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Functions of Computerized Accountancy

(Recommended by Prof. A.F. Katkow)

The information created within accountancy system is more and more frequently used in company's management and the computerized accountancy is expected to provide information not only retrospective by also prospective one. This paper presents functions of computerized accountancy related to informational expectations of information recipients.

Информация, создаваемая внутри системы бухгалтерского учета, все чаще используется менеджментом компании. Поэтому требуется, чтобы компьютеризированный учет снабжал не только ретроспективной, но и перспективной информацией. Представлены функции компьютеризированного бухгалтерского учета, связанные с информационными ожиданиями получателей информации.

Key words: accountancy, computerized accountancy, IT accounting.

Accountancy is a fundamental source of economic information for business units. It collects all necessary data which characterize business activity and it provides services to various levels of management by delivering all necessary information. Thus it is a significant component of an informational system in business. Business accountancy can also be considered as a coherent system (it is an element of a bigger system and it is a system itself) where data collection and registering (filing), data processing (grouping according to set criteria) and presentation of the effects of the processing (in the form of statements and various sheets) can be distinguished. Information received from computerized accountancy should present true and fair view of a company and meet the informational expectations of the system users and information recipients. Accountancy which employs computer hardware for data processing must provide not only for accounting rules as a system, legal regulations but also specific technology requirements. The article characterizes computerized accountancy functions which provide for its specificity related to informational expectations of the recipients of such information.

The essence of business accountancy. Accountancy is not an unambiguous concept. Polish and foreign literature presents numerous interpretations of

this concept and various scope of accountancy. One of the most prominent Polish theorist of accountancy, S. Skrzywan highlights its essence as a particular kind of economic events registration. According to S. Skrzywan this means a system of continuous registration, presentation and interpretation of data on business activity and property of a business unit, expressed in cash and balanced numbers [1].

Traditional approach to accountancy encompasses three fundamental modules: accounting; costing; financial reporting.

Accounting is a filing part of accountancy which registers, in the books, all the data for further processing. Costing is defined as all the activities which aim to reflect the provision, production and sales in a company by means of registration, grouping and interpretation within separate prime costs of production and sales of products of company's activity, measured in a quantitative and qualitative way, for a certain period of time, in order to obtain possibly comprehensive information necessary for determination of results and for managing the company. [2]. Financial reporting is a final stage of data processing in accounting systems. It generates information presented to the financial statement recipients of a broadly understood business environment. It is regulated by legal regulations in terms of content, form and presentation.

In Polish legal regulations on accounting rules, an essence of accountancy is shown indirectly, by determination of its purpose and scope. According to the Accounting Act it encompasses:

- accepted accounting rules (policy);
- bookkeeping, on the basis of accounting records, with consideration of events in a chronological and systematic order;
- periodical determination and check, by means of stocktaking, for real level of assets and liabilities;
- assets and liabilities pricing and determination of financial result;
- preparation of financial statements;
- collecting and filing of accounting documents, as well as all the remaining documentation under the Act;
- audits and announcement of financial statements in cases under the Act [3].

If the computer groups take part in accounting data processing, such an accounting is referred as to computerized accountancy.

Information created by accountancy is useful for the business environment and related business transactions and capital connections. These relationship concerns mainly:

- its owners and prospective investors who are interested in financial results and the level of risk of activity of a company and they need the information which could help them to track, purchase, keep or sell their shares, stocks etc;
- contractors who are interested in evaluation of general financial stand of an entity and its plans for the future;

public institutions and organizations which are particularly interested in information for the economic macro statistics or economic and fiscal policy determination;

lenders and borrowers, who are interested mainly in level of cash flow in an entity and its solvency which impacts the evaluation of credit risk;

the Treasury, which is interested in information on financial results of an entity and the method of tax clearance;

employees, who are interested in issues of remuneration, perspectives for the entity in terms of opportunities of job and remuneration continuation;

local governments – these are interested in general financial standing of an entity in terms of local tax liabilities, employment rate, number of job vacancies, environmental pollution, local subventions and subsidies;

competition, who are interested in financial and organizational activity of an entity in terms of its profitability, size and sales markets, prices and margins and the marketing policy.

Access to the information on a business unit is guaranteed to the external recipients by the Accounting Act regulations, which precisely determine the forms and deadlines for financial statement presentation, one of the main sources of information on businesses.

Effect of accounting methods on accounting policy. Accounting policy is understood as: selected and used solutions (rules), accepted under the Act and determined under the International Accounting Standards which ensure the required quality of financial statements [4]. The companies can, within the accepted accounting rules, use some simplifications unless it negatively affects the realization of the rule of true and fair view.

Data processing in accounting systems can be carried out by means of a conventional «by hand» method or using computer technology. «By hand» methods of bookkeeping include: tabular bookkeeping; register bookkeeping; duplicating bookkeeping.

Tabular bookkeeping was invented in XVII century in France. Record of an economic event in the form of table is prepared in such a way that first a chronological records is written in the register and then with a systematic approach on the appropriate accounts of a ledger. After registration of all the records, a column of a total and Dt and Ct account columns are added. A total of a register is equal the total of turnover of Dt and Ct side of all accounts. For the ledger accounts a detailed bookkeeping is carried out (for the «Materials», «Settlements with Suppliers», «Settlements with Customers», «Goods»).

Due to limited number of account, a tabular technique can only be applied in small businesses. The advantages of this form of bookkeeping include transparency of records, easy identification of accounting errors, easy registration and check of the records in ledgers and subsidiary ledgers.

Register bookkeeping is characterized by the fact, that individual economic events are presented in so called account ledgers which are analytical bookkeeping devices. Number of ledger can vary depending on the size and kind of business activity. All the ledgers group homogenous operations from all the documents (purchase ledger, bank ledger, banking ledger, sale ledger). The ledger presents the economic event history within the whole lifetime of this event. The ledgers are prepared on monthly basis.

The advantages of register bookkeeping include opportunities to share work in accountancy, opportunities to analyse a particular economic event, opportunities to include the detailed bookkeeping (analytical to the account ledgers). A drawback is lack of systematic records on synthetic accounts and complicated system of connections and relations from the record in the synthetic ledger to the accounting document. Duplicating bookkeeping consists in registration of the accounts (for systematic records) and the register (for chronological records) on the cards. Number of account cards to a particular account depends on the number of registered economic events.

Advantages of duplicating bookkeeping include opportunities to keep any number of accounts, division of work in accounting departments, correctness, opportunity to facilitate accounting works. Drawbacks include poor transparency, difficult control over economic events, double entry accounting activities for each event and high number of devices necessary for registration.

Most of companies keep their books using computer technology, by means of special-purpose software. Polish balance sheet law imposes numerous requirements on computerized accountancy. Those requirements include: methods of bookkeeping; form of accounting records; printout of books and other documents.

While keeping the books using a computer, accounting informational resources organized in the form of separated computer databases, data sets or its separated parts are found to be equal to the books, no matter the location of their origin and storage. A condition to keep the information resources of an accounting system in the form of computer database is the possession of a software which enables to obtain transparent information with regards to the records made in accounting books by printout and copying onto another computer data carrier. Automatic control over continuation of the records as well as turnover and balance amounts brought forward should also be ensured. The accounting books should be printed not later than at the end of the financial year. Moving the contents of books into another data carrier which ensures the lifetime of the record over five year is found to be equal to printout.

Records in books kept by means of computers should be characterized by:
numbering order;

input of records into the books by means of the communication devices or magnetic data carriers is permitted only when the records are given a fixed, transparent form which reflects the content of accounting documents, a source of its origin and the person responsible for input of these data can be traced, the applied procedure ensures checking of correctness of processing for relevant data and the completeness and identity of records are ensured, source data are properly protected in a way ensuring its invariability for the period required for storage of a particular accounting documents;

continuous method of calculation for records (turnovers) total. The method of records input into the register should enable their unequivocal connection to checked and approved accounting documents;

they should have the positions numbers added automatically as they are registered and the data which enable to trace the person responsible for the content.

Accounting books, either traditional or computerized, should hold the name of the entity that they concern, name of the book, name of the processing software, financial year, reporting period and the date of preparation. In the documentation of the accepted rules for accountancy in a company a method of data processing (also in case of «by hand» method) is described. If the processing is performed on a computer basis, the description of the employed software provides for the most important features of the computerized accountancy. Scope of this description is contained in the Accounting Act (Art. 10 item 3).

In case of accounting books kept using a computer, an emphasis is made on the safety of the data. Data protection should consist in application of the following protective devices:

- using the data carriers which are resistance to dangers;
- selection of appropriate means of external protection;
- systematic creation of backup copies for databases saved on computer carriers;
- ensuring the protection for computer software and computerized accountancy system data by means of application of appropriate software and organization solutions which protect against unauthorized access or destruction.

Detailed rules for data protection and stipulation of conditions for required protection is determined by the entity itself, depending on the possessed informational resources.

Specificity of computerized accountancy. Each informational system, including also computerized accountancy, should be characterized by credibility, correctness, usability and efficiency. In order to fulfill these expectations, the accountancy should be: reliable; error-proof; checkable; should reflect current economic events [5].

Obligation to fulfil these conditions is important especially for computerized accountancy. Computerized accountancy is connected with several threats to the accounting data. The sources of these threats include the following com-

ponents of the information systems: hardware, software (system and applications) and the persons connected with the system. Moreover, they can come from the natural forces of information system environment [6].

Reliability of the books means the presentation of economic events according to the true state; error-proof characteristics means a complete and appropriate qualification and registration of the accounting documents in the books. The errors which do not affect the balance (correctness of amount on the side of Dt and Ct for particular accounts and, consequently, conformance of assets and liabilities) may occur in computerized accounting. The most important control function for computerized bookkeeping of economic events such as control of the rule of double entry accounting, is, with the systems of computerized accountancy, performed automatically. The errors which can not be detected fast and efficiently actually pose threats to the reliability of the result information.

Books are checkable when they enable the correctness of the records (balances) and procedures for calculations to be checked. It is proved by full documentation which enables the identification of accounting documents with the records in the books to be performed at each level of processing [7]. Accounting records are ordered chronologically (register) and systematically (ledger accounts), which enable the reporting obligations to be fulfilled under balance and fiscal law.

The superior task of accountancy is to deliver reliable and credible economic information which not only enables the assessment of a business unit to be carried out but also provides the data necessary to management decision-making. Thus a fundamental function of accountancy is an informational function. Due to this fact, numerous authors highlight this function by indicating its place among other functions in the following way: information, analysis, settlement, statistics [8]; control, information, statistics, analysis [9]; information, analysis, control [10]; registration, control, reporting, analysis and interpretation [11]; information, settlement, registration, planning, evidence, optimisation, control, motivation, statistics and analysis [12].

Reporting function manifests in preparation of statements and reports adjusted to the needs of external and internal recipients. Evidence function is connected with application of accounting devices as the evidence in possible lawsuits or fiscal proceedings. Optimisations function expresses in creation, by the accounting system, of the basis for decision-making and formation of economic future. Control function consist in application of accounting data for protection of property against abuse, protection of the debtors, assessment of real economic standing of an entity. Analysis function in accountancy consists in application of figures from the statements for evaluation of current operation and for drawing conclusions which facilitate making optimal decisions.

Regarding the above mentioned characteristic it can be found that the accountancy is mainly an information system where an important role is played by economic or financial information whose fundamental designation is to meet the informational needs of internal and external users. Increase in information demands by the environment have caused extension of the functional and information range of accountancy – mainly its analytic, planning and decision functions. During realization of its ordinary functions, the accountancy should show reliable, quantified view of history and results for the economic events [13].

Extended memory capacity, speed and broad opportunities of computerized systems of accountancy enable:

- adding, to accounting data processing, various characteristics of economic events and resources and consequently multi-sectional sets of information;

- processing of huge databases in a short time;

- providing, in data processing, for the analysis, simulations, modelling and concluding;

- use of information obtained from accountancy systems for analysis (databases, data warehouses and artificial intelligence).

Use of computer for accounting books changes the method of data processing and it can affect the organization and management in the entity. The before mentioned features prove huge opportunities of extension of present traditional systems of accountancy with functions parallel in relation to basic registration functions of concluding in terms of decision making in a company. Modern systems of data processing enable to create, on the basis of information from accountancy systems, early warning systems for warning against the risk to lose the opportunity of business continuation or deterioration of financial and property standing of the company. Strong connection of computerized financial accountancy with company management cause that, apart from traditional function of accountancy, a new, managerial function appears.

Conclusions. Application of modern methods of collection, processing, analysis and access to accounting information significantly affected the view of information system in companies. Usability and efficiency of modern computerized accountancy systems depends however on various conditions of an internal and external nature. For many entities the modern computerized accountancy systems are still out of reach due to financial and organizational reasons. The dynamics of economic processes forces the integration of accounting systems as a reliable and credible source of information with the system of management. There is no turning point here. The companies, apart from developing the systems of accounting data processing, must put the emphasis on data safety. Changing the computerized accountancy system into the information database for managing the entity has become a key factor for operation and development of companies.

Інформація, що утворюється у системі бухгалтерського обліку, все частіше використовується менеджментом компанії. Тому потрібно, щоб комп'ютеризований облік забезпечував не тільки ретроспективною, але й перспективною інформацією. Наведено функції комп'ютеризованого бухгалтерського обліку, пов'язані з інформаційними очікуваннями отримувачів інформації.

1. *Skrzywan S.* Teoretyczne podstawy rachunkowości (Fundamental theory of accountancy). — Warsaw : PWE, 1973. — P. 155.
2. *Gmytrasiewicz M., Karmanska A.* Rachunkowość finansowa (Financial accountancy).— Warsaw: Difin, 2004. — P. 26.
3. *Ustawa z dnia 29 września 1994 r. o rachunkowości.* — Т. j. DzU z 2002 r. Nr 76, poz. 694 z późn. zm.), art. 4 ust. 3. (Accounting Act of 29 September 1994//J. of Laws of 2002, No. 76 item 694 with further amendments).
4. *Ibidem*, art. 3 item. 1 point 11.
5. *Ibidem*, art. 24.
6. *Skowronski J.* (red.) Prowadzenie i rewizja ksiąg rachunkowych przy technice komputerowej (Registration and auditing of the books with computer technology), — Łódź:SKwP, 1990. — P. 84.
7. *Idzikowska G., Kwasiborski A., Majdziak J., Owczarek K., Owczarek Z., Skowronski J.* Rewizja finansowa w środowisku informatycznym (Financial audit in informational environment). — Warsaw : REWIKS, 1997. — P. 17.
8. *Skrzywan S.* Teoretyczne podstawy rachunkowości (Fundamental theory of accountancy). — Warsaw : PWE, 1969. — P. 246.
9. *Peche T.* Teoretyczne podstawy rachunkowości (Fundamental theory of accountancy). — Warsaw. — 1988. — P. 55.
10. *Jarugowa A., Skowronski J.* Rachunek kosztów w systemie informacyjnym przedsiębiorstwa (Costing in information system of companies). — Warsaw. — 1975. — P. 25.
11. *Messner Z., Klimas M.* Teoretyczne podstawy rachunkowości (Fundamental theory of accountancy). — Warsaw : PWN, 1986.— P. 12.
12. *Sawicki K.* Problem funkcji i kierunków rozwoju rachunkowości jednostek gospodarczych, (Problems and directions of development in business units accountancy)//Zeszyty Teoretyczne Rady Naukowej SKwP. — 1994. — № 28. — P. 120.
13. *Micherda B.* Analityczna funkcja rachunkowości w okresie przejściowym do gospodarki rynkowej (Analytic function of accountancy during period of transition into a market economy) — Kraków : Wydawnictwo Akademii Ekonomicznej w Krakowie, 1998. — P. 155.

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