

BANGLADESH  
COST ACCOUNTING  
STANDARDS  
BCAS - 17

Performance  
Measurement

## BACS 17: Performance Measurement

### 17.1 Introduction

Performance measurement is an important tool of strategic analysis. It is the process of collecting, analyzing and/or reporting information regarding the performance of an individual, group, organization, system or component. It can involve studying processes/strategies within organizations, or studying engineering processes/parameters/phenomena, to see whether output are in line with what was intended or should have been achieved. Stakeholders will get a better indication of an organization's strategy from observing what it measures and does than from its declared goals or what it says it does. It is applicable to all industry sectors and to all types and sizes of organizations (public, private and not-for-profit). An important role of the management accountant is to provide decision making information for performance measurement and helping to develop or refine performance measurement systems. The management accountant should also ensure that measures implemented are consistent with the chosen management techniques, such as VBM or ABM. Due to the detailed nature of performance measurement techniques, readers should refer to the specific applications outlined in other topic gateways, such as the Balanced Scorecard. This standard targets to provide a further detail on performance measurement as a guide to corporate managers so that a discipline could be established in this field that will bring maximum benefits to vested interest groups. However, this standard should be read as supplement to other standards where performance measurement is also addressed like standard costing, life cycle costing etc.

### 17.2 Objectives

The standard provides a basic guideline of implementing performance measurement system in an organization irrespective of nature, type, size and objectives of the organization. More specifically, the standard explicitly addresses -

- a) Performance measurement system of an organization;
- b) Performance measurement parameters to be used by organization;
- c) Monitoring and evaluation of performance measurement system; and
- d) Post Performance measurement activities to be undertaken.

### 17.3 Scope

17.3.1 □ This standard provides guidelines for implementing performance measurement system in organizations.

17.3.2 □ This standard is applicable to measure performance of individual units, segments, processes, individuals and overall organizations.

17.3.3 □ This standard may be followed by companies and other business or non-business organizations where cost and management accounting is in practice either as a statutory obligation or to support management decision making process.

### 17.4 Key Features

The key features of this standard are pointed below -

- a) Presenting performance measurement system;
- b) Identifying different steps in implementing performance measurement system;
- c) Bringing both financial and non-financial performance measures;

- d) Providing guidelines based on standard tools like logic model, post implementation audit tool, etc.; and
- e) Listing some common ratios, KPIs and template for common size financial statements.

## 17.5 Definitions

The following terms are used in this standard with the meanings specified -

17.5.1 Performance Measurement: Performance measurement is generally defined as regular measurement of outcomes and results, which generates reliable data on the effectiveness and efficiency of programs.

17.5.2 Inputs: Inputs are the resources (human resources, employee time, funding) used to conduct activities and provide services.

17.5.3 Outputs: Outputs are products and services delivered. Outputs are the completed products of particular activities, whether executed internally by the organization or by an external contractor.

17.5.4 Outcome: An outcome represents a specific result a program is intended to achieve. It can also be defined as the specific objective of a specific program. It is not what the program actually produced itself (the output), but the consequences of those products, services, or assistance.

17.5.5 Activities: Activities are individual tasks funded by projects or programs. Typically, every individual activity is the smallest "unit" of work.

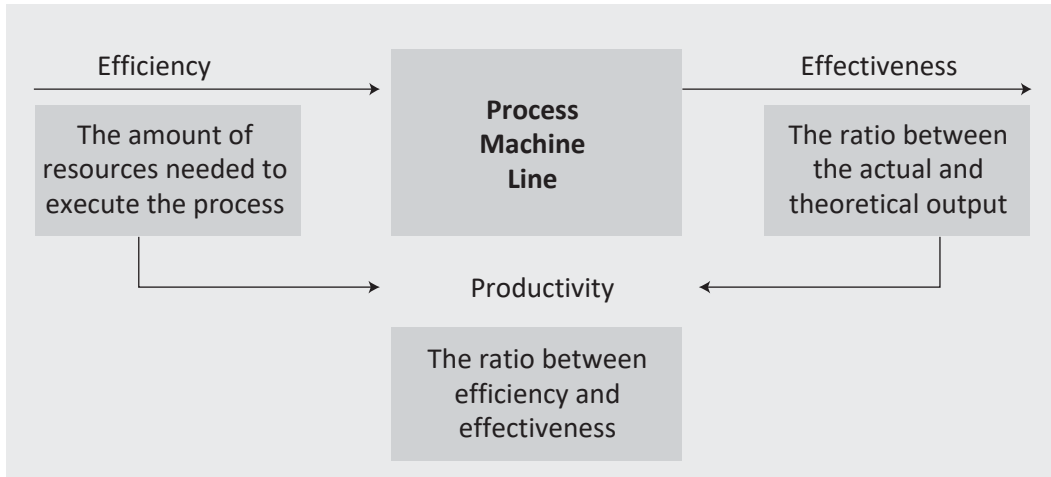
17.5.6 Efficiency: Efficiency is a ration of output to input, generally expressed as percentage. It is determined by the amount of time, money, and energy - i.e. resources - that are necessary to obtain certain results. In order to meet our daily production quota, we commit a specific machine that uses up energy, make operators and maintenance personnel available, and provide raw materials. For example, if we are able to meet our daily production with less energy and fewer operators, we have operated more efficiently.

$$\text{Efficiency} = \frac{\text{Resource Actually Used} \times 100\%}{\text{Resource Planned to be Used}}$$

17.5.7 Effectiveness: Effectiveness refers to the extent of achievement of objectives. It is determined by comparing what a process or installation can produce with what they actually produce; therefore, effectiveness does not tell anything about the efficiency - the amount of resources that have to be committed to obtain that output. If we are successful in manufacturing better product in the same time period, effectiveness will increase. A valuable discussion could be whether 'good product' should be seen as 'Good product with customer demand' to prevent over-production.

$$\text{Effectiveness} = \frac{\text{Actually Output} \times 100\%}{\text{Expected Output}}$$

17.5.8 Productivity: Productivity is defined as output per unit of input. Productivity is determined by looking at the production obtained (effectiveness) versus the invested effort in order to achieve the result (efficiency); in other words, if we can achieve more with less effort, productivity increases.



17.5.9 Common Size Financial Statement: A common-size financial statement is simply one that is created to display line items on a statement as a percentage of one selected or common figure. Creating common-size financial statements makes it easier to analyze a company over time and compare it with peers. Using common-size financial statements helps investors to spot trends that a raw financial statement may not uncover. Common-size analysis shows ratios in percentages (for example, current assets / total assets, long-term assets / total assets).

17.5.10 Vertical Analysis: Vertical analysis compares each item with a base item. For example, in an income statement analysis sales is the base item and in a common-size balance sheet analysis, total assets is the base item.

17.5.11 Horizontal Analysis: Horizontal analysis compares each item with an item for a selected base year.

## 17.6 Standards

17.6.1 Performance measurement is fundamental to organizational improvement and thus every organization should have its own performance measurement system.

17.6.2 The importance of performance measurement has increased with the realization that to be successful in the long-term requires meeting (and therefore measuring performance against) all stakeholders' needs including customers, consumers, employees, suppliers, local community stakeholders, and shareholders.

17.6.3 While the importance of performance measurement is difficult to quantify it is evident that in virtually all texts, research, and case studies on organizational improvement, that performance measurement plays a central role. It is worth noting that performance measurement is a requirement for benchmarking and business excellence.

17.6.4 Performance measurement is one of the cornerstones of business excellence. Business excellence models encourage the use of performance measures, but in addition and more importantly, they consider the design of performance

measurement systems to ensure that measures are aligned to strategy, and that the system is working effectively in monitoring, communicating, and driving performance.

17.6.5 All organizations measure performance to some extent. However, there is a large disparity among organizations in terms of which performance measures are used with many primarily focusing on financial measures. There has, however, been a general move away from financial measurement since the early 1980's. This was accelerated in the 1990's and 2000's by the worldwide acceptance of business excellence models and performance measurement frameworks that address all stakeholders' needs.

17.6.6 The performance measurement revolution has seen a move away from the problems of past measurement systems. Five common features of out-dated performance measurements systems were:

- a) Dominant financial or other backward-looking indicators;
- b) Failure to measure all the factors that create value;
- c) Little account taken of asset creation and growth;
- d) Poor measurement of innovation, learning and change; and
- e) A concentration on immediate rather than long-term goals.

17.6.7 The focus in performance measurement is now on achieving a balanced framework that addresses the issues described above. Examples of these new frameworks are Kaplan and Norton's Balanced Scorecard, Skandia's navigator model and the Performance Prism. Others recommend that the results sections of business excellence models should be used to generate a balanced set of performance measures.

17.6.8 In development of an effective performance measurement system, it is important to concise the following points:

- a) The performance measurement system must be integrated with the overall strategy of the business.
- b) There must be a system of regular feedback and review of actual results against the original plan and the performance measures themselves.
- c) The performance measurement system must be comprehensive. It needs to include the range of factors that contribute to the organization's success such as competitive performance, quality of service and innovation. This requires a range of financial and non-financial indicators.
- d) The system must be owned and supported throughout the organization. The implementation must be top-down so that individuals setting strategy can determine the objectives and develop appropriate top-level measures. These should filter down to the rest of the organization. Other levels throughout the organization should set their own measures in consultation with the level above and these must be consistent with the top-level measures.
- e) Measures need to be fair and achievable. Where performance measures are used to reward managers' performance, the evaluation should include only the elements they have direct control over.
- f) The system and results reporting need to be simple, clear and understandable, particularly to non-finance professionals. There is a need to prioritize and focus so that only the key performance indicators for the business in strategic terms are measured.

- 17.6.9 There are a number of challenges that are faced when designing an effective Performance Measurement System, these include the following:
- How to measure non-financial performance
  - What measures to choose and why
  - How to use them - what to do with the results
  - Who should be responsible for using the results
  - How and to whom, to communicate the results
  - The resources needed to consider the above and design and deploy the measurement system
- 17.6.10 There are other major requirements that an organization needs to consider before an effective performance measurement system can be designed or installed. Apart from lower level measures that may be vital for the operation of processes, all measures need to be chosen to support the attainment of specific performance or behavior identified by the organization's leaders as important or necessary to work towards the organizational goals. This being the case, there must be clearly defined goals/objectives and strategies chosen to reach them before measures can be chosen to support their attainment. Similarly the key processes, drivers of performance, and the core competencies required by employees need to be identified before effective performance measurement can be achieved.
- 17.6.11 In the best performance management systems, actions and results are logically related to one another by a theory of causality, or "logic model." Potential measures come from understanding the purpose of the organization and what is being done to accomplish the organization's mission. Logic models (given in appendix) are a useful tool for this.
- 17.6.12 Performance measures should be SMART: Specific, Measurable, Achievable, Relevant, Timely. In other way, good performance measures are:
- Relevant
  - Understandable
  - Timely
  - Comparable
  - Reliable
  - Cost effective
- 17.6.13 **There is no set number or formula to determine how many performance measures an organization should have. A study found that tracking too many performance measures at once may cause managers and workers to lose sight of which ones contribute directly to strategic objectives. On the other hand, having too few measures may not tell a good story about your work.**
- 17.6.14 Keep these things in mind when thinking about the number of measures to engage:
- Performance measures cost money, time, and staff resources. The more you use, the more it will cost to collect, store, report, monitor, and analyze the data.
  - Having just one performance measure would be similar to driving a car with only a gas gauge. You would have no idea how fast the car was traveling or if there were problems with the engine.

- c) Using too many measures. You would have difficulty driving your car if the dashboard had as many dials and gauges as a jet plane. You would be trying to figure out what is happening while being bombarded by information from dozens of different instruments, dials, gauges and warning lights.
- 17.6.15 One rule of thumb is that it is difficult to simultaneously manage more than 10-15 measures at any given level of the organization. Each level (senior management, division, and work team) may have 10 to 15 measures that include some measures used by lower levels. Different levels in an organization will use performance measures.
- 17.6.16 It is essential to narrow the list of performance measures you use to a vital few that really mean something to the intended audience (Relevance). Narrowing the list requires judgment and knowledge about the organization's systems and customers. Keep in mind that the audience who receives the information set the standard for what is relevant and important.
- 17.6.17 Typically, internal audiences are interested in process-level measures and production outputs. Surveys may be measurement tools of last resort for qualitative subjects that defy attempts to measure them quantitatively, such as customer satisfaction. Survey scores can be useful to internal audiences, but usually mean little to external audiences.
- 17.6.18 External audiences involved in budget and policy development are more interested in efficiency and outcome (results) measures. Because ultimate outcomes are often influenced by many factors besides an agency's work, the most meaningful measures for judging effectiveness may be immediate or intermediate outcomes.
- 17.6.19 **Best performance measures are typical to the nature of the organization. Following points may be considered as a common guide to chose performance measures:**
- a) Select the target for each key performance indicators keeping them aligned with critical success factors.
  - b) Balanced frameworks (both financial and non-financial measures), for example, Kaplan and Norton's Balanced Scorecard, Skandia's Navigator Model and the Performance Prism are more preferable to only financial measures.
  - c) Value based measures (e.g., EVA) are more preferable to non-value based measures.
  - d) A common-size financial statement should be prepared to facilitate comparison.
  - e) A list of ratio should be managed and monitored continuously.
- 17.6.20 Performance measures should be monitored continuously and post monitoring activities should be undertaken for the betterment of organizational performance.

## 17.7 Recording and Reporting

- 17.7.1 Organization should have a well designed manual documenting performance measurement system clearly so that everybody understands the organizations philosophy on performance measurement.

- 17.7.2 Organization should identify Critical Success Factors and related Key Performance Indicators with targets to be achieved. Such target should be shared with respective organizational units for achieving the targets.
- 17.7.3 Organization should have its own balanced framework, if any, designed and a culture should be installed to deploy strong level of commitment towards the framework.
- 17.7.4 Performance measurement cycle should be clearly designed along with the steps followed so that everybody could be well aware of the consequences of performance measurement system.
- 17.7.5 A selected list of ratios should be prepared so that performance can be monitored regularly with reference to those ratios at regular interval and corrective actions may be undertaken.
- 17.7.6 It is better to produce common size financial statements so that the financial performance can be compared with the peers and industry as well. A proposed industry averages are given in appendix as an example.
- 17.7.7 Organizations should have a guideline to audit performance measures regularly and initiate post-audit actions for further improvement.

## 17.8 Effective Date

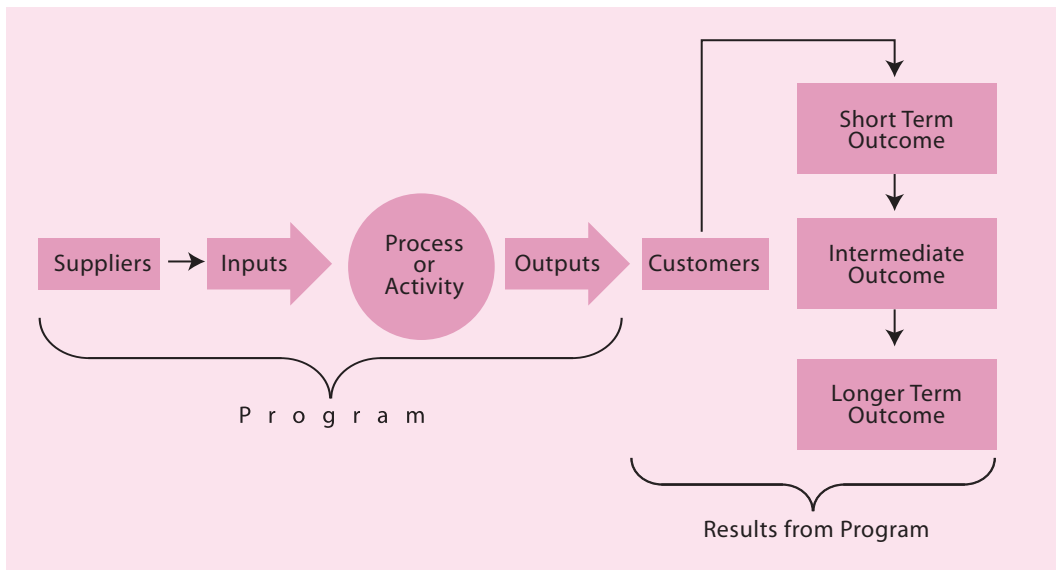
This standard will be effective from January 1, 2017 onwards.



## Appendix 17A

### Logic Model

Logic Model is a picture of your program. By using graphic and text, the model illustrates the relationship between your program's activities and its intended outcomes and results. Each activity is accomplished through a business process. We can model almost any business process using the diagram below:



This is sometimes called a "SIPOC" model: Supplier, Input, Process, Output, and Customer. Two additional elements of the model are management, the individuals in the organization who are responsible for the process, and outcomes, what the customer wants to accomplish with the product.



## Appendix 17B

### Logic Model Implementation Template

Step 1: Clarify the program goal and define the elements of the program in a table

How			Who	What and Why		
Resources / Inputs	Activities	Outputs		Outcomes		
			Customers	Short-Term (Change in Attitude)	Intermediate (Change in Behavior)	Long-Term (Change in Condition)

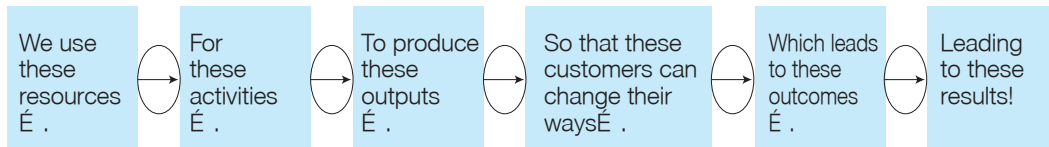
  

External Influences
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Step 2: Verify the logic with stakeholders

- a) Seek review from stakeholders.
- b) Check the logic
  - ❖ How-Why Questions: Start with Outcomes and ask "How?" Start at Activities, ask "Why?"
  - ❖ If-Then Questions: Start at Activities and move along to Outcomes asking, "If this, then that?"
- c) Compare to what units in the organization do and define their contributions to the outcomes.
- d) Check the logic by checking it against reality.

Step 3: Develop a diagram and text describing logical relationships



Draw arrows to indicate/link the causal relationships between the logic model elements.

## Appendix 17C

### The Five-Step Process to Build a Performance Measurement System

**Step 1:** Planning to Measure

**Step 2:** Choosing What to Measure

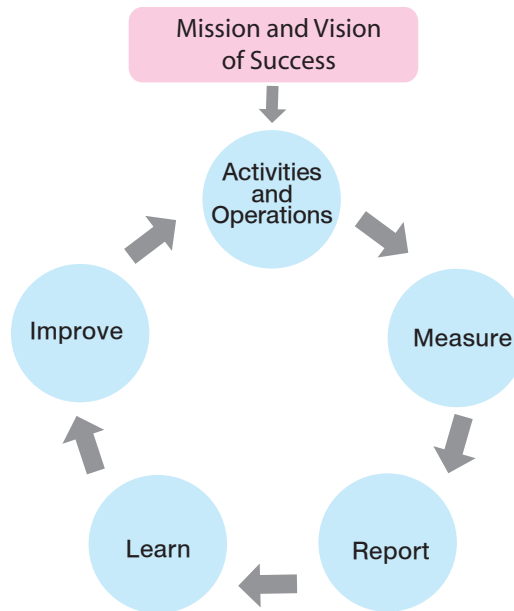
**Step 3:** Determining how to Measure

**Step 4:** Preparing to use your data

**Step 5:** Putting your Performance Measurement System into Action

## Appendix 17D

### The Performance Measurement Cycle



**Measure:** Designated staff members will collect data for the indicators selected in Step 2 via the measurement processes and tools developed in Step 3.

**Report:** Designated staff members complete and send the management dashboard and any program-level dashboards developed in Step 4 to the appropriate review teams.

**Learn:** Following the review schedule for your dashboards, also developed in Step 4, the management and program-level review teams meet regularly to interpret and analyze reported data.

**Improve:** Based on the insights and conclusions drawn from the reported data, the review teams assign responsibilities for implementing improvements to the organization's strategy, activities, and operations.

## Appendix 17E

### Performance Measurement Audit Tool

The performance measurement audit will help you to identify anything that you are currently measuring; your systems for measuring, compiling, and reviewing data; and the degree to which measurement data get put to use internally and externally. To conduct the measurement audit, answer the questions listed below in order to fill out the table followed by.

- a) What indicators are currently being tracked?
- b) How and when are you tracking these indicators?
- c) Where are you storing your data?

Indicator	How	When	Staff Involved	Data Storage Location

## Appendix 17F

### Critical Success Factors (CSF) and Key Performance Indicators (KPI)

CSF is defined as the critical areas whose high performance or success is important, as they decide the success of an organization. These are actually the steps taken to succeed. KPI, on the other hand, is defined as the tools to measure the performance of any organization. It indicates the success rate or level.

	CSFs Critical Success Factors	KPIs Key Performance Indicators
Answer a question	What should be done in order to get successful?	Are we successful?
The main role	Specify requirements for the success	Indicate what we are doing
Type of measurement	Qualitative	Quantitative
Dependency	Standalone	Depend on benchmarks
Business Insights	Use Insights	Generate Insights
Example:		
A restaurant	Market share	% of business within a 5km radius
	Customer satisfaction	% of customers who are satisfied
	Meal quality	% of meals returned because of poor quality
White Goods manufacturer	High product quality	Number of warranty claims per 100 units
	High process yields	% rolled throughput yield
	Low production costs	Average variable costs
	Market share	% of the market

## Appendix 17G

### Ratio Analysis

Such analysis provides a method of standardization. More importantly, it provides a profile of firm's economic characteristics and competitive strategies. Although extremely valuable as analytical tools, financial ratios also have limitations. They can serve as screening devices, indicate areas of potential strength or weakness, and reveal matters that need further investigation. Ratio analysis should be used in combinations with other elements of financial analysis. There is no one definitive set of key ratios; there is no uniform definition for all ratios; and there is no standard that should be met for each ratio. There are no "rules of thumb" that apply to the interpretation of financial ratios. Ratios are categorized from different perspectives. One of such categories is presented below:

- a) **Activity ratios** - the liquidity of specific assets and the efficiency of managing assets
- b) **Liquidity ratios** - firm's ability to meet cash needs as they arise;
- c) **Debt and Solvency ratios** - the extent of a firm's financing with debt relative to equity and its ability to cover fixed charges; and
- d) **Profitability ratios** - the overall performance of the firm and its efficiency in managing investment (assets, equity, capital)

Categories of ratios used by different stakeholder groups vary due to their varying needs. Some of such ratios are presented below as illustrative purpose. Companies should have their own list of ratios that mostly suit their own purpose.

Ratio	Formula	What it measures	What it tells you
<b>Owners:</b>			
Return on Investment (ROI)	$\frac{\text{Net Income}}{\text{Average Owners' Equity}}$	Return on owners' capital When compared with return on assets, it measures the extent to which financial leverage is being used for or against the owner.	How well is this company doing as an investment?
Price Earnings Ratio (P/E Ratio)	$\frac{\text{Market Value per Share}}{\text{Earning per Share}}$	The P/E Ratio measures its current share price relative to its per-share earnings.	What the market is willing to pay for a stock based on its current earnings?
Return on Assets (ROA)	$\frac{\text{Net Income}}{\text{Average Total Asset}}$	How well assets have been employed by management.	How well has management employed company assets? Does it pay to borrow?
<b>Managers:</b>			
Net Profit Margin	$\frac{\text{Net Income}}{\text{Sales}}$	Operating efficiency. The ability to create sufficient profits from operating activities.	Are profits high enough, given the level of sales?
Asset Turnover	$\frac{\text{Sales}}{\text{Average Total Asset}}$	Relative efficiency in using total resources to product output.	How well are assets being used to generate sales revenue?

Ratio	Formula	What it measures	What it tells you
<b>Managers:</b>			
Return on Assets	$\frac{\text{Net Income}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Total Asset}}$	Earning power on all assets; ROA ratio broken into its logical parts: turnover and margin.	How well has management employed company assets?
Average Collection Period	$\frac{\text{Average AR} \times 365}{\text{Annual Credit Sales}}$	Liquidity of receivables in terms of average number of days receivables are outstanding.	Are receivables coming in too slowly?
Inventory Turnover	$\frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$	Liquidity of inventory; the number of times it turns over per year.	Is too much cash tied up in inventories?
Average Age of Payables	$\frac{\text{Average AP} \times 365}{\text{Net Purchase}}$	Approximate length of time a firm takes to pay its bills for trade purchases.	How quickly does a prospective customer pay its bills?
<b>Short-Term Creditors:</b>			
Working Capital	Current Asset - Current Liabilities	Short-term debt-paying ability.	Does this customer have sufficient cash or other liquid assets to cover its short-term obligations?
Current Ratio	$\frac{\text{Current Asset}}{\text{Current Liabilities}}$	Short-term debt-paying ability.	Does this customer have sufficient cash or other liquid assets to cover its short-term obligations?
Quick Ratio	$\frac{\text{Cash} + \text{Mktable Sec} + \text{AR}}{\text{Current Liabilities}}$	Short-term debt-paying ability without having to rely on sale of inventory.	Does this customer have sufficient cash or other liquid assets to cover its short-term obligations?
<b>Long-Term Creditors:</b>			
Debt-to-Equity Ratio	$\frac{\text{Total Debt}}{\text{Total Ratio}}$	Amount of assets provided by creditors for each dollar of assets provided by owner(s)	Is the company's debt load excessive?
Times Interest Earned	$\frac{\text{EBIT}}{\text{Interest Expense}}$	Ability to pay fixed charges for interest from operating profits.	Are earnings and cash flows sufficient to cover interest payments and some principal repayments?
Cash Flow to Liabilities	$\frac{\text{Operating Cash Flow}}{\text{Total Liabilities}}$	Total debt coverage. General debt-paying ability.	Are earnings and cash flows sufficient to cover interest payments and some principal repayments

However, ROI measures can be decomposed into some more ratios and thus such ratios provide more meaningful information as compared to other standalone ratios. The derivation of ROI measures are shown below:

### Return on Asset (ROA)

$$= \frac{\text{Net Income} + \text{Interest Expense (net of Income Tax Savings)}}{\text{Average Total Assets}}$$

$$= \frac{\text{EBIT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} = \text{Profitability} \times \text{Activity}$$

### Return on Equity (ROE):

$$= \frac{\text{Earning before Taxes}}{\text{Equity}}$$

$$= \frac{\text{EBT}}{\text{Sales}} \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$= \left[ \frac{\text{EBIT}}{\text{Sales}} \times \frac{\text{EBT}}{\text{EBIT}} \times \frac{\text{Net Income}}{\text{EBT}} \right] \times \frac{\text{Sales}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$= \text{Profitability} \times \text{Activity} \times \text{Solvency}$$

(Operations X Financing X Taxes)

### Additional insights into the relationship of ROE & ROA

Note the in the three way disaggregation of ROE, the first two components are ROA calculated on an after interest basis

We can express ROE in terms of ROA directly as (again using pre-tax numbers to simplify matters)

$$\text{ROE} = \frac{\text{EBIT} - \text{Interest}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

$$\text{ROA} - \frac{\text{Interest}}{\text{Assets}} \times \frac{\text{Assets}}{\text{Equity}}$$

This term with some manipulation can be converted to\*

$$\text{ROE} = \text{ROA} + (\text{ROA} - \text{Cost of Debt}) \times [\text{Debt} / \text{Equity}]$$

Leveraging is only profitable if the return on assets is greater than the cost of debt

An obvious parallel to this equation for ROE (return on equity)

$$\text{ROE} = \text{ROA} + (\text{ROA} - \text{Cost of Debt}) \times [\text{Debt} / \text{Equity}]$$

is the equation for the beta of a firm ( $\beta_e$ )

$$\beta_e = \beta_a + (\beta_a - \beta_d) \times [\text{Debt} / \text{Equity}]$$

where  $\beta_a$  and  $\beta_d$  are the unlevered beta and the beta of debt respectively.

## Appendix 17H

### Common Size Financial Statements

Differences in firm size may confound cross sectional and time series analyses. To overcome this problem, common size statements are used. A common size statement of financial position expresses each item on the statement as a percentage of total assets. A common size statement of profit or loss and other comprehensive income expresses each statement category as a percentage of total sales revenues.

Common size statements									
III Statement of Financial Position									
Company Type	1	2	3	4	5	6	7	8	9
Cash and short-term investments	2%	13%	37%	1%	1%	3%	1%	22%	6%
Receivables	17	8	22	28	23	5	11	16	8
Inventory	15	52	15	23	14	2	2	-	5
Other current assets	6	-	5	1	4	2	2	1	-
Current assets	40%	73%	79%	53%	42%	12%	16%	39%	19%
Gross property	86	40	26	44	63	112	65	1	106
Less: Accumulated depreciation	(50)	(19)	(8)	(15)	(23)	(45)	(28)	-	(34)
Net property	36%	21%	18%	29%	40%	67%	37%	1%	72%
Investments	3	1	-	-	3	14	16	55	-
Intangibles and other	21	5	3	18	15	7	31	5	9
<b>Total assets</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Trade payables	11	21	22	13	26	7	11	-	20
Debt payable	4	-	3	6	4	6	2	46	4
Other current liabilities	9	43	-	-	1	4	1	16	8
Current liabilities	24%	64%	25%	19%	31%	17%	14%	62%	32%
Long-term debt	20	5	12	27	23	34	24	27	21
Other liabilities	16	-	1	21	16	12	13	5	12
Total liabilities	60%	69%	38%	67%	70%	63%	51%	94%	65%
Equity	40	31	62	33	30	37	49	6	35
<b>Total liabilities &amp; equity</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Statement of Profit or Loss and Other Comprehensive Income									
Company Type	1	2	3	4	5	6	7	8	9
Revenues	100%	100%	100%	100%	100%	100%	100%	100%	100%
Cost of goods sold	58	81	58	63	52	-	59	-	-
Operating expenses	21	7	24	28	33	84	29	55	91
Research & development	7	5	9	-	1	-	-	-	-
Advertising	3	-	3	2	5	-	-	-	2
Operating income	11%	7%	6%	7%	9%	16%	12%	45%	7%
Net interest expense	1	(1)	-	2	2	6	3	41	1
<b>Income from continuing Operations before tax</b>	<b>10%</b>	<b>8%</b>	<b>6%</b>	<b>5%</b>	<b>7%</b>	<b>10%</b>	<b>9%</b>	<b>4%</b>	<b>6%</b>

#### Company Types

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> 1. Aerospace         | <input type="checkbox"/> 4. Computer Software | <input type="checkbox"/> 7. Consumer Finance     |
| <input type="checkbox"/> 2. Airline           | <input type="checkbox"/> 5. Consumer Foods    | <input type="checkbox"/> 8. Newspaper Publishing |
| <input type="checkbox"/> 3. Chemicals & Drugs | <input type="checkbox"/> 6. Department Stores | <input type="checkbox"/> 9. Electric Utility     |

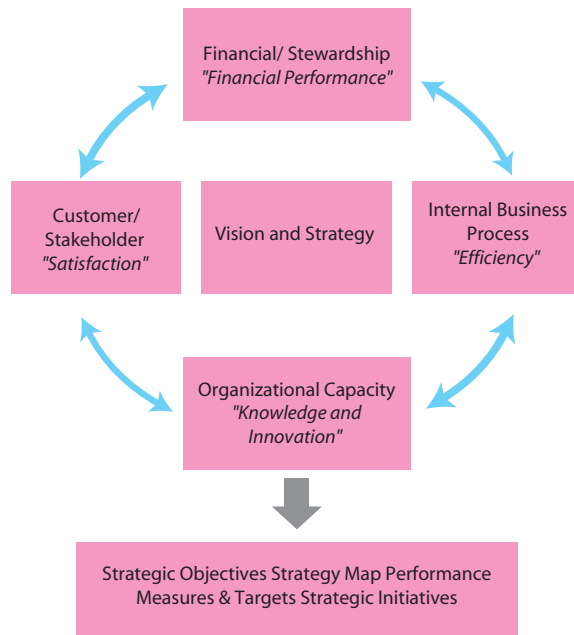


## Appendix 17I

### Balanced Framework

#### a) Balanced Scorecard

The balanced scorecard is a strategic planning and management system that is used extensively in business and industry, government, and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals. It was originated by Robert Kaplan (Harvard Business School) and David Norton as a performance measurement framework that added strategic non-financial performance measures to traditional financial metrics to give managers and executives a more 'balanced' view of organizational performance. The balanced scorecard suggests that we view the organization from four perspectives, and to develop metrics, collect data and analyze it relative to each of these perspectives as identified in the figure.



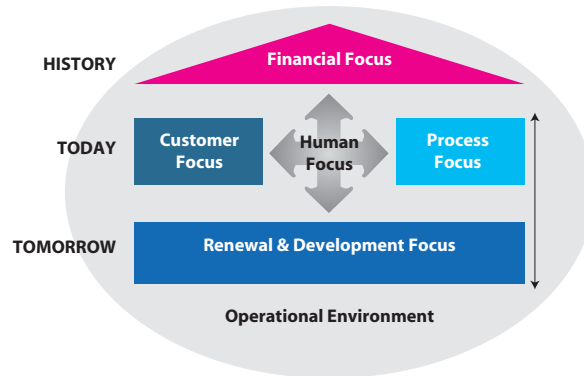
#### b) Skandia Navigator

Skandia AFS, a subsidiary of the Skandia insurance group, has chosen to turn the measurement of intangible assets into a tool for competitive differentiation. The company actively and publicly promotes its 'Business Navigator', which incorporates a large number of key indicators and is one of the driving forces in the intellectual capital movement. The Skandia Navigator is a future-oriented business-planning model providing a more balanced overall picture of operations. It represents a balance between the Past (the Financial Focus), the Present (the Customer, Human and Process Foci) and the Future (the Renewal & Development Focus). The Navigator allows the breakdown of Skandia's operational vision and objectives into concrete factors that can be coupled to an individual's own work. Skandia believes the investments made in renewing and developing the Human, Customer and Process capital drive financial success. The Navigator visualizes this belief and forms the basis for business planning processes. Skandia's Business Navigator incorporates a total of about thirty key indicators in various areas, which are monitored internally on a yearly basis.

#### c) Performance Prism

The Performance Prism (PP) is referred to by its Cranfield University developers as a 'second generation' scorecard and management framework. The distinguishing characteristic of the Performance Prism is that it uses as its starting point all of an organization's stakeholders, including investors, customers and intermediaries, employees, suppliers, regulators and

communities, rather than strategy. According to PP proponents, strategy should follow from stakeholder analysis. The PP framework also focuses on the reciprocal relationship between the organization and its stakeholders, as opposed to just stakeholder needs.



There are five 'facets' to the Performance Prism which lead to key questions for strategy formulation and measurement design:

1. **Stakeholder Satisfaction:** Who are our stakeholders and what do they want and need?
2. **Strategies:** What strategies do we need to satisfy these wants and needs?
3. **Processes:** What processes do we need to execute these strategies?
4. **Capabilities:** What capabilities do we need to operate our processes more effectively and efficiently?
5. **Stakeholder Contribution:** What do we want and need from our stakeholders if we are to develop and maintain these capabilities?

