FINANCE AND ACCOUNTING
VIEWS ON THE COMPENSATION OF INVENTORY PLUSES AND MINUSES

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Abstract: After the establishment of inventory pluses and minuses, we proceed to the settlement of differences. In the establishment of debt value, in cases when the inventory shortages are not considered offences, we consider the possibility of compensation of shortages with potential pluses acknowledged. The compensation of shortages with the pluses noticed at inventory allows the correction of goods handling errors because of confusions between assortments. The danger of confusions is determined by the resemblance between products, danger which appears as a consequence of careless handling, when labels disappear from packaging, bar codes are missing and because of carelessness of warehouse managers. The competence of approval of compensations belongs in all cases to the leaders of patrimonial entities.

Key words: patrimony inventory, inventory procedure, compensation conditions, compensation rules, compensation procedure, recording of inventory differences.

1. Patrimony inventory procedure

The actual patrimony inventory has the main purpose of establishment of the real situation of all assets and liabilities of each entity and of goods and values held with any title and belonging to other natural or legal persons, in view of elaboration of financial statements, statements which must assure a faithful image of the financial position and performance of a unit.

The acknowledgment and description of patrimonial elements subjected to inventory is the stage in which the actual inventory-taking of patrimonial assets takes place and is materialized in the completion of inventory lists. The completion of inventory lists is carried out either by using the software system of automatic data processing or by the writing of assets identified, without free spaces and without erasures, according to the internal procedures approved. The patrimonial assets inventory-taking process is carried out in the places where they are kept.

The patrimony inventory is materialized by the writing of assets in ink, pen or electronically, without free spaces and without erasures in the form "inventory list", after the checking of the physical existence of each patrimonial element inventoried.
In the situation in which the assets are inventoried by electronic identification methods (for example: bar code reader, etc.), the data is directly transmitted in the financial accounting software system, the inventory lists are edited directly from the software system. One will edit complete lists with all the inventoried positions or selectively only for the positions, points of reference, where differences in quantity or value (depreciations) are noticed, as applicable.

The documents drawn up by the inventory commission remain in the inventoried management, in specially arranged places, locked and sealed. It is prohibited to take them out of management until the end of inventory.

The establishment of the factual stock is done by counting, weighing, measuring, technical calculations, scanning, as applicable.

For all the other assets, debts and equity, on the occasion of inventory, we check the reality of balances of those accounts and for those which are at third parties, requests for confirmation are made and are attached to the lists after the receipt of confirmation.

For the inventory of assets which do not have material substance, debts and equity, distinctive analytical statements are made. The totality of analytical statements thus elaborated is checked against the balances of corresponding synthetic accounts which are taken over in "Inventory Ledger".

The inventory lists are signed on each page by the members of the inventory commission and by the warehouse managers.

The results of inventory are written in a report and the proposals contained in the report of the inventory commission are presented within seven days from the day of conclusion of inventory operations to the administrator of the patrimonial entity.

The administrator of the patrimonial entity with the approval of the legal department decides on the method of resolution of the proposals made, with the observance of the legal provisions in force. The assets, debts and equity written in the inventory ledger are based on inventory lists, inventory reports and analytical statements, as applicable, which justify the content of each balance sheet position.

The establishment of inventory results is done by the comparison of quantities and values written in the inventory lists, with the quantities and values recorded in accounting. In this respect, first we check the accuracy of data from accounting with the synthetic and analytical trial balances, then we check the accuracy of data from the inventory, by comparing the counterpart from these lists written by a member of the inventory commission with the counterpart of the same lists written by the warehouse manager, correcting on the spot possible differences
acknowledged, under the signature of the participants in inventory. The written balances are certified by the person who keeps the analytical records of management and by the head of the financial accounting department. We also check the accuracy of evaluations, calculations from accounting and from the inventory lists.

From the abovementioned comparison, it may result inventory pluses or minuses for which the inventory commission will demand written explanations from the warehouse manager.

The inventory results must be recorded both in the operational records and in accounting records within maximum seven days from the day of approval of the inventory report by the administrators. After the establishment of inventory pluses and minuses, we proceed to the settlement of differences. In principle, the pluses are recorded as entries in the patrimony of units and the minuses are recorded as expenditure or are deducted from the revenues related to variation of stocks, as applicable.

According to the legislation in force, warehouse managers are fully liable to the entity for damages (inventory shortages) which he caused in management. When the warehouse manager has caused shortage in inventory at workplace and it is not fully covered within a month, the entity will indemnify itself from the guarantee in cash created.

According to Labour Code, the employees are liable with their patrimony by virtue of civil contractual liability for the material damages caused to the employer by fault and in relation to their work. In case the employer notices that his employee caused a damage by fault and in connection with his work, he can require its recovering from the employee by a note of acknowledgment and evaluation of damage by the agreement of the parties (commitment of payment), in a deadline which cannot be less than 30 days from communication date.

The recovering of the prejudice by the agreement of the parties is limited to the situations when it does not exceed a value of 5 minimum gross basic salaries, and if the prejudice exceeds this value, the employer will have to address the courts of law.

For the purpose of a correct resolution of inventory shortages, the inventory commissions will take full explanatory notes from warehouse managers and it must result from these notes the nature of shortages, losses, depreciations acknowledged and the circumstances of their occurrence.

Based on the explanations received and other documents and deeds investigated, the inventory commissions formulate conclusions and propose concrete measures to the attention of management,
measures which are to be adopted (compensations, perishabilities, imputations, discharges etc.).

2. Procedure of compensation of inventory pluses and minuses

In the establishment of debt value, in cases when the inventory shortages are not considered offences, we have in view the possibility of compensation of shortages with possible pluses acknowledged.

The compensation of shortages with the pluses acknowledged in inventory allows the correction of goods handling errors owing to the confusions between assortments.

The danger of confusions is determined by the resemblance between products, danger which appears as a consequence of careless handling, when labels disappear from packaging, bar codes are missing and because of carelessness of warehouse managers. The competence of approval of compensations reverts in all the cases to the leaders of patrimonial entities.

According to the norms regarding the organization and performance of patrimony inventory (OMFP no. 2861/2009), the compensation of pluses with inventory minuses operates only if the following conditions are fulfilled:

- existence of the risk of confusion between the assortments of the same group of material assets because of their resemblance regarding external aspect: colour, model, sizes, packaging and other elements;
- pluses and minuses must be related to the same management period and the same management.

The compensation is not allowed if it was proven that the differences noticed are due to bad intention or negligence, which led to the stealing or destruction of these goods, because of the fault of persons in charge with the management of these goods. The lists with assortments of products, merchandise, packaging and other material values, which fulfil the conditions of compensation are established every year by the administrators of the economic units or credit accountants.

We must also have in view the following rules regarding compensation (Lenghel Radu Dorin 2011: 43):

a. the quantitative equality between pluses and minuses is obtained by the elimination from calculation of quantities which exceed this equality (pluses or minuses, as applicable), starting with assortments, which have the lowest unit price in the ascending order of prices (warehouse managers are liable for the smallest damage);
b. the differences in value at equal quantities of pluses and minuses are established between total value of assortments noticed in excess and total value of assortments noticed in minus, from the same group of material values;
c. following compensation, unfavourable differences cannot result for the entity and if they do, they are recovered from the guilty persons (following compensation the patrimony of the entity cannot be reduced).

In the practice of compensation of differences in plus and minus established at inventory we can encounter four different situations. If we note with $\Sigma bi$, the sum of missing quantities and with $\Sigma ai$, the sum of quantities noticed in excess in inventory, these situations can be synthesized as follows (Lenghel Radu Dorin 2011: 44):

1. $\Sigma ai < \Sigma bi$, $\Sigma aipi < \Sigma bipi$ (the shortages in quantity and value are higher than the pluses acknowledged):
   - discharge of management with the value of missing quantities eliminated from the calculation of compensations and with the negative value difference resulted from compensation.
   - imputation of these shortages in quantity and value established after compensation.

2. $\Sigma ai < \Sigma bi$, $\Sigma aipi > \Sigma bipi$ (from the quantity point of view the shortages are higher than pluses, but from the value point of view the pluses exceed the shortages):
   - discharge of management with the value of quantity shortage eliminated from the calculation of compensations.
   - imputation of the quantity shortage not compensated.
   - registration as a plus in management of positive value differences after compensations.

3. $\Sigma ai > \Sigma bi$, $\Sigma aipi > \Sigma bipi$ (pluses in quantity and value are higher than shortages):
   - they are recorded as an inventory plus:
     - value of quantities noticed in excess and eliminated from the calculation of compensations;
     - the positive value differences resulted from compensations.
   - the patrimonial liability is not established.

4. $\Sigma ai > \Sigma bi$, $\Sigma aipi < \Sigma bipi$ (from quantity point of view the pluses are higher than shortages, but from value point of view shortages exceed pluses):
   - it is recorded as a plus in management, the value of quantities eliminated from the calculation of compensations.
the management is discharged with the negative value difference resulted from compensations (inventory shortage).
- these negative value differences are imputed.

3. Case studies regarding the compensation of inventory pluses and minuses

a. Case study no. 1

Following the inventory of a wholesale warehouse of wooden profiles (melamine fibreboard) inventory differences were noticed according to the table below. Make the compensation of inventory differences.

<table>
<thead>
<tr>
<th>Assortment</th>
<th>Factual stock $~ \text{m}^2~$</th>
<th>Written stock $~ \text{m}^2~$</th>
<th>Acquisition cost $~ \text{lei}~$</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 1</td>
<td>600</td>
<td>300</td>
<td>10</td>
</tr>
<tr>
<td>PM 2</td>
<td>300</td>
<td>600</td>
<td>15</td>
</tr>
<tr>
<td>PM 3</td>
<td>500</td>
<td>200</td>
<td>20</td>
</tr>
<tr>
<td>PM 4</td>
<td>200</td>
<td>500</td>
<td>25</td>
</tr>
</tbody>
</table>

Source: own projection

The compensation is made according to the table below:

<table>
<thead>
<tr>
<th>Assortment</th>
<th>Acquisition cost</th>
<th>Quantity differences</th>
<th>Value differences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>$+$</td>
<td>$-$</td>
</tr>
<tr>
<td>PM 1</td>
<td>10</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>PM 2</td>
<td>15</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>PM 3</td>
<td>20</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>PM 4</td>
<td>25</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td>Total inventory</td>
<td>600</td>
<td>600</td>
<td>9.000</td>
</tr>
<tr>
<td>Eliminated from compensation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Compensation</td>
<td>600</td>
<td>600</td>
<td>9.000</td>
</tr>
<tr>
<td>Result of compensation (9.000 -12.000. )</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

The main accounting recordings following the compensation of inventory pluses and minuses are:
1. recording of shortage in amount of 3.000 lei (deductible expense), resulted from the compensation of the four assortments of melamine fibreboard from the warehouse of wooden profiles:

\[
607 = 371 \times 3.000
\]

2. imputation to warehouse manager:

\[
\frac{4282}{7588} = \frac{3.720}{3.000} \quad \frac{4427}{720}
\]

3. retention of this prejudice from the guarantee initially deposited by the warehouse manager:

\[
4281 = 4282 \times 3.720
\]

**b. Case study no. 2**

Following the inventory of a wholesale warehouse with metallic profiles (screws) inventory differences were noticed according to the table below. Make the compensation of inventory differences.

<table>
<thead>
<tr>
<th>Assortment</th>
<th>Factual stock ~ m$^2$ ~</th>
<th>Written stock ~ m$^2$ ~</th>
<th>Acquisition cost ~ lei ~</th>
</tr>
</thead>
<tbody>
<tr>
<td>SR 1</td>
<td>300</td>
<td>600</td>
<td>10</td>
</tr>
<tr>
<td>SR 2</td>
<td>600</td>
<td>300</td>
<td>15</td>
</tr>
<tr>
<td>SR 3</td>
<td>200</td>
<td>500</td>
<td>20</td>
</tr>
<tr>
<td>SR 4</td>
<td>500</td>
<td>200</td>
<td>25</td>
</tr>
</tbody>
</table>

*Source: own projection*

The compensation is made according to the table below:

<table>
<thead>
<tr>
<th>Assortment</th>
<th>Acquisition cost</th>
<th>Quantity differences</th>
<th>Value differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>PM 1</td>
<td>10</td>
<td>300</td>
<td>3.000</td>
</tr>
<tr>
<td>PM 2</td>
<td>15</td>
<td>300</td>
<td>4.500</td>
</tr>
<tr>
<td>PM 3</td>
<td>20</td>
<td>300</td>
<td>6.000</td>
</tr>
<tr>
<td>PM 4</td>
<td>25</td>
<td>300</td>
<td>7.500</td>
</tr>
<tr>
<td>Total inventory</td>
<td>60</td>
<td>60</td>
<td>12.000</td>
</tr>
<tr>
<td>Eliminated from compensation</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Compensation</td>
<td>60</td>
<td>60</td>
<td>12.000</td>
</tr>
<tr>
<td>Result of compensation (12.000 - 9.000)</td>
<td></td>
<td></td>
<td>3.000</td>
</tr>
</tbody>
</table>
The main accounting entries following compensation are:
1. recording of charging in management of the value differences resulted from the compensation of the four assortments mistakable: $371 = 607 \times 3.000$ lei or $607 = 371 - 3.000$ lei, depending on the mode of operation of the accounting software.

4. Conclusions
In relation to the settlement by compensation of inventory differences, we can draw the following conclusions:
– the establishment of inventory results is done by comparing the quantities and values written in the inventory lists with the quantities and values recorded in accounting. The written balances are certified by the person who keeps the analytical records of management and by the head of the financial accounting department. We also check the accuracy of evaluations, calculations from accounting and from inventory lists. From the comparison above, inventory pluses or minuses may result for which the inventory commission will demand written explanations from the warehouse manager;
– for all pluses, shortages and depreciations noticed at goods, the inventory commission requests written explanations from the persons who are responsible for the management of goods. Based on the explanations received and the documents analysed, the inventory commission establishes the nature of shortages, losses, damages and depreciations acknowledged, as well as the nature of pluses, and in accordance with the legal provisions in force the proposes the method of settlement of differences between the accounting data and the factual data resulted from inventory;
– in case of acknowledgment of imputable inventory shortages, the administrators must impute to the guilty persons the missing goods at their replacement value. In case of missing goods which are to be imputed, which cannot be purchased from the market, the imputation value is established by a commission made of specialists in that field;
– when presumptions of confusions are made, the inventory commission will propose the compensation of pluses and inventory shortages;
– in relation to the case studies presented, we can draw the following conclusions: in the first case following compensation it resulted a shortage of value of 3,000 lei, imputable to the warehouse manager and in the second case, it resulted a plus of value following compensation of 3,000 lei, which will be charged in management;
– the proposals regarding the compensation of inventory differences will be contained in the report of the inventory commission,
report which is presented within seven days from the day of conclusion of inventory operations, to the administrator of the patrimonial entity. The administrator of the patrimonial entity with the approval of the head of financial accounting department decides on the method of resolution of proposals made (compensation of inventory differences) with the observance of the legal provisions in force;

– considering that the danger of confusions is determined by the resemblance between the products, danger which appears following careless handling, when labels disappear from packaging, when bar codes are missing and because of negligence of warehouse managers, we suggest a better codification of the products and a better training of warehouse managers.

Bibliography
Lenghel Radu Dorin, Financial Control and Audit, Risoprint Publishing House, Cluj-Napoca, 2011;
Lenghel Radu Dorin, Internal Control and Audit, Risoprint Publishing House, Cluj-Napoca, 2011;
Government Decision no. 831 of 2004 regarding the allowed limits of perishability in merchandise in the sale process.
Order of Minister of Public Finances no. 2861/2009 regarding the patrimony inventory.

Note on the author
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