

## ACCOUNTING, AN ESSENTIAL COMPONENT OF THE INFORMATION SYSTEM

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### Abstract

*In the context of deep financial and economic transformations taking place both nationally and globally, the need and appropriateness of ongoing and increased involvement of accounting information in the management process is increasingly obvious under the increasing credibility and relevance of such information in user perception. Although the data, information and knowledge provided by accounting are not the only ones characterizing a particular economic unit, we believe they are an essential element for analysis and assessment of the entity's statement of assets, motivation according to which accounting is seen by the management, and not only, as the core of the information system.*

*Thus, the accounting information experiences a wide revaluation on all the decision-making stages specific to a field of activity, materialized, for this purpose, in economic and financial indicators that are obtained either directly from synthetic and analytical accounts, or through calculations based on them, regularly and periodically, depending on the need and possibility of operational knowledge of such indicators or only at certain times.*

*Therefore the main purpose of the accounting information system is to provide each user, according to its responsibilities and tasks, with all the necessary information, representing both an interface between the operating and the management system of the entity, but also an element connecting the internal and the external environment of the company, a perspective that motivates our scientific approach orientation in the research of accounting information and its role in the decision making process.*

**Keywords:** *information system, accounting information, financial accounting, management accounting, decision*

**JEL Classification:** *M40, M41, M48, M49*

## 1. Introduction

Given the contemporary developments in the business environment, the need for quality and timely information and the willingness to make real-time informed decisions imposed changes in the organization and functioning of companies, and the possible solution was ***the existence of a unified information system as single database with fast processing possibilities, appropriate to each type of business; thus e-business performance management was brought into question.*** [11]

However, ***in order to become information***, the data related to the object of activity of an entity, that represents qualitative or quantitative attributes of a variable or set of variables, must be processed in accordance with the informational requirements, aspect requiring data collection and actual processing, and sending of results to the information users; such processing is usually performed automatically, using electronic equipment for automatic data processing.

Looking from this perspective, we consider that the efficient management of modern economics, with its growing complexity and interdependence between the various industry sectors, requires ***ongoing development and improvement of the economic information system***, so that, through its design, it should allow the managers from any organizational level, to be acquainted with the economic phenomena and processes and, on this basis, develop informed decisions on an entity's current and future development.

## 2. Accounting information and its importance in decision making

Proceeding from the grounds that accounting is the main data source of the economic information system, issue noted by the American economist Hybe, [3, 10] who realizes that out of the total economic information circulating in an economic unit, approximately 80% are economic data and 47% is accounting information, ***we can say that in an entity, accounting is the most important component of the information system***, because: most microeconomic decisions are made based on the information provided by accounting, the accounting information provides external data users and managers with a picture of the entire entity, also making the connection with the other components of the information system of the company by integrating the information into a common database.

In this context, the information systems specialist, Marshall Romney, referring to the accounting information system, says that it consists of: “people, processes and information technology”, being asked to perform *three functions*, covering: [4, 12]

- ✦ collection, saving and storing of transaction data, so that the entity can consult its history anytime;
- ✦ processing of the collected data and obtaining the information necessary for planning, implementation and control of all the activities carried out by the entity;
- ✦ provision of appropriate control procedures to protect the company assets, including the “wealth of information”, ensuring the validity and accuracy of the information obtained, in accordance with the information needs of users.

Thus, if the information system as a whole targets all the elements involved in the collection, transmission, storage and processing of data necessary to obtain information essential to decision-making, *we may consider accounting as the information system that quantifies and processes data, and then transmits the financial information related to a particular entity, different categories of users, information needed in decision making, thus ensuring the permanent connection between the decision-making (management) and the operational (execution) system.*

Considering *the data* obtained from source documents as *inputs into the accounting system*, and *the information* resulted from processing, useful to decision makers as *outputs from the system*, then, schematically, *the accounting information system* can be presented as follows: (Figure no. 1) [3, 9]

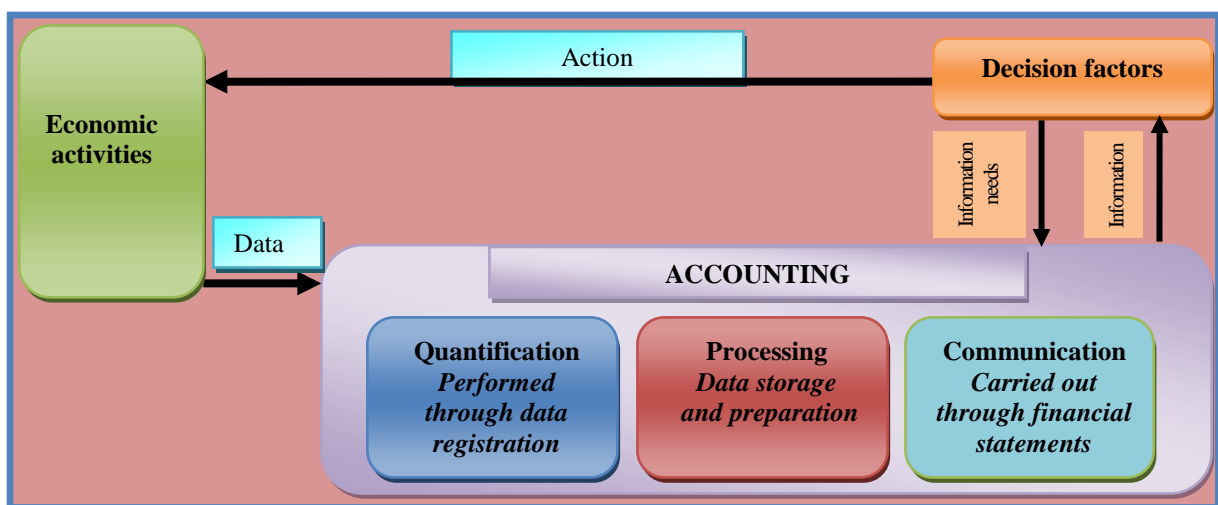


Figure no. 1. Accounting as an information system for economic decisions

However, we believe that *data and information are not sufficient to make decisions*, which is why we agree with specialists who claim that *the knowledge is important, as it helps and supports users in performing certain associations, groupings and generalizations*, concepts that are interrelated, as indicated by the following representation (Figure no. 2). [3, 6]

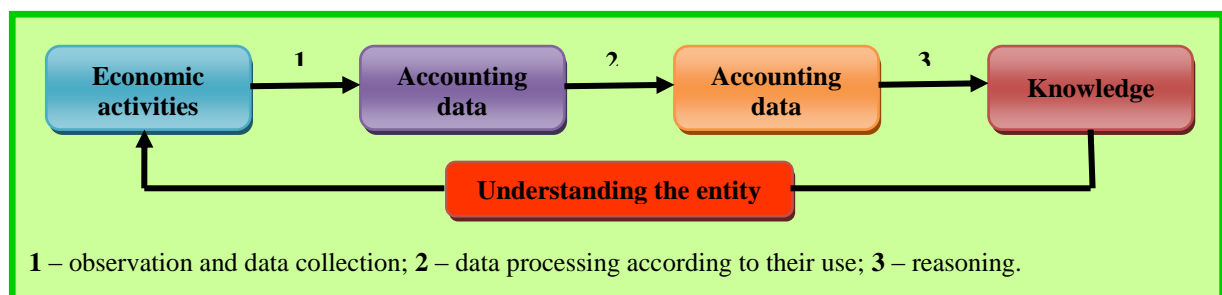


Figure no. 2. Knowledge field in the accounting

Analyzing the two representations that relate to accounting, regarded as an information system, *we may conclude that*, in order to use the accounting information resulting from processing data obtained from observation of the economic activities of an entity, by using a language and means specific to accounting, they are subject to some reasoning, whose purpose leads to the entity's understanding, perception required in making good and effective decisions for the decision makers.

Therefore, we may define accounting as the sufficiently comprehensive information system, starting from data entered into the system and ending with the proper use of the financial and economic information by different users.

At the same time, we join the specialists' opinion, [6] which presents accounting as an information system that processes with specific methods the information expressed in monetary standard, with a dual role, which refers, on the one hand, to providing a structured representation of an entity's property and, on the other hand, to building information that would meet the management needs of different users, *a concept that takes into account the role that accounting fulfills at some point.*

But in the context of ongoing economic development of the society, the mission of accounting has evolved from recording technique of business transactions to an instrument of control and evidence in court, representing both *a knowledge base for the entity's management*, but at present, it is seen as a “social game” confronting the interests of users and producers of accounting information, information which refers to an entity's economic activity.

*Although the data, information and knowledge provided by accounting are not the only ones characterizing a particular economic unit, they are an essential element for analysis and assessment of the entity's statement of assets, motivation according to which accounting is seen by the management as the core of the information system.*

However, the development of informed decisions to facilitate solving many problems of economic and financial management depends not only on the quantity but also on the quality of information provided through the accounting and financial information system, so that, in the process of communication with end users, the accounting information follows a well-established *route* (Figure no. 3).

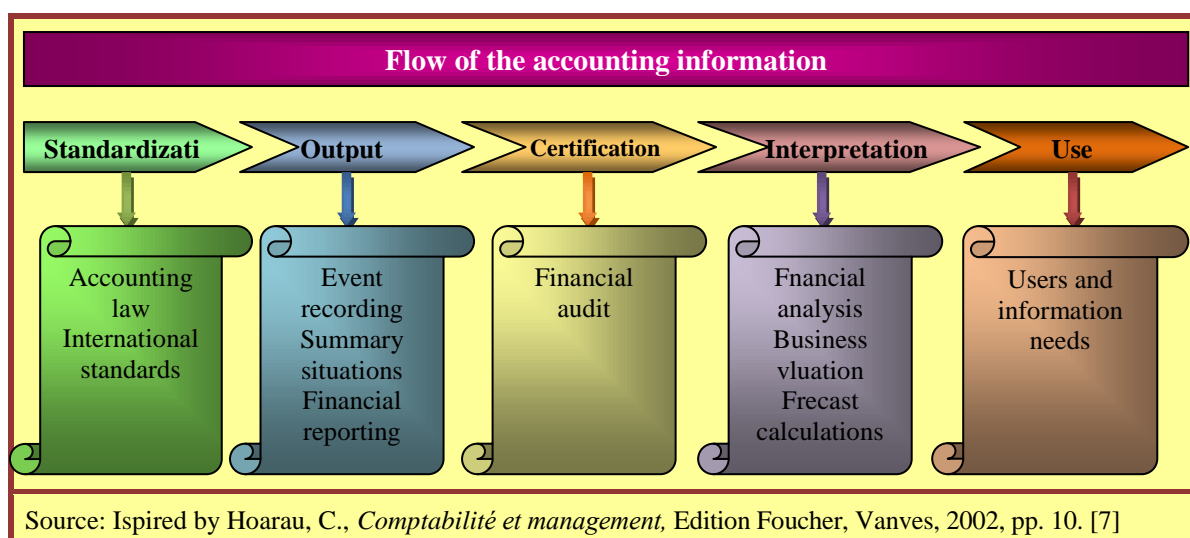


Figure no. 3. Flow of the accounting information

Given the number and complexity of data processed by accounting, *its information valences are efficiently used in automatic data processing*, the use of software and global harmonization of accounting are part of the great trends for improving the accounting information system, with favorable implications for the proper management of the entity's assets and the right determination of its earnings.

But *the use of software* in automatic data processing is not the only condition that leads to high-quality accounting information, motivation according to which its user should show maximum exigency in the purchase of software that should make it possible, on the one hand, to obtain all the required statements and on the other hand, to check the data being processed by validation software, so that the sequence of menus should make it possible to carry out all stages of automated data processing with minimal effort. However, it is required to follow the way in which the information product may meet new requirements determined by changes in the calculation methodology of some indicators or by some legislative reforms, involving the development of new situations.

Therefore, we believe that *the computer system* represents a component of the accounting information system that makes it possible to perform operations of data collection, transmission, storage, processing and dissemination of the information obtained, by using information technology means and personnel specializing in automatic data processing, being interposed between the operating system on the one hand, and the decision-making system, on the other hand (Figure no. 4).

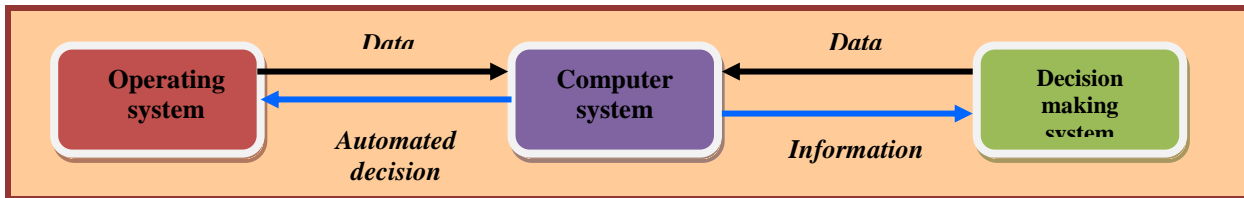


Figure no. 4. Computer system, part of the accounting information system

Looking from this perspective, *the accounting information system* may be considered as represented by that technical and organizational set of collection, transmission, storage and processing of data related to the economic activity of an entity in order to obtain high-quality information necessary for decision-making; the computer system as part of the accounting information system is interposed between the operating and the decision-making system, and at the same time, it is a means of communication between the two subsystems.

### 3. Need to organize the accounting information system according to the dualistic conception

However, given the growth in the plurivalence of economic realities and in the pressure from users, requesting for accounting information, we believe that the success of organizing an accounting information system depends on the way in which the accounting information is obtained from data processing and is distributed to consumers, organization that is determined, on the one hand, by economic and political factors, and on the other hand, by users' requirements.

Thus, the accounting information system in our country is organized according to the *dualistic conception*, being divided into *two components: financial accounting and management accounting*, which have similarities because both record events from the entities' business, facts quantified on a monetary standard in order to provide users with the accounting information obtained, namely: *public information*, for all users, internal and external, for the financial accounting and *confidential information*, accessible to internal users, provided by the management accounting.

However, the increasingly varied information needs of different categories of internal and external users create some *significant differences between the financial accounting*, on the one hand, *and the management accounting*, on the other hand, differences that can be analyzed in terms of some *criteria*, such as: main objectives targeted by the two subsystems of the accounting information system, the method of organization and management, the analytical framework and working procedure. [1, 4, 8]

Taking into account the categories of users who are addressed the financial and accounting information, we believe that the accounting dualism originated in the need to separate and protect such information that could not be offered to the general public, thus clearly distinguishing between *the information that can be released*, which serves both the entity's own information needs and those of external users and *the confidential information*, available to managers and their supervisory, analysis and internal control bodies.

Thus, *financial accounting*, as an activity specializing in measurement, evaluation, knowledge, management and control of assets, liabilities and equity, and of the earnings obtained from such activity, must provide chronological and systematic recording, processing, publication and storage of information regarding the financial standing, financial performance and cash flows for both their internal requirements and in the relations with present and potential investors, financial and commercial creditors, customers, government institutions and other users. [13]

In contrast, although it records events from the same entity's business, *management accounting* provides a detailed overview of each activity, with the following main objectives: record of operations regarding the expenditure collection and distribution by destinations, namely by activities, departments, manufacturing phases, cost centers or profit centers, as appropriate, and calculation of the cost of acquisition, production, processing of the goods obtained or incoming, of the works performed, services provided, production in progress, current assets etc. from the production, commercial, service, financial units and from other accounting areas. [14]

Therefore, *the two components of the accounting information system, financial accounting and management accounting are not independent, they complement each other in terms of information; the quality of the accounting information resulting from processing data related to the business carried out in an entity is an essential element that contributes to effective decision-making.*

In fact, accounting organization in double circuit leads to the *possibility of determining the same result in two ways: a schematic one*, corresponding to the financial accounting and *an analytical detailed one*, appropriate to management accounting; the components of the information system are essentially *two ways of seeing and understand one reality.*

In this context, taking into account the objectives of the accounting information system and given the diversity of users and their pressure on the supply of accounting information, the differences that arise between the two levels, namely financial accounting and management accounting are presented in Figure no. 5.

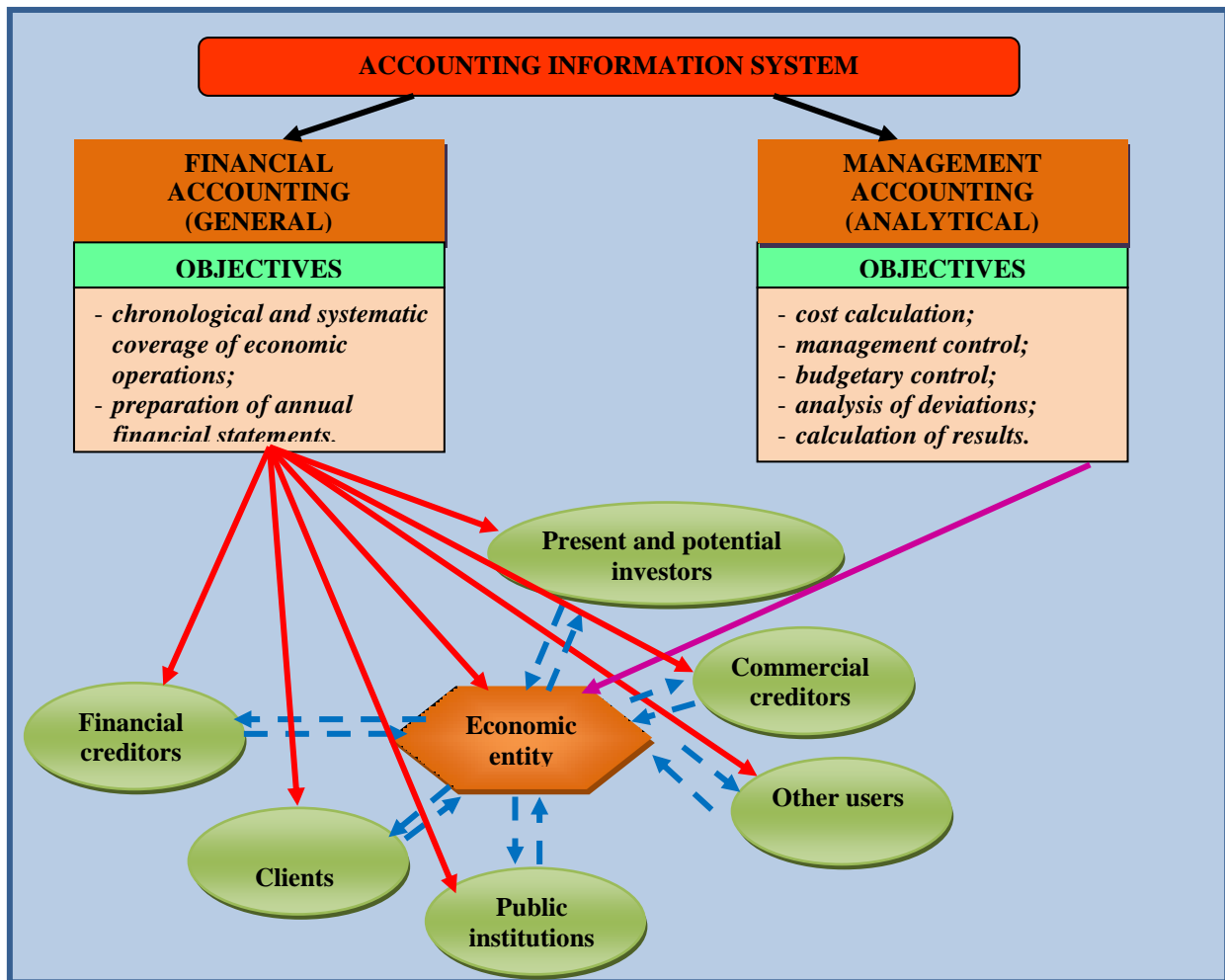


Figure no. 5. Differences between the accounting information system components

Although the two components of the accounting information system in our country are mandatory for all entities, *financial accounting*, which operates only with monetary quantities, is highly formalized and is regulated both by laws [2, 13, 15] and by generally accepted principles or international standards and recommendations, while the *management accounting* must be adapted to the specific business carried out by each entity, using beside the values expressed in monetary standard many quantitative sizes necessary to achieve a correct and comprehensive analysis.

Referring to management accounting as *cost accounting*, it should be noted that a *technical approach* related to cost calculation and analytical results is joined by a *decisional approach* corresponding to managerial accounting, with the purpose of guiding the skills of people responsible for the management and use of resources in the economic unit.

Thus, including in our opinion, the management accounting, through the economic and managerial dimension, complements the legal and accounting dimension (formalized and standardized) of financial accounting; [2] the differences between the manner of organization and management of the two components of the information accounting system in our country are presented in Figure no. 6.



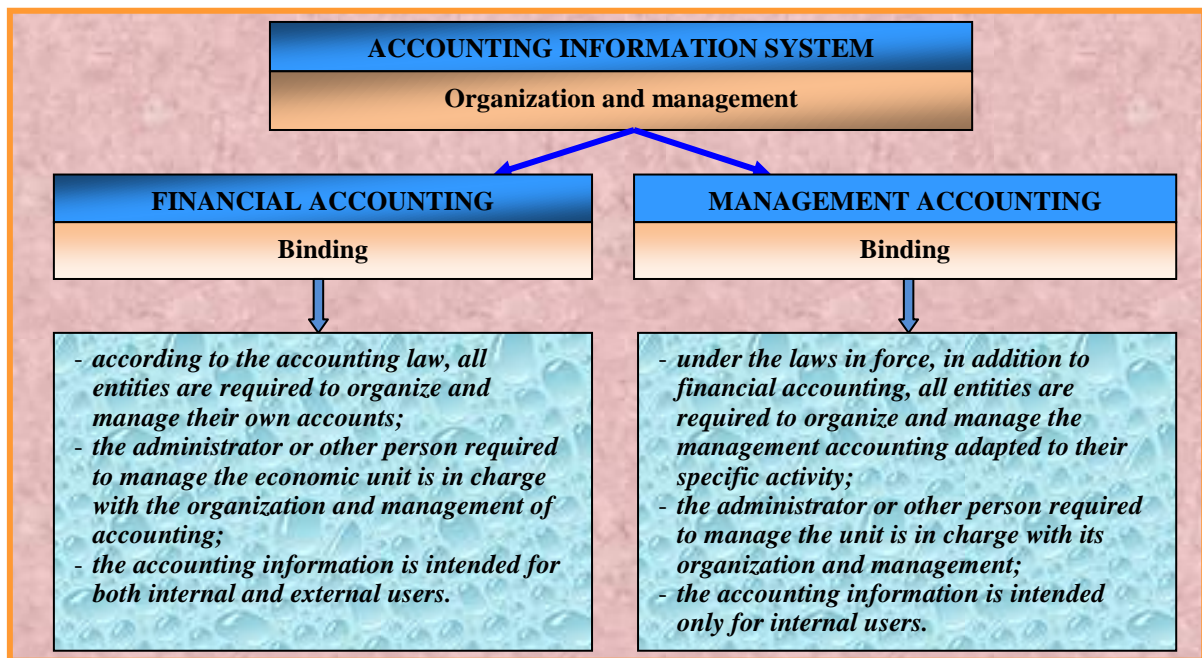


Figure no. 6. Organization and management of the accounting information system components

Although financial accounting is the documentary source of the management accounting because the documents underlying the entry of operations in the financial accounting are also used for making records in the management accounting, after having first been processed in accordance with the needs of the latter, referring to *financial accounting* we can say that it tends to mainly analyze the flows between the economic entity and its exterior, i.e. the *outflows* with the economic, social and administrative environment, whereas *management accounting* investigates the *inflows*, in order to calculate production costs.

Looking from this perspective, Figure no. 7 shows the summary of the analytical framework of the accounting information system, exposure which reveals the difference between the distinctive analysis area of financial accounting and that of management accounting.

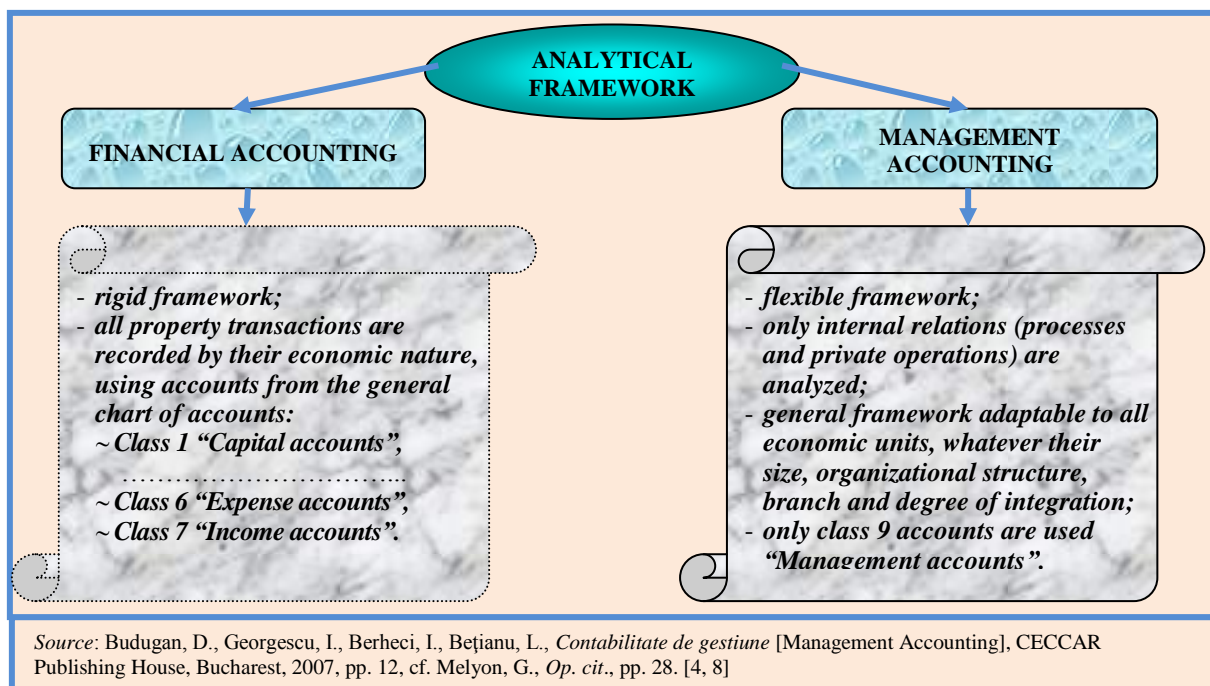


Figure no. 7. Differences regarding the analytical framework of the accounting information system components

The manner for acting in order to achieve the main objectives specific to the accounting information system is related, on the one hand, with the manner in which its components are organized and managed, and on the other hand, with the scope of the flows it analyzes.

Although it records data from the same documents, processed according to the needs specific to the object of study, it should be noted that, while **financial accounting** is highly formalized and mandatory for all economic entities, **management accounting** is organized on principles and bases specific to each entity, appropriate for their purpose. If we consider the orientation of management accounting, particularly towards internal control, then any limiting standardization of it would be equivalent with a restriction of processing, although the information provided by management accounting is not restrictive.

In this context, the correlation between financial accounting, on the one hand, and management accounting, on the other hand, as structures of the accounting information system, namely: the relations between the two circuits of accounting and accounting flows are summarized in Figure no. 8. [1]

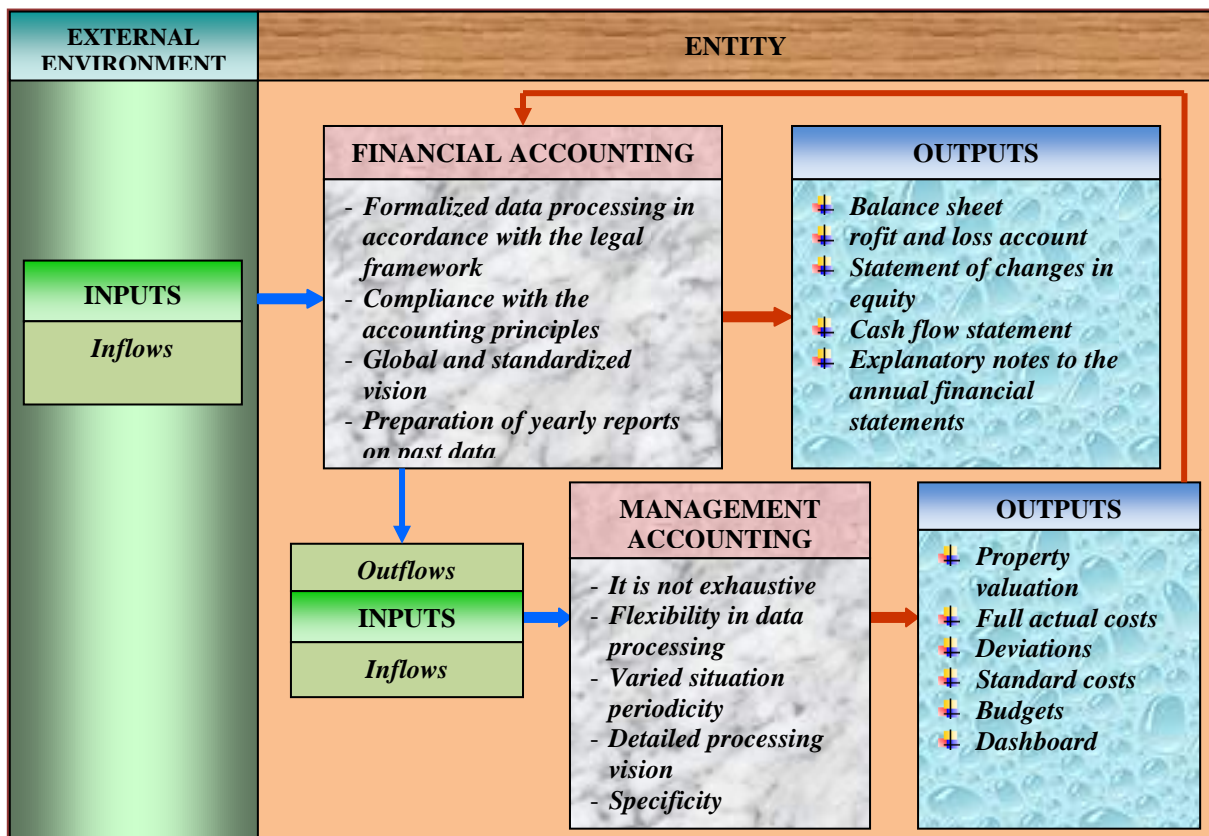


Figure no. 8. Interdependence between the accounting information system components

By analyzing the diagram of accounting flows and of the relationship between financial accounting and management accounting *we can see that*, although they use the same data and provide each other with information, *the organization and management of the two components of the accounting information system are carried out separately, both circuits taking into account the increasingly complex and diverse user demand regarding the provision of high-quality accounting information satisfying both the internal and external users.*

However, we join the specialists' opinion, [5] and *we consider that the accounting information and hence accounting, with all its advantages, is not adapted to meet new information needs arising from the complexity of contemporary economic and legal structures* and is intended to describe the past, even if in the assessment of certain values, the short and medium term prospects of the entity are taken into account (depreciation of inventories, degressive amortization etc.).

#### 4. Conclusions

*Therefore*, by the way of data processing, accounting, as a component of an entity's information system provides accurate information on the existence and movement of assets, giving users, in summary form, the results of the work performed. In fact, we can say that the information power of accounting is determined by enrollment in the processing process of all data related to the economic and financial operations targeting that entity, and the conception

and registration logic make it the main component of the information system, that contributes to the smooth conduct of an economic unit's business.

*Therefore*, the main purpose of the accounting information system is to provide each user, according to its responsibilities and tasks, with all the necessary information, representing both an interface between the operating and the management system of the entity, but also an element connecting the internal and the external environment of the company.

However, the financial accounting is aimed at treating previous operations in order to determine an outcome, without analyzing how and under what conditions it was obtained, the essential characteristics of the entity's activity do not fall within the scope of its concern; an impediment which is partially removed by using the management accounting, subsystem meeting the information needs of the entity's management.

Therefore, the information provided by the *financial accounting* does not clarify the nature and quality of products, business efficiency, technical performance of production capacities, labour productivity etc., knowledge which requires the use of physical data, which are, however, completely ignored by the financial accounting, but used by the *management accounting*. *However, accounting remains an indispensable basis of information for different users, but is limited as a management tool, both in space and time. And as all future projects, all forecasts require an analysis of the past, a research allowed by accounting, it should be noted that it will never be able to warn exactly on what can be done, motivation explaining the need for research and development of complementary tools of analysis, such as statistics, econometrics etc.*

However, given the growth in the plurivalence of economic realities and in the pressure from users, requesting for accounting information, *we believe that the success of organizing an accounting information system depends on the way in which the accounting information is obtained from data processing and is distributed to consumers*, organization that is determined, on the one hand, by economic and political factors, and on the other hand, by users' requirements.

## 5. References

- [1] **Alazard, C., Separi, S.**, Controle de gestion, 2<sup>e</sup> édition, Dunod, Paris, 1994, pp. 99-100.
- [2] **Avram, M, Avram, A.**, Legislație contabilă și fiscală, [Accounting and tax legislation], Universitaria Publishing House, Craiova, 2012.
- [3] **Berheci, M.**, Valorificarea raportărilor financiare. Sinteze contabile: teorie, analize, studii de caz [Financial Reporting Valuation. Accounting Summaries: Theory, Analysis, Case Studies], CECCAR Publishing House, Bucharest, 2010, pp. 25-32.
- [4] **Budugan, D., Georgescu, I., Berheci, I., Bețianu, L.**, Contabilitate de gestiune [Management Accounting], CECCAR Publishing House, Bucharest, 2007, pp. 9-14.
- [5] **Dimitriu, M.**, Contabilitatea și societatea cunoașterii [Accounting and Society of Knowledge, Financial Studies Magazine, no. 2/2007, pp. 84-85.
- [6] **Grenier, C., Bonnebouche, J.**, Système d'information comptable. Comptabilité générale, Editions Foucher, Paris, 1998, pp. 26 and pp. 320.
- [7] **Hoarau, C.**, Comptabilité et management, Edition Foucher, Vanves, 2002, pp. 10.
- [8] **Melyon, G. and others**, Comptabilité analytique: principes, techniques et évolutions, Editions ESKA, Paris, 1994, pp. 25-30.
- [9] **Needles Jr., B.E., Anderson, H.R., Caldwell, J.C.**, Principiile de bază ale contabilității [Basic Principles of Accounting], 5<sup>th</sup> edition (translation), Arc Publishing House, Chisinau, 2000, pp. 3.
- [10] **Oprea, D.**, Premisele și consecințele informatizării contabilității [Prerequisites and Consequences of Computerized Accounting], Graphix Publishing House, Iasi, 1999, pp. 9.
- [11] **Popescu, D.**, Resurse financiare și performanța firmei prin e-management [Financial Resources and e-Business Performance Management], Tribuna economică Magazine, no. 23/2006, pp. 67.
- [12] **Romney, M.B., Steinbart, P.J.**, Accounting Information System, 8<sup>th</sup> edition, Prentice Hall, 2000.
- [13] \*\*\* Accounting Law no. 82/1991, republished, with its subsequent amendments and completions.
- [14] \*\*\* Order of the Ministry of Public Finance no. 1826/2003 approving the Specifications for some measures on the organization and conduct of management accounting.
- [15] \*\*\* Ministry of Public Finance Order no. 3055/2009 approving the Accounting Regulations in compliance with the European directives.