

UDC 657.421.1

Comparison of the process of stocks inflow and outflow in accounting systems of foreign countries and in Ukraine in terms of successful management information system formation

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In the article a comparison of foreign and native experience of stock accounting is given. It is revealed that inventories take a primary place among the objects of accounting and management of an enterprise and are the one of the most important articles of the asset balance. The main accounting methods of stocks disposal in Ukraine and abroad are considered, benefits and shortcomings of their usage by entities of various type are investigated. The possibility of use of foreign experience of stock accounting in Ukraine is researched. The work proves that it is very important to select the right method that allows making the most closely assessment taking into account interests of owners of the company and the specifics of its production activities.

Keywords: stock accounting, outflows of stocks, methods of reserves depreciation, periodic system of accounting, permanent system of accounting.

Шматковська Т.О. СПІВСТАВЛЕННЯ ПРОЦЕСУ НАДХОДЖЕННЯ ТА ВИБУТТЯ ЗАПАСІВ В ОБЛІКОВИХ СИСТЕМАХ ЗАРУБІЖНИХ КРАЇН ТА В УКРАЇНІ В АСПЕКТІ ФОРМУВАННЯ ВДАЛОЇ УПРАВЛІНСЬКОЇ ІНФОРМАЦІЙНОЇ СИСТЕМИ

У статті надано порівняння зарубіжного та вітчизняного досвіду щодо обліку запасів. Встановлено, що запаси займають важливе місце серед об'єктів обліку та управління на підприємстві і є однією з найважливіших статей активу балансу. Розглянуто основні методи обліку вибуття запасів в Україні та за кордоном, визначено переваги та недоліки їх використання на українських підприємствах. Досліджено можливість використання зарубіжного досвіду щодо обліку запасів в Україні. В роботі обґрунтовано, що обрання вірного методу, який дозволяє найточніше провести оцінку з урахуванням інтересів власників підприємства та специфіки його виробничої діяльності, є досить важливим в реаліях сучасності.

Ключові слова: облік запасів, вибуття запасів, методи списання вартості запасів, періодична система обліку, постійна система обліку.

Шматковская Т.А. СОПОСТАВЛЕНИЕ ПРОЦЕССА ПОСТУПЛЕНИЯ И ВЫБЫТИЯ ЗАПАСОВ В УЧЕТНЫХ СИСТЕМАХ ЗАРУБЕЖНЫХ СТРАН И В УКРАИНЕ В АСПЕКТЕ ФОРМИРОВАНИЯ УДАЧНОЙ УПРАВЛЕНЧЕСКОЙ ИНФОРМАЦИОННОЙ СИСТЕМЫ

В статье проведено сравнение зарубежного и отечественного опыта учета запасов. Установлено, что запасы занимают важное место среди объектов учета и управления на предприятии и являются одной из важнейших статей актива баланса. Рассмотрены основные методы учета выбытия запасов в Украине и за рубежом, определены преимущества и недостатки их использования на украинских предприятиях. Исследованы возможности использования зарубежного опыта учета запасов в Украине. В работе обосновано, что выбор правильного метода, который позволяет наиболее точно провести оценку с учетом интересов собственников предприятия и специфики его производственной деятельности является достаточно важным в реалиях современности.

Ключевые слова: учет запасов, выбытия запасов, методы списания стоимости запасов, периодическая система учета, постоянная система учета.

Formulation of the problem. The growth of enterprise profit and the invested capital turnover rate depends on the efficient use of inventories that is why a great attention is paid to its accounting. The choice of the accounting method for inflows and outflows of inventory in foreign countries is a key element to influence the formation of primary costs of enterprise and its profit. In

the countries with continental and Anglo-Saxon system of accounting there is the ability to select one of two systems of stock accounting: periodic or permanent. In Ukrainian accounting the method of stocks periodic accounting is not used and is not developed, although the use of such a system is important for small businesses. Determining the correct methods of stock accounting

affects directly the efficiency of production management process and final products. This problem is of particular relevance because of limited production resources that leads to constant search for way of more rational use.

Analysis of recent research and publications. Investigation of this problem is made in works of such prominent scientists as: F. F. Butynets, S. V. Holovov, V. I. Yefimenko, L. Lukianenko, M. R. Luchko, D. A. Pankow, O. V. Chumak.

A review of scientific literature shows that the issue of comparison of native and international experience in accounting for inventories, and in particular the study of the introduction of international experience in accounting for inventories in Ukraine is not paid by sufficient attention.

The purpose. The aim of the article – is a review of basic accounting methods of stocks inflows and outflows in native and foreign practice and justification for the use of foreign experience in stock accounting in Ukraine.

According to the aim a set of the following tasks are put:

1) to overview the basic methods of accounting income and outflow of stocks in native and foreign practice;

2) to investigate the possibility of implementing international experience on stock accounting in Ukraine.

The main material research. Inventories are the rule, the most important and significant part of the asset; they obtain a special place in the property and a dominant position in the cost structure of enterprises of various areas as well as in determining the results of business enterprise and in shaping the information about its financial state.

To ensure continuity of production, there should always be inventories in the company's warehouses in accordance with the norms, stipulated by enterprise requirements. In warehouses of companies business transactions are made with the preservation of inventories incoming, as well as with the outflow of such inventories in production. Accounting should provide control over the residues, income and spending of inventories in the warehouse, which is an important condition for preservation of ownership [1; 2].

Stock accounting in Ukraine is governed by the Regulation (standard) on accounting №9 «Inventories» and «Methodical Recommendations on Stock Accounting», approved by the Ministry of Finance on 10.01.2007.

The inventory accounting in foreign countries is regulated by the International Accounting

Standard № 2, «Assessment and classification of inventories in the context of the actual cost», which defines cost (initial cost) and its evaluation methods (Table 1) [3].

Accounting for stocks availability and shifting in Ukraine is carried out only on accounts in the system of permanent stock accounting.

In foreign countries, the analytical methods of inventory accounting include:

- Periodic accounting method;
- Permanent accounting method.

The essence of permanent accounting system is that records of inventory are constantly on a continuous basis; all changes in industrial stocks can be accurately tracked during the reporting period [4; 5]. Therefore, there is constantly the possibility to get information about current stock of materials, which in turn makes it possible to accurately track not only the size of current stocks of materials, but also to regulate the amount of insurance reserves of enterprise. Insurance reserves are created for the case of possible delays of supply of other party materials. Thus, due to the continuous inventory accounting, a possibility to reduce the size of these stocks occurs in a company, for example, a logistic system «just in time» where the size of the inventory is constantly monitored and there is no need to hold more stocks in warehouses. The essence of a standing account is expressed in such a way: shock halls reserves at beginning of the period plus income for the period minus costs stocks for a period equal to the remaining inventory at the end period.

Giving characteristic features to permanent accounting system such scholars as V. I. Yefimenko, L. I. Lukianenko, I. A. Lariukhina indicate that the system is characterized by work and constantly requires costs for conducting accounting records but in the global computerization permanent accounting system does not require large expenditures of labour, so its use is appropriate for most businesses, so it is widely used as in foreign countries and in the Ukrainian accounting practice [5].

In practice abroad a periodic system of accounting reserves is also used. In this case, unlike the system of permanent inventory accounting, during the period records on the account «Stocks» are not implemented and it serves not to show the movement of stocks in the period, but for the fixing of the initial and final balance on account «Inventory», which should appear in balance sheet. Moreover, the balance in the account «Stocks» at the end of a period is determined by physical inventory count. For-

mula of the periodic system is as follows: balance reserves at beginning of the period plus income for the period minus the balance at the end period inventory is inventory expenses for the period. Physical counting groups of materials in stock, in this case are accomplished through certain periods of time. In this case, the order for most of the material can be carried out at the same time, the cost for demand reduces. At the same time it is impossible due to the periodic system to observe the amount of reserves during the period, that is why, unlike permanent system that allows in a certain way to save on insurance reserves, there is a need to maintain an adequate safety stock, so using this system can lead to increase in maintenance costs of insurance reserves, but basing on the fact that the most of materials can be carried out at the same time, the company can reduce the cost of service order. In Ukrainian accounting process the periodic system of accounting for inventories is not expected, but at small businesses, such as

retail chains, it is advisable to realize inventory at the end of the reporting period, so the introduction of periodic inventory accounting system for such enterprises is appropriate.

In Anglo-Saxon countries accounting periodic system for inventory process is as following:

– when receiving inventory from suppliers account is made:

Debit «Costs for the purchase»;

Credit «Accounts payable»;

– At the end of the period adjustments to the financial results are reflected or done by writing off the initial balance reserves account for «inventory»:

Debit «Financial results of the reporting period»;

Credit «Stocks»;

– or by writing off the remaining inventory at the end of the period identified by the inventory:

Debit «Stocks»;

Credit «The financial results of the reporting period».

Table 1

Comparative characteristic of accounting process on stocks at enterprises in Ukraine and accounting systems of foreign countries*

In Ukraine	Accounting systems in foreign countries
The principles of accounting information about stocks and its disclosure in financial statements established in the Regulation (standard) on Accounting № 9 «Inventories»	Basic methodological principles of assessment, recording and display of stocks in the financial statements set out in International Accounting Standard №2 «Evaluation and classification of inventory in the context of the actual cost»
Inventories – assets that: - are held for further sale only when the ordinary course of business is held; - stay in the process of production aiming at the sale of the next item produced.	Inventories – are assets that are: - held for sale in the ordinary course of business; - in the process of production for such sale; - in the form of materials or supplies for consumption in the production process or providing services.
Proceeding materials to the company is based on the bill, with the help of which the income warrant is duplicated. The first copy is the basis for posting values in the warehouse. The second copy of the income warrant is the report about usage instructions.	Receipt of materials at the company is documental confirmed with the report that is made in triplicate. The basis for the compilation of the report is the supplier invoice, a copy of the report sent to the supply department for verification of the terms of placing the order, the second one is passed to the shop with the materials, and the third one is left in reception. A copy of the report, which was originally sent to the supply department, is later transferred to the accounting for payments to suppliers.
Issue of stocks is held mainly on production, herewith the supply department issues fixed limit card for a month in duplicate, one copy is passed to the warehouse, and the second to the shop.	Supply of materials to production is carried out according to the requirements. The requirements are also in triplicate. The first copy remains in stock, second – for the group of financial accounting, the third – for a person who receives material. The demand for basic materials differs from the requirements for collateral only in colour of form.

*Overview is based on sources: [3]

We believe that to ensure the practical implementation of the periodic system of reserves accounting in Ukraine, a special account for cost accounting for the purchase of stocks is required, that is why it is proposed to introduce a sub-9011 «Purchase». In its practical implementation accounting in the Ukrainian periodical system will look like this:

– When receiving inventory from suppliers the account is:

Debit 9011 «Purchase»;

Credit 63 «Payments to domestic suppliers»;

– At the end of the period of financial results adjustment by writing off the initial balance reserves account «Inventories»:

a) cancellation of the original displaying of balance:

Debit 791 «Operating results»;

Credit 201 «Raw materials».

b) cancellation reflected in the balance of stocks at the end of the period identified by the inventory:

Debit 201 «Raw materials»;

Credit 791 «Operating results»;

c) reflect the write-off costs for the purchase of material to the financial results of the company:

Debit 791 «Operating results»;

Credit 9011 «Purchase».

An important precondition for the successful organization of accounting for inventories is their assessment, because it affects the accuracy of the financial results of enterprise [6, p. 386].

The accounting practices of Western companies is based on the assumption that the purchase and sale (issue to production) of stocks is treated as a value stream, not as physical flow units. This means that within the inventory write-off, the priority is given to display the value without ensuring

absolute compliance with its actual value of the physical movement of resources [7, p. 222].

For the effective implementation of business, enterprises need to solve the problem of selection of a method for assessing excluding reserves. Provisions for inventory accounting in accordance with the International Financial Reporting Standards and Regulations (Standard) №2 and №9 on Accounting have some differences. Also in Ukraine since 2005, the number of allowed accounting methods of disposal of stocks is decreased to 5. Also, the issue of efficiency of their use in accounting remains unresolved. To understand the differences in methods of accounting for inventories and accounting systems of Ukraine and abroad, our comparative characteristic of accounting for inventories under the Regulations (Standard) on Accounting №9 «Inventories» and IAS №2 «Inventories» and standard ARB №43, US GAAP is given [8, 9] (Table 2).

1. The first method of evaluation in accordance with the Regulations (standard) of accounting №9 – the method of assessment for the identified cost (in foreign accounting systems the term «specific identification of individual costs») – applies regarding disposal of inventory that cannot be replaced or being released by special orders, projects or when their initial value is determined by the identified cost. This method is used in practice mainly by companies that sell expensive pieces of goods or in small firms, as in other instances of its usage it is complicated by the inability to determine exactly which goods are sold. In addition, using this method, a company with serial goods can manipulate its profits by selling more expensive or, if necessary, cheaper items of inventory.

Table 2

Comparative characteristic of features of provisions for accounting and analytical process of stock location in Ukraine and accounting systems of foreign countries*

The algorithm and the accounting for stock location in accordance with:		
Regulations (standard) of accounting № 9 «Inventories»	IAS № 2 «Inventories»	ARB 43 Standards, US GAAP (US)
1. Identified initial cost of relevant items of inventory. 2. Weighted average cost. 3. Initial cost of first-time flow of inventory method («FIFO») 4. Method of regulatory costs. 5. Method of sale price.	1. Specific identification method. 2. Weighted average cost. 3. Method formula “first-in – first-out method” («FIFO») 4. Standard method (regulatory) costs. 5. Retail method.	1. Cost of each unit. 2. Average cost. 3. Cost price of first-time purchase of inventory method («FIFO») 4. Standard cost. 5. Price of sale (realization). 6. Cost of the most recent acquisition of stocks method («LIFO»).

*Overview is based on sources: [8; 9]

2. Evaluation of the weighted average cost (in foreign accounting systems the term «*weighted average cost formula*») is based on the assumption that each reserves unit in this period has the same average value. Assessment of the present method is performed by each unit of inventory by dividing the total value of the balance of these reserves at the beginning of the month and the cost of similar stocks, received in the reporting month, their total number at the beginning of the month and received ones in the reporting month. The method should be used at the enterprise, because it can align values of sales cost within unpredictable growth of purchase prices, the accounting is more like simplified procedure. Among the disadvantages of this method – possible differences between the count and market price of stocks remaining at the end of the period charging mismatch of revenues and expenditures.

3. The method of «FIFO» (in international accounting systems the term «*first-in, first-out*») – suggests that the assessment of the balance of inventories and its disposal for the period is made dependently on the sequence of their receipt (purchase). Valuation of inventories balance in this case is based on the assumption that reserves are eliminated in exactly the same line when they came to the organization. The method of «FIFO» is sometimes compared to a conveyor, to which supplies arrive in the same chain, where they were loaded on it. This method is the most reliable for realistic assessment of the remaining stocks because its usage brings the cost of inventory on the balance sheet to market prices, so more reliably displays the value of assets [6, p. 405]. Its main drawback is the impact of external economic factors of the country life on the gross profit of a single enterprise. Thus, the method of «FIFO» in price rise of the purchase forms maximum assessment of reserves at the end of the period, estimates the minimum period cost and the largest amount of profit. In terms of lower prices, «FIFO», by contrast, gives a minimum evaluation of reserves in the period end balance sheet, the maximum assessment of period and cost of the least profit [10, p. 202–204].

4. Evaluation by regulatory costs (in international accounting systems the term «*standard cost*») is the application of the unit cost of goods (works, services) that are now established on the basis of normal levels using inventory, labour, production capacity and current prices. Using standard costs at the enterprise, on the one hand, simplifies accounting and inventory valuation, on the other – for establishing regulatory

price purchasing department must constantly monitor fluctuations in market prices of stocks, causing additional costs. This method, according to the author, is extremely effective for companies engaged in large-scale and mass production [7, p. 231].

5. Retail method is used by retailers for the evaluation of a large number of items of inventory that change rapidly and provide the same profit margins, and for which it is impossible to use other methods of determining the cost. Under this method the cost of inventory is determined by reducing the value of their sales on a definite percentage of gross profit. In Ukraine, this method can be applied only to retailers, whereas in the US, for example, the tool can be used to account for all stocks listed in the active market.

6. The method of «LIFO» (in international accounting systems the term «*last-in, first-out*») is not used in Ukrainian accounting. But its understanding is necessary for handling data of accounting of foreign companies' reserves (USA, Russia, etc.), as well as for management accounting. The method of «LIFO» is based on the assumption that the cost of inventories received last is used to determine the cost of goods sold first. This method is banned in several countries, including the UK, Sweden, Switzerland, Singapore and Australia. Since 2005, the use of the method «LIFO» is prohibited in Ukraine. The reasons for this underestimation is the maximum profit in the condition of rising prices and the possibility to manipulate the index of reporting earnings, depending on the date of stocks purchase in order to make artificial changes in the tax base. However, the method of «LIFO» has advantages over the methods discussed, including «FIFO», because method «LIFO» ensures the principle of matching revenues and expenses in the best way; nearly corresponds to the level of prices at the time of sale, at any price fluctuations in cost of sales [10, p. 204–205].

With the realities of our time we can use several methods of stock assessment, each of which has its advantages and disadvantages. It is important to choose the method that allows assessing most accurately with the interests of owners of enterprises and specific productive activities. Among the methods that are allowed to apply in accounting of Ukrainian enterprises the most versatile methods are weighted average cost and the cost of first-time revenue reserves method («FIFO»). These are the most simple accounting methods and the most popular in accounting inventory provision of large and medium-sized enterprises. The method of

regulatory costs requires huge spending on the development and on ongoing monitoring of market prices, so it is cost-effective only for large-scale and mass production.

Conclusions and recommendations for further research. Inventories take a primary place among the objects of accounting and enterprise management and are one of the most important articles of the asset balance. Value and quality of company profits and turnover rate of capital invested depend on the efficient use of inventory. In practice abroad, a system of periodic inventory accounting is used. When using such a system for Ukraine, the orders for most of materials can be made at the same time with reducing the costs order. We believe that the periodic inventory accounting system would be appropriate for such enterprises. Most researchers believe, that the main drawback of the peri-

odic inventory accounting is work load, through mandatory inventories of each reporting period, but for enterprises that conduct frequent inventory it is necessary to use a periodic inventory accounting system as it is more appropriate than using permanent system. An important part of accounting for inventories is their assessment, because it directly affects the accuracy of the financial results of the company. Today it is possible to apply several evaluation models, each of which has its advantages and disadvantages. It is important to select the right method to assess most closely with the interests of owners of the enterprise and specifics of its production activities. In accounting, not only the number of stock assessment methods is important, but its positive impact on the adoption of successful management decisions on products pricing and evaluating of the entity financial performance.

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