ACCA Paper 1.2 Assignment
Financial Information for Management

Looking at Peroid Inventory and Perpetual Inventory

Provide a comparative analysis of inventory systems
For the manufacturing sector
Using management accounting techniques.

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Summary

We work for a firm of accountants, which has recently added management consultancy to the list of services available to our clients.

One of our clients, from the manufacturing sector, is considering changing from a periodic inventory system to a perpetual inventory system.

Therefore this report explains and gives a comparative analysis of both of these inventory systems. We shall discuss different methods able to be adopted in line with accounting standards and suggest recommendations to the company. We shall show the importance of choosing the correct or rather best suited method in order to represent a true and fair view of the accounts.

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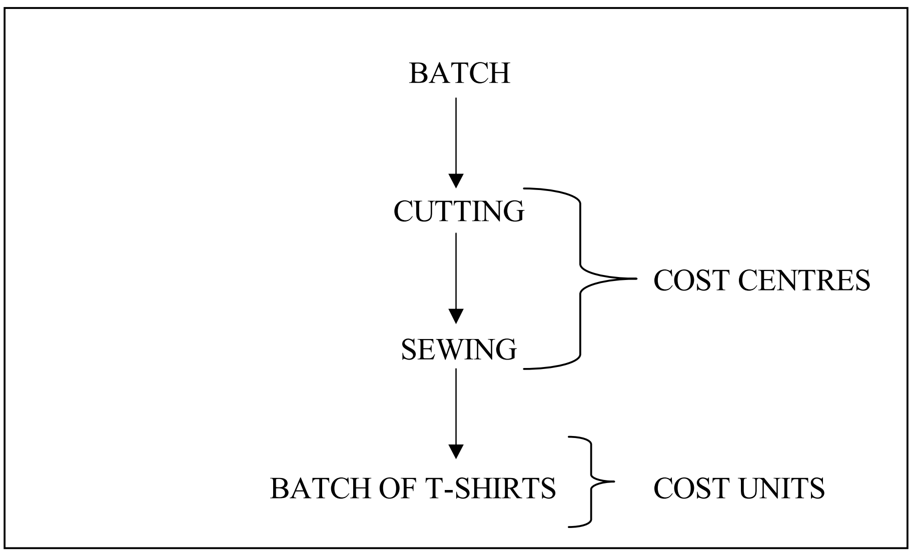
Introduction

One of our clients is considering changing from a periodic inventory system to a perpetual inventory system.
These concerns are related to stock valuation, which is an important process for a company as it can have direct effects on profit figures.
With regards to stock valuation, there are different methods, which will produce different valuations, this is because in practise there will be a delay between buying the materials and it being used and price variances could be extracted at either point in time. This report will discuss the methods available, FIFO, LIFO and AVCO providing a comparative analysis of these.
Discussion shall then move on to the advantages and disadvantages of each inventory system, the main points regarding cost and accuracy.
Figures are produced to show what the valuations for the company would be for each stock valuation method and inventory system.
Finally recommendations are made to the company based on our findings. Our recommendations suggest what the best option would be, but there is a limit to what we can say as we are not provided with relevant information as to what methods are in place at the moment. Time limits for the report and lack of background information in to the company also may effect our final recommendations from being as accurate as possible.

1.0 The Importance of Stock Valuation.

According to Wood and Sangster, 2002, most Businesses want to know how much each item has cost to make in order to make more sensible decisions about what should be done to aid the progress of the business towards its objectives.
This expenditure control is one of the most important features of cost accounting.
But what organisations need to consider is that control of expenditure is only possible if you can trace the costs down and trace the route they pass through.
A convenient approach to collect these costs is through 'cost centres', for example production locations, functions, activities or items of equipment.

Figure1. Flow of Costs into Unit Cost.



As a product travels through its stages of manufacturing it attracts cost in each 'cost centre'. These need to be established for other activities linked closely to production but not actually creating the end product itself.
One of these cost centres will be raw materials or stock and it is necessary to place a value on the item so analysis can be done.
Woods and Sangster, 2002, state that most people assume that when a value is placed upon stock, it is the only figure possible, but this is not true. Wright, 1996, acknowledges that in practise there will be a delay between buying the materials and it being used and that price variances could be extracted at either point in time. Barfield et al, 1991, also realises the difficulty with the cost valuation of material issues. Each same type of material may have been bought at different times at different prices and when it comes to the end period, which price should be used?

2.0 Stock Valuation Methods.

There are several different methods available that can be applied to value an item, such as:

First In First Out Method (FIFO).
This method is when the first goods to be received are the first to be issued.

Last In First Out (LIFO)
The goods issued are from the last lot of goods received before that date.

Average Cost (AVCO)
The average cost for each item is calculated and this figure is then used until another receipt of goods, when another recalculation is needed.

Each different method of valuation provides different costs, therefore resembling different profits. "It is therefore important that the method chosen is the one that is closest in its assumptions to the nature of the business" (Wood and Sangster, 2002:311).

The determination of which method to use should relate to what the objectives of the pricing are. Mainly these will be to determine the cost of materials for decision-making and product pricing and to allocate material costs.

FIFO appears to be the most logical method, in that it follows the physical flow of materials through an organisation. The outcomes of this method are a lower cost of sales calculation, which consequently shows a higher profit. Record keeping is also relatively expensive too. (see appendix ??)
LIFO results in a higher cost of sales and therefore lower profits, as the stock is valued at its latest (and usually higher) prices. (see appendix???)
AVCO is the most popular method (UWM, 2003).

LIFO is not an acceptable method of pricing for taxation purposes, unless reports are adjusted, but this can create more confusion and is not a popular choice by organisations. The Statement of Standard Accounting Practise on Stock and Work in Progress (SSAP 9) however, states that LIFO does not bear a reasonable relationship to actual costs obtained during the period and implies that that this method is inappropriate for external reporting.

In view of this, FIFO or AVCO should be applied.

When making the decision of which method to use, it is necessary to consider that the value of stock must give a true and fair view of the state of affairs the business is in. However, there is no precise definition of what a 'true and fair view really is, and is sensitive to individual judgement.

There is much controversy regarding material pricing. Although the objectives are clear – "that a charge to production on a consistent and realistic basis for cost of materials used" (Fong, 2003) there are problems with several issues.

1. Rapidly changing prices for purchases,

2. Stock at different prices held,
3. Impossible to identify items with their delivery consignment.
4. Sensitivity of product cost to materials pricing method used.

The valuation of materials is important also because if there is an error in the costs assigned to an ending inventory, then this will create an opposite error in the cost of goods sold, thus repetition of the original error in the amount of gross profit.

The only certain thing about valuation is, according to Wood and Sangster, "that the concept of consistency should be applied". One-way to do this is to adopt an inventory system, which should be followed at all times.

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Section 3.0 Perpetual Inventory

Perpetual Inventory is a method for tracking and knowing the value of inventory and quantity of merchandise on hand at any time by tracking sales, returns and receipts with information systems.

The perpetual inventory system requires a separate inventory ledger to be maintained for each product. These ledgers provide detailed information on purchases, cost of goods sold and inventory on hand. Each column gives information on quantity, unit cost and total cost. (see appendix ??? for a worked example)

Advantages of perpetual inventory are:-

- It has a high degree of control
- It aids in the management of proper inventory levels
- Physical inventors can be easily compared
- Whenever a shortage (i.e. a missing or stolen good) is discovered, the inventory shortages account should be debited.

Disadvantages of perpetual inventory:-

- Rapidly changing prices for purchases, which means the inventory ledger would need to be kept up to date all the time, involving a lot of time and resources.
- Stock with different prices held, means inventory ledger needs to be kept up to date and accurate.
- Impossible to identify items with their delivery consignment.
- Sensitivity of product cost to materials pricing method used.

Section 4.0 Periodic inventory

The Periodic Inventory System is, according to Fong (2003) " the value of goods held at the balance sheet date determined by counting and pricing the goods on hand".

This system will be done on a regular period basis (for example, at then end of an accounting year, or every three months).
This model leads to solutions that are very close to the exact optimal solutions determined through simulation. It is shown that the proposed system offers substantial cost savings. (see appendix ?? for a worked example)

Section 5.0 Perpetual V's Periodic inventory

There are fundamental differences for accounting and reporting merchandise inventory transactions under the periodic and perpetual inventory systems.

To record purchases, the periodic system debits the purchases account while the perpetual system debits merchandise inventory account. To record sales, the perpetual system requires and extra entry to debit the cost of goods sold and credit merchandise inventory. By recording the cost of goods sold for each sale, the perpetual system alleviated the need for adjusting entries and the calculation of the goods sold at the end of a financial period, both of which the periodic inventory system requires.

Either stock valuation method can be applied to either inventory system, thus importance being placed on how to value the stock. The main differences between the inventory systems are that perceptual is slightly more accurate and is always up to date, whereas periodic is still very accurate, but as it is not done as often , information is not readily available but it therefore more cost and time efficient.

6.0 Stock Valuation Using the Different Methods.

The following table shows the different values stock can have through the different inventory systems: (taken from appendix ???)

Stock Valuation Method	Periodic Closing Stock Value (£)	Perpetual Closing Stock Value (£)
F.I.F.O	1360.00	1360.00
L.I.F.O	840.00	1165.00
A.V.C.O	1272.40	1305.20

As the table above shows, figures for the FIFO method are the same, so in this case, movement across the inventories will have no effect on stock valuation and therefore profit. Changing should only therefore occur if the perpetual system proves to be easier or more efficient. From the discussions above, however, it is apparent that the periodic system is better so the company should not change systems.

The difference in valuation using the LIFO method proves to be very different. However, SSAP 9, does not permit this method as using the latest price shows stock at the inflated value, thus not representing a true and fair view. This should therefore have no effect on the consideration to changing the inventory system.

AVCO method shows valuation is relatively similar for either inventory system. Periodic is slightly lower, which will consequently increase profits slightly; however the difference is not great enough to impact a decision for this reason alone. Consideration of other factors, as discussed previously will prove to be of importance here, when making a decision over which inventory system to choose.

Conclusions

To conclude, this report has discussed the importance of the choice in stock valuation method and inventory system and the effects each will have.
Stock valuation will have an effect on the company's overall profit figures. The choice made should reflect a true and fair view of the company's status. For this reason, the accounting standards thus should not be used by the company prohibits LIFO method. FIFO and LIFO appear to produce similar and fair valuations therefore either, could be used.
Both the periodic and perpetual system allows either stock valuation to be used. The perpetual system is very time consuming, thus costing the company money. Where as the periodic system is not prepared as often (although regular enough to ensure the company is up to date) and therefore costs less time and money.
Such conclusions suggest the periodic inventory system with either a FIFO or AVCO stock valuation method would prove to be the most suitable.

Recomendations

Through the discussions in this report it becomes apparent that the most suitable stock valuation method, which abides to accounting standards is FIFO or AVCO. As these can be applied in either inventory system, we suggest the periodic inventory to be chosen, as it is most cost efficient.
The company is already using this technique, so no inventory change is recommended.
Depending on which stock valuation method is currently in practise depends on whether a change here applies. If they are using LIFO then they must change in order to comply with accounting standards. Otherwise, no change is needed is either LIFO or AVCO is recommended.

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