Sparkassenstiftung für
internationale Kooperation

6. Investment KPIs

Introduction to investment KPIs

For the management of a company it is very important to know whether an investment is profitable or not as decisions have to be made on future investments. Consequently, in the following section two investment KPIs are introduced. First inventory assets and its importance for a firm are explained. Secondly, steps to improve inventory management is explained. Additionally, the metric of Break-even-time, its importance and how it can be improved are explained. Finally, some simple tasks to calculate these ratios along with solutions are provided.

Investment

KPIs

Inventory Assets

INVENTORY

ASSETS

You might sometimes feel like you're walking a tightrope, if your business requires maintaining an inventory. On the one hand having too much inventory is costly in various ways. On the other hand not having enough inventory means you run the risk of losing sales. That's the reason why it is very important to have an efficient inventory control system.[60]

Why is it important?

To turn away customers, who are ready to buy your products, is one of the worst things one can do in business. This is often the result of a stockout, which means you have run out of the item customers want. Other than potential loss of revenue from missed sales, this can also potentially result in a permanent loss of customers as customer seek alternatives to satisfy their needs. An efficient inventory control system tracks the volume of products to keep in stock and simultaneoulsy forecasting how long supplies will last based on sales activity. Consequently, orders are placed ahead of time in order to prevent stockouts.

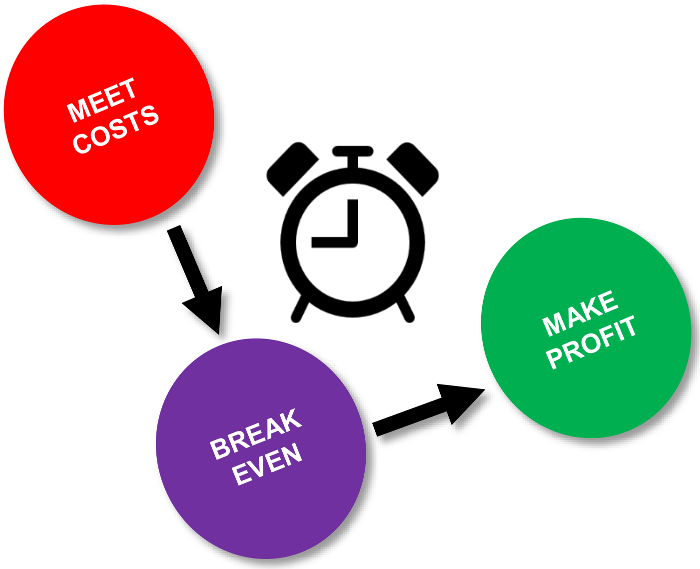
On the other hand, you can also wind up with overstock – too much of certain items – when inventory is not effeciently managed which is also a cause of concern. The longer a product remains as unsold inventory, the greater the risk it may never sell. Consequently, SME's are typically forced to write these off, or for the least offer huge discounts. Perishable items may spoil and products go out of style or become obsolete. Additionally, products may potentially get damaged or stolen the longer they remain in storage. The storing, counting and handling of excessive inventory can add ongoing costs.

Banks usually are very interested in a solid inventory management, as inventory is often put up as a collateral for loans.[61]

How can a company improve its inventory management?

- Take a granular look at inventory to segment products based on their characteristics is beneficial. Typical characteristics are market appeal, profitability, and supply versus demand pattern. Based on this segmentation the rate at which a depleting inventory is replenished can be decided. Thus profits can be maximized and operational costs on less profitable products can be minimized.
- Ensure consistent, timely and accurate delivery. Suppliers should be audited periodically. As demand and supply fluctuate regularly, the categorization of a product should also be frequently reviewed.[62]

Break-even Time



The amount of time it takes for an investment to earn back its orginal costs is represented by Break-even-time (BET). This can be calculated by using a present value table in order to measure the number of days the net cash flow from the investment will equal the original cost of the investment. One may think of this as a kind of stock investment calculation. It is typically used by companies for any kind of venture and not just for investments in the market.[63]

Example:

For example a manufacturer does not typically invest money into the stock market. They usually put all of their capital into asset and plant expansions. The management wants to know how long it will take for the company to make enough money by the machine to pay for the machine, when looking at purchasing a new piece of equipment. It is obvious that a lower BET represents a better purchase. On the other hand, retailers typically do not spend large amounts of money on equipment. Most retailers do not even own the building in which they operate. They often rent a storefront in a plaza or mall or any other suitable location. Most retailers do however invest their money in leasehold improvements and store build outs to attract more customers. For retailers this is just as an important investment as purchasing new equipment for a manufacturer. So the management of the retail store has to know how long it will take the new store improvements to recover costs spent. Break even calculation is important for cash flow purposes as well. The amount of cash coming in from the investment has to be estimated by the management in order to make loan repayments and other fees associated with the purpose.[64]

How can a company improve the break-even time?

Some fixed costs may be capable of being outsourced and transform into variable or per unit costs. One can also review individual costs line by line to determine whether a competitive advantage is created from internally taking over some costs. It might be an opportunity to pay someone else to hold these fixed costs and charge a per unit price.[65]

Task

Assume you are given the following information on a company:

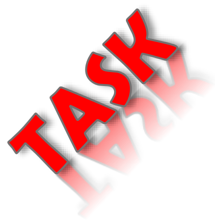
Investment	$ 1000
Cash flow in year 1	$ 400
Cash flow in year 2	$ 350
Cash flow in year 3	$ 450
Cash flow in year 4	$ 380
Interest rate	10 %

Please feel free to solve the following questions in order to practice the contents of investment key performance indicators:

1) How could a company improve its inventory management?

2) In which year reaches the company the break-even point?

   Hint:
   - Discount the cash flow in each year with the interest rate in order to calculate the present values, therefore feel free to use the following formula:



$$\textit{Present value in a certain year} = \frac{\textit{Cash flow}}{(1+\textit{Interest rate in }\%)^{\textit{Year}}}$$

   - Then add the cash flows and look in which year the sum of cash flows exceeds the investment

   - Feel also free to show your results in a table

3) How could a company improve the break-even time?

Solution

1) Product segmentation, auditing of suppliers.

2)

Discount the cash flow in each year with the interest rate in order to calculate the present values:

Present value in year 1: $\frac{\$\,400}{(1+10\,\%)^1} = \$\,363{,}64$

Present value in year 2: $\frac{\$\,350}{(1+10\,\%)^2} = \$\,289{,}26$

Present value in year 3: $\frac{\$\,450}{(1+10\,\%)^3} = \$\,338{,}09$

Present value in year 4: $\frac{\$\,380}{(1+10\,\%)^4} = \$\,259{,}55$

Then add the present values and look in which year the sum of present values exceeds the investment:

<u>Year 1</u>: $ 363,64 < $ 1000

→ investment is not exceeded in year 1

<u>Year 1 + Year 2</u>: $ 363,64 + $ 289,26 = $ 652,89 < $ 1000

→ investment is not exceeded in year 2

<u>Year 1 + Year 2 + Year 3</u>: $ 363,64 + $ 289,26 + $ 338,09 = $ 990,98 < $ 1000

→ investment is not exceeded in year 3

<u>Year 1 + Year 2 + Year 3 + Year 4</u>: $ 363,64 + $ 289,26 + $ 338,09 + $ 259,55
= $ 1250,53 > $ 1000

→ investment is exceeded in year 4

Table:

	Cash flow in $	Present value in $	Sum in $
Year 1	400	363,64	363,64
Year 2	350	289,26	652,89
Year 3	450	338,09	990,98
Year 4	380	259,55	**1250,53**

3) Outsourcing of fixed costs.

SOLUTION