**TRAINING IN FINANCIAL AND BUSINESS MANAGEMENT FOR ROAD CONTRACTORS**

**MODULE ONE SESSION SEVEN**

 **PERFORMANCE MEASUREMENT AND PROFITABILITY MANAGEMENT**

**1.0 Purpose of the Session**

1. To introduce the income statement as short term measure of performance
2. To enable trainees to appreciate return on capital invested as a central performance ratio.
3. To identify determinants of profitability in road construction
4. To introduce trainees to cash as the long term measure of performance
5. To introduce the concept of net present value and the internal rate of return
6. To introduce the balance sheet as position statement of wealth of a business.

**1.2 The nature of financial performance of a business**

The core purpose of setting up a business is to increase the wealth of its owners. So performance measurement of a business means measuring how much wealth the business has generated for its owners over a period of time. The higher the wealth is the better the performance. At short intervals the business assesses its performance using the income statement based on accounting conventions to determine whether and how much profit the business has made. Over the long term, performance measurement is done by ascertaining the cash that the business has generated over a period of time. The higher the cash is, the better the performance.

A business has to make three fundamental decisions and measuring its performance also means assessing how well it has made such decisions and how relevant and suited they are with the nature of the business. These decisions are:

1. The nature of assets the business has invested in and whether they assist it to generate cash better; (The Investment Decision)
2. The financing structure of the business that combines owners and borrowed funds to reduce the cost of capital at a level of risk acceptable to the owners; (The Financing Decision)
3. Decision of the extent to retain cash generated by the business in order to meet the business’s survival and growth needs and balancing that with the needs of its owners to get dividends or drawings. (The Dividend Decision)

A business must regularly review those decisions and synchronise them to maximise its cash generation to its owners in the long term.

**1.3 The income statement:**

An income statement gives the short term accounting performance of a business. The statement summarizes the trading results for a stated period; the revenue generated, the cost of producing it, general operating costs and the net profit or loss. A business must regularly prepare an income statement to assess its trading performance and direction. The profit or the loss is the bottom line indicator of performance for that period. In a nutshell one line summarizes the trading activities of the whole period; the larger the profit is the better the performance.

Usually (and legally for a company) financial statements are prepared annually, audited and tabled before the owners in an annual general meeting.

**1.4 Information derived from an income statement**

An examination of an income statement will yield the following information:

1. Size of the business as indicated by its turnover
2. The nature and structure of costs
3. Pricing policy as expressed by its gross profit margin
4. Trading performance by the level of its profit and return on investment.
5. The activity and productivity of the resources as indicated in the balance sheet
6. The trend of the business when income statements of several periods are available.

**1.5 Possible profitability ratios:**

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| --- | --- |
| Gross margin (Margin policy)  | Costs to revenue ratios eg:  |
| Labour or Materials cost to revenue  | Variable overheads to revenue |
| Activity ratios or turnover ratios such as stock turnover | Fixed assets or net assets turnover  |
| Productivity ratios such as kilometres per employee or per day  | Revenue per employee or per km.  |
| Cost per employee or per km.  | Investment ratios  |
| Return on capital employed  | Return on owners investment |
|  | Return on capital employed |

**1.6 Central profitability ratio (ROI)**

One ratio may be used as an overall performance indicator ratio for profitability. The return on investment (ROI) ratio indicates the profits of the business relative to the investment in the business. It answers the question: “What did you put in and what do you get out?” In this case, return represents the profit after tax, while investment is the owners’ equity. By looking at ROI we are selfishly focusing only at equity and the equity bottom line.

* ROI%= (profits after tax/owners’ equity) x100

ROI is the central performance measure for owners of short term profitability of their business; the higher the ratio, the better the business is performing. Managers should do everything possible to improve this ratio for their business. They should also bench mark with businesses in the industry and with the industry in general. Economics theory suggests that resources will shift to investment areas that yield higher ROI. This will certainly be true given the related business risks, and free mobility of capital.

**1.6 Determinants of profitability in construction business**

There are many factors that determine whether a business will make profits in a road construction or not. Not all the factors mentioned below need be present for profit to be realized but generally their observance will determine the extent of profits to be made. The determinants include:

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| --- | --- |
| Quality of bids made  | Pricing policy having competitive margins on cost |
| Size of the business and its capacity to do work | Stock of jobs held to reduce idle time  |
| Technical and managerial competences in the business | Speed of execution to minimize impact of fixed overheads |
| Quality assurance practices to avoid repeat works | Cost control avoids wastage and cost overruns |
| Access to funding facilitates more jobs and better cash flow | Variations management creates more revenue and profits |
|  | Capital structure (gearing) that reduce the average cost of capital |

**1.7 Long term profitability**

The long term profitability measure of any business is the cash it can generate for the owners. It is measured by the net cash (cash received less paid) generated from it over a period of time. For a project that has a finite life time, the cash flow could be forecasted and the worth of the net cash estimated to evaluate the financial benefits of the project. The higher the cash generated from a business, the quicker it comes and the longer it continues to come, the better the business or the investment.

Cash may be invested in fixed assets in order to yield future cash flows. Fixed assets generate cash or avoid paying out cash in future. The principle is the same as for business. Fixed assets should be looked at as investment opportunities. Their value to the business is the net cash flow they will bring into the business or the cash flow they will save the business. If this is what make assets valuable to the business then many of the fixed assets which businesses hold may not really be business assets.

But the value of money today is not the same as the value of money tomorrow! The value of money in future is less than at present since money today can be invested to provide an interest income in the future. Inflation too reduces the value of money to be received in future. Therefore, a complication arises to amalgamate cash from different time periods and compare it when actually it does not have the same purchasing power! The simplest rule should be that the earlier the business gets the cash back the better! But that does not give the whole picture of the business or the project.

 **1.8 Net present value (NPV)**

In order to compare like with like, cash received or paid out in future is discounted by a factor to make it have the same value with money now. Once discounted all money is compared at its current value. The discounting factor to be used is the cost of capital of the business. If the company’s cost of capital is not known, the alternative is to use the opportunity cost of cash, which is estimated as the risk free return plus an allowance for risk and possibly inflation.

The present value of a future cash receipt or payment is its discounted value using the company’s cost of capital as the discounting factor. For example, if the company’s cost of capital is 20%, the present value of shs 60,000 received in one year’s time is shs 50,000. (Modern computers and some calculators will easily work out the present value of a stream of cash flow.)

Net present value (NPV) of future cash flows is the discounted future receipts net of payments and the initial cash outlay, using the cost of capital as the discounting factor. For example if a business spends Shs 50 million to buy an excavator and the discounted cash flow from its operations totals shs. 60million, its net present value is shs.10 million (that is shs.60m, the discounted cash flow, less shs50m the original cash outlay). If the discounted cash flow from its operations is shs35 million, then the NPV would be negative shs15 million (that is shs35m minus shs50m)!

NPV can therefore be positive, zero or negative. A business is profitable in the long term if it has a positive NPV. Indeed the higher the NPV the more profitable the business is. A business breaks even when its NPV is zero and is unprofitable if its NPV is negative.

As a general rule of profitability, a business should only invest in projects that have a positive NPV at its cost of capital. Such projects will add value to the business and therefore increase the owners/shareholders wealth.

**1.9 The Internal rate of return (IRR)**

The cost of capital that will return an NPV of zero for a project or stream of cash flow is called the internal rate of return (IRR). (Computers and modern calculators can easily work it out for a stream of figures.) A business or project is profitable if it has an IRR higher than the cost of capital. The higher the IRR the more profitable the business/project will be. Expressed differently, the IRR is the highest rate at which the business can borrow to finance a project and make a profit.

For investment decisions therefore, a business will select a project, or will invest money in an asset if its IRR is greater that the business’s cost of capital.

**1.10 Position statement**

The position statement is normally referred to as the balance sheet. It gives the book worth of the business at a point in time and how it is financed. The position statement is commonly known as the balance sheet. It shows the assets and liabilities of the business. It shows the fixed assets of the business, its working capital including work in progress, inventory and cash and bank. It also shows accounts receivables (debtor) as well as accounts payables (creditors). Finally the position statement indicates the equity of the owners and any long term borrowing that both constitute the capital of the business. Following the double entry principle, assets of a business equals its liabilities hence the statement is referred to as the balance sheet. The balance sheet is the summary of the investments of the owners of the business to whom it owes the net assets.

**1.5 Information derived from the balance sheet**

1. The Investment Decision. Its investment preferences and sum total of its history. What assets has the business invested in? Is it in fixed assets such as land or is it in equipment or current assets or in cash?
2. The Financing Decision: The level of indebtedness and the nature of its financial risk through its financing structure, that is, to what extent does it have debt and how does the size of the debt compare with the size of the owners’ equity.
3. The book value of the business.
4. The liquidity and solvency of the business.
5. The trend of the business. This is visible if financial statements for several years are compared.
6. The business as a going concern. Poor liquidity and solvency ratios will indicate going concern problems for the firm; however continued unprofitable trading and low turnover ratios of assets will as well indicate a threat to the going concern of the business. Overtrading, another major threat to the going concern may also be detected from ratio analysis.

**Discussion points**

* Analyze the income statement of Munaku Ltd. and assess the profitability of his business.
* Identify practices that either enhance or hinder profitability in the road construction sector.
* Given project A and B determine which of the two could Munaku contractors undertake and why.
* Given project C and D, indicate which one Munaku Ltd. would select and why.
* If you had limited funds, rank the four projects in order of preference.

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| --- | --- |
|  | **Projects available to Munaku** |
| Projects | A | B | C | D |
| Year | Cash flow per year in shs'000 |
| 0 |  (150,000) |  (150,000) |  (200,000) |  (170,000) |
| 1 |  (20,000) |  90,000  |  55,000  |  29,000  |
| 2 |  90,000  |  55,000  |  57,000  |  32,000  |
| 3 |  72,000  |  70,000  |  68,000  |  45,000  |
| 4 |  60,000  |  68,000  |  71,000  |  69,000  |
| 5 |  78,000  |  30,000  |  73,000  |  98,000  |
| 6 |  65,000  |  32,000  |  88,000  |  99,000  |
| Net income |  195,000  |  195,000  |  212,000  |  202,000  |
| NPV (30%) |  (23,876) |  22,155  |  (30,262) |  (37,211) |
| NPV (15%) |  49,189  |  83,504  |  50,571  |  39,977  |
| IRR (%) |  24  |  38  |  23  |  21  |
| NPV (15%) / investment |  32.8  |  55.7  |  25.3  |  23.5  |