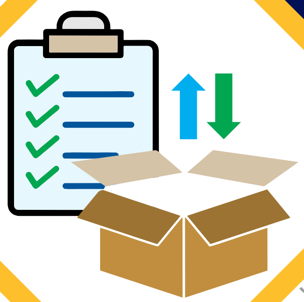
Information Booklet

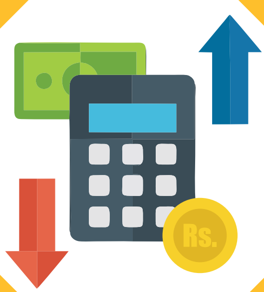
Accounting & Finance

1

INVENTORY MANAGEMENT

for SMEs





SMEDA

NBDP

National Business Development Program for SMEs

Introduction

Small and Medium Enterprises Development Authority (SMEDA) works under the Ministry of Industries and Production, Government of Pakistan and was established in 1998 with the objective to propel economic growth through development of SMEs. SMEDA serves as an SME strategy-advisory body for the Government of Pakistan and facilitates partners in meeting their SME development agendas.

SMEDA envisions growth of a globally competitive SME sector (in Pakistan), through creating an enabling environment and support services for increase in the national economy. SMEDA strives to achieve this vision by providing assistance in employment generation and value addition to the national income, through development of the SME Sector, by helping increase the number, scale and competitiveness of SMEs.

National Business Development Program for SMEs (NBDP) is a project of SMEDA which intends to provide hands-on support services to SMEs. The aim of this business development support provided by NBDP is to advance new businesses and improve efficiencies in existing SME value chains to empower them to contend in global market. NBDP expects to facilitate around 314,000 SME beneficiaries over the period of five years.

Objective

- To provide understanding of inventory management process and activities with rationale for decisions with respect to procurement, processing, and selling of the goods and services, most efficiently providing increased sales revenue and profits.

Table of Contents

a Basics of Inventory or Stock and Their Types

Inventory is the stock of materials and goods meant for processing and sale by any business and it usually does not include the fixed assets and equipment etc. These are most valuable assets of business because businesses require it for their operations and generate profits to sustain. It also has value because it can be used as collateral to get a loan and buy more inventories or it can be readily converted into cash to pay urgent bills.

Inventory, stock and merchandise are interchangeable words. While inventory is usually used in manufacturing concerns, the word stock and merchandise are used in trading concerns.

Inventory Vs Stock:

The word inventory often refers to goods that are stored for sale, but even those businesses that do not have stock to sell might have inventories to maintain. Following are a few head to head differences between inventory and stock:

	Inventory	Stock
Context	It is used in accounting context as it directly impacts the finances of a business.	It is used in business context as it directly affects the revenue or sales of a business.
Valuation	The value of inventory is determined through various calculations e.g., first in first out and weighted average method.	It is valued by the price at which it is sold in the market i.e., the selling price at which it is sold to the customers.
Frequency	It is evaluated occasionally. Inventory is usually valued just before the end of a financial reporting period.	It is evaluated on daily and/or weekly basis.

Types of Inventory:

Generally there are five types of inventories in addition to non product related consumables:

1 Raw Material: Raw materials, which are procured to produce the finished goods,

2
Work in Process (WIP)

Work-in-progress, or WIP goods as they go through the production and value addition process or

3
Finished Goods

Finished goods, processed or manufactured goods that are ready to distribute and sell

4
Goods in Transit

Returned or damaged goods, goods that have been returned due to some defect or obsolescence

5
Consigned Goods

MRO, maintenance, repair and operations supplies that are consumed but are not part of the product itself, such as blades, needles, wax, paper and oil etc in a furniture or clothing business

b Importance of Inventory Management

Because of the very nature of these assets of being near liquid (i.e., readily convertible into cash) inventory is classified as current asset. It is also mostly the biggest asset on the account books of SMEs and requires the maximum of investment.

1. **Inventory management is all about creating balance in the type, time and quality of procurement of materials.**
When a business invests in more inventory than it can sell, it is overstocked. Overstocking creates a number of issues including cash flow constraints and may even face losses due to obsolescence. On the other hand, with not enough inventories, the business may compromise its service delivery.

2. **Inventory management is essential for a business's profitability.**
Sometimes, the business has to forego its profit due to the excess inventory lying in the warehouses. If the business cannot utilize the inventory completely, it usually cannot sell all the inventory, and it cannot get a refund from the vendor or supplier, the goods will sit in storage without being disposed off and counted as losses. A certain percentage of loss is an acceptable norm and expected in most business, however, inventory greatly in excess of projected sales will always hurt a business's profitability. So it is a good to say that "Goods you can't move are goods wasted'.

3

Inventory management ensures quality customer service and increases business. Stock out or failure to have sufficient inventory of finished goods on hand to meet customer demands also hurts a business. A business may lose more than a sale if they don't have required inventory to fill a sales order. Having to tell a customer about being out of stock, can turn them away to competitors that have what they are seeking. Customer service and Inventory have a close relationship; the best way to ensure reliable customer satisfaction and minimized waste is through good inventory management.

c What is Included and What is Not Included in The Inventory?

What is included?	What is not included?
▪ Raw Material ▪ Work in Progress (WIP) ▪ Finished Goods ▪ Goods in Transit ▪ Consigned Goods ▪ Merchandise Inventory ▪ Maintenance, Repair & Operating (MRO) Supplies	▪ Contracts in progress on construction and/or services ▪ Biological assets arising from agricultural activities

d Inventory Records and Procedures

Inventory Record:

An inventory record contains information about the type and amount of stock as well as all the equipment, fixtures and material owned by a business.

The inventory record also lists material on hand, material ordered and WIP material.

Inventory Records Serve the Following Purposes:

- To help maintain a complete record of items held, purchased, sold, consumed or lost.
- To provide information for preparing monthly/yearly financial statements.
- To give complete details about the cost of inventory that contributes to the value of a business.
- To design strategy and improve cost effectiveness of operations and track usage efficiency.
- To understand where each item is stored and improve operational efficiency by preserving and maintaining stock in the location that is most beneficial for production.
- To maintain adequate stock by calculating whether optimum inventory is continuously available for production.
- To create a list of items according to specifications.
- To determine whether optimum stock is being ordered, in addition to making a timeline for anticipated deliveries.
- To ensure that inventory is not wasted, stolen, damaged or otherwise made unprofitable.

Basic Features of Inventory Record:

Following are the details about the inventory records:

- A typical inventory record is maintained physically or digitally. Its complexity depends upon the size of the business, type of materials and the volume of production.
- Mainly inventory records contain a description of each item in inventory along with information about its location, quantity and identification number.
- An inventory record also tracks changes in the total quantity of stock, as well as incoming and outgoing inventories.
- In inventory, each item can be tracked and depending on the system, items may also be organized by type or categories.

Two Methods of Inventory Management:

01 First-in First-out (FIFO)

02 Weighted Average Method (WAM)

FIFO stands for "first-in, first-out", meaning that the oldest inventory items will be sold first. FIFO does not necessarily mean that the exact oldest physical item has been tracked and sold, it just refers to items that are billed. With FIFO, the cost of inventory reported on the balance sheet represents the cost of the most recently purchased inventory items.

In case of perishable goods FIFO the businesses follow FIFO method, since selling off the oldest goods first reduces the risk of inventory obsolescence.

Companies and businesses selling products with relatively short demand cycles, such as Fashion Designers, also may have to pick FIFO to ensure they are not stuck with outdated styles in inventory.

From the details prepare stores ledger under FIFO.			
2019 Dec	1	Opening Balance	400 kg @ 1.25 PKR
	5	Received	200 kg @ 1.30 PKR
	8	Issued	480 kg
	10	Issued	40 kg
	20	Received	400 kg @ 1.40 PKR
	28	Issued	240 kg

	Receipts			Issues			Balance		
Date	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR
01							400	1.25	500
05	200	1.30	260				400	1.25	500
							200	1.30	260
08				400	1.25	500	120	1.30	156
				80	1.30	104			
10				40	1.30	52	80	1.30	104
20	400	1.40	560				80	1.30	104
							400	1.40	560
28				80	1.30	104	240	1.40	336
				160	1.40	224			

Round off the amounts

The balance sheet would now show the inventory valued at 240 units with 336 PKR.

Weighted Average Method (WAM) is used to assign the average cost of production to a product. Weighted average costing is commonly used in situations where:

- Accounting system cannot track each inventory item.
- Inventory items are so similar to each other that there is no way to assign a cost to an individual unit.
- Manufacturers usually rely upon the weighted average costing methods because inventories are often piled up or mixed which makes it difficult to differentiate between older and newer goods.
- For instance, in chemical manufacturing, one batch of a chemical may be mixed with another batch of the same chemical. Because it would be difficult to account for the mixture, the company uses a weighted average.
- WAM is frequently used in inventory management of fuel companies, agricultural companies and pharmaceutical companies etc.

When using the weighted average method, divide "the cost of goods available for sale" by "the number of units available for sale".

$$WAM = \frac{Cost\ of\ goods\ available\ for\ sale}{Number\ of\ Units}$$

Where,

$$Cost\ of\ goods\ available\ for\ sale = Beginning\ Inventory + net\ purchases$$

Then this weighted-average figure is used to assign a cost to both "ending inventory" and "the cost of goods sold".

From the details prepare stores ledger under simple average method.			
2019 Dec	1	Opening Balance	400 kg Rs. 1.25 PKR
	5	Received	200 kg Rs. 1.30 PKR
	8	Issued	480 kg
	10	Issued	40 kg
	20	Received	400 kg Rs. 1.40 PKR
	28	Issued	240 kg

	Receipts			Issues			Balance		
Date	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR
01							400	1.25	500
05	200	1.30	260				600	1.2667	760
08				480	1.2667	608	120	1.2667	152
10				40	1.2667	51	80	1.2667	101
20	400	1.40	560				480	1.3771	661
28				240	1.3771	331	240	1.3771	330

Round off the amounts

The balance sheet would now show the inventory valued at 240 units with 330 PKR.

"LIFO" stands for last-in, first-out, meaning that the most recently produced items are recorded as sold first. However, the LIFO method is banned under the International Financial Reporting Standards (IFRS) which are the accounting rules followed in the Pakistan and many other countries.

From the details prepare stores ledger under FIFO.			
2019 Dec	1	Opening Balance	400 kg @ 1.25 PKR
	5	Received	200 kg @ 1.30 PKR
	8	Issued	480 kg
	10	Issued	40 kg
	20	Received	400 kg @ 1.40 PKR
	28	Issued	240 kg

	Receipts			Issues			Balance		
Date	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR	Quantity Units	Rate PKR	Amount PKR
01							400	1.25	500
05	200	1.30	260				400	1.25	500
							200	1.30	260
08				200	1.30	260	120	1.25	150
				280	1.25	350			
10				40	1.25	50	80	1.25	100
20	400	1.40	560				80	1.25	100
							400	1.40	560
28				240	1.40	330	80	1.25	100
							160	1.40	224

Round off the amounts

The balance sheet would now show the inventory valued at 240 units with 324 PKR.

Note: In the revision of IAS-II (in 2003), the LIFO method is prohibited to use in financial statements. Inventory should be recorded at lower of cost or NRV (Net Realizable Value) because LIFO does not provide true and fair view of financial statements.

e Inventory Management Software

Inventory management software is a useful tool for small businesses because it helps management in preventing stock outs and over stock for multiple products and provides accurate recordkeeping. An inventory management soft ware solution makes it easier than trying to do them all manually.

Inventory Management Software is a business IT application that tracks, manages and organizes inventory and keeps record of material purchased, sold and consumed in other production process.

Inventory Management Software:

- Reduces time, cost and efforts done in managing inventory
- Increase production process efficiency
- Helps businesses plan ahead by using inventory automation technology
- Allows users to prepare for radical changes in sales
- Prevents product loss caused by environmental factors and theft

f Using Inventory Data for Management Decisions

An efficient inventory management system is a useful tool to help forecast how much inventory will be needed based upon sales projections. Through this, the business can prevent overstock and stock-out situations and place orders accordingly. The business must assess how much demand consumers have for their product as well as the product's ability to last and its rate of depreciation. For example, if you sell perishable goods, your inventory management should take into account expiration dates. You should also calculate the costs of storing into inventory carrying cost, the expense of keeping inventory on hand. Similarly, there are number of related factors that go into successful inventory management system

Financial Analysis of Inventory:

There are quantitative as well as qualitative techniques used by analysts and investors in order to develop an understanding of a business.

#1 – Quantitative Analysis – Inventory Days Ratio

Under the quantitative techniques, the inventory is used to calculate certain ratios and perform the ratio analysis.

A set of ratios is given below:

Inventory Turnover:

Inventory turnover shows how many times the inventory of a business is sold and replaced over a period. The formula of inventory turnover ratio is;

$$\textit{Inventory turnover ratio} = \frac{\textit{Cost of goods sold}}{\textit{Average inventory}}$$

Where,

$$\textit{Average inventory} = \frac{\textit{Beginning inventory} + \textit{Ending inventory}}{2}$$

No. of Days Inventory:

No. of days in inventory also known as day's inventory outstanding is an efficiency ratio that measures the average number of days a business holds its inventory before selling it. The ratio measures the number of days for which the funds are tied up in inventory. The formula of No. of days inventory is:

$$\textit{No. of days inventory} = \frac{365}{\textit{Inventory turnover}}$$

For the fiscal year ending January 2018, a business (ABC Co.) reported annual sales of PKR 500 million, year-end inventory of PKR 43.78 million, accounts receivables PKR 100 million, total purchases PKR 300 million, accounts payable PKR 75 million and an annual cost of goods sold (or cost of sales) of PKR 373.40 million.

Inventory turnover for the year equals:
PKR 373.40 billion ÷ PKR 43.78 billion = 8.53 times in a year
Its No. of day's inventory equal:
365 ÷ 8.53 = 42 days

#2 – Qualitative Analysis:

Review of Buffer Stock:

The excess amount of raw material that has been kept on hand to guard against inventory shortage or price fluctuation is reviewed to check whether it is required or not.

Periodic Reviews:

The inventory is reviewed at regular time intervals (e.g., once a month) to decide the quantities that need to be ordered to bring the inventory level up to a given amount.

Identify Obsolete Stock:

Obsolete stock/dead inventory is reviewed to check the items that have reached the end of "product lifecycle", i.e., there is no market demand for that product anymore. It is important to identify obsolete inventory because inaccurate or incorrect forecasting of customer demand can lead to ordering more stock than needed. This method requires policy, planning, documentation and system controls to guard against waste and financial loss caused by passing the "best-before" dates of any product.

Useful Life:

Useful life of the inventory is checked in order to check the economic benefit of the item and cost of keeping that item in stock.

Degrees in the Quantity:

The availability, need, quantity, importance, urgency, placement and controlling is reviewed through the following questions:

1) What items should be stocked?
2) Where the item should be stocked?
3) How much of the item should be ordered?
4) When the order for items should be placed?
5) How important is the item?
6) How the item should be controlled?

SMEDA

National Business Development Program for SMEs

HEAD OFFICE

Address:	3rd/4th Floor, 3rd Building, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel:	(042) 111-111-456, 99204701-12
Fax:	(042) 36304926-27
Email:	helpdesk@smeda.org.pk

REGIONAL OFFICES

Balochistan	
Address:	Bungalow No. 15-A, Chaman Housing Scheme, Airport Road, Quetta
Tel:	(081)-2831623 - 2831702
Fax:	(081)-2831922
Email:	helpdesk.balochistan@smeda.org.pk

Punjab	
Address:	4th Floor, 3rd Building, Aiwan-e-Iqbal Complex, Egerton Road, Lahore
Tel:	(042)-111-111-456
Fax:	(042)-36304926, 36304927
Email:	helpdesk.punjab@smeda.org.pk

Khyber Pakhtunkhwa	
Address:	Ground Floor, State life Building, The Mall, Peshawar
Tel:	(091)-111-111-456, 091-9213046-7
Fax:	(091)- 5286908
Email:	helpdesk.KhyberPakhtunkhwa@smeda.org.pk

Sindh	
Address:	5th Floor, Bahria Complex II, M.T. Khan Road, Karachi
Tel:	(021)-111-111-456
Fax:	(021)-35610572
Email:	helpdesk.sindh@smeda.org.pk