veyatie collects this data by asking customers to rate their satisfaction with their visit to the store as they are paying for their items. The scores range from 1 (completely dissatisfied) to 5 (completely satisfied). The mean score is the performance indicator reported to the board and the senior managers. Customers are encouraged to leave a score by having their names entered into a quarterly prize draw to win tickets to major football matches, concerts and amusement parks.

Balanced scorecard

A consultant has suggested to the board that the introduction of a balanced scorecard approach may improve business performance, as Veyatie is unlikely to achieve all of its strategic objectives in the near future. The board has already heard what the benefits of the balanced scorecard are, but are sceptical about these.

The board has asked for your advice on the problems of implementing and using the balanced scorecard approach at Veyatie. One aspect of this advice should focus on the selection of suitable performance measures and the consultant has already chosen some performance measures which could be included in a balanced scorecard at Veyatie (Appendix 2). These have been provided to help you illustrate your advice on the problems of using the balanced scorecard.

Note: The board would welcome your advice on how to refine the performance measures as part of your advice on the problems of using and implementing the balanced scorecard, but does not want you to give a detailed evaluation of the advantages and disadvantages of each performance measure, or to suggest completely new measures.

Required:

It is now 1 September 20X5.

(a) Assess the difficulties in using and interpreting the customer satisfaction data at Veyatie. (10 marks)

(b) Advise the board as requested of the problems of implementing and using the balanced scorecard approach at Veyatie. (15 marks)

(25 marks)

Appendix 1

Customer satisfaction data

Percentage of customers giving customer satisfaction scores* between 1 and 5

		20X3		20X4				20X5	
Narrative	**Score**	**Q3**	**Q4**	**Q1**	**Q2**	**Q3**	**Q4**	**Q1**	**Q2**
Completely satisfied	5	5%	5%	50%	5%	5%	0%	5%	45%
Very satisfied	4	10%	5%	0%	14%	15%	5%	20%	1%
Satisfied	3	70%	65%	0%	56%	50%	65%	45%	1%
Somewhat dissatisfied	2	10%	20%	0%	20%	25%	25%	25%	8%
Completely dissatisfied	1	5%	5%	50%	5%	5%	5%	5%	45%
Mean score		**3·00**	**2·85**	**3·00**	**2·94**	**2·90**	**2·70**	**2·95**	**2·93**

* Satisfaction scores were collected from a large number of customers when paying for their items.

Appendix 2

Perspective	**Performance measure**
Financial	Operating profit margin
	Inventory turnover
	Current ratio
Customer	Customer satisfaction
	Market share
Internal business processes	Stock out percentage[1]
Learning and innovation	Total employee training days[2]

Notes:

1. Stock out percentage is the percentage of product lines which are unavailable for sale in each store at the beginning of each trading day.
2. The human resources department already records the total number of employee training days. Employee training covers the three main areas of health and safety training, training in handling customer complaints and training staff to understand the range of products available and how to display them attractively in the store.

3 Company information

Daldorn is a manufacturer of heavy steel items. It is funded by a venture capitalist organisation (VC). Following a period of poor performance, the VC has expressed concern that Daldorn's board members are focusing too much on their own interests, while neglecting to adequately measure and manage company performance in respect of other stakeholder groups.

The company has experienced severe cash flow difficulties due to financial losses made on the sale of several new products. These difficulties have been attributed to poor pricing decisions, which were the responsibility of the board and have resulted in many employees losing their jobs.

Key stakeholder groups

The VC has identified three key stakeholder groups at Daldorn:

The board

The VC is concerned that due to the past losses made on several new products, the board has become too cautious in their attitude towards potential new projects and, in particular, to the pricing of new products. Given the importance of the board to the success of Daldorn, the VC has recently implemented a new bonus scheme. This is an attempt by the VC to revise the board's appetite for risk and encourage them to take more risks, for example, in deciding on the price of new products. Board members will now receive a very large annual performance-related bonus for Daldorn's achievement of challenging targets set on the financial performance measure of return on capital employed (ROCE).

Employees

The manufacturing process at Daldorn does not require employees to have a high level of skill and so most of the manufacturing employees are relatively low skilled. Other employees in other departments have roles which can require specific skills and qualifications. There is a high level of unemployment in the region where Daldorn is based.

Government and regulators

Daldorn operates in a strict regulatory environment. Daldorn has a good record of compliance, but recently its own scientists have discovered high concentrations of a toxic pollutant, which is a waste product from its own manufacturing processes, in the soil near to its factory.

The VC has asked for your advice on whether Daldorn's existing measures shown in Appendix 1 adequately measure the company's performance in managing the concerns of each of these three key stakeholder groups. You may justify the use of alternative measures, but the VC wants only one measure for each stakeholder group and is not concerned about the potential conflict between measures at this stage. As part of this work, the VC expects you to briefly comment on the power and interest of the three stakeholder groups.

Pricing decision

Daldorn is about to launch a new product and needs to determine an appropriate price to charge. The variable cost of each product is uncertain and, hence, there are three possibilities for each demand level. The total contribution of the products at the three possible anticipated levels of demand are shown in Appendix 2.

Investment projects

Two new mutually exclusive manufacturing projects, which are totally unconnected to Daldorn, have become available for the VC to invest in. The VC has undertaken many similar investments before and is an almost entirely risk neutral investor.

Two important exogenous (external) variables affecting the net present value (NPV) of the new projects, A and B, are the worldwide demand for steel products and the level of tariffs applied to the import of a key raw material. The probabilities of these two variables are independent. The VC has estimated the probabilities of there being low, medium or high levels of these two variables in Appendix 3, together with an estimate of the expected NPV for project A for each level of demand and tariff. An analyst has already calculated that the overall expected value of project B is \$1,347 million.

Required:

(a) **Assess the performance measures shown in Appendix 1 in relation to the three key stakeholder groups as required by the VC.** (9 marks)

(b) **Evaluate which price the board would choose for the new product based on the board's revised attitude to risk and briefly comment on the drawbacks of the decision rule used.** (5 marks)

(c) **Advise the VC which of the two new investment projects it should undertake, including an evaluation of the appropriateness of the numerical technique used.** (11 marks)

(25 marks)

Appendix 1

Stakeholder	Measure
Board	Return on capital employed
Employees	Training costs
Government/regulators	No measure specified

Appendix 2

Demand, selling price and variable cost for the new product

Demand*	Unit selling price $'000	Unit variable cost $'000	Unit contribution $'000	Total contribution $'000
1,200	75	37	38	45,600
1,200	75	40	35	42,000
1,200	75	50	25	30,000
950	95	37	58	55,100
950	95	40	55	52,250
950	95	50	45	42,750
500	140	37	103	51,500
500	140	40	100	50,000
500	140	50	90	45,000

* Total demand for the whole of the product's anticipated two-year life.

Appendix 3

Project A – Expected NPV ($ million) for each possible demand level and tariff level combination

		Tariff level		
		High	Medium	Low
Demand level	Low	1,200	1,700	1,850
	Medium	1,000	1,500	1,600
	High	900	1,000	1,100

Project A – Joint probabilities for each possible demand level and tariff level combination

			Tariff level		
			High	Medium	Low
			0·20	**0·50**	**0·30**
Demand level	Low	**0·20**	0·04	0·10	0·06
	Medium	**0·50**	0·10	0·25	0·15
	High	**0·30**	0·06	0·15	0·09

Notes

(1) The standard deviation of the outcomes for project A has been correctly calculated to be 103 and the standard deviation of the outcomes for project B has been correctly calculated to be 106.

(2) An analyst has already calculated that the overall expected value of project B is $1,347 million.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
4	3·902	3·808	3·717	3·630	3·546	3·465	3·387	3·312	3·240	3·170	4
5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
7	6·728	6·472	6·230	6·002	5·786	5·582	5·389	5·206	5·033	4·868	7
8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
9	8·566	8·162	7·786	7·435	7·108	6·802	6·515	6·247	5·995	5·759	9
10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Strategic Professional – Options

Advanced Performance Management (APM)

Wednesday 4 March 2020

APM ACCA EN

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – BOTH questions are compulsory and MUST be attempted

Present Value and Annuity Tables are on pages 10 and 11.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

APM

Think Ahead ACCA

The Association of Chartered Certified Accountants

This is a blank page.
The question paper begins on page 3.

Section A – This ONE question is compulsory and MUST be attempted

1 Company information

Achilty Retail (Achilty) is a stock exchange listed business which sells a range of clothes from a website to consumers in Beeland. Achilty started as a chain of clothing shops but has slowly transitioned into a website only business, and sold its last physical shop recently.

Achilty's mission is 'to deliver long-term returns to shareholders through a combination of sustainable growth in earnings per share and payment of cash dividends'. This mission will be achieved by the following subsidiary objectives:

– Improving product ranges;
– Increasing the number of customers and their individual spend;
– Focusing on customer service; and
– Improving profitability by efficient cost control in purchasing and inventory management.

The board feels that while performance has been good compared to other retailers in general, it is lagging behind the growth of the online retail clothing sector. It is felt that many of the systems and processes have yet to adjust to the new reality of web-only business. As a result, the chief executive officer (CEO) has been reviewing the business in order to identify areas for improvement. She has focused on current performance reporting and the more effective use of the data which Achilty collects.

Current performance reporting

At a recent board meeting, there was a debate as to whether performance towards this mission and its subsidiary objectives are being usefully measured. The director raising the concern believed that any fault might lie in the board's performance report for annual strategic review, although the CEO is fairly happy with the report. Therefore, the CEO wants a full evaluation of the current performance report (see Appendix 1 for the most recent example) in light of this debate and also, more generally, in terms of the best practice for reporting performance. There is no need to suggest new indicators.

Other proposed performance indicators

At this board meeting and as a result of the disagreement about performance reporting, a number of new performance indicators were discussed. The CEO wants an assessment of these indicators, including their calculation if that is possible from the information supplied, and also, whether and how they link to the mission and subsidiary objectives. The indicators and additional information are given in Appendix 2.

Role of the management accountant

The CEO recently introduced a new enterprise resource planning system (ERPS). This system will provide a single database, operating across the whole organisation, to replace systems which have been built up in each function around Achilty's basic website. The functions, for example, purchasing, warehousing and fulfilment, and sales and marketing, will now all work on a common technology platform. Her plan is to move more decision making to individual managers of cross-functional teams who will work on all aspects of a given selection of product lines, such as women's or sports clothing. For example, purchasing will now liaise more closely with sales and marketing in order to ensure that the best possible and most profitable product range is available. It is hoped that this will reduce the number of senior managers and so flatten the organisational hierarchy.

The CEO has been reading about the work of Burns and Scapens. She would like you to explain how you see the role of the management accountant changing in the current business environment both broadly and with specific application of the three drivers of change identified by Burns and Scapens to Achilty.

Data warehouse

In order to catch up with the rest of the online retail sector, the CEO believes that the key step will be to effectively use the vast amount of customer data which the website collects. In a further step forward in the use of information technology at Achilty, she plans to create a data warehouse and use its information to help to achieve the objectives of Achilty. The data warehouse will collect data from customer activities on the website and also, from social media. Given the $50m cost, she wants an assessment of the opportunities and risks which such an expensive system would present.

Required:

It is now 1 September 20X5.

Write a report to the chief executive officer (CEO) of Achilty to respond to her instructions for work on the following areas:

(i) Current performance reporting. (15 marks)

(ii) Other proposed performance indicators. (8 marks)

(iii) The changing role of the management accountant. (12 marks)

(iv) The opportunities and risks of introducing a new data warehouse. (11 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Strategic performance report for Achilty for year ended 30 June 20X5

Financial performance by product area

	Women	Men	Children	Sports	Total	Total	Change on previous year
	20X5 $m	20X5 $m	20X5 $m	20X5 $m	20X5 $m	20X4 $m	
Revenue	85·1	53·2	42·5	31·9	212·7	192·6	10·40%
Gross profit	44·6	25·6	23·3	16·4	109·9	106·7	3·00%
Operating costs:							
Staff costs					45·3	44·1	2·70%
Marketing					17·8	17·8	0·00%
Other operating costs					27·6	25·6	7·80%
Operating profit					19·2	19·2	0·0%
Earnings per share (cents)					24·8	24·8	0·00%
Dividend paid per share (cents)					2·5	2·5	0·00%
Customer response							
Number of customer accounts ('000s)					1,014	973	4·20%
Percentage of customer accounts with at least one purchase in the year					58%	61%	–4·90%
Average spend per customer purchase ($)					122·3	108·4	12·80%
Internal processes							
Deliveries within promised deadline					97%	97%	0·00%
Number of product lines sold					2,104	2,107	–0·10%

Commentary:
Overall performance is satisfactory as the business has maintained its earnings per share and dividend.
Revenue is up by 10·4% on the previous year.
The number of customer accounts and average spend per purchase have increased in the year.
Deliveries to customers continue to be made within promised deadlines to a significant extent.

Appendix 2

Other proposed performance indicators:

1. Return on capital employed (ROCE)
2. Total shareholder return (TSR), which comes from share price change and dividend yield
3. Inventory days
4. Receivables days

Supplementary information for Achilty:

	20X5	20X4
	$m	$m
Assets and liabilities		
Non-current assets	54	52
Current assets		
Inventory	8·7	7·9
Receivables	1·6	1·5
Cash	0	0
	10·3	**9·4**
Current liabilities	15·5	14
Non-current liabilities	21	22
Net assets	**27·8**	**25·4**
Equity	**27·8**	**25·4**

Section B – BOTH questions are compulsory and MUST be attempted

2 Company information

Totaig manufactures high quality and innovative small electrical appliances such as hairdryers and vacuum cleaners. All of the board of directors, who are the strategic decision makers, have always worked in the business and are members of the Totaig family. Most of the operational managers joined as factory workers when the business started and have taken on more responsibilities as the business has grown.

Totaig has basic and outdated IT systems for a business of its complexity and has always used traditional financial performance measures such as return on investment (ROI) and operating profit margin.

Totaig has historically had few competitors and the directors have focused on improving financial results from one year to the next, with little long-term planning. A number of overseas competitors have, however, recently entered Totaig's market. It is estimated that, within one year, these competitors will be able to produce at a similar unit cost to Totaig and that within three to five years, the quality of the competitors' products will be comparable to the current quality of Totaig's products. Totaig may have to invest heavily in product development and make acquisitions in the future in order to compete effectively.

Value based management (VBM)

A consultant has recently told the directors that implementing VBM may help Totaig to respond to the increase in competition over the next one to five years. The consultant has defined VBM as 'the alignment of the business strategy, management processes and culture on maximising shareholder wealth by focusing on key drivers of value'. The directors have accepted this as a reasonable definition of VBM and most of them now agree that VBM would be useful, though others are not yet convinced.

The directors have, however, asked you for further advice on one aspect of the implementation of VBM at Totaig. At her recent presentation, the consultant presented a slide (Appendix 1) showing the four steps in implementing VBM. The directors want your advice on how to implement Step 2, which is defining performance targets. Your advice should focus on the following four areas:

1. Selection of appropriate measures and targets.
2. Timescales to which the targets should relate.
3. Management levels (strategic and operational) in the business to which the targets should relate.
4. Difficulties in measuring and managing performance using VBM.

Measuring value

The directors are unsure of a suitable financial performance indicator for them to use to measure whether Totaig is creating value. As an illustration, they have asked you to evaluate, by calculating economic value added (EVA™), whether Totaig has generated value for the year to 30 June 20X5. You should use the financial information given in Appendix 2, and advise on the difficulties of using EVA™ as a performance indicator at Totaig.

Required:

It is now 1 September 20X5.

(a) Advise the directors on the implementation of Step 2 of VBM as requested. (15 marks)

(b) Evaluate both whether Totaig has created value and the difficulties of using EVA™ as a performance indicator at Totaig. (10 marks)

(25 marks)

Appendix 1

Four steps in implementing VBM

Step 1 – Produce a strategy for maximising value

Step 2 – Define performance targets

Step 3 – Create a plan to achieve the targets

Step 4 – Set up measurement and reward systems

Appendix 2

Income statement for the year to 30 June 20X5

	$'000
Operating profit	10,000
Interest expense	(1,500)
Profit before tax	8,500
Tax at 22%	(1,870)
Profit after tax	6,630

Notes:

1. During the year, $450,000 of advertising cost which will generate sales in future periods was expensed to the income statement.
2. The allowance for doubtful debts at the end of the period was $300,000, a reduction of $200,000 from the beginning of the period.
3. The capital employed at the beginning of the period was $88,944,000.
4. Totaig's after-tax weighted average cost of capital (WACC) is currently 9%. The company is financed by a mixture of equity and fixed and floating rate loans.
5. The directors are considering changing Totaig's policies for the depreciation of non-current assets for the year ending 30 June 20X6.

3 Company information

Coruisk is a clothing manufacturer in Teeland which produces a range of dresses which it sells to Ericht. The range of dresses are the only products which Coruisk produces and Ericht is its only customer.

Ericht is a well-known retailer in Teeland. Ericht has recently been affected by changes in consumer purchasing preferences to buying clothes online and, as a result, is keen to reduce its inventory holding as a way of reducing its costs. Ericht is also finding that it has an excess of goods which it has to discount as consumer tastes appear to change more quickly than in the past.

Current purchasing policy

Coruisk currently obtains its raw material from four suppliers. Each of these suppliers operates differently in terms of the processes and procedures which they adopt in trading with Coruisk. Coruisk has been agreeable to this, as the quality of the raw material supplied has generally been acceptable.

More recently, however, Coruisk has found reason to question the accuracy and quality of the raw material delivered from one supplier. Additionally, another supplier now only despatches material to Coruisk in full-load quantities as it wishes to optimise the use of its delivery vehicles.

Current production methods

The performance metric at Coruisk for production efficiency is the number of dresses produced per period. Coruisk's method of production is to produce individual dresses in long production runs which has helped in maximising output.

Staff working in the production department have their bonus based on this metric. Goods which have not been produced to the required standard have traditionally been rejected at the end of the production process. Coruisk's production control manager has indicated to you that the current production methods have been successful, as the company only has 5% of its goods returned from Ericht due to poor quality.

JIT and costs of quality

Ericht would like to move to a just-in-time (JIT) system of purchasing its goods from Coruisk. The board of Coruisk has asked you for help, as a management consultant, to advise it as to how the company may have to change its approach to the areas of purchasing and production to prepare itself for producing to JIT principles.

The chief executive officer (CEO) does not believe that the company will encounter any problems in adapting to Ericht's requirements and has told you: 'we have very good quality control practices and procedures in place and are confident that we are consistently supplying goods which are required at an acceptable price and at high quality. Our practice of testing goods at the final stage of production, and before they leave the factory, supports this.'

Coruisk's CEO has also made available to you a list of costs which she believes address all relevant costs of quality. These costs are detailed in Appendix 1. The headings for a cost of quality report are also supplied in this appendix. She indicated that some of these costs have never been measured before and have been given financial values to help you give advice. She also told you that Coruisk's current revenue is $4·5 million.

Required:

It is now 1 September 20X5.

(a) Assess the changes which Coruisk will have to make in the areas of purchasing and production in order to supply goods to Ericht on a JIT basis. (13 marks)

(b) Prepare a cost of quality report for Coruisk based on the information in Appendix 1 and comment on potential quality cost changes in light of the proposed move to JIT. (12 marks)

(25 marks)

Appendix 1

CEO's estimates of quality related costs

	$'000
Estimated costs of handling complaints from Ericht	135
Material costs	2,000
Scrap (cannot be reworked)	58
Quality control supervisor's salary (employed full time)	35
Rework cost	72
Machine downtime	38
Product recalls and cost of goods returned	180
Labour cost of production	800
Quality audit	2
Foregone contribution from lost sales (estimated)*	85
Routine maintenance	8

Cost of quality report headings

Costs of conformance:
Prevention costs
Appraisal costs

Costs of non-conformance:
Internal failure costs
External failure costs

* The foregone contribution from lost sales is an estimate made by the CEO of potential sales lost to Ericht due to problems related to production and delivery experienced by Coruisk.

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	0·812	0·797	0·783	0·769	0·756	0·743	0·731	0·718	0·706	0·694	2
3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
14	0·232	0·205	0·181	0·160	0·141	0·125	0·111	0·099	0·088	0·078	14
15	0·209	0·183	0·160	0·140	0·123	0·108	0·095	0·084	0·074	0·065	15

Annuity Table

Present value of an annuity of 1 i.e. $\frac{1 - (1 + r)^{-n}}{r}$

Where r = discount rate
n = number of periods

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	1·970	1·942	1·913	1·886	1·859	1·833	1·808	1·783	1·759	1·736	2
3	2·941	2·884	2·829	2·775	2·723	2·673	2·624	2·577	2·531	2·487	3
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5	4·853	4·713	4·580	4·452	4·329	4·212	4·100	3·993	3·890	3·791	5
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(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
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2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Strategic Professional – Options

Advanced Performance Management (APM)

September/December 2020 – Sample Questions

APM ACCA EN

APM

Time allowed: 3 hours 15 minutes

This question paper is divided into two sections:

Section A – This ONE question is compulsory and MUST be attempted

Section B – BOTH questions are compulsory and MUST be attempted

Present Value and Annuity Tables are on pages 8 and 9.

Do NOT open this question paper until instructed by the supervisor.

This question paper must not be removed from the examination hall.

Think Ahead ACCA

The Association of Chartered Certified Accountants

Section A – This ONE question is compulsory and MUST be attempted

1 Organisation information

You are a performance management consultant brought in by the chief executive officer (CEO) of the Department for Internal Affairs (DIA) for the country of Deeland. The department handles, among other areas, the policing of Deeland. The CEO is a government employee reporting to the Minister for Internal Affairs. The Minister for Internal Affairs is an elected politician appointed by the leader of the Deeland government.

The government of Deeland has recently changed and the new Minister for Internal Affairs has instructed the CEO of the DIA to improve the performance of the Deeland Police (DP) by implementing the Minister's new mission statement for DP: 'to protect the community and prevent crime while providing a value for money service.' As part of this implementation, the CEO has identified the following four key areas for action:

1. Protecting and supporting those at risk of harm
2. Ensuring criminals are caught and brought before the courts
3. Achieving long-term sustainable solutions to the causes of crime
4. Addressing new forms of crime arising in the virtual world

The new Minister wants general improvement in the first three of these areas, as her political campaign was based around criticism of the previous government's perceived failure on these points. It is widely agreed that in the second area, the major concern is the catching of criminals since, historically, there is a high probability that once caught they are brought before the courts. The third area is being addressed through increased involvement with local communities in order to identify and address the causes of crime. The fourth area of crime in the virtual world (the use of computers to facilitate crime) was hardly addressed under the previous government and the Minister wants to see the creation of a task force which will develop skills in detection and prosecution of virtual crime.

CSFs and KPIs

In a recent meeting with the CEO, the Minister indicated that she felt that the four key areas were too vague and in order to better focus actions, the Minister's adviser has suggested the following critical success factors (CSFs):

1. Greater protection and more support for those at risk of harm
2. Be better at catching criminals
3. Reducing the causes of crime by increased involvement with local communities
4. Create a task force to develop skills in detection and prosecution of virtual crime

Initially, the CEO did not see why the four key areas originally given could not be used as CSFs. He wants you to provide justifications in the light of the Minister's concerns for the changes which the adviser has made to each of these. Then, using the above CSFs, he wants you to provide justified recommendations of up to two key performance indicators (KPIs) per CSF in order to measure performance.

In order to help you with the KPIs, the CEO has provided you with a table of data (Appendix 1) which has been used in the past when considering DP's performance. However, you are allowed to suggest new data which would help in measuring performance. The CEO has made it clear that at this stage, no calculations are required.

Value for money

Since DP is funded wholly through Deeland's general taxation, the CEO wants to be able to report on whether DP is providing a value for money (VFM) service as required by the new mission statement. He has heard of the 3Es (economy, efficiency and effectiveness) but needs an explanation of these three headings and how this links to the work on CSFs and KPIs already requested. Then, he requires an evaluation, using the data given in Appendix 1, of whether DP provides such a service. He understands that the evaluation may be limited, as Appendix 1 may not give a data set to perform a full VFM exercise.

Non-financial performance indicators

The new Minister has come from a business background into politics and so far, in departmental discussions, she has focused heavily on the financial aspects of running the Department of Internal Affairs. The CEO wants to help her change focus towards using non-financial performance indicators (NFPIs) and so to understand why financial indicators are not particularly useful for public sector organisations such as DP. The CEO wants you to explain this in your report and illustrate your explanation with examples relevant to DP.

League tables

The Minister is interested in benchmarking as this was often done during her days in business. As a result, she joined an international initiative for creating a league table of fire service data by sharing information with other nearby countries. The CEO believes that the Minister will want to introduce this idea for DP and so wants an assessment of the use of an international police force performance league table and its link to targets for DP. The CEO is especially concerned about the police officers' reaction to this new idea as they have a powerful union, which has widespread public support. Therefore, he also needs you to explain how the use of league tables and targets might affect police officers' behaviour.

Required:

It is now 1 September 20X5.

Write a report to the CEO of the Department for Internal Affairs to respond to his instructions for work on the following areas:

(i) the critical success factors and key performance indicators for Deeland Police; (16 marks)

(ii) an evaluation of the value for money service provided; (13 marks)

(iii) the use of non-financial performance indicators; (7 marks)

(iv) the use of league tables in measuring the performance of Deeland Police. (10 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer. (4 marks)

(50 marks)

Appendix 1

Deeland Police data for each year ending 30 June

	20X5	20X4	20X3
Population ('000s)	11,880	11,761	11,644
Number of police officers	37,930	38,005	38,400
Number of administrative staff	12,320	12,197	12,075
Number of crimes reported in the year	541,735	530,900	520,282
Number of violent crimes reported in the year	108,347	106,180	104,056
Number of crimes solved in the year	297,954	300,934	303,943
Number of complaints	7,624	7,512	7,483
Response to an incident within the allocated time limit	84%	86%	87%
Cost of police force for the year ($m)	2,248	2,226	2,203
Staff costs (all staff including police officers) ($m)	2,026	2,103	2,141

Section B – BOTH questions are compulsory and MUST be attempted

2 Company information

Clonyard is a private company which sells shoes to adults and children. Clonyard has several retail shops. The mission of Clonyard is 'to satisfy customers by providing footwear of excellent quality for the modern world.' Clonyard has built its reputation on providing footwear to those who have specialist needs in footwear, such as minor medical issues, and Clonyard's staff excel at spending time with customers to determine customers' correct requirements. Clonyard has achieved modest growth over the past five years.

Twelve months ago, Clonyard was the subject of a successful but hostile take-over bid by Elrig, a listed company. Elrig's mission is 'to return value consistently to our shareholders by growing our market share and by offering unrivalled value for money for our customers.'

Elrig's primary motivation for the takeover was to enhance its market share by acquiring a niche operator. In addition, Elrig's directors also believe that there is likely to be consolidation in the industry in the near future and the purchase of Clonyard by Elrig is a reaction to that belief. Having acquired Clonyard, Elrig is keen to retain the Clonyard brand and is also keen to ensure that all aspects of Clonyard's business operations are integrated into those of Elrig.

Current situation

Elrig has taken a decision at board level that a similar range of inventory is maintained throughout all Elrig and Clonyard shops. Managers of Clonyard's individual shops are unhappy with this as this is contrary to the individual specialisms which shop managers were encouraged to develop previously. As a result, several managers have left the business.

In order to help with the integration of Clonyard into Elrig's business, Elrig has ensured that each Clonyard shop will have at least one of Elrig's employees working there. Clonyard's staff have complained that the Elrig members of staff are more focused on ensuring a sale is made than spending the required time with customers. Clonyard staff have also expressed concern about the lack of technical product knowledge of Elrig's staff.

Elrig has retained most of Clonyard's directors. These directors have found it challenging to adjust to Elrig's focus on pursuing market share and recently said, 'It's as though they don't measure anything else. Every report we get is about market share and the message is always that we need more of it, as quickly as possible.'

The chief executive officer (CEO) of Elrig was recently told by a management consultant that Elrig should consider using the McKinsey 7S model (Appendix 1) to help with the integration of Clonyard into Elrig's operation. The management consultant indicated that she felt that Elrig should only focus on the four soft elements in this model for now.

Introduction of an ERPS

Elrig and Clonyard are currently utilising different computer systems. It is therefore difficult for staff at all levels of Elrig's operations to obtain access to Clonyard's performance data. The board of Elrig has complained that any information it receives on Clonyard's operations or performance is too late to enable the board to make decisions. The director of operations for the group, for example, has indicated that she does not see any reports on inventory levels at each Clonyard shop until at least three months into the financial year. She has also indicated that Clonyard shops appear to wait too long for goods to be delivered to them from their suppliers.

The group sales director indicated that the data he receives on Clonyard's monthly financial performance is at least three weeks late. This offers no opportunity to introduce discounted products at an appropriate time, which is a very common sales approach for Elrig.

Elrig's employees in general have expressed concern that Clonyard's computerised information systems are outdated and that Clonyard's employees do not use the computer system as much as they should. For example, it was reported that it is common practice for a Clonyard employee to place an order for inventory over the telephone and not enter the order onto the computer system until after the order has been delivered.

The board of Elrig has decided that it needs real time access to Elrig's overall business operations, including Clonyard, and is considering the purchase of an enterprise resource planning system (ERPS). Further, a director of Elrig has indicated: 'the use of a shared up-to-date information system such as an ERPS will ensure that the Clonyard operation is completely integrated within the Elrig one. The Clonyard employees will also be delighted with the brand new system.'

Required:

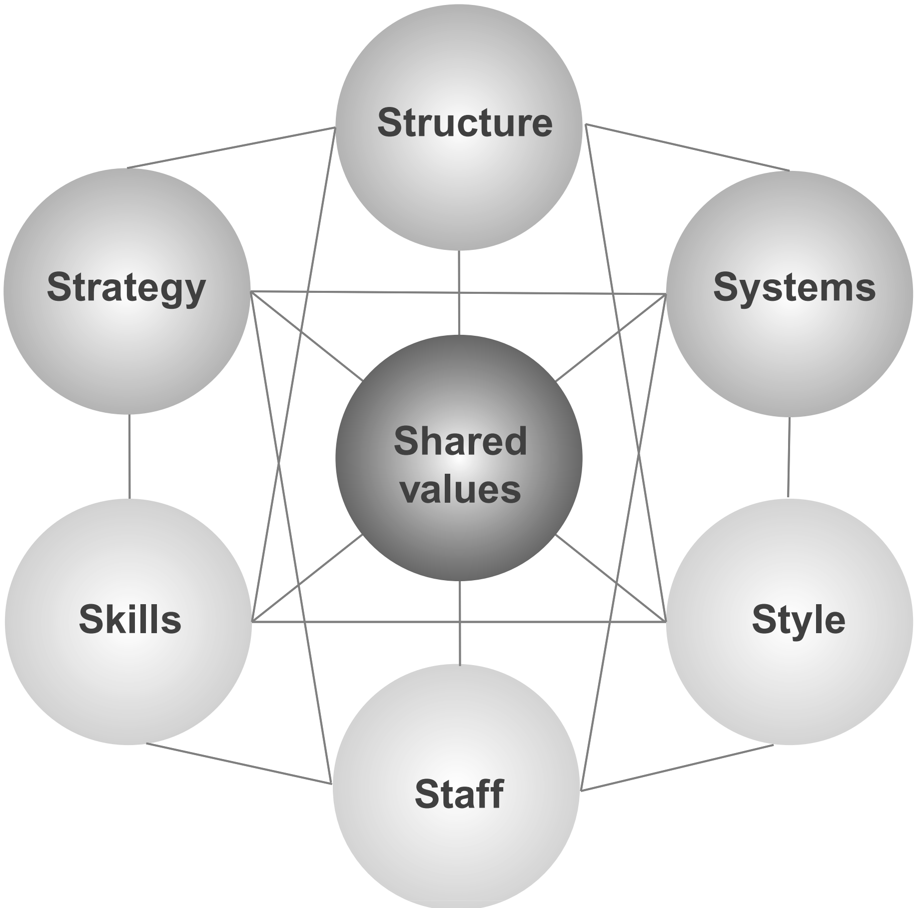
It is now 1 September 20X5.

(a) Using the soft elements of the McKinsey 7S model, evaluate whether Elrig is properly aligned with Clonyard. (15 marks)

(b) Evaluate the introduction of an ERPS into Elrig's overall business, including Clonyard. (10 marks)

(25 marks)

Appendix 1



The soft elements are: skills, staff, style and shared values.

3 Background

Roan University (Roan) is based in Teeland, which is a developed country. The government of Teeland has stated that it will cut part of the funding for the university and has made it clear that Roan must develop new replacement income streams. Roan will remain state owned.

Saugh University (Saugh) is based in Deeland, which has a developing economy and which is culturally different to Teeland. Saugh's funding is from the government of Deeland and this funding is secure for the foreseeable future. The government of Deeland has indicated that it wants the university to develop joint ventures and alliances with universities in developed countries.

Roan and Saugh have recently entered into a joint venture to set up a new university in Deeland. The new university is called RS University (RSU). Roan and Saugh each own 50% of the joint venture and a new purpose-built campus has been constructed. RSU will welcome students within three months.

Details of the joint venture

Roan and Saugh have established a joint management board (MB) to manage the long-term and short-term operations of RSU. The MB's membership is 50% from each university, plus at least one government representative from Deeland. The MB meets at least three times per annum and the position of chairman on the MB rotates between Roan and Saugh on a meeting-by-meeting basis.

Roan has stated that its aim for the joint venture RSU is 'to internationally expand our provision and lead educational developments in the global arena by enhancing our revenue streams from innovative sources.' Saugh, however, has made it clear that it will view the success of RSU by the quality of the graduates who are produced and by the contribution these graduates make to society.

Saugh is keen that Roan sends as many home-based staff from Teeland to teach at RSU in Deeland as is possible but Roan would prefer to recruit local staff in Deeland to undertake its teaching obligations at RSU. Roan's teaching staff have voiced concerns about the extensive travel involved to teach at RSU and have also indicated that their work at Roan is likely to suffer if they teach at RSU. Specifically, they feel that they would not be able to effectively undertake their teaching duties, research activities or supervision of students at Roan. Negotiations are currently taking place between the teachers' trade union, which Roan's staff belong to, and management at Roan which could result in all Roan's teaching staff refusing to teach at RSU.

Public view of the joint venture

There has been some criticism of the joint venture within the local community in Teeland. A parent of one of the students studying at Roan has written, on behalf of a newly-formed public pressure group, to the local newspaper saying, 'All the attention at Roan is on this inappropriate joint venture. My son was told that he could not receive any help or guidance as the staff who could help him were all overseas helping with the development of RSU. His exam results were three weeks late as there was no one there to mark the exams. This is not acceptable. Roan should exist to educate Teeland students primarily. Everything else is secondary.'

Membership of the public pressure group is growing.

Stakeholder analysis

Roan has undertaken an analysis of its stakeholders using Mendelow's matrix. Part of this work is supplied below, along with the justifications for the categorisation of the three stakeholder groups.

		Level of interest	
		Low	**High**
Level of power	**Low**	A	B
	High	C	D

Government of Teeland – the government would be keen to know of any financial problems or difficulties with the joint venture but, generally, it would belong in segment A so **minimal effort** should be expended.

Roan teachers' trade union – the teachers' trade union's power could be high if it has the backing to recommend to the management of Roan that Roan employees will not travel to or teach at RSU. If Roan can recruit local staff for RSU, the power and interest of the trade union will both be low as there will be little or no need for its involvement. If Roan cannot recruit local staff, then the power and interest of the trade union will both be high and it will fall into category D of being a **key player**.

Public pressure group in Teeland – the group has a very high level of interest in the joint venture and its power may be determined by its size. If it grows significantly, then its power may become high also. For the present, its power is likely to be low so the group will fall into category B – **kept informed**.

Required:

It is now 1 September 20X5.

(a) Discuss the problems that will be encountered in managing and measuring performance in the RSU joint venture. (16 marks)

(b) For each of the three stakeholder groups, recommend and justify an appropriate performance measure which could be used by Roan. (9 marks)

(25 marks)

Present Value Table

Present value of 1 i.e. $(1 + r)^{-n}$

Where r = discount rate
n = number of periods until payment

Discount rate (r)

Periods (n)	1%	2%	3%	4%	5%	6%	7%	8%	9%	10%	
1	0·990	0·980	0·971	0·962	0·952	0·943	0·935	0·926	0·917	0·909	1
2	0·980	0·961	0·943	0·925	0·907	0·890	0·873	0·857	0·842	0·826	2
3	0·971	0·942	0·915	0·889	0·864	0·840	0·816	0·794	0·772	0·751	3
4	0·961	0·924	0·888	0·855	0·823	0·792	0·763	0·735	0·708	0·683	4
5	0·951	0·906	0·863	0·822	0·784	0·747	0·713	0·681	0·650	0·621	5
6	0·942	0·888	0·837	0·790	0·746	0·705	0·666	0·630	0·596	0·564	6
7	0·933	0·871	0·813	0·760	0·711	0·665	0·623	0·583	0·547	0·513	7
8	0·923	0·853	0·789	0·731	0·677	0·627	0·582	0·540	0·502	0·467	8
9	0·914	0·837	0·766	0·703	0·645	0·592	0·544	0·500	0·460	0·424	9
10	0·905	0·820	0·744	0·676	0·614	0·558	0·508	0·463	0·422	0·386	10
11	0·896	0·804	0·722	0·650	0·585	0·527	0·475	0·429	0·388	0·350	11
12	0·887	0·788	0·701	0·625	0·557	0·497	0·444	0·397	0·356	0·319	12
13	0·879	0·773	0·681	0·601	0·530	0·469	0·415	0·368	0·326	0·290	13
14	0·870	0·758	0·661	0·577	0·505	0·442	0·388	0·340	0·299	0·263	14
15	0·861	0·743	0·642	0·555	0·481	0·417	0·362	0·315	0·275	0·239	15

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3	0·731	0·712	0·693	0·675	0·658	0·641	0·624	0·609	0·593	0·579	3
4	0·659	0·636	0·613	0·592	0·572	0·552	0·534	0·516	0·499	0·482	4
5	0·593	0·567	0·543	0·519	0·497	0·476	0·456	0·437	0·419	0·402	5
6	0·535	0·507	0·480	0·456	0·432	0·410	0·390	0·370	0·352	0·335	6
7	0·482	0·452	0·425	0·400	0·376	0·354	0·333	0·314	0·296	0·279	7
8	0·434	0·404	0·376	0·351	0·327	0·305	0·285	0·266	0·249	0·233	8
9	0·391	0·361	0·333	0·308	0·284	0·263	0·243	0·225	0·209	0·194	9
10	0·352	0·322	0·295	0·270	0·247	0·227	0·208	0·191	0·176	0·162	10
11	0·317	0·287	0·261	0·237	0·215	0·195	0·178	0·162	0·148	0·135	11
12	0·286	0·257	0·231	0·208	0·187	0·168	0·152	0·137	0·124	0·112	12
13	0·258	0·229	0·204	0·182	0·163	0·145	0·130	0·116	0·104	0·093	13
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6	5·795	5·601	5·417	5·242	5·076	4·917	4·767	4·623	4·486	4·355	6
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8	7·652	7·325	7·020	6·733	6·463	6·210	5·971	5·747	5·535	5·335	8
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10	9·471	8·983	8·530	8·111	7·722	7·360	7·024	6·710	6·418	6·145	10
11	10·368	9·787	9·253	8·760	8·306	7·887	7·499	7·139	6·805	6·495	11
12	11·255	10·575	9·954	9·385	8·863	8·384	7·943	7·536	7·161	6·814	12
13	12·134	11·348	10·635	9·986	9·394	8·853	8·358	7·904	7·487	7·103	13
14	13·004	12·106	11·296	10·563	9·899	9·295	8·745	8·244	7·786	7·367	14
15	13·865	12·849	11·938	11·118	10·380	9·712	9·108	8·559	8·061	7·606	15

(n)	11%	12%	13%	14%	15%	16%	17%	18%	19%	20%	
1	0·901	0·893	0·885	0·877	0·870	0·862	0·855	0·847	0·840	0·833	1
2	1·713	1·690	1·668	1·647	1·626	1·605	1·585	1·566	1·547	1·528	2
3	2·444	2·402	2·361	2·322	2·283	2·246	2·210	2·174	2·140	2·106	3
4	3·102	3·037	2·974	2·914	2·855	2·798	2·743	2·690	2·639	2·589	4
5	3·696	3·605	3·517	3·433	3·352	3·274	3·199	3·127	3·058	2·991	5
6	4·231	4·111	3·998	3·889	3·784	3·685	3·589	3·498	3·410	3·326	6
7	4·712	4·564	4·423	4·288	4·160	4·039	3·922	3·812	3·706	3·605	7
8	5·146	4·968	4·799	4·639	4·487	4·344	4·207	4·078	3·954	3·837	8
9	5·537	5·328	5·132	4·946	4·772	4·607	4·451	4·303	4·163	4·031	9
10	5·889	5·650	5·426	5·216	5·019	4·833	4·659	4·494	4·339	4·192	10
11	6·207	5·938	5·687	5·453	5·234	5·029	4·836	4·656	4·486	4·327	11
12	6·492	6·194	5·918	5·660	5·421	5·197	4·988	4·793	4·611	4·439	12
13	6·750	6·424	6·122	5·842	5·583	5·342	5·118	4·910	4·715	4·533	13
14	6·982	6·628	6·302	6·002	5·724	5·468	5·229	5·008	4·802	4·611	14
15	7·191	6·811	6·462	6·142	5·847	5·575	5·324	5·092	4·876	4·675	15

End of Question Paper

Advanced Performance Management (APM)

March/June 2021 (20/21 Syllabus)

Get to know your exam

These graphical representations are intended to give an indication of past exam requirements and associated question content.

Please note that you will not be able to complete answers within these documents and in isolation they will not sufficiently prepare you for your exam.

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Introduction screen

APM March/June 2021 (20/21 syllabus)

ACCA Think Ahead

Introduction

This exam contains past exam content and indicates how the live exam will be structured and assessed, the likely layout and style of questions and the range of response options that could be presented to you in each question's workspace.

You should use this exam to become familiar with the workspace and the features and functionality contained within the live exam.

The past content exam is reflective of the live exam experience but has some differences:

- The live exam will be timed, however there is no time limit in the past content exam.
- If you want to sit this exam in exam-style conditions you should answer the questions presented within a **3 hour 15 minute time period**.
- Once you have started this past content exam, you are able to leave at any time by closing the browser window. When you return, anything you have entered into the response options will be saved and you can continue sitting the exam.
- In the live exam your answers entered into the workspace response options will be expert-marked. At the end of this exam, you should use the solution material provided to assess your performance.
- You will be able to access solution material at the end of this exam when using the Self Marking resources which include a Marking Guide and Sample Answer for each question. If you wish to access these without completing the questions, click on End Exam on the Item Review Screen and navigate to the Marking tab on the Dashboard to Self-Mark.

Exam summary screen

APM March/June 2021 (20/21 syllabus)

Exam Summary

Time allowed: This exam is not timed.

This exam is divided into two sections:

Section A

- One question worth 50 marks.
- 50 marks in total.

Section B

- Two questions, each worth 25 marks.
- 50 marks in total.

All questions are compulsory.

Select **Next** to start your exam.

Exam summary screen (continued)

Section A

APM March/June 2021 (20/21 syllabus)

Section A

This section of the exam contains **one question**.

This question is worth **50 marks** and is compulsory.

This exam section is worth **50 marks** in total.

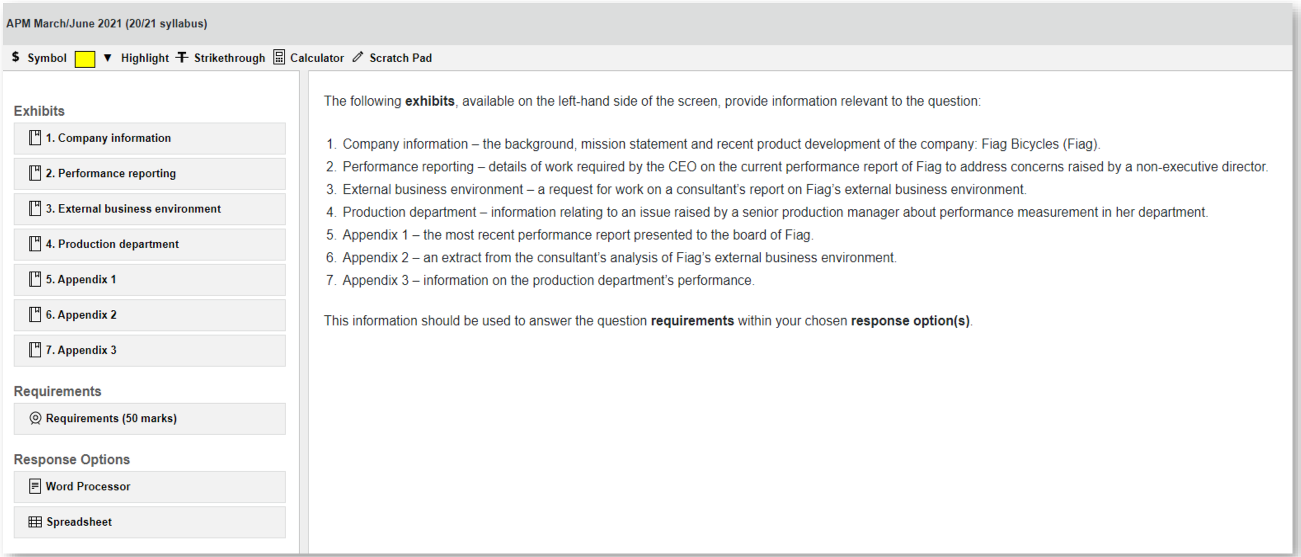
Important:

In your live exam, you should:

- Indicate which requirement each of your responses relate to so that this is clear for markers.
- Show all notes/workings that you want the marker to see within your responses. Remember, any notes/workings made on the Scratch Pad or on your workings paper will not be marked.

Select **Next** to continue.

Scenario 1 – Initial screen



Scenario 1: requirements

Requirements (50 marks)

It is now 1 September 20X5.

Write a report to the chief executive officer (CEO) to respond to his instructions for work on the following areas:
(a) the performance reporting at Fiag focused on:

(i) the question of manipulation in the board report;

(12 marks)

(ii) whether the report addresses the company's objectives and the report's presentation;

(14 marks)

(b) the consultant's report on the external business environment;

(12 marks)

(c) the issue of performance measurement at the production department.

(8 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer.

(4 marks)

Scenario 1: Exhibits

Exhibit 1: Company information

1. Company information

Flag Bicycles (Flag) is a large national bicycle manufacturer in the well-developed country of Beeland. It was a family-owned business until three years ago when it raised new funds from a venture capitalist (VC) to develop new models of bicycle. Of the eight models in its current range, two have been significantly redesigned and one totally new model has been launched in 20X4. This new model (the Zoam) has been developed over five years and is Flag's most radical development to date, as it is lightweight and has an electrical battery which can assist less physically fit riders to cycle up hills.

The VC invested $30m in 20X2 and insisted that Flag produce a mission statement as a clear indication of the company's objective. The objective of Flag is 'to give the shareholders sustainable growth in returns by developing and manufacturing the best quality bicycles and so bring the joy of cycling to a broad customer base in Beeland'.

Exhibit 2: Performance reporting

2. Performance reporting

The VC has a non-executive director on the board of Flag. She has criticised the executive directors over the most recent performance report that was presented to the board meeting in order to review the annual performance to 30 June 20X5 (Appendix 1). Firstly, she was very unhappy about what she felt were attempts to manipulate the picture of Flag's performance presented in the report.

Secondly, she repeated criticism that she had given in earlier board meetings that the report does not address the company's objectives. She then demanded that the executive directors take action on these points immediately and asked that the board meeting be reconvened once this is done.

The chief executive officer (CEO) wants you, as a performance management expert in the company, to give him advice on these matters. He is committed eventually to a redesign of the performance reporting at Flag but needs to understand the non-executive director's concerns more clearly before this begins. He is happy that there are no arithmetic errors in the presentation of the performance report but wants a critical review from you:

1. addressing the question of manipulation in the impression given by the report
2. assessing whether the current report addresses the company's objectives and briefly, any other issues in its presentation

Exhibit 3: External business environment

3. External business environment

The CEO has recognised that the company operates in an increasingly volatile external business environment. Therefore, he has employed a consultant to perform a PEST analysis and he has given you the relevant extracts of their report (Appendix 2). He stated that he does not want you to re-perform the consultant's analysis of the external environment. Instead, he wants you to focus on the implications of the PEST factors identified on Fiag's business and then on providing a justified recommendation of suitable performance indicators to measure the impact of those factors.

Exhibit 4: Production department

4. Production department

A senior production manager (SPM) has recently been angry at her failure to receive part of her bonus for the year, when she felt she had performed outstandingly. She is rewarded her bonus in two parts: one part is shares in Fiag in order to reflect the overall company performance; and the other part is cash, based on the performance of her department compared to budget. It was this second part where her expectations were not met by the reward.

During the year, there were significant price changes in materials used in production. The SPM has suggested that budget variances should be broken down into those that she can control and those that are out of her control, as such assessment is otherwise unfair. The CEO has supplied you with data relating to this in Appendix 3 and wants advice from you on the implications of this suggestion for management accounting at Fiag and for the SPM in this particular case.

Exhibit 5: Appendix 1

5. Appendix 1

Page: 1 of 1 Automatic Zoom

Performance Report

Year to 30 June	20X5	20X4	Improvement year on year	Industry average
	$m	$m	%	%
Revenue	273	289	–6%	
Costs of sales	131	137		
Gross profit	142	152	–7%	
Administrative expenses	50	52		
Distribution expenses	28	29		
Selling and marketing expenses	51	52		
Operating profit	13	19		
Operating margin	4·8%	6·6%		11%
Exceptional costs	0	12		
Net financing costs	0	0		
Profit before tax	13	7	86%	

Commentary:

- Revenue from new and redesigned bicycle models grew by 200% in 20X5
- PBT has improved by 86%
- Operating margin has fallen by a small 1·8%

Notes:

1. Administrative expenses includes the income from a two-year government grant of $5m p.a. (in 20X5 and 20X4) relating to Zoam.
2. Revenue includes revenue from the Zoam (new electrical bicycle) ($25m in 20X5, $5m in 20X4).
3. Exceptional costs are the costs of developing the new electrical bicycle.

Exhibit 6: Appendix 2

6. Appendix 2

External business environment at Fiag (August 20X5)

Extract of report by A Consultant

Political environment

- The government of Beeland has recently provided tax allowances to citizens who use a bicycle to commute to work.
- It has also supported cycling by building many new dedicated cycle-paths.

Economic environment

- Beeland has seen steady economic growth for the last 20 years and this wealth has spread through all parts of society.
- The introduction of significant import tariffs has surprised many businesses such as Fiag, who import raw materials or sub-components for final assembly.

Socio-cultural environment

- Having a healthy lifestyle has become an increasingly popular aspiration for the people of Beeland.
- The population of Beeland is ageing with increasing numbers of retired people.

Technological environment

- Cheap, new materials are enabling lighter bicycles to be built without compromising their strength.
- Battery technology has rapidly advanced so that it is feasible to fit lightweight electrical power units to bicycles.

Exhibit 7: Appendix 3

7. Appendix 3

Production department information

Fiag's senior management set standard costs and budgets for each department once a year.

The SPM's problem arose in relation to the main product of the SPM's department, the Speedy. The original standard cost for this bicycle was set in the budget as $255 per unit.

During the year, actual production costs on the bicycle were $22·5m with 85,000 Speedys manufactured.

The main reason for the higher actual costs was a rise of 16% in material costs, as these materials are imported and the government has imposed extra tariffs on imported goods. If this had been known at the time that budgets were set, then the standard cost would have been set at $268 per unit.

The SPM would receive the second part of her bonus (10% of base salary) if costs have a favourable variance.

Exam summary screen (continued)

Section B

APM March/June 2021 (20/21 syllabus)

Section B

This section of the exam contains **two questions.**
Each question is worth **25 marks** and is compulsory.
This exam section is worth **50 marks** in total.

Important:
In your live exam, you should:

- Indicate which requirement each of your responses relate to so that this is clear for markers.
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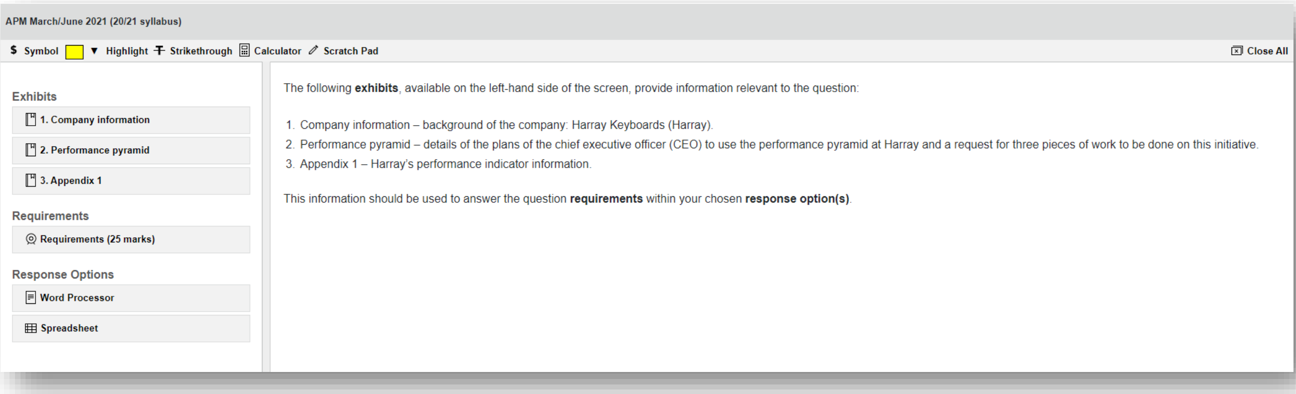
Select **Next** to continue.

Scenario 2 – Initial screen



Scenario 2: requirements

Requirements (25 marks)

It is now 1 September 20X5.

(a) Explain how the headings in the performance pyramid link together to aid analysis of the performance indicators used in a business.

(6 marks)

(b) Complete the analysis and evaluate the operational performance indicators at Harray, using the headings and data in Appendix 1.

(12 marks)

(c) Evaluate the reliability of non-financial indicators as requested by the CEO, using the operational performance indicators from part (b).

(7 marks)

Scenario 2: Exhibits

Exhibit 1: Company information

1. Company information

Harray Keyboards (Harray) is a family-owned business which manufactures computer keyboards. It has contracts to supply three large desktop computer manufacturers. Harray won its contracts to supply these manufacturers under severe price competition as the manufacturers themselves have seen the price of their whole desktop package fall in the past 10 years. The contracts are for five years and have at least three years each left to run. At the end of the contract, the desktop manufacturers will retender for suppliers and Harray expects to be in a strong position as the existing supplier to win more work.

The chief executive officer (CEO) and leader of the Harray family is Graham Harray. He and the board believe that the success of the business has been built on an emphasis on strategic focus. He recently declared at a board meeting, 'Cost leadership wins business in our niche market and we should not over-stretch ourselves into non-core activities – we make cheap keyboards!'

Exhibit 2: Performance pyramid

2. Performance pyramid

The CEO has indicated that he wants to use the performance pyramid to analyse the performance indicators used at Harray. He has asked you, as the company's performance management expert, to undertake three pieces of work on this area.

First, whilst the CEO is familiar with the headings in pyramid (vision, market, financial, customer satisfaction, flexibility, productivity, waste, quality, delivery and cycle time), he would like you to explain how they fit together in the pyramid structure and how Harray could use this to analyse a performance measurement system.

Second, the CEO would like you to complete the analysis provided in Appendix 1. Appendix 1 contains the work done so far by a junior accountant on the pyramid headings and their associated indicators for Harray, with additional notes and information about Harray's performance. He would then like you to evaluate only the operational performance indicators at Harray.

Third, there are a number of non-financial indicators used in the performance pyramid and the CEO wants to get a sense of the reliability of these indicators compared to the financial ones which are usually presented in the board reports. He would like this part of the work to focus on the methods of measuring such indicators including the information sources, and the methods of processing and checking which is normally undertaken.

Exhibit 3: Appendix 1

3. Appendix 1

Harray's performance indicator information (for the year ended 30 June 20X5)

Pyramid heading	Indicator	Value
1. Vision	Cost leadership in keyboard manufacturing	
2. Financial	Profit in the financial year	$600,000
3. Market	Market share	12%
4. Customer satisfaction	Customer complaints	0·4% of keyboards
5. Flexibility	Time from order to delivery	28 (average)
6. Productivity	Operating profit margin	7·2%
7. Waste		
8. Quality		
9. Delivery		
10. Cycle time	Working capital cycle	37 days

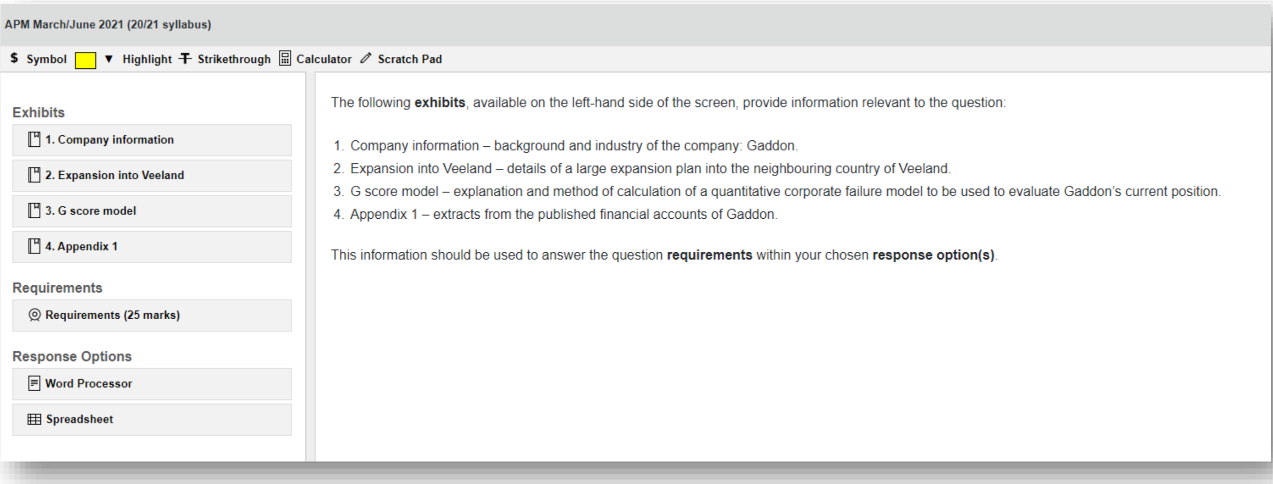
Notes:

1. Vision does not have an indicator. There is a separate project being carried out within the finance department to deal with this.
2. The absolute profit figure is used.
3. Market share is measured by an external marketing expert.
4. Customer complaints are measured by customer returns.
5. Many orders require customisation of the production process. Customers see timely delivery as critical.
6. There are a number of other margins available for use in measuring productivity in specific areas of operations but operating margin is used as the summary indicator of productivity.
7. There are 16 manufacturing production lines in the factory. These lines are active for nine hours a day for six days a week (52 weeks a year). A keyboard is produced from the production line every 2·2 minutes (including set-up time), while the machines are operating. Last year, the factory produced 1·05 million keyboards.
8. The number of keyboards rejected by quality inspectors in the factory was 15,750 in the year. Of these, 9,450 were able to be reworked at an average cost of $2 and the rest were scrapped. The standard cost of a keyboard is $8.
9. Harray uses an external logistics firm (Achall) to handle all deliveries. Harray calls Achall to collect an order and Achall's lorry fleet picks up orders from Harray's factory and delivers to the customer. There are service level agreements governing how long Achall has to deliver the goods to Harray's customers. Achall supplies Harray with data from its own systems on the number of packages delivered and how many were late. Below is the report for last year:

Deliveries made (in total in the period)	5,127
Deliveries made within agreed time after Harray's order received	4,717
Total time taken to deliver Harray's goods (i.e. the total, over all the orders, of the number of days each order spends in transit)	17,432

10. Working capital cycle is calculated as inventories days (22) + trade receivables days (42) – trade payables days (27).

Scenario 3 – Initial screen



Scenario 3: requirements

Requirements (25 marks)

It is now 1 September 20X5.

(a) Using the 20X4 G score, advise the CEO whether Gaddon is at risk of corporate failure and evaluate the usefulness of using quantitative models, such as the G score, to predict corporate failure.

(10 marks)

(b) Advise the CEO why liquidity indicators are important in assessing the likelihood of corporate failure at Gaddon and assess whether the current liquidity of the business indicates corporate failure is likely.

(8 marks)

(c) Assuming that Gaddon is at high risk of corporate failure, evaluate the factors which have led to the company finding itself in this position.

(7 marks)

Scenario 3: Exhibits

Exhibit 1: Company information

1. Company information

Gaddon has successfully operated a chain of 90 gymnasiums in Jayland for many years. The founder of the business retired during 20X3 due to ill health. His daughter, who had graduated from the Jayland School of Business (JSB) in the same year, took over from him as Gaddon's CEO. As a student, the new CEO had worked as an intern in neighbouring Veeland. She knew that many citizens there have unhealthy lifestyles, and participation in sport and physical exercise is very much lower than in Jayland. As there were relatively few gymnasiums in Veeland, the CEO believed there was a great opportunity to expand the Gaddon brand there.

Exhibit 2: Expansion into Veeland

2. Expansion into Veeland

The CEO told the members of the board to draw up an ambitious plan to open a chain of 60 new gymnasiums in Veeland. Until then, Gaddon's strategy had remained unchanged for a long time and the business opened an average of one new gymnasium each year. Most of the board members had little experience of evaluating strategic change on the scale which was now being proposed and had relied on the former CEO to guide them on strategic matters.

At a board meeting, Gaddon's finance director expressed concerns about the amount of debt which would be required to fund the expansion and the high level of risk involved in operating overseas for the first time on such a large scale. Shortly after the board meeting, he resigned from the board and took a job in a competitor organisation. In addition, a number of other board members discussed privately that the expansion was unlikely to succeed in a nation as unhealthy as Veeland, but did not openly voice their opposition to the CEO's plans.

In the absence of the finance director, the CEO did much of the financial evaluation of the expansion herself. She assumed that each new gymnasium would generate the same average annual revenue as those in Jayland of $432,000. On the same basis, fixed staff and operating costs would be $343,000. As the capital assets of $400,000 needed to set up each gymnasium would be depreciated over 25 years, she calculated that the annual profit from each gymnasium would be around $73,000 and the payback period based on the cash flows of the project would be 4·5 years.

In total, $24m was required to finance the expansion but the bank was only willing to give Gaddon a loan of $12m. Convinced that her plan would be a success, the CEO persuaded a wealthy family friend to lend Gaddon an additional $12m. Both loans were for 25 years and both had an annual floating interest rate of 5%.

At the beginning of 20X4, Gaddon opened the planned 60 new gymnasiums in Veeland. Though performance was better than some had expected, the number of customers at each gymnasium was much lower than for a similar gymnasium in Jayland, and customers were unwilling to pay such high membership prices.

At the end of July 20X5, the Central Bank of Geeland raised interest rates, and the rate of interest on Gaddon's loans was increased to 7%. It is now 1 September 20X5 and Gaddon has already missed the July 20X5 and August 20X5 instalments on both of its loan payments, in order to afford to pay creditors and staff wages.

Exhibit 3: G score model

3. G score model

The CEO has contacted you as a performance management consultant to advise her on Gaddon's deteriorating financial position, and whether the business is at risk of corporate failure. You have decided to calculate the 'G score' for Gaddon to help with your work.

The G score is a quantitative model for predicting corporate failure for companies listed in Jayland. It was created by a group of academics at the JSB. It is based on the statistical correlations between a company's key financial ratios and the success or failure of the company within two years of the sample data. It is derived from statistical analysis of the published accounts of all companies on the small Jayland stock exchange.

Calculation of the G score

The G score is calculated by applying the following weighting factors to four key financial ratios and adding these weighted elements together.

G score = $3G_1 + 4G_2 + 1{\cdot}5G_3 + 1{\cdot}2G_4$

Where:

G_1 = Current assets/total assets
G_2 = Earnings before interest, tax, depreciation and amortisation/total assets
G_3 = Revenue/total assets
G_4 = Total assets/non-current liabilities

Companies with a G score of less than 4 are in danger of corporate failure, whereas companies with a score of 6 or more are not in danger of failure. Those companies with a G score of between 4 and 6 need further analysis to determine whether they are at risk of corporate failure.

Extracts from Gaddon's 20X3 and 20X4 accounts are given in Appendix 1.

Exhibit 4: Appendix 1

4. Appendix 1

Edit Format

A1

	A	B	C	D	E	F
1						
2	**Extracts from the published accounts of Gaddon for the years to 30 June**					
3						
4	**Statement of financial position $'000**					
5					**20X4**	**20X3**
6	**Assets:**					
7	Tangible non-current assets				37,640	13,500
8	Intangible non-current assets				2,250	4,090
9					**39,890**	**17,590**
10	Current assets:					
11	Trade receivables				2,585	1,620
12	Cash				195	1,750
13					**2,780**	**3,370**
14	Total assets				**42,670**	**20,960**
15						
16	**Equity and liabilities:**					
17	Share capital				1,000	1,000
18	Retained earnings				16,195	18,985
19	Total equity				**17,195**	**19,985**
20	Non-current liabilities				24,000	100
21	Current liabilities:					
22	Trade payables				1,475	875
23	Total liabilities				**25,475**	**975**
24	Total equity and liabilities				**42,670**	**20,960**
25						
26	Dividend paid per share				Nil	$2.50
27						
28	**Statement of profit or loss $'000**					
29					**20X4**	**20X3**
30	Revenue				51,840	38,880
31	Operating expenses				53,630	34,328
32	Operating profit*				**-1,790**	**4,552**
33	Interest payable				1,200	4
34	Tax payable				-	910
35	Net profit				**-2,990**	**3,638**
36						
37	*Operating profit in 20X4 is after charging $2m in depreciation and amortisatio					
38						
39	**Cash flow statement $'000**					
40					**20X4**	**20X3**
41	Free cash flow after capital expenditure				-3,200	3,800
42						
43						

Advanced Performance Management

Sample Exam – December 2021

Get to know your exam

These graphical representations are intended to give an indication of exam requirements and associated question content.

Please note that you will not be able to complete answers within these documents and in isolation they will not sufficiently prepare you for your exam.

We encourage you to visit the ACCA Practice Platform in order to attempt up to date practice exams within the computer-based exam environment.

Instruction screens

APM September/December 2021 exam (21/22 syllabus)

Instructions (1 of 4)

The instructions displayed below are representative of those displayed in the live exam. Where there are differences between this past content exam and the live exam these are explained.

General Instructions

- In this exam, the instruction screens are not timed however in the live exam they will be available for a maximum of 10 minutes prior to the exam starting.
- In the live exam, the stated exam time will automatically start once the 10 minute period has passed (or earlier if you choose to start the exam within the 10 minute period).
- A copy of the instruction screens can be accessed at any time during the exam by selecting the Help button provided.

The Workspace

- Your exam consists of a number of questions. Each question is presented in a workspace. Each workspace will include:
  - Introductory information for the question.
  - Exhibits – these contain the question scenario content broken down into sections or sources of information you will need to answer the question requirement(s).
  - Requirements – these list the requirement(s) you are expected to answer in the workspace.
  - Response Options – you may be presented with one or more word processor and/or spreadsheet response options within which to construct your answer.
- When selected, the exhibits, requirements and response options will display in windows, which can be moved and resized as required.
- You can close each window individually or close all windows at once by selecting Close All on the top toolbar. This minimises the open windows to the left-hand side of the screen. Note that any answers you have entered into the response options will be saved and you can re-open them and change your answers at any time.
- There is a splitter bar which you can move to see more or less of the left or right hand side of the screen as required.
- You can highlight or strikethrough text in the introductory information, PDF exhibits or requirements by selecting Highlight or Strikethrough.
- You can copy and paste between exhibits, requirements and response options by using the Ctrl-C (Copy) and Ctrl-V (Paste) shortcuts.

← Previous Next →

Instruction screens (continued)

APM September/December 2021 exam (21/22 syllabus)

Instructions (2 of 4)

Navigation

- The question number you are viewing is displayed in the top display bar. You can hide or restore this display by selecting .
- You can navigate between screens by selecting **Next** or **Previous** or by clicking on a question number from the Navigator or Item Review screens.
- You can revisit questions and change your answers at any time during the exam.

Flag for Review

- If you wish to revisit/review a question later in the exam, click **Flag for Review**.
- Click the button again to remove the flag.

Help

- Click the **Help** button provided to access:

- A copy of these exam instructions.
- Help and guidance on workspaces.
- Formulae sheets/tax tables if your exam requires these. Note that the name of the Help button will indicate if formulae sheets/tax tables are available i.e. **Help**, **Help/Formulae Sheet** or **Help/Tax Tables**

Calculator

- You have the option to use the on-screen standard or scientific calculators by selecting **Calculator**.
- Note that in the live exam you are also permitted to use your own calculator providing it does not have the facility to store or display text.

Previous Next

Instruction screens (continued)

APM September/December 2021 exam (21/22 syllabus)

Instructions (3 of 4)

Workings/Scratch Pad

- You may use an on-screen Scratch Pad to make notes/workings by selecting **Scratch Pad**
- You can cut and copy text from the Scratch Pad and paste into your response options either by using the Ctrl-C (Copy), Ctrl-X (Cut) and Ctrl-V (Paste) shortcuts, or the on-screen buttons.
- The Scratch Pad retains all notes/workings entered for all workspaces and these are available for the duration of the exam. They will not be submitted for marking after your live exam.
- You will also be provided with paper for notes/workings for your live exam, should you prefer to use it. This will not be submitted for marking. It will be collected at the end of the exam and must not be removed from the exam room.
- **Important:**
  - The notes/workings entered onto the Scratch Pad or your workings paper during the live exam will not be marked.
  - If you want the marker to see any notes/workings for question requirements in the live exam you must show them within the relevant response options.

Symbol

- You can add a selection of currency symbols to your answers by selecting **$ Symbol** on the top toolbar.

Navigator Screen

- Navigator can be accessed at any time during the exam by selecting **Navigator**.
- This screen allows you to jump to any question number in the exam.
- It also allows you to see the status of each question and whether it has been viewed, attempted or flagged for review.

← Previous | Next →

Instruction screens (continued)

APM September/December 2021 exam (21/22 syllabus)

Instructions (4 of 4)

Reviewing the Exam

- You can review this exam once you have attempted any, or all, of the questions.
- To do this:
  - Navigate to the **last question** in the exam.
  - Click **Next** .
- This takes you to the Item Review screen.

Item Review Screen

- This screen gives you a final opportunity to see the flag and attempted status of each question and to review your answers before you exit the exam.
- You can select individual questions you wish to revisit, or quickly access groups of questions from the Item Review screen.
- During the item review period Navigator is not available however you can navigate to questions by selecting **Next** , **Previous** or **Review Screen** .
- When reviewing questions you can change your answers and click **Review Screen** to view any updated status on the Item Review screen.

Ending the Exam

- Once you have completed your item review and wish to finally end the exam click **End Exam** from the Item Review Screen.
- Once you end the exam, you cannot revisit any questions. Your answers will then be available for marking and review.

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Exam summary screen

Advanced Performance Management (APM) Specimen – from September 2022 onwards

Exam Summary

Time allowed: 3 hours 15 minutes.

This exam is divided into two sections:

Section A

- One question worth 50 marks.
- 50 marks in total.

Section B

- Two questions, each worth 25 marks.
- 50 marks in total.

All questions are compulsory.

Select **Next** to start your exam.

← Previous Next →

Exam questions

Section A – summary screen

APM September/December 2021 exam (21/22 syllabus)

Flag for Revie

Section A

This section of the exam contains **one question**.

This question is worth **50 marks** and is compulsory.

This exam section is worth **50 marks** in total.

Important:

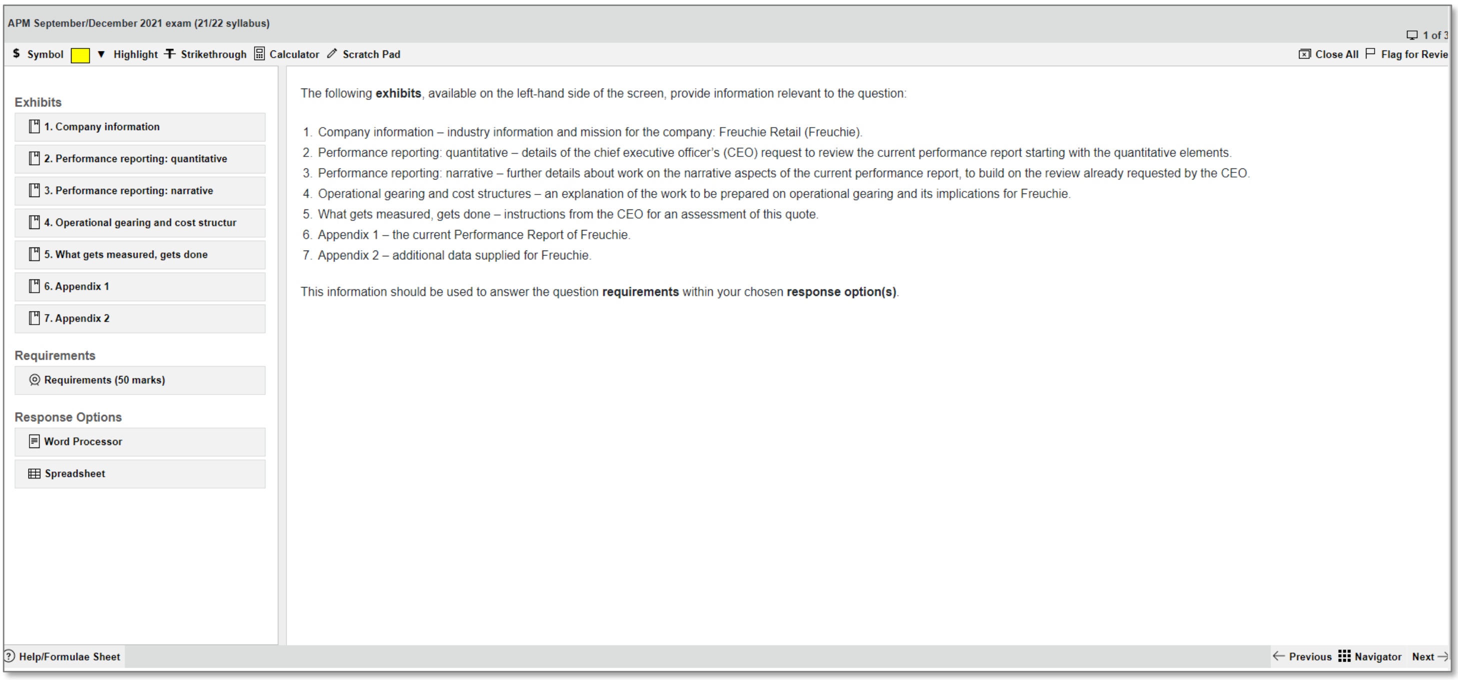
In your live exam, you should:

- Indicate which requirement each of your responses relate to so that this is clear for markers.
- Show all notes/workings that you want the marker to see within your responses. Remember, any notes/workings made on the Scratch Pad or on your workings paper will not be marked.

Select **Next** to continue.

Navigator Next

Section A – question 1



Requirements

Requirements (50 marks)

It is now 1 September 20X5.

Write a report to the chief executive officer (CEO) of Freuchie to respond to his instructions for work on the following areas:

(i) Current performance reporting: quantitative;

(18 marks)

(ii) Current performance reporting: narrative;

(10 marks)

(iii) The calculation of operational gearing and its implications;

(8 marks)

(iv) The quote 'What gets measured, gets done'.

(10 marks)

Professional marks will be awarded for the format, style and structure of the discussion of your answer.

(4 marks)

Exhibit 1

1. Company information

Freuchie Retail (Freuchie) is a family-owned business which sells a range of clothes from a chain of shops across Beeland. Freuchie's mission is 'to deliver returns to shareholders above the average for the retail sector by providing a superior customer experience from the appearance of the stores to the attractive range of clothes which are sold with enthusiasm'.

The board feel that performance has been poor compared to other similar retailers in the past five years. As a result, a new chief executive officer (CEO) was appointed a year ago and has spent this time conducting a fundamental review of the business. The review has identified a number of areas for improvement including those associated with performance reporting and management.

Exhibit 2

2. Performance reporting: quantitative

The CEO is concerned that performance towards this mission and its subsidiary objectives are not being usefully discussed at board meetings. He believes that the fault lies in the board's performance report for annual strategic review. Therefore, he wants you to do an assessment of the current performance report in two parts in light of his concern (see Appendix 1 for the most recent example). The first part of the assessment should consider the quantitative elements of the report and can include some discussion of improved indicators and also, more generally, should take into account what is best practice for reporting performance.

Exhibit 3

3. Performance reporting: narrative

Page: 1 of 1 — Automatic Zoom

The second part of the performance reporting assessment should be a review and rewrite of the current narrative commentary on the report. The CEO believes the current commentary is especially weak and wants a critical assessment of it, followed by an improved example based upon what you consider to be the crucial aspects of Freuchie's performance. He stated that the improved example commentary should consist of no more than four points in order to focus attention on the key areas. You should include figures to illustrate the points you have included using the data given where it is available but some can be left blank to be filled in later if the underlying data is not available.

Exhibit 4

4. Operational gearing and cost structures

Page: 1 of 1 — Automatic Zoom

The CEO was at a business networking meeting recently where one speaker, a highly regarded management consultant, made a number of comments about fixed and variable costs, operational gearing and the importance of these to the operation of a store. The CEO did not understand the presentation, complaining that there was too much jargon. He wants to understand what operational gearing is and how it relates to fixed and variable costs. Therefore, he wants a calculation of operational gearing for Freuchie using current data (Appendices 1 and 2) and an assessment of the implications of the result for Freuchie's management.

Exhibit 5

5. What gets measured, gets done

At the same business networking meeting, another CEO mentioned that she found the quote 'What gets measured, gets done' a useful starting point for thinking about the management implications of new performance indicators. She then used another list of jargon phrases that Freuchie's CEO did not follow. As a result, the CEO wants an assessment of the problems that the quote identifies and also, how phrases such as 'tunnel vision, sub-optimisation, myopia and gaming' might link to the quote. He wants illustrations from Freuchie's business.

Exhibit 6

6. Appendix 1

	A	D	E	F	G	H
1	**Freuchie Retail: Strategic Performance Report**					
2	**Year to 30 Jun 20X5**					
3		**Budget**	**Actual**	**Actual**	**Costs and profit as a % of revenue**	**Change on previous year**
4		**20X5**	**20X5**	**20X4**		
5		**$m**	**$m**	**$m**		
6	Revenue	641	638.1	577.7		10.50%
7	Cost of Sales	380.5	378.9	342.1		
8						
9	**Gross Profit**	**260.5**	**259.2**	**235.6**	40.60%	10.00%
10						
11	Staff costs	136.2	135.8	123.1	21.30%	10.30%
12						
13	**Other operating costs**					
14	Rent and property costs	71	71	63.4		
15	Marketing	34	34	34	5.30%	0.00%
16	Head office costs	11.9	11.7	11.9		
17	**Total**	**116.9**	**116.7**	**109.3**	18.30%	6.80%
18						
19	**Operating Profit**	**7.40000000 00000001**	**6.69999999 99999997**	**3.2**	1.00%	109.40%
20	Finance costs	4.9	4.9	4.8		
21	**Group profit before tax**	**2.50000000 00000001**	**1.79999999 99999997**	**-1.6**	0.30%	
22	Tax	0.5	0.4	-0.3		
23	**Group profit after tax**	**2.00000000 00000001**	**1.39999999 99999997**	**-1.3**	0.20%	
24						
25	**Other data:**					
26	Number of employees		5,103	4,607		10.80%
27	Dividend per share ($)		0.51	0.51		0.00%
28	Inventory obsolescence/loss write-downs ($m)		13.1	12.7		3.10%
29	Number of stores		42	38		10.50%
30						
31	**Commentary:**					
32	· Overall performance is satisfactory as the business has maintained its dividend.					
33	· Revenue is up by 10.5% on the previous period.					
34	· Gross margin has held at about 41%.					
35	· Inventory write-downs were in line with the increased stock held at the stores.					
36						
37						

Exhibit 7

7. Appendix 2

Edit Format

A1

Freuchie - additional data			
Cost of sales includes:			
	Budget	**Actual**	**Actual**
	20X5	**20X5**	**20X4**
	$m	**$m**	**$m**
Insurance	18.2	18.2	16.2
Utilities	12	11.9	10.8
Depreciation	17	17	15.3
Total	**47.2**	**47.1**	**42.3**

Staff costs:

The employees are all paid an annual salary as a fixed sum stated in their contract, except for a bonus pool of 1% of revenue which is divided up between the sales staff who exceed their target revenue.

Section B – summary screen

APM September/December 2021 exam (21/22 syllabus)

Flag for Revie

Section B

This section of the exam contains **two questions.**
Each question is worth **25 marks** and is compulsory.
This exam section is worth **50 marks** in total.

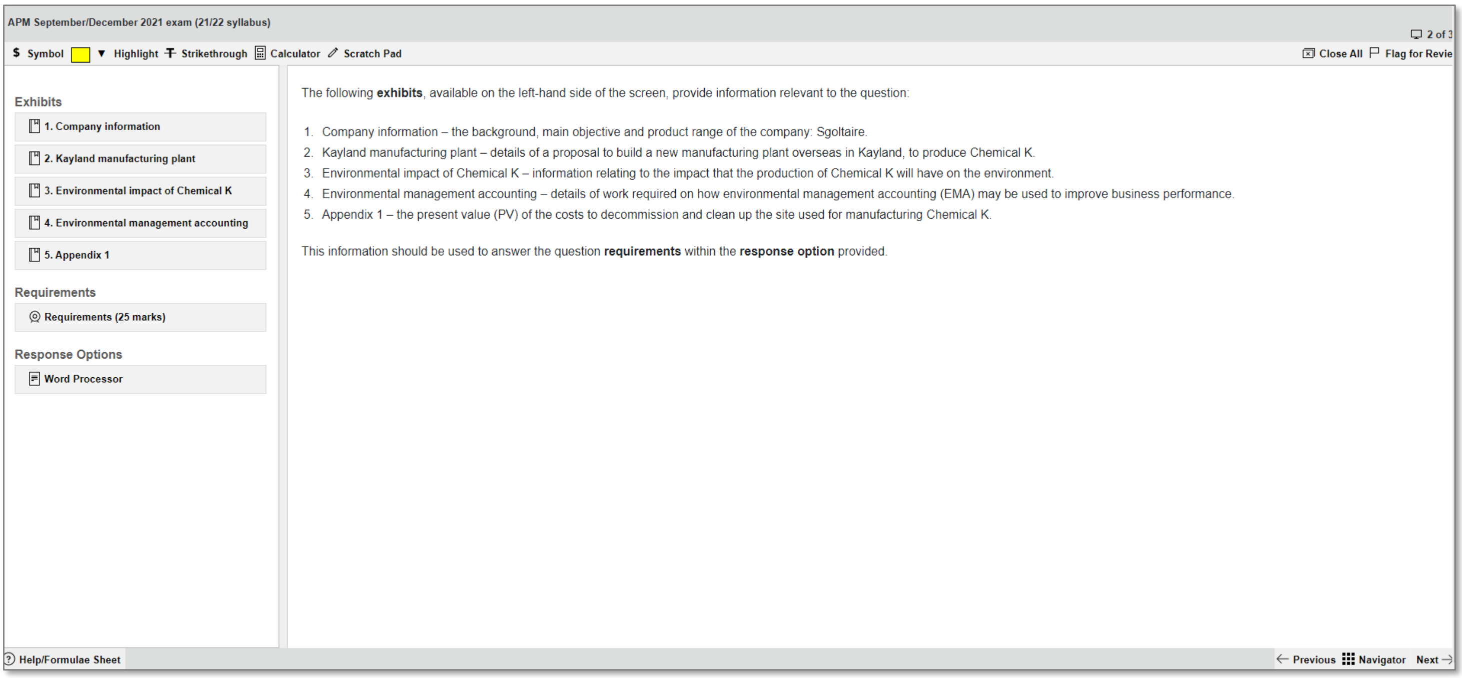
Important:
In your live exam, you should:

- Indicate which requirement each of your responses relate to so that this is clear for markers.
- Show all notes/workings that you want the marker to see within your responses. Remember, any notes/workings made on the Scratch Pad or on your workings paper will not be marked.

Select **Next** to continue.

Previous Navigator Next

Section B – question 1


APM September/December 2021 exam (21/22 syllabus)

2 of 3

Symbol | Highlight | Strikethrough | Calculator | Scratch Pad | Close All | Flag for Review

Exhibits

- 1. Company information
- 2. Kayland manufacturing plant
- 3. Environmental impact of Chemical K
- 4. Environmental management accounting
- 5. Appendix 1

Requirements

- Requirements (25 marks)

Response Options

- Word Processor

The following **exhibits**, available on the left-hand side of the screen, provide information relevant to the question:

1. Company information – the background, main objective and product range of the company: Sgoltaire.
2. Kayland manufacturing plant – details of a proposal to build a new manufacturing plant overseas in Kayland, to produce Chemical K.
3. Environmental impact of Chemical K – information relating to the impact that the production of Chemical K will have on the environment.
4. Environmental management accounting – details of work required on how environmental management accounting (EMA) may be used to improve business performance.
5. Appendix 1 – the present value (PV) of the costs to decommission and clean up the site used for manufacturing Chemical K.

This information should be used to answer the question **requirements** within the **response option** provided.

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Requirements

Requirements (25 marks)

It is now 1 September 20X5.

(a) Advise the board on how ethical issues may affect the decision to manufacture in Kayland.

(10 marks)

(b) Advise the board on how EMA will help Sgoltaire in the four areas identified.

(15 marks)

Exhibit 1

1. Company information

Sgoltaire is a large company listed on the Jayland stock exchange. Its main objective is to maximise the long-term wealth of its shareholders. The largest shareholder is a pension fund which only invests in companies which behave ethically towards their stakeholders and the environment. All companies listed in Jayland must produce an annual corporate sustainability report (CSR).

Sgoltaire manufactures a diverse range of chemicals, ranging from those for use in industrial processes to household detergents and cleaning products. Sgoltaire is a well-known and trusted brand in Jayland. Many of its household products command premium prices because they use ingredients and manufacturing processes which cause less harm to the environment than those of competitors.

Exhibit 2

2. Kayland manufacturing plant

As part of a wider strategy, Sgoltaire plans to produce a new product, Chemical K, which will require the building of a new manufacturing plant. The company has always manufactured in Jayland, but in order to increase business performance, the board is considering whether to build the new plant overseas at a site identified in Kayland.

Due to high unemployment in Kayland, labour costs are lower there. Environmental regulations are also much less strict than in Jayland. Kayland is a hot, dry country where there is often insufficient water available to meet the needs of the population and their livestock.

Sgoltaire's largest shareholder, the pension fund, is aware that the company lacks experience in operating outside Jayland. Because of this, the shareholder is concerned that the board may pay insufficient attention to the impact of ethical issues on both strategy formulation and business performance, when taking the decision whether to manufacture in Kayland.

Exhibit 3

3. Environmental impact of Chemical K

The manufacture of Chemical K would consume large volumes of water taken from a nearby river. To comply with the limited environmental regulations in Kayland, some of this water would be used to dilute a toxic waste product, Waste Product A (WPA), which arises from the manufacturing process. The diluted WPA would then be discharged back into the nearby river. The discharge of WPA into rivers is not permitted in Sgoltaire's home country of Jayland because there is some scientific evidence that contact with WPA may cause serious long-term health problems to people, which may not become apparent for many years.

Production of Chemical K would cease after ten years and the plant must be decommissioned. The site would remain contaminated with harmful chemicals for many years after decommissioning, unless a separate cleaning operation is undertaken.

Exhibit 4

4. Environmental management accounting

It has been suggested that Sgoltaire uses environmental management accounting (EMA) to improve business performance. EMA is the identification, collection and analysis of information related to the physical and financial impact of an organisation's activities on the environment. The board wants advice on how EMA will help the following four areas:

1. Calculating costs
2. Investment appraisal
3. Setting performance measures and targets
4. Product pricing

In relation to investment appraisal, the board calculated that the net present value (NPV) of the proposal to manufacture Chemical K in Kayland is $240m, compared to $200m if the manufacturing was done in Jayland. It has since been identified that the costs of decommissioning the plant and cleaning the site were not included in these calculations, so the board has now begun the work of estimating the present values of the costs to decommission and clean the two possible sites (Appendix 1).

Exhibit 5

5. Appendix 1

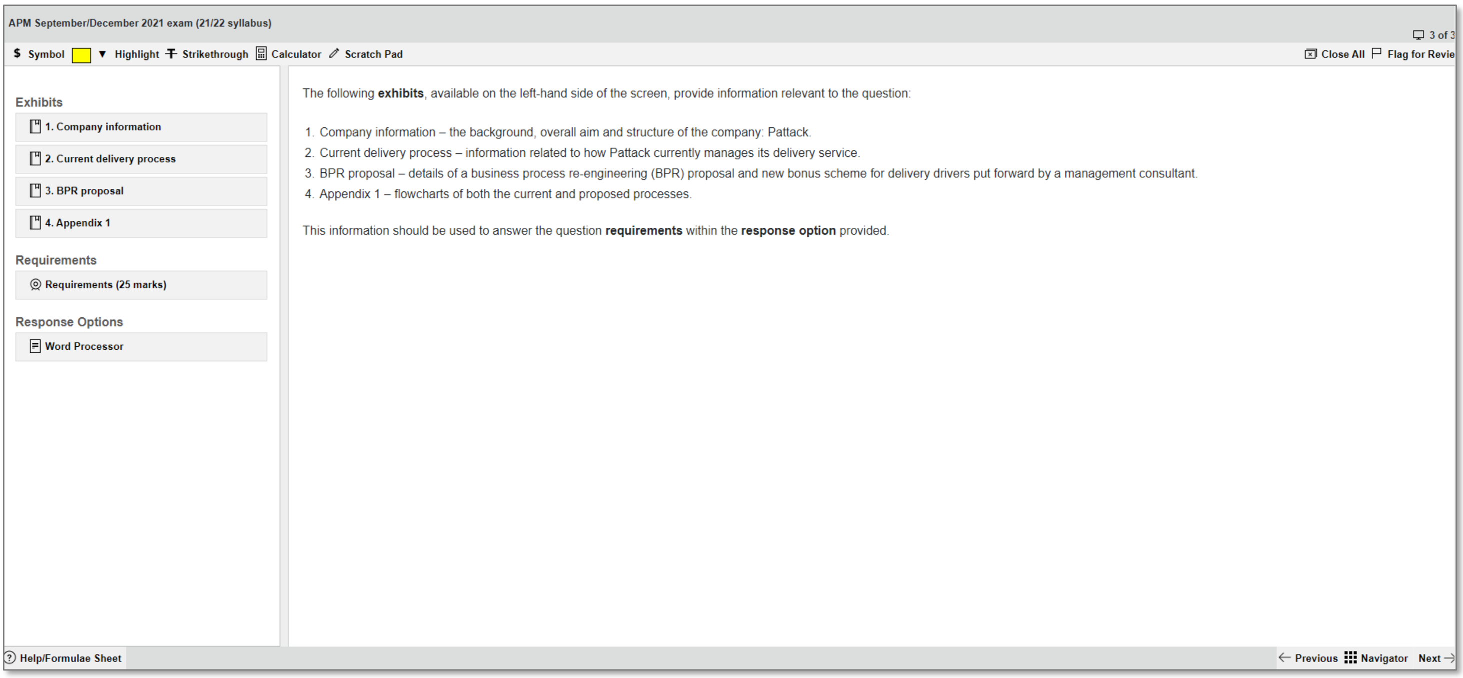
Present value of the costs of decommissioning the plant and cleaning the site

Cost	**$m Jayland**	**$m Kayland**
Decommissioning the plant[1]	20	30
Cleaning the site[2]	60	–
Total	80	30

1. The board has estimated that because of logistical difficulties due to Kayland being 8,000 km from Jayland, decommissioning costs, which do not include the costs of cleaning the site, would be 50% higher than in Jayland.

2. The board has not yet estimated the costs of cleaning the site in Kayland, though because of the same logistical difficulties which apply to decommissioning costs, costs of cleaning the site in Kayland will also be higher than in Jayland.

Section B – question 2



Requirements

Requirements (25 marks)

It is now 1 September 20X5.

(a) Evaluate how the BPR proposal could improve Pattack's performance in relation to its overall aim.

(15 marks)

(b) Evaluate the bonus scheme for delivery drivers identified by the management consultant.

(10 marks)

Exhibit 1

1. Company information

Page: 1 of 1 Automatic Zoom

Pattack is a company in Geeland which specialises in the delivery of parcels. Pattack collects parcels from online retailers and delivers them to the end user. Pattack's overall aim is: 'to maximise shareholder value through having a strategic focus on costs, by being the best delivery company in Geeland, by being innovative in our approach, and by having an engaged and committed workforce.'

Despite enjoying several years of growth, Pattack's performance has suffered recently as there have been new entrants into the market place.

Pattack's current functions are run along departmental lines:

Collections – the collection drivers who collect parcels from retailers;

Internal operations – the computer operators who enter the orders;

Delivery administration – the administrators who schedule the deliveries; and

Deliveries – the delivery drivers who deliver the parcels to the end user.

Exhibit 2

2. Current delivery process

Page: 1 of 1 Automatic Zoom

Currently, Pattack collects parcels from the retailer and brings those parcels back to its premises. Collection drivers are employed for this purpose.

When on Pattack's premises, the parcels are then logged on Pattack's computer system. All details of the delivery are recorded at this time. These details are: the name of the retailer, the name of the end user to whom the parcel has to be delivered and the expected delivery date and time. On-time delivery is a key metric in the parcel delivery industry.

Pattack's drivers' delivery schedules are prepared for them by delivery administration after the computer operators have entered the order details. These schedules are presented to the drivers in paper form and the schedules are organised based on the time each order is due to be delivered.

The drivers return their completed delivery schedules after the day's deliveries. Computer operators should record the date and time of the actual delivery at this point. However, the operators are often too busy logging the delivery details of outgoing parcels for the next day to undertake this task and, additionally, the delivery drivers do not always record the actual time when the delivery was made. A lack of accuracy of recorded delivery data has been the cause of complaints from the retailers Pattack delivers for.

The manager of the deliveries department does not have a vehicle tracking system and assumes that the delivery drivers are following the schedule they have been given in the morning.

Exhibit 3

3. BPR proposal

Page: 1 of 1 Automatic Zoom

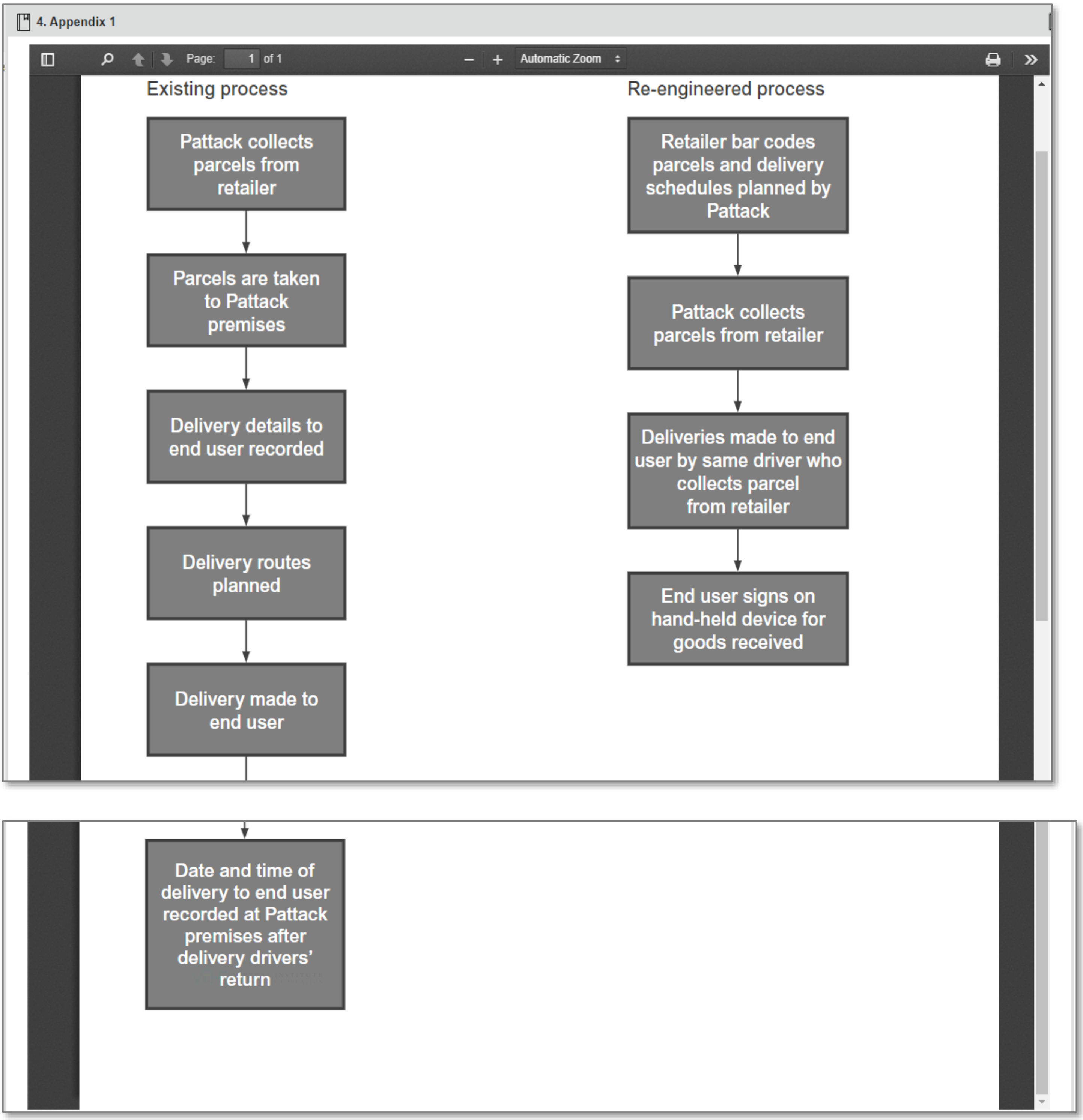
The chief executive officer (CEO) of Pattack recently met with a management consultant who advised him that the entire current operation should be re-engineered. The management consultant suggested that Pattack invests in a barcoding system which would electronically barcode all parcels with all details of the delivery. This coding could be undertaken by the retailers, which would ensure this data was entered as soon as the order is allocated to Pattack. This data would be electronically communicated to Pattack, enabling deliveries to end users to be arranged at this time.

Drivers collecting parcels from the retailers would be the same drivers who deliver the parcels to the end user. These drivers would know the delivery schedule in advance of collecting the parcels. End user receipt would be acknowledged by issuing each driver with a digital handheld device which would require a signature from the end user and which would also automatically note the delivery time when the parcel was signed for. Additionally, each vehicle would be fitted with a vehicle tracking device which would ensure its exact location could be checked at any time.

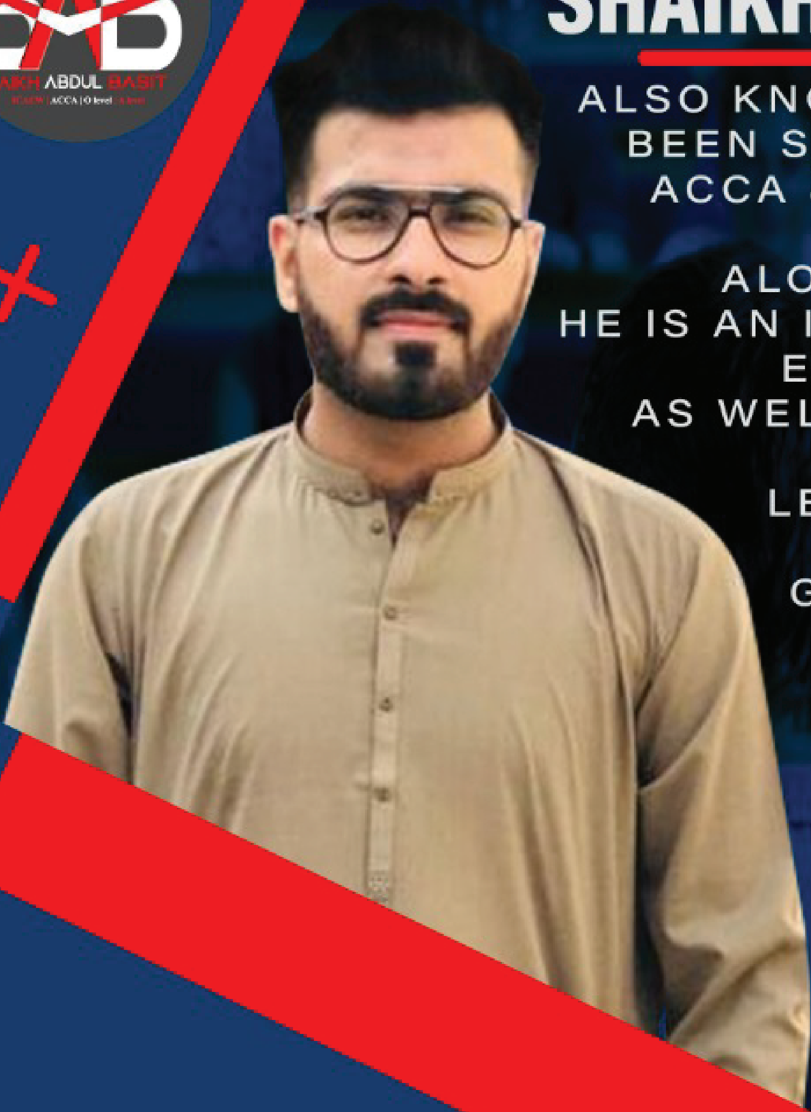
Appendix 1 provides a flowchart of the old process and the re-engineered process.

The management consultant also suggested that Pattack's bonus system should relate to the new process and indicated that he felt the drivers should be awarded a bonus when overall retailer satisfaction exceeded 85%.

Exhibit 4


4. Appendix 1
Page: 1 of 1
Automatic Zoom
Existing process
Pattack collects parcels from retailer
Parcels are taken to Pattack premises
Delivery details to end user recorded
Delivery routes planned
Delivery made to end user
Date and time of delivery to end user recorded at Pattack premises after delivery drivers' return
Re-engineered process
Retailer bar codes parcels and delivery schedules planned by Pattack
Pattack collects parcels from retailer
Deliveries made to end user by same driver who collects parcel from retailer
End user signs on hand-held device for goods received

SHAIKH ABDUL BASIT



ALSO KNOWN AS SIR SAB, HE HAS BEEN SUCCESSFULLY TEACHING ACCA & O/A LEVELS FOR MORE THAN 3 YEARS NOW, ALONG WITH ACCA MEMBER, HE IS AN ICAEW FINALIST WITH AN EXPERIENCE IN TEACHING AS WELL AS IN THE CORPORATE WORLD IN ONE OF THE LEADING MANUFACTURING INDUSTRIES. HE HAS A GREAT MIX OF PRACTICAL EXPOSURE ALONG WITH QUALIFIED TEACHING METHODOLOGIES WHICH CREATES EASINESS FOR STUDENTS TO GRASP CORE CONCEPTS OF ACCOUNTANCY.

021-34141130 I 0331-2623849

MIRCHAWALA HUB OF ACCOUNTANCY.

Plot # 5, Block 3, Farhan Housing Society,
Haider Ali Road, Karachi

A.B_SHAIKH@YAHOO.CO.UK FB/SIR SHAIKH ABDUL BASIT WWW.SIRSAB.COM