
STUDY ON THE ACCOUNTING OF STOCKS OF RAW MATERIALS, MATERIALS AND PRODUCTS. CHARACTERISTICS IN THE WOOD INDUSTRY

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Abstract:

Given the importance of current assets and stocks as part of them, the rational organisation of their evidence is a primary goal of accountancy in this field. The objectives of stocks of raw materials, materials and products are mainly related to carrying out the commercial functions of the company. Therefore, the tracking and control of supply program, providing patrimonial integrity of stocks, tracking the rational usage of supplied material means, etc are aimed. Based on these aspects, the paper originally shows some theoretical aspects on the concept of stock, their typology and evaluation. A more detailed presentation is restricted to an accounting monograph of the accounting operations of stocks of raw materials, materials and products, with characteristics for the economic entities in the wood industry.

Keywords: stock, raw materials, materials, evaluation

1. The concept of stock and the typology of stocks

The basic concept applicable to the accounting of stocks is the concept of accrual accounting, which implies that the results of transactions are acknowledged when they occur (and not while the cash equivalent is received or paid), is recorded in the accounting records and included in the accounting statements of the related periods.

An asset is classified as *current asset* if (OMFP 3055/2009):

- a. It is expected to be achieved or is intended to be sold or consumed during the regular operational cycle of the entity;

- b. It is mainly held for trading;
- c. It is expected to be achieved within 12 months from the date of the balance sheet; or
- d. It is represented by cash or cash equivalents whose usage is not restricted.

Stocks are defined as the assets: (a) held for selling during the ordinary course of the activity; (b) under production in view of a sale under the same terms as above; (c) as raw materials, materials and other consumables that are to be used in the production process or services.

Stocks include:

- *goods*, namely the goods that the entity buys for sale or for sale in its own stores;
- *raw materials*, which are directly involved in the production and can be found in the finished product, entirely or in part, either in their original state, or transformed;
- *consumable materials* (auxiliary materials, fuel, wrapping materials, parts, seeds and materials to be seeded, feed and other consumable materials), which are involved in or support the manufacturing or operation process without being usually found in the finished product;
- *materials in the inventory* (protective equipment, working equipment, special clothing, mechanisms, devices, controllers, control and measuring equipment, stamps and other such objects);
- *semi-finished*, representing products whose technological process has been completed in a certain stage of the manufacturing process and which move on to a different manufacturing stage or are delivered as such to third parties;
- *finished products* representing goods which have completed the manufacturing stages, no longer require further processing within the unit, which can be stored for delivery or sent directly to customers;
- *waste products*, accounting for scrap, waste or recoverable materials;
- born and young *animals and birds* of any kind, bred and used for breeding, fattening and exploited or for production;);
- *packaging*, reusable, purchased or manufactured, necessary for products sold;
- *running production*, is the production that has not gone through all the processing phases (stages) provided in the technological process as well as the products that have not been subject to technical tests and reception or that are incomplete.
- *goods in custody, for processing or in consignment to third parties, the machinery used only as demonstration material for negotiation in the car industry, with a life of less than a year*; they are recorded separately in accounting and on categories of stocks (if demonstration materials have a life period of more than one year, they are considered fixed assets).

Also, there are reflected distinctively in accounting those stocks purchased, for which the related risks and benefits have been transferred but which are under supply (group 32 “Stocks under supply”). The book entry of the stocks is made at the date of the transfer of risks and benefits. Generally, the control’s dates of transfer, transfer of ownership and delivery are the same. However, there may be some time differences, such as, for instance:

- goods sold in consignment;
- stocks pledged delivered to the creditor beneficiary of the pledge, which remain accountable in the balance sheet of the debtor until their sale;
- goods received for which the invoice has not yet been received, which should be recorded in the buyer’s assets;
- goods delivered and non-invoiced, which should be removed from the records, the transfer of ownership taking place;
- goods sold and not delivered yet, for which the transfer of ownership took place. For example, for the “ex-work” delivery condition sales, the goods sold get out of the seller’s stock when they are made available to the buyer etc.

2. Evaluation of stocks

The evaluation process consists of establishing the values at which assets, debts, income and expenses are represented in the balance sheet and the profit and loss account, aiming at meeting both the management and decision needs. In carrying out this process, it is absolutely necessary that certain principles be followed, such as: continuity of the activity, evaluation methods cannot be changed from one year to another; prudence; intangibility of the balance sheet; separate evaluation of asset and liabilities items; expenses and incomes of the financial year to which accounts refer should be taken into account, regardless of the date of payment or collection.

The evaluation process requires the choice of a specific evaluation basis. Most often, the elements included in the annual financial statements are evaluated on the basis of acquisition and production cost principle which, after that determine the historical cost.

According to OMFP 3055/2009, the evaluation should be conducted in the following moments, through the options of the movement’s economic character: at the entry in the property, at the time of the inventory, at the end of the financial year, at the date of the exit.

At the date of entry into the patrimony, stocks are evaluated and recorded in accounting at the entry value, called book value (historical cost), as it follows:

- *acquisition cost*, for the assets acquired for good and valuable consideration, established by adding the following: net purchase price, all non-recoverable taxes and fees, transport, handling expenses and other

costs that might be directly attributable to those goods. These also include commissions, notary fees, costs for obtaining permits and other expenses attributable to those assets. Transport costs are included in the acquisition cost even when the supply function is outsourced. Trade discounts (*reductions* – are received for quality flaws and they are applied on the selling price, *volume discounts* – are calculated on all transaction made with the same third party during a given time, *commissions* – are received for sales higher than the accepted volume or if the buyer has a preferential status) granted by the vendor and written in the purchase invoice adjust, with the purpose of reducing the acquisition cost, while the financial discounts (*trade discounts* – are received for the payment of debts before the normal deadline of the maturity date) received from the supplier, regardless of the period they make reference to, are incomes of the period. Exceptions are usually the financial fixed assets whose cost of acquisition equals the purchase price or the price negotiated with the supplier;

- *cost of production*, for the assets manufactured within the enterprise, and it is composed of direct production expenses (cost of acquisition of raw materials and consumables, direct salaries, etc.), the share of indirect costs of production allocated rationally (management expenses, cost of acquisition of auxiliary utility materials, utility cost etc.) and the financial expenses (provided that they are interests and commissions on the loans to finance the investment and that they aim its period of execution). *At the production of fixed assets*, costs of site development, initial delivery and handling costs, installation and assembly costs, costs of testing the correct operation of the asset, professional fees and commissions paid in connection to the asset etc may be included to the attributable expenses. Stock costs of a service provider include labour and other expenses related to the personnel employed in providing the service, including the employees entrusted with the supervision, and also the corresponding regies. There are not included in the cost of production the losses of materials, labour and other production costs that exceed the normally permitted limits, storage costs, unless these costs are necessary in the production process, the general management expenses which do not contribute to bringing stocks in their final shape and place, fixed regies unallocated to the cost, selling expenses. They are recognized as expenses of the period they occurred in. When entering into accounting, stocks can also be evaluated according to the standard costs method which involves the calculation and periodic use of a pre-established cost that shall be adjusted, at the end of the period, depending on the actual cost. This method may be used if it approximates actual costs;
- *input value*, for the assets representing contribution to the registered capital, determined based on the market price, utility, condition and

location of that asset, by comparison with some fixed assets with similar technical features or close to its condition and location;

- fair value, for the assets acquired free of charge, is the amount at which an asset could be exchanged or a liability settled, willingly, between the parties fully aware of the situation, in a transaction where the price is determined objectively.

At the inventory evaluation is made at the actual value or utility value of each element, known as inventory value. At the inventory, missing or damaged elements can also be noticed, slow moving or not moving, which are valued at the likely price of exploitation for their sale or imputation. (Toma Constantin, 2002).

At the end of the financial year stock elements are evaluated and reflected in the annual financial statements at the entry value, in accordance with the results of the inventory. Assets from stocks are evaluated at their book value, except adjustments for impairment that were found. If stocks' book value is higher than the inventory value, the stocks' value is reduced to the net realizable value, by an adjustment for depreciation.

At the date of release from the entity or on release for consumption, the evaluation of stocks is made through one of the three evaluation methods:

- a. "First in, first out" or FIFO method which implies that evaluation of outputs is made to the input costs in chronological order of appearance. Thus, the first items purchased are the ones that are also sold first and consequently the items that remain in stock at the end of the period are those that have been purchased or manufactured most recently;
- b. "Weighted average cost" or WAC which is determined monthly or after each entry, as a ratio between the total value of the initial stock plus the entry's value and the existing quantity in the initial stock plus the quantities entered in stock.
- c. „Last in, first out" or LIFO, which requires that goods that are written off be evaluated at the cost of acquisition or production of the last input (parcel). As the parcel is used, the goods that are written off are evaluated at the cost of acquisition or production of the previous parcel, in chronological order.

The method chosen must be applied consistently for similar elements from the stock, from one financial year to another. If, in exceptional circumstances, managers decide to change the method for a particular element in the stock, the explanatory notes must include the reason of the change and its effects on the result.

Stocks need not be reflected in the balance sheet at a higher value which could be obtained by their use or sale. Therefore, the value of the stocks is reduced to the net realizable value (the estimated selling price that might be obtained during the ordinary course of activity, minus the estimated costs of completion, when required, and the estimated costs for the sale), by an adjustment for depreciation.

3. Methods of evidence and accounting of stocks of raw materials, materials and products

According to regulation in force (OMEF no. 3512/27.11.2008), analytical accounting of goods can be made based on one of the following methods: operational-accounting, quantitative-value, global-value.

The operational-accounting method can be applied to the analytical accounting of raw materials, consumable materials, materials that are objects of the inventory, semi-finished products, finished products, waste products, goods and packaging. It consists of keeping, in each inventory, the quantitative evidence of goods, on patterns, using inventory record cards, as appropriate. The documents used are "Inventory record card", "Statement of account for various operations", "Registry of stock".

The quantitative-value method can be used for analytical accounting of raw materials, consumable materials, materials in the form of small inventory, semi-finished products, finished products, waste products, animals and packaging. It consists of keeping the quantitative evidence on patterns of stocks in each inventory and in the quantitative-value accounting. Synthetic accounts reflecting the stocks of material values take place in the analytical side of the accounting. Checking the correctness of entries in records from the storage locations and from the accounting is performed by the periodical scores between the quantities made in the inventory cards and those in the analytical account records of the accounting records. The following forms can be used in the quantitative-value method: "Inventory record card", "Statement of account for various operations", "Analytical balance of stocks". Quantitative evidence of materials is kept in the accounting records with inventory record cards, records being made daily, by the treasurer or by the designated person, based on the incoming and outgoing documents of materials. After registration, these documents are handed to the accounting department based on a slip. In accounting, the documents are registered in the analytical account records for material values, stocks and balances are established, summarized statements are prepared on the inputs and outputs of materials, for registration in the synthetic accounting. The control of records from the synthetic and analytical accounts of stocks shall be ensured by the analytical verification balance, made separately for each stock account.

The global-value method can be used for analytical accounting of goods and packaging in retail units, office supplies, printers, materials used for packaging, materials in the form of small inventory, operational protective equipment and other categories of goods, the form "Statement of account for various operations" and the management report being used, as appropriate. According to this method, the analytical accounting of goods and packaging is kept globally and in value, both in management and in accounting and verifying the records' conformity is only made in value, at periods established by the unit. The management report is filled out based on

the input and output documents of goods and packaging and the submission of cash from sales, and records in the value cards are made based on the same documents.

Accounting of stocks is kept quantitatively and in value or only in value using the permanent inventory or the intermittent inventory method.

When **the permanent inventory method** is used, all input and output operations of materials are recorded in accounting, which enables the establishment and knowledge at any time of stocks both in terms of quantity and value.

The intermittent inventory method consists of the fact that inventory entries are not recorded by stock accounts, namely class 3 accounts, but by expense accounts, namely class 6 accounts. Entities using the intermittent inventory method make factual inventory of stocks during the period, annually, quarterly or monthly, as appropriate, but not later than the end of the reporting period for which they have to determine tax liabilities. Setting outputs of stocks during the period is based on the factual inventory of stocks at the end of the period. Therefore, the outputs (E) are determined as the difference between the initial stock value (Si) plus the input value (I) and the final stock value (Sf), based on the inventory, according to the following calculation formula: $E = Si + I - Sf$

At the beginning of the financial year, namely of the period, as appropriate, the existing stock is cancelled as a stock output by its registration in classes of expenses on raw material, materials, etc. etc.

The intermittent inventory is not used in retail trade if the global-value method is applied. The period for the factual inventory of stocks is chosen so that legal obligations (accounting, tax, etc.) can be set correctly.

4. Monograph on the accounting of stocks of raw materials, materials and products. Characteristics in the wood industry

The specific documents on the origin, circulation and marketing of wooden materials are: Waybill of the wood, Sales slip, Unique registry of wooden material.

A. On 02.05.2012 300 m³ of round timber (round fir wood) is purchased with the Invoice no. 2407162, from the supplier Valea Frumoasei Forest District at an acquisition price of 480 lei/m³ and TVA 24%. The wood is registered according to the Governmental Decision H.G. 996/2008 in the Unique Registry of wooden material. "Reverse charge" is imprinted on the invoice.

N.C.1. The purchase of round wood is recorded based on Invoice no. 2407162 / 02.05.2012 with the amendment "Reverse charge" and N.R.C.D 207/02.05.2012 from the supplier Valea Frumoasei Forest District.

301 "Raw materials"	=	401 "Suppliers"	144.000
4426 "VAT deductible"	=	4427 "VAT collected"	34.560

On 04.05.2012 460 m³ round fir wood were issued for the manufacturing process based on Sales Slip (B.C.) no. 182. The wood was in stock from the previous month (200 m³ to 102.000 lei value). WAC was applied (102.000 lei + 144.000lei): (200 m³ + 300 m³) = 492 lei/m³. Therefore, consumption is evaluated at 226.320 lei.

N.C.2. 460 m³ consumption of round fir wood according to B.C. no. 182/04.05.2012.

601 "Expenses on raw materials"	=	301 "Raw materials"	226.320
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B. On 04.05.2012 5 pieces of electric heaters were purchased for 120 lei/ pcs. Invoice no 1276545 from the supplier Ambient, 24% VAT deductible. Transport expenses incurred are in the amount of 32, 24% VAT, the service being provided by the same supplier and outlined as distinct position on the purchase invoice. The invoice was paid in cash.

N.C.3. Purchase of appliances, according to NRCD no.208/04.05.2012 and payment of invoice in cash at the entity's cashier.

%	=	401 "Suppliers"	783,68
303 "Materials in the form of small inventory"			632
4426 "VAT deductible"			151,68
401 "Suppliers"	=	5311 "Cash in lei"	783,68

Unit cost of acquisition of a radiator is 126,40 lei. (632: 5 =126,40) after calculating the transport.

N.C.4. 3 electric heaters are brought into use with B.C. no 183 of 04.05.2012, in the amount of 379,20 lei (126,20 x 3 = 379,20) on departments.

603 "Expenses on materials in the form of small inventory"	=	303 "Materials in the form of small inventory"	379,20
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After wearing, the electric heaters are annulled drafting an annulment Minutes resulting in spare parts evaluated at 25 lei, an amount that shall be recorded as other income.

- An extra-accounting record of annulled appliances is kept in the amount of 379,20 as it follows:

D 8035 "Stocks in the form of small inventory in service" = 379,20

- Writing-off from the extra-accounting record of annulled electric heaters;

C 8035 " Stocks in the form of small inventory in service " = 379,20

- Spare parts are recovered from the dismantling of annulled heaters, in the amount of 25 lei, which are recorded as follows:

3024 "Spare parts"	=	7588 "Other operating income"	25
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C. N.C.5. Supply of raw materials "wood laths" from the company Delta-Design, in currency. The nominal value of the debt is 16.715,54 USD at a currency rate of 3,41 lei; (16.715,54 x 3,41 = 57.000 lei). The transport was made by the beneficiary in the amount of 700 lei. NRCD 208 was prepared, according to invoice U652346/05.05.2012

301 "Raw materials"	=	401 "Suppliers"	57.000
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4426 "VAT deductible"	=	4427 "VAT collected"	13.680
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N.C.6. The transport of the raw materials in the amount of 700 lei, TVA 24% is calculated, according to invoice U652346 / 05.05.2012 which increase the value of "wood laths".

301 "Raw materials"	=	401 "Suppliers"	700
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4426 "VAT deductible"	=	4427 "VAT collected"	168
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N.C.7. With B.C no. 184 of 05.09.2008 “wood laths” raw materials is released in the amount of 46.000 lei.

601 “Expenses on raw materials”	=	301 “Raw materials”	46.000
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D. N.C.8. Purchase of motor oil with invoice no. 1653476 /05.05.2012, 10% discount from the supplier OMV. NRCD no.209/05.05.2012 was prepared for the amount of 10.000, VAT included. The transport made by the supplier amounts 50 lei.

%	=	401 “Suppliers”	10000
301 “Raw materials”			8.064,52
4426 “VAT deductible”			1.935,48

N.C.9. The registration of the 10% discount received from the supplier OMV (8.064,52 x 10% = 806,45 lei) for motor oil and (1.935,48x 10% = 193,55 lei) on the discount related to VAT.

401 “Suppliers”	=	%	1.000
		767 “Income from obtained discounts”	806,45
		4426 “VAT deductible”	193,55

N.C.10. With the P.O. 199/08.05.2012 invoice no. 1782344 is paid, except the discount, amounting 9.000 lei (1.0000 – 1000 = 9.000) to the supplier OMV.

401 “Suppliers”	=	5121 “ Bank accounts in lei”	9.000
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E. Purchase of colourless lacquer, from the supplier Ambient Sibiu, for which invoice 96834/10.05.2012; 500 Kg x 10 = 5000 lei was prepared, for which an advanced payment of 1.500 lei, VAT included was paid, with the P.O. 200/ 09.05.2012.

N.C.11. The supplier Ambient Sibiu draws the invoice no. 1782344/10.09.2008 and states that an advanced payment in the amount of 1.500 lei was made with P.O. no 200/09.05.2012.

%	=	401 “Suppliers”	1.500
4091 “Suppliers-debtors for purchase of goods in the form of stocks”			1209,68
4426 “VAT deductible”			290,32

401 "Suppliers" = 5121 "Bank accounts lei" 1.500

N.C.12. Invoice 1782344/11.05.2012 is received for colourless lacquer, amount 5.000 lei, VAT included, from the supplier Ambient Sibiu.

	%	=	401 "Suppliers"		5.000
3021 "Auxiliary materials"					4.032,26
4426 "VAT deductible"					967,74

N.C.13. Regularization of the advance granted to the supplier Ambient Sibiu with PO no 200/09.05.2012

	%	=	401 "Suppliers"		-1.500
4091 "Suppliers-debtors for purchase of goods in the form of stocks "					-1209,68
4426 "VAT deductible"					-290,32

N.C.14. Invoice 1782344 of 11.05.2012 is paid with P.O. no. 201/12.05.2012 to the supplier Ambient Sibiu, namely 5.000 – 1.500 = 3.500 lei.

401 "Suppliers" = 5121 "Bank accounts in lei" 3.500

F. N.C.15. The entity receives free of charge firewood according to the Report of hand over-take over no. 2/16.05.2012 for which NRCD no. 210/16.05.2012 was drafted, its value being 500 lei, which it will donate to the kindergarten.

3021 "Auxiliary materials" = 7582 "Income from donations and grants received" 500

G. N.C.16. Purchase of work equipment with invoice 2234567/18.05.2012 from the supplier Baumax Sibiu in the amount of 4.000 lei, 24% VAT deductible. NRCD no. 211/18.05.2012 was drafted. Transportation costs amount 200 lei, 24% VAT deductible. The equipment is distributed to employees, 50% of the cost being deducted from their salaries in 2 instalments. Evidence of working inventory is kept at the actual cost price.

	%	=	401 "Suppliers"		4.960
303 "Materials in the form of small inventory"					4.000
4426 "VAT deductible"					960

N.C.17. Payment of transportation costs related to the work equipment purchased with invoice no. 2234567/18.05.2012 is recorded and also their distribution on the materials in the form of small inventory, value 200 lei, 24% VAT deductible.

	%	=	401 "Suppliers"	248
303 "Materials in the form of small inventory"				200
4426 "VAT deductible"				48

N.C.18. Payment of invoice 2234567/18.05.2012 with P.O. no. 202/22.05.2012 to the supplier Baumax.

401 "Suppliers"	=	5121 " Bank accounts in lei"	4.960
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N.C.19. The work equipment is distributed to the employees by B.C. no. 186 of 19.05.2012 and 50% is kept from their salaries, in 2 instalments (4.000 + 200 lei) x 50%.

	%	=	303 "Materials in the form of small inventory"	4.200
603 "Expenses on the materials in the form of small inventory"				2.100
4282 "Other claims about employees"				2.100

and they are recorded simultaneously off-balance sheet as follows:

D 8035 "Stocks in the form of small inventory brought into use"	4.200 lei.
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N.C.20. The VAT related to the work equipment supported by the employees is recorded (2.100 x 24%) = 504 lei.

4282 "Other claims related to employees"	=	4428 "VAT under settlement"	504
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N.C.21. The first instalment for the equipment is kept back from the salary from May 2012, plus VAT (2.100 + 544): 2 = 1.322 lei.

421 "Employees – due salaries"	=	4282 "Other claims with the employees"	1.322
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N.C.22. The registration of the date VAT falls due related to the first instalment of the equipment received by the employees: (504: 2 = 252 lei).

4428 "VAT under settlement"	=	4427 "VAT collected"	252
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N.C.23. The work equipment is deducted from the off-balance records once brought into use as follows:

C 8035 "Stocks in the form of small inventory brought into use"	4.200 lei
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H. On 19.05.2012 10 m³ of deal boards (finished products) is obtained at the cost of production in the amount of 5.200 lei. 3 m³ 1.560 lei worth is later given for the operational consumption.

N.C.24. Procurement of 10 m³ deal boards (finished products) at the cost of production, 5.200 lei worth.

345 "Finished products" = 711 "Income related to stocks' costs" 5.200

N.C.25. Release for operation consumption of 3m³ deal boards according to BC no. 187/19.09.2008.

711 "Income related to stocks' costs" = 303 "Materials in the form of small inventory" 1.560

I. On the occasion of a fortuitous inventory, there has been noticed a minus in the raw materials (colourless lacquer) worth 200 lei. Based on the Report of inventory differences no. 12/19.05.2012 and on the statement of the stock keeper, the current amount of 250 lei, 24% VAT deductible was charged against him.

N.C.26. Report no. 12 of 19.05.2012 and the Imputation order no. 4 of 19.05.2012 for the missing colourless lacquer were recorded into the accounting records.

601 "Expenses on raw materials" = 301 "Raw materials" 200

N.C.27. Based on the Imputation Decision no. 4 of 19.05.2012, the claim against the stock keeper was registered, at the current value of 250 lei and 60 lei VAT collected.

4282 "Other claims relating to employees" = % 310
 7581 "Income from damages, fines and penalties" 250
 4427 "VAT collected" 60

N.C.28. With invoice no. 1123405 of 22.05.2012, the stock keeper consigned the amount at the entity's cashier's office.

5311 "Cash in lei" = 4282 "Other claims relating to employees" 310

J. The stock of europallets (finished products) at 01.05.2012, according to the analytical balance sheet, is of 30.000 pcs. at 10 lei/pcs. In May 2012, 60.000 europallets were manufactured, having the following expenses: expenses on raw materials 30.000 lei, expenses on auxiliary materials 2.000 lei, expenses on collaborators 75.000 lei, expenses on electricity 10.000 lei, 24% VAT; price difference related to initial stock of finished products 10.000 lei.

N.C.29. Expenses on consumed materials are recorded.

601 "Expenses on raw materials" = 301 "Raw materials" 300.000

N.C.30. Expenses on auxiliary materials are recorded.

6021 "Expenses on auxiliary materials" = 3021 "Auxiliary materials" 200.000

N.C.31. Expenses made by collaborators to get the europallets are recorded.

621 "Expenses on collaborators" = 401 "Suppliers" 75.000

N.C.32 Electricity costs are recorded.

%	=	401 "Suppliers"	12.400
605 "Expenses on energy and water"			10.000
4426 "VAT deductible"			2.400

N.C.33. Record to obtain the europallets at the standard price of 600.000 lei (60.000 x 10 lei = 600.000).

345 "Finished products" = 711 "Income related to stocks' costs" 600.000

N.C.34. Price differences related to the obtained products (300.000 + 200.000 + 75.000 + 10.000 - 600.000 = -15.000 lei)

348 "Price differences for products" = 711 "Income related to stocks' costs" -15.000

Note: Costs of production incurred to the manufacturing of europallets evaluated at standard price are negative, thus differences are favourable (in red).

N.C.35. 70.000 pcs europallets are sold, 15 lei/pcs. (70.000 x 15 = 1.050.000 lei), on invoice no. 1246783/23.05.2012 to the customer Holzindustrie Schweighofer Sebeş – Alba, with the amendment "Reverse charge"

4111 "Customers" = 701 "Income from the sale of finished products" 1.050.000

4426 "VAT deductible" = 4427 "VAT collected" 199.500

N.C.36. Europallets recorded for 10 lei/pcs. are written off, according to the analytical balance sheet on 01.05.2012 sold for 700.0000 lei (70.000 x 10 =700.000), invoice 1246783 / 23.09.2008 to the customer Holzindustrie Schweighofer Sebeş-Alba.

711 "Income related to stocks' costs" = 345 "Finished products" 700.000

Calculation of distribution coefficient (K) of price differences for sold europallets:

$$K = (\text{Starting debtor balance account 348} + \text{Debit side account 348}) / (\text{Starting debtor balance account 341} + \text{Debit side account 341}) = (10.000 - 15.000) / (300.000 + 600.000) = - 0,0055$$

Determining the price differences related to outputs of europallets by multiplying the coefficient K with the value of europallets at the registration price, namely 10 lei/pcs sold:

$$D = - 0,0055 \times 700.000 \text{ lei} = -3.850 \text{ lei.}$$

N.C.37. Favourable differences related to the europallets sold are recorded.

711 "Income related to stocks' costs" = 348 "Price differences for products" -3.850

K. The fir timber stock (semi-finished products), according to the analytical balance sheet, is on 01.09.2008 of 10.000 pcs., 8 lei/pcs. Difference related to the initial stock – 10.000 lei. The entity has manufactured in September 30.000 pcs of fir timber at the following costs: expenses on raw materials 90.000 lei, expenses on auxiliary materials 80.000 lei, expenses on collaborators 55.000 lei.

N.C.38. Record of expenses on consumed raw materials.

601 "Expenses on raw materials" = 301" Raw materials" 90.000

N.C.39. Expenses on auxiliary materials.

602 "Expenses on consumables" = 302 "Auxiliary materials" 80.000

N.C.40. Expenses on collaborators.

621 "Expenses on collaborators" = 401 "Suppliers" 55.000

N.C.41. The procurement of 30.000 pcs. fir timber at standard price of 240.000 lei is recorded.

341 "Semi-finished products" = 711 "Income related to stocks' costs" 240.000

N.C.42. Price differences related to the obtained production = -15.000 lei = (90.000 + 80.000 + 55.000 – 240.000)

348 "Price differences for products" = 711 "Income related to stocks' costs" -15.000

N.C.43. Invoice 1246784 of 24.09.2008 was prepared to the customer "38 Materna" (Polisano) Sibiu, quantity 40.000 pcs. fir timber 10 lei / pcs. with the specification "Reverse charge".

4111 "Customers" = % 400.000
702 "Income from the sale of semi-finished products" 400.000

4426 "VAT deductible" = 4427 "VAT collected" 76.000

N.C.44. The timber delivered to customer "38 Materna" (Polisano) Sibiu in the amount of 320.000 lei (40.000 x 8 = 320.000) is written-off.

711 "Income related to stocks' costs" = 341 "Semi-finished products" 320.000

The calculation of coefficient of price differences for sold semi-finished products:

$$K = (\text{Starting debtor balance account 348} + \text{Debit side account 348}) / (\text{Starting debtor balance account 345} + \text{Debit side account 345}) = (10.000 - 15.000) / (80.000 + 240.000) = - 0,01562$$

Determining price differences related to outputs of fir timber:

$$D = - 0,01562 \times 320000 \text{ lei} = - 4.998 \text{ lei.}$$

N.C.45. Favourable price differences (red) related to timber deliveries are recorded.

$$711 \text{ "Income related to stocks' costs"} = 348 \text{ "Price differences for products"} -4.998$$

L. The entity obtains from production 4.000 lei worth of waste. Then, the waste was sold for the amount of 5000 lei. 3% of the income was achieved from the sale of waste.

N.C.46. Invoice 1246785/24.05.2012 for the recovery of sold residual products and the distinct highlight on the invoice of the 3% share representing the Environmental Fund, as well as the specification "reverse charge".

$$4111 \text{ "Customers"} = \frac{703 \text{ "Income from the sale of waste"} + 4427 \text{ "VAT collected"}}{5.000} \times 5.000$$

N.C.47. Unload of management of residual products, in the amount of 4.000 lei

$$711 \text{ "Income related to stocks' costs"} = 346 \text{ "Residual products"} 4.000$$

N.C.48. Receipt of invoice 1246785 /24.05.2012 by bank, P.O. 723 of 26.05.2012, minus the 3 % representing the amount required to establish the Environmental Fund, which is recorded as "other taxes".

$$5121 \text{ "Bank accounts in lei"} + 635 \text{ "Other taxes and similar charges"} = \frac{4111 \text{ "Customers"} \times 5.000}{100} + 150$$

M. Purchase of 40.000 pcs. "timber support laths" for 7,50 lei/pcs. from Tălmăciu Forest District, invoice 2973645/29.05.2012 with the specification "Reverse charge". NRCD no. 214/29.05.2012 was drafted.

N.C.49. Reception of 40.000 pcs "timber support laths" according to Invoice 2973646 /29.05.2012 from Tălmăciu Forest District. NRCD no.214 / 29.09.2008 was prepared.

301 "Raw materials"	=	401 "Suppliers"	300.000
			300.000
4426 "VAT deductible"	=	4427 "VAT collected"	57.000

N.C.50. 30.000 pcs of "timber support laths" were given for consumption with B.C. no 189/29.05.2012, price 7,50 lei.

601 "Expenses on raw materials"	=	301 "Raw materials"	225.000
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N. At the end of the month, namely 31.05.2012, the products in progress have been inventoried, evaluated at an actual cost of 5.000 lei.

N.C.51. Record of production in progress established at the end of the month in the amount of 5.000 lei.

331 "Products in progress"	=	711 "Income related to stocks' costs"	5.000
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N.C.52. At the beginning of June 2012 the cancellation of unfinished production takes place.

711 "Income related to stocks' costs"	=	331 "Products in progress"	5.000
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5. Comparative evaluation of stocks of output consumable materials

The entity must use the methods to determine the cost for all stocks with similar character and usage. The method must be applied consistently from one financial year to another. If the manager decides to change the method in the explanatory notes of the financial statements, he must include the reason of the change and its effects on the result.

Table 2. Initial stock and movements of stocks during May 2012

Date	Explanation	Quantity	Cost per unit (lei)
01.05	Initial stock	200	12,50
08.05	Supply	300	7,35
16.05	Consumption	200	-
21.05	Supply	100	3,25
28.05	Consumption	260	-

The studied company evaluates the output (consumption) as resulted from the movement of stocks of materials in table no. 2, and also the final stock according to the weighted average cost method calculated after each reception according to table no. 3.

Table 3. Weighted average cost method WAC calculated after each reception

Date	Explanation	Inputs			Outputs			Stock		
		Q	C.U	V	Q	C.U	V	Q	C.U	V
01.05	Initial stock	-	-	-	-	-	-	200	12,50	2500,00
08.05	Supply	300	7,35	2205	-	-	-	500	9,41	4705,00
16.05	Consumption	-	-	-	200	9,41	1882,00	300	9,41	2823,00
21.05	Supply	100	3,25	325	-	-	-	400	7,87	3148,00
28.05	Consumption	-	-	-	260	7,87	2046,20	140	7,87	1101,80
	Total	400		2530	460		3928,20	140	7,87	1101,80

Where:

Q = quantity; C.U = cost per unit; V = value

In comparison, table no.4 shows the evaluation of the situation where the company would have used the WAC stock evaluation method, calculated at the end of the month.

Table 4. Weighted average cost method (WAC) calculated at the end of the month

Date	Explanation	Inputs			Outputs			Stock		
		Q	C.U	V	Q	C.U	V	Q	C.U	V
01.05	Initial stock							200	12,50	2500,00
08.05	Supply	300	7,35	2205				500		
16.05	Consumption				200			300		
21.05	Supply	100	3,25	325				400		
28.05	Consumption				260			140		
	Total	400		2530	460	8,38	3854,80	140	8,38	1173,20

$$CMP = \frac{(2500 + 2530)}{(200 + 400)} = 8,38 \text{ lei / board.}$$

Table 5. Value of outputs through FIFO "first in-first out" method:

Date	Explanation	Inputs			Outputs			Stock		
		Q	C.U	V	Q	C.U	V	Q	C.U	V
01.05	Initial stock				-	-	-	200	12,50	2500,00
08.05	Input	300	7,35	2205	-	-	-	200 300	12,50 7,35	2500,00 2205,00
16.05	Output	-	-	-	200	12,50	2500	300	7,35	2205,00
21.05	Input	100	3,25	325				300 100	7,35 3,25	2205,00 325,00
28.05	Output				260	7,35	1911	40 100	7,35 3,25	294,00 325,00
TOTAL		400	-	2530	460	-	4411	140		619,00

Table 6. Value of outputs though LIFO "last in-first out" method:

Date	Explanation	Inputs			Outputs			Stock		
		Q	C.U	Value	Q	C.U	Value	Q	C.U	Value
01.05	Initial stock				-	-	-	200	12,50	2500,00
08.05	Input	300	7,35	2205	-	-	-	200 300	12,50 7,35	2500,00 2205,00
16.05	Output	-	-	-	200	7,35	1470	200 100	12,50 7,35	2500,00 735,00
21.05	Input	100	3,25	325				200 100 100	12,50 7,35 3,25	2500,00 735,00 325,00
28.05	Output				100 100 60	3,25 7,35 12,50	325 735 750	140	12,50	1750,00
TOTAL		400	-	2530	460	-	3280	140		1750,00

Making a comparative analysis, price differences obtained from the methods employed, there can be noticed that for each method in part the account 602 "Expenses with consumable materials" would have a different value in accounting. Using the WAC method after each supply, the entity has a value of 3928 lei for outputs, higher cu 73,20 lei as compared to WAC method at the end of the month of 3854,80 lei, lower by 482,80 lei as compared to FIFO method and higher by 648,20 lei as compared to LIFO.

6. Calculation of cost per unit using “quantitative method”

The company uses this method to calculate the cost per unit as it related products; boards of various species, similar in usage and considered as main products, and for some of them the total resulting quantity is not used entirely. Therefore, based on the estimated orders and taking into account to ensure the safety stock, the company estimated that in June 2012, the following would be manufactured: fir boards 40.000 pcs., pine boards 20.000 pcs., oak boards 7.000 pcs. After the technical quality control, 7% of the oak boards’ lot was rejected. 4% losses occurred in fir boards due to inappropriate storage conditions, and 2% of the pine boards were eliminated from the lot. Related production costs are worth 118.972 lei according to the information in tables 20-22.

a. Expenses on raw materials, consumable materials from June 2012 are collected, divided by destinations (table no. 7).

Table 7. Expenses on raw materials and materials

Raw materials		Consumable materials	
Sawmill Hall	30.097	Sawmill Hall	6.390
Auxiliary department	-	Auxiliary department	423
Administrative department	-	Administrative department	126
Total	30.097	Total	6.939

b. Expenses on salaries are calculated, divided on departments for June 2012 as follows:

Table 8. Entity’s expenses on salaries

Activity	Lei
Basic activity	6.2646
Auxiliary activity	6.538
Administrative activity	4.318
Total	7.3502

c. Expenses with the depreciation on each sector where the company has fixed assets for which monthly depreciation is recorded for June 2012 are collected.

Table 9. Expenses with the depreciation on departments

Current no.	Explanations	Total	Buildings	Equipment and machinery	Office automation equipment
1.	Basic activity	7.820	321	7.230	0
2.	Auxiliary activity	137	0	346	0
3.	Administrative activity	477	95	695	249
	Total	8.434	416	8.271	249

Total expenses to be allocated = (30.097 + 6.939 + 73.503 + 8.434) = 118.972 lei

d. Calculation of average cost per unit per piece of board, for the manufactured quantities.

$$\bar{C} = \frac{\sum_{i=1}^n ch_i}{\sum_{j=1}^n q_j}$$

where:

- \bar{C} = average cost per unit;
- q = quantity of each product;
- i = calculation item;
- j = type of product

$$\bar{C} = \frac{118.972}{40.000 + 20.000 + 7.000} = 1.78 \text{ lei / board.}$$

➤ Recalculation of actual cost per unit for the boards where losses are involved.

$$C_e = \frac{\bar{C} \times qf}{qu}$$

where:

- C_e = recalculated actual cost per unit;
- qf = quantity produced of a particular product;
- qu = quantity used from a particular product;

e. Calculation of the actual cost per unit of fir boards where 4% losses are involved.

$$C_e = \frac{1.78 \times 40.000}{40.000 - (40.000 \times 4\%)} = 1,85 \text{ lei / fir boards.}$$

f. Calculation of actual cost per unit of oak boards where 7% losses are involved.

$$C_e = \frac{1.78 \times 7.000}{7.000 - (7.000 \times 7\%)} = 1,91 \text{ lei / oak boards.}$$

g. Calculation of actual cost per unit of pine boards where 2% losses are involved.

$$C_e = \frac{1.78 \times 20.000}{20.000 - (20.000 \times 2\%)} = 1,86 \text{ lei / pine boards.}$$

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