

## Backflush Costing and Backflush Accounting

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### Abstract

**B**ackflush Costing (BC) has been made in response to the advances and innovations of production. The approach that is called backflush accounting (BA) has developed in response to the requirements of JIT manufacturing environment. The most important point to understand Backflush Costing and accounting is that there is no continuous tracking system. Backflush Costing which is also called Delayed or Post Deduct Costing is one of the simplest methods of cost accumulation that is used by companies that have adopted the JIT system. However, the JIT is not just a technique or techniques for accumulating cost and has broader philosophy that focuses on continuous simplification and reduction of loss and waste in all levels of the institution's activities and one of the goals of this system is zero ending inventories. The new costing system which is connected with the aim of responding to the requirements of JIT production system is called backflush costing.

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## Introduction

In accounting literature, cost evaluation methods and its accumulation are often related to cost accounting system. Although these methods are only part of a system or subsystem. Each cost accounting system consists of the following five sections:

- 1 - Principles of Measuring Input,
- 2 - Inventory evaluation methods,
- 3 - Methods of cost accumulation,
- 4 - Cost Flow Assumptions, and
- 5 - The capacity and approach of recording the cost of inventories.

One of the main differences of JIT system with traditional systems is the method of this system about its accounting records. This concept as helps to reduce the cost, it also helps to reduce the accounting records. Journal records of traditional systems start from purchasing raw materials and inventories of raw materials that requires keeping multiple inventory accounts such as inventory of raw materials, inventory of work in process, and inventory of built goods along with keeping materials and direct labor accounts. It should be noted that manufacturing companies that produce different products using traditional systems, need to register thousands of documents in journal and ledger when buying and using materials. Thus making traditional accounting systems are very expensive in comparison with the JIT system because the JIT system has reduced number of records and used accounts, and therefore reduces and simplifies accountant' work. This record system is called backflush costing. Backflush costing is appropriate for JIT environment because in this environment work in process and manufactured goods is minimum. In backflush costing system, there is no attempt to trace raw materials and their components from depot to work during construction and finished goods. Backflush costing system omits the events related to record of raw materials movement to work during production, and in addition, movements of inventories to the completion of finished goods are not reported (Swenson & Cassidy, 1993).

## Backflush Costing System

The problem of inefficient costing systems has been solved through the improvement of accounting principles, innovative management as target costing, activity-based costing, activity-based budgeting, theory of Constraints, backflush costing and costing the product life cycle (Uyar, 2010). However, acceptance rate of this type of modern costing systems such as backflush costing is low and slow. This type of costing focuses on output and product and then returns and shares costs between products sold and inventories without separating work in process account. Zero or minimum inventories simplify costing procedures through transferring total cost of production into goods sold cost account. When there is inventory at end of period, Part of the cost which initially had transferred into goods sold cost account, deducted and returned to appropriate inventory account. In cases where there is work in

process Inventory, at the end of period, costing for external reporting purposes are evaluated. Essential features of backflush costing can be summarized as follows (McWatters et al 2001):

- 1- One account is used for raw material and work in process inventory (RIP).
- 2- Work account is not created during process and tracking work in process is eliminated.
- 3- For each line of JIT flow, an account is created for cost of labor and overhead (conversion price).
- 4- Cost of materials is transferred directly to the product account.
- 5- Conversion cost is shared to finished goods (FG) inventory account based on labor hours of machine or operating time.
- 6- When the units were completed, cost of material is deducted from RIP and FG is transferred to material account.

Other accounts included in this system are finished goods and cost of goods sold (CGS). During an accounting period, purchase of raw materials, direct labor and overhead costs are transferred to goods sold account, and materials and conversions are transferred directly to goods sold cost account at the time of realization. Documents are not kept permanently, and usual records like movement of finished work cost in production process from one section to next section and finally movement of finished goods cost to depot are omitted (Rahnomy Roudposhti, 2008).

For more understanding, it should be noted that, at the end of period, in order to calculate manufacturing cost, there are only four approaches. Two first approaches are indicative of traditional evaluating approaches of inventories, while two other approaches are not traditional approaches and sometimes are used by companies which accept JIT philosophy. These four methods are as follows:

- 1- Accumulation of manufacturing cost in inventories in the form of full absorption costing which direct materials, direct labor, fixed and variable manufacturing overheads are transferred to ending inventory.
- 2- Accumulation of variable manufacturing cost in inventories in the form of direct costing and transfer of manufacturing fixed cost to cost account, and direct materials, direct labor and variable manufacturing overhead to ending inventory.
- 3- Accumulation of direct materials cost in inventory account and transfer of total conversion cost to cost account. In this approach, only direct materials cost is transferred to ending inventory account and it is often called throughput costing because its results are similar to results yield in throughput accounting in relation to theory of constraints.
- 4- Identification of total manufacturing cost as cost and not transferring any of the factors of manufacturing cost to inventory account that is completely opposite of the full absorption costing.

## Backflush Accounting

Backflush accounting term published by CIMA terminology was introduced in February 1991. CIMA defined backflush accounting as an accounting system which is focused on the output of an organization and then works are returned to inventory and cost of sales based on the characteristics of the cost. Traditional accounting system uses the successive tracking, i.e. accounting methods are paced with the physical sequence of purchasing and manufacturing. Delayed term is related to its creation because backflush accounting delays costing of inventories to sales time and finally cost returns through accounting system. Backflush accounting removes the need to separate the WIP account. There are two reasons to justify this purpose (Omah & Okolie, 2013):

1- Removing the incentive of managers to produce inventories. In traditional systems usually managers attempt to generate operating profit by producing units not sold. In absorption costing, variable overhead cost is also added to inventories cost.

2- Increasing managers' focus on the broad objectives of the organization rather than the individual sub-goals.

Organizations faced following conditions after accepting backflush accounting (Omah & Okolie, 2013):

1- Managers rather than tracing details of direct materials and direct labor through set of operations, require a simple accounting system.

2- Each product has a set of cost standards.

3- Inventory levels of materials are fixed or minimum.

If inventories are low, cost volume is transferred to sold goods and is not transferred to inventories. Backflush accounting is particularly attractive for organizations that have a small inventory. Some of the limitations and shortcomings of backflush accounting compared to the JIT are as follows:

1- Backflush accounting does not have full compliance with generally accepted accounting principles and external reporting.

2- Backflush accounting is not able to answer the questions of auditors.

3- Use of resources at every stage of the production process is not specified.

4- Backflush accounting is appropriate for JIT production system with minimum direct material inventory or without direct materials and such a situation occurs rarely in the real world.

Backflush accounting like just in time manufacturing system is a quite different system from traditional systems and requires a specific cost accounting system. Reverse accounting is shortcut costing and relies on firms that have less important amount of work in process. Thus, they are specifically appropriate for companies that use JIT inventory management system. In reverse accounting, cost is not related to units until they are not finished or sold. Reverse accounting is sometimes called delayed accounting too and while cost is not shared to products until after the occurrence of events, it is a useful name. Namely, material and conversion cost is transferred to cost of

goods sold and then at the end of period, remained finished goods and set inventory and valued unfinished units and inventories cost are transferred from cost of goods sold to finished goods account, work in process, and conversion cost inversely based on standard cost. Lack of Stock has made stock valuation systems unnecessary and rules out convert speed of direct materials to cost of goods sold. This system is known as delayed accounting system. Delayed accounting delays record of cost until

In JIT manufacturing environment, inventories are demanded through stretching process and by a process based on fragmented and small amounts which is often called the Kanban. Movement of inventories in this system is not long and from warehouse to the production line and from production line to the warehouse but flow of inventories in JIT, is like canals and pipelines that is called production line. The inventory movement within the channel is done through the calculation of units which move toward the end of line and then is reversed. Reverse means search in the bill of materials and products and deduction of inventory records matching manufactured components. Therefore, it is necessary to increase billing accuracy. Last status and position is called “fraction column” point or reverse (Tatkonda, 1988).

There are two boundary events that their record is kept in most delayed accounting systems: the first boundary is the raw material purchasing. In a real just-in-time manufacturing system, no type of raw material is stored and this boundary is not related and raw material is demanded when second boundary is activated. Second boundary is related to transfer of goods to the warehouse of manufactured goods or in just-in-time manufacturing system at the time of selling goods. This system is used in Toyota Company. In the Japanese system, it is used in a certain way. First staff should be involved in sales because cost of sales is the boundary point – no record is done until selling time. Second, there is no benefit in producing goods for warehouse. In traditional system which there is warehouse of manufactured goods, managers can increase their profits by producing more than sale because in traditional system, cost increase of manufactured goods can lead to decrease of cost of goods sold at the end of period.

### **Conclusion**

Backflush costing like most of costing systems use periodic inventory system because permanent inventory documents are removed. Although understanding of backflush costing systems is easy as well as other costing systems but its title is ambiguous because backflush costing systems can be used with any inventory valuation system. Reverse costing is based on concept of inventories in which inventories are activities that do not create any added value for the company and in JIT inventory system in which work in process account is not used, it has a better efficiency and can be used with activity-based costing system. Reverse costing, is an attractive accounting system for use because it makes inventory management process very simple in production. In this system, rather than work in process inventory account is used continuously during production, only the cost of the final product is considered and returned to inventory account at the end of period. Backflush costing has most

association with private companies which use just-in-time manufacturing system for inventories or activity-based costing system. Backflush costing do not comply with GAAP and cannot be used for external reporting requirements. In this costing, work in progress is not identified however, its breakdown from inventories is necessary to represent in Profit and Loss condition. Backflush Costing Proponents argue that at this level, little amount of inventories is not important. The important point is that companies that are obliged to internal or independent auditing may not be able to use this costing because backflush costing is not able to answer most of auditing questions. If the inventory cycle is long, backflush costing estimates the values of inventories less than true during the year. Actual reverse costing methods can be various according to the procedures specific to each company and its aim is to reduce the number of measured and recorded events in accounting system.

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