

Niculae, Mirela

Article

The role of the financial-accounting information system in the matrix of the entity functions

Provided in Cooperation with:

Dimitrie Cantemir Christian University, Bucharest

Reference: Niculae, Mirela (2017). The role of the financial-accounting information system in the matrix of the entity functions. In: Academic journal of economic studies 3 (3), S. 19 - 23.

This Version is available at:
<http://hdl.handle.net/11159/1002>

Kontakt/Contact

ZBW – Leibniz-Informationszentrum Wirtschaft/Leibniz Information Centre for Economics
Düsternbrooker Weg 120
24105 Kiel (Germany)
E-Mail: [rights\[at\]zbw.eu](mailto:rights[at]zbw.eu)
<https://www.zbw.eu/econis-archiv/>

Standard-Nutzungsbedingungen:

Dieses Dokument darf zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden. Sie dürfen dieses Dokument nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, aufführen, vertreiben oder anderweitig nutzen. Sofern für das Dokument eine Open-Content-Lizenz verwendet wurde, so gelten abweichend von diesen Nutzungsbedingungen die in der Lizenz gewährten Nutzungsrechte.
<https://zbw.eu/econis-archiv/terms-of-use>

Terms of use:

This document may be saved and copied for your personal and scholarly purposes. You are not to copy it for public or commercial purposes, to exhibit the document in public, to perform, distribute or otherwise use the document in public. If the document is made available under a Creative Commons Licence you may exercise further usage rights as specified in the licence.

The Role of the Financial-Accounting Information System in the Matrix of the Entity Functions

Mirela Niculae

Faculty of Finance, Banking and Accountancy, Department of Accountancy and Audit, Dimitrie Cantemir Christian University,
Romania, E-mail: mirela_s_radu@yahoo.com

Abstract *Along with the development of the global economy which determined a major increase of the value of the financial-accounting information for the entities, the extension of the area, contents and operation of the economic information is necessary for being able to provide the useful elements within the decision process. Currently, the information technology facilitates the communication of all the information, offering the necessary instruments for the entities to be able to organize and develop the business in the context of the globalization process. The Financial-Accounting Information System integrates the assembly of information resources of economic-financial nature created on the level of all the organization structures and which are processed for the substantiation of the management decisions and fulfillment of scopes. The Financial-Accounting Information System of a public interest entity is built from a series of hierarchy and interconnected structures within an integrated configuration, operating within a systemic conception.*

Key words Financial - Accounting Information System, Integrated Informatic System, organizational process, operational areas, public interest entity

JEL Codes: M40, M41, O30

1. Introduction

The operation of an entity and the fulfillment of its scopes are possible only providing that the Financial-Accounting Information System is able to provide useful information within a decision process.

The Financial-Accounting Information System of an entity is the assembly of all the data, information, flows and information circuits, of the means, methods and information processing procedures, designed to attend the definition of the entity's scopes and to substantiate the management decisions, for the fulfillment of the respective scopes.

The information system permits the aggregation of the information in a proper form for making decisions to all the hierarchy levels. As a result of the information technology development, the accounting exceeded the stage of registration of the financial information and entered the stage in which it manages the complex financial and non-financial information regarding the daily statement of the entity, providing the possibility to offer certain anticipated information (Cardoş, 2010).

2. Literature review

The entity is an articulation of three systems: a decision system using the information generated by the operational system for the accomplishment of the scopes; an information system evaluating the operational performances, on the one side, and collecting data for the information supply of the decision system, on the other side; an operational system providing the approach of a concrete transformation function of the production factors in assets, works and services, but transforming the made decisions into performances concretized in final outcomes of the entity (Diaconu, 2015).

In the work "Accounting information systems", Ramona Vasilescu provides the fact that the connections between different parts of an economic entity must satisfy the quality and promptness requirements which may originate from the inside of the economic entity (such as those originating from the higher hierarchy levels), or from outside the economic entity.

An information system consists in a multitude of interrelated subsystems working together for the collection, processing, storage, transformation and distribution of the information for planning, making decisions and control. Each information system can be divided into three main elements: entries, processing and outcomes (Vasilescu, 2008).

The concept of information technology refers to the total of the software and hardware elements used in the computer information systems. The information technology changed the way in which one might work in any field. Moscove observes the fact that the information technology had the same impact upon the society like the industrial revolution. The information technology affects both the financial and the management accounting (Moscove *et al.*, 2003).

In the book "Computer basics. Hard & Soft", the authors defined the informatics system as "an information system having the electronic computer as collection, storage, transmission and transformation item" (Lupulescu *et al.*, 1999).

The use of the information technology reduces the mathematical errors created by the manual accomplishment of the accounting recordings. As a result of the use of the specialized accounting software, the financial reports can be easily generated and in due time (Thapayom and Ussahawanitchakit, 2015). Financial information can be obtained at the proper time, allowing the managers to make the best decisions and to improve the entity's competition (Prodan Palade and

Tanasă, 2016). In the same time, the IT use may improve the lead accounting process. This concept means the removal of all the types of useless items from the accounting system, such as the redundant and time-consuming transactions (Kennedy and Brewer, 2005).

3. Methodology of research

The information system and the information it generates, creates value for the entity under the form of increase of the efficiency and of the effectiveness of business and internal structures (Cardoş, 2010)

The information system of the entity may contribute to the removal of the redundant hierarchy levels as a result of the improvement of the control and delegation of certain responsibilities (Marchand and Hykes, 2007).

The strategy and the scopes an entity establishes, influences the architecture of the information system. The alignment of the systems to the requirements of the entity is one of the main preoccupations of the managers of the information systems. The main premise is given by the fact that currently the operation way of the information technology is unanimously accepted which is too less connected to the technology itself, but mostly of the way in which it is used and managed (Huang and Hu, 2007).

The execution of an integrated architecture, which is meant to take into account the realities of the entity and the existing or available technologies, generates a series of advantages amongst which: the improvement and efficiency of the internal processes, also emphasized by Marchand and Hykes (2007); the decrease of the complexity of the information system by removing the redundant structures or information (repetitive or available from several sources), the facilitation of assimilation of new technologies because the entity is having available the map of the processes and business and the way in which they change or are allocated (Cardoş, 2010).

4. Data analysis and Results

The METROREX is organized and operating according to the provisions of the Decision no. 482 from June 17th, 1999 regarding the incorporation of the Trade Company "METROREX" S.A., the Status completed by the provisions of the Law no. 31/1990 regarding the trade companies, and of the Decisions of the General Meeting of the Shareholders regarding the approval of the organization chart. The mission of METROREX is to satisfy the public, social and civil protection interest, by providing the public transportation service of the persons by subway on the underground and surface railways, safely for the traffic and comfort on the level of the European requirements.

Table 1. Structure of the Shareholding – METROREX S.A. – December 31st, 2015

Name of the shareholder	2014			2015		
	Number of shares	Total nominal value	% from the registered capital	Number of shares	Total nominal value	% from the registered capital
The Romanian State	8,071,035	20,177,588	100	30,071,035	75,177,588	100
Total	8,071,035	20,177,588	100	30,071,035	75,177,588	100

Source: Financial statements drawn up for the year ended on December 31st, 2015

According to the provisions of the Organization and operation Regulation of METROREX S.A., approved within the Extraordinary General Meeting of the Shareholders from May 4th, 2017, the entire business of METROREX is structured on processes, projects and programs.

The processes are built on business taking over an entry (products, services, information, general resources, etc.) adding value by consuming the resources and cause an outcome on exit (they fulfill a function) which must respond to certain quality requirements, imposed through the performance scopes established by an external or internal beneficiary.

The general and specific processes developed on the entity level of public interest are grouped on the level of the operational areas, as it follows: the Procurement / Supply operational Area; the Inventory operational Area (Stocks); the Suppliers' operational Area; the Design operational Area; the Fixed Assets operational Area; the Maintenance operational Area; the Valorization operational Area; the Client operational Area; the Treasury operational Area; the General Accounting operational Area; the Budget operational Area; the Document Management operational Area; the Human Resource and Salary operational Area.

Regarding the business report for 2015 of METROREX S.A., for 2015, a special role was held by the continuation and consolidation of the Integrated Informatic System – "Phoenix" (IIS) with real data from the financial-accounting departments, exploitation, procurements, etc. to build a management information real support.

Table 2. Roles in the organization processes

ORGANIZATIONAL UNIT	
ROLES IN RELATION TO THE ORGANIZATION PROCESS	
A – process architect	Process design-perfection coordinator: <ul style="list-style-type: none"> • Second level of management (specialized managers) • Following the assembly performance of the executed, coordinated, designed processes in their subordination • Identification and removal of the malfunctions of interaction between the processes and collaboration between the departments
C – process coordinator	Executive coordinator (of an instance) of the process <ul style="list-style-type: none"> • Usually, the first level of management (office managers, service etc.)
E (1 or 2) – process executive	Executive – attendant to the respective process
ROLES AND TASKS ON A, C, E LEVELS (1 OR 2)	
1AC	<ul style="list-style-type: none"> • The process is basic (main) • The manager of the unit is: architect and coordinator for the process
1A	<ul style="list-style-type: none"> • The process is basic (main) • The manager of the unit is: architect for the process
1C	<ul style="list-style-type: none"> • The process is basic (main) • The manager of the unit is: coordinator for the process
2C	<ul style="list-style-type: none"> • The process is auxiliary (secondary) • The manager of the unit is: architect and coordinator for the process

Source: compilation of the author under the organization and operation Regulation of METROREX S.A., approved in the Extraordinary General Meeting of the Shareholders from May 4th, 2017.

In the Integrated Informatic System there is a series of hierarchy and interconnected structures within an integrated configuration. The financial-accounting system includes the General Accounting, legal reporting and reports to the management, the Sales register and the Purchase register, the fixed assets register and the Management of Liquidities. The system must be accessible from all the locations where accounting business is developed (generation of accounting notes), having responsibilities related to the management of the fixed assets, invoicing business – receiving or supplier invoicing – payments.

For the implementation of this system, the Oracle Financials way was proposed including the following submodules/functions:

- Oracle General Ledger (GL) – General Accounting;
- Oracle Payables (AP) – Payment Management;
- Oracle Receivables (AR) – Payment Management;
- Oracle Cash Management (CM) – Receivable Management;
- Oracle Assets (FA) – Fixed Assets.

Table 3. Short presentation of the Oracle Financials module

OPERATIONAL AREAS	OPERATIONS
Suppliers/Payments management	<ul style="list-style-type: none"> - Received advances; - Received invoices – diverse or by integration with Supply module - Cancellation received invoices – diverse or by integration with the Supply module (PO); - Payments on invoices; - Expense account; - Accounting of transaction through integration with the General Accounting module.
Customers/Receivables management	<ul style="list-style-type: none"> - Received advances; - Issued invoices – diverse or by integration with the Delivery module; - Cancellation issued invoices – diverse or by integration with the Delivery module; - Reception on invoice; - Accounting of transactions by integration with the General Accounting module;
Liquidity management	<ul style="list-style-type: none"> - Introduction of Bank Accounts (receptions, invoice/miscellaneous payment – by integration with the Suppliers and Customers modules); - Cash registers (receptions, payments on invoices/miscellaneous – by integration with the Suppliers and Customers modules)

OPERATIONAL AREAS	OPERATIONS
Fixed assets	<ul style="list-style-type: none"> - Fixed asset procurements – by integration with the Supply module; - Invoices received of fixed assets – by integration with the Suppliers module; - Depreciation of fixed assets; - Transactions of different fixed assets (modernization, cassation, reassessment, reframing, assignment etc.); - Sale of fixed assets; - Accounting of transactions by integration with the General Accounting module.
General accounting	<ul style="list-style-type: none"> - Accounting of all the accounting notes generated from the other operational areas; - Miscellaneous accounting notes; - Accounting notes corresponding to the management accounting; - Accounting notes corresponding to the term ending.

Source: METROREX S.A.

5. Conclusions

The architecture of the Integrated Informatic System (IIS) of the public interest entity emphasize several aspects, as it follows:

- The IIS of the entity within a software module assembly, computing technique, communication and technology systems meant to coordinate all the resources, information and activities inside the company;
- The IIS of the entity provides the unique processing and integration of the information from different business areas, such as: financial-accounting, sales and distribution, human resources, maintenance, etc.
- The IIS of the entity permits the introduction of data by manual collection procedures or by automatic collection by the system, the storage of this data, its unit processing and extraction of information (outcomes) under different forms (real-time reports).
- The IIS of the entity has safety saving procedures (data recovery able to provide the integrity and their consistency) and provides an efficient and safe policy for the data recovery in case of disasters (plan and testing).

Acknowledgement

The research was made with the support of S.C. METROREX S.A., under the agreement to access the economical and technical data of the entity.

References

- Beaman, I., Richardson, B. (2007). *Information Technology, Decision Support and Management Accounting Roles*, Journal of Applied Management Accounting Research, vol. 5, nr. 1, pp. 59-68.
- Cardoș, V.D. (2010). Teză de doctorat "Provocările și valențele auditului sistemelor informaționale contabile", http://doctorat.ubbcluj.ro/sustinerea_publica/rezumat/2010/contabilitate/Cardos_Vasile_RO.pdf
- Ceran, M.B., Gungör, S., Konya, S. (2016). *The Role of Accounting Information Systems in Preventing the Financial Crises Experienced in Businesses*, Economics, Management and Financial Markets, vol. 11, nr. 1, pp. 294-302.
- Diaconu, E. (2015). Rolul informației financiar-contabile în dezvoltarea durabilă a firmei, <http://conferinta.academiacomerciala.ro/CD2015/ARTICOLE/1/ROLUL%20INFORMATIEI%20FINANCILA%20A%20FIRMEI%20Diaconu.pdf>
- Forman, C., McElheran, K. (2012). *Information Technology and Boundary of the Firm: Evidence from Plant-Level Data*, Working Paper, nr. 12-092, Harvard Business School, SUA.
- Gallani, S., Krishnan, R., Wooldridge, J.M. (2015). *Applications of Fractional Response Model to the Study of Bounded Dependent Variables in Accounting Research*, Working Paper, nr. 16-016, Harvard Business School, SUA.
- Ghasemi, M., Shafeiepour, V., Aslani, M., Barvayeh, E. (2011). *The Impact of Information Technology (IT) on Modern Accounting Systems*, Procedia – Social and Behavioral Sciences, vol. 28, pp. 112-116.
- Huang, D.C., Hu Q., (2007). *Achieving IT-Business Strategic Alignment via Enterprise-Wide Implementation of Balanced Scorecards*, Information Systems Management, vol. 24, nr.2
- Kennedy, F.A., Brewer, P.C. (2005). *Lean Accounting: What's It All About?*, Strategic Finance, vol. 87, nr. 5, pp. 26-34.
- Lim, F.P.C. (2013). *Impact of Information Technology on Accounting Systems*, Asia-Pacific Journal of Multimedia Services Convergent with Art, Humanities, and Sociology, vol. 3, nr. 2, pp. 93-106.
- Lupulescu, M., Dănăiață, D., Muntean, M. (1999). *Bazele computerelor*. Hard & soft, Editura Mirton, Timișoara.
- Marchand, D.A., Hykes, A., (2007). *The Role of Information in Creating Value Effectively*, în Amman et al., Managing Complexity in Global Organizations, John Wiley & Sons.

- Moscove, S.A., Simkin, M. G., Bagranoff, Nancy A. (2003). *Core Concepts of Accounting Information Systems*, John Wiley & Sons Ltd.
- Prodan Palade, D., Tanasă F.E (2016). *Impactul tehnologiilor informaționale asupra sistemelor de contabilitate*, CECCAR Business Magazine, nr.24, <http://www.ceccarbusinessmagazine.ro/impactul-tehnologiilor-informationale-asupra-sistemelor-de-contabilitate-a925/>
- Ristea, A.L., Valeriu, I.F., (2009). *Metodică în cercetarea științifică*, Editura Expert, București.
- Thapayom, A., Ussahawanitchakit, P. (2015). *Accounting Information System Excellence and Goal Achievement: Evidence from Information and Communication Technology Businesses in Thailand*, The Business and Management Review, vol. 7, nr. 1, pp. 309-321.
- Vasilescu, R., (2008). *Sisteme informatice de contabilitate*, Editura Eurostampa, Timișoara.
- *** Regulamentul de organizare și funcționare al METROREX S.A., aprobat în ședința Adunării Generale Extraordinare a Acționarilor din data de 04.05.2017.
- *** Statutul actualizat al Societății Metrorex S.A. (2015), în raport cu prevederile Legii nr.31/1990 privind societățile, republicată și actualizată și de prevederile OUG nr.109/2011 privind guvernarea corporativă a întreprinderilor publice, cu modificările și completările ulterioare.
- *** Raport de activitate pe anul 2015 al METROREX S.A.
- *** Ordinul nr. 1802 din 29 decembrie 2014 pentru aprobarea Reglementărilor contabile privind situațiile financiare anuale individuale și situațiile financiare anuale consolidate, Monitorul Oficial nr. 963 din 30 decembrie 2014, Partea I.

Websites:

<http://www.metrorex.ro/>

http://www.metrorex.ro/rapoarte_si_studii_p1402-1

http://www.tehnopress.ro/webfiles/books_documents/pdf_extras/34_interior_fotache.pdf