

## Aspects Regarding the Use of Information Technology Tools for Processing Accounting Information on Fair Value

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### Abstract

*Traditional accounting flows have proven to be efficient over time, but in the current situation, where more and more information is being generated, they have become difficult to use because they are not always able to provide the ideal way to manage volume - timely data, at an optimal cost and with a minimum level of error.*

*In order to be able to detail how accounting processes can be modified, to require a lower level of human intervention, it is relevant to present in advance a classic flow regarding the recording of fair values, in order to properly highlight the impact that the use generates. solutions based on artificial intelligence, along with automation and cloud computing platforms. This presentation aims to highlight the changes in the activity of accounting professionals, which require their training in the field of information technology, but also the understanding of accounting processes from this perspective.*

**Key words:** information technology, accounting, fair value.

**J.E.L. classification:** M41, G32.

### 1. Introduction

The accounting profession is undoubtedly going through a series of changes, most of them due to the evolution of information technology, which develops the general framework necessary for professionals to meet the current needs of the business environment ([www.iaesb.org](http://www.iaesb.org)).

In the current context, one can discuss the existence of an entire interconnected world in which communication and collaboration between individuals change, and technological progress generates new opportunities, with the help of which professionals in all fields can develop their working skills with information technologies, thus becoming able to turn their attention to activities that require a higher level of professional judgment and which have a significant added value.

Given the current economic environment which is becoming increasingly dynamic, future accountants need to develop a new set of skills, which combines accounting skills with technical skills in the IT solutions used. The adoption of new technologies really leads to the remodeling of the profession, because it allows the automation of several accounting processes, and in this context, professionals must improve their skills to meet current needs ([www.iaesb.org](http://www.iaesb.org)).

### 2. Theoretical background - information technology tools for processing accounting information

In recent years, professional bodies (IASB, 2016) have started to sound an alarm signal in order to draw the attention of accountants to the difficulties of promoting and using present and future information technologies, which may have as purpose the decline of the profession, and practitioners would it could be replaced by specialists from other fields, better prepared to address the needs generated by the current highly computerized economic context, if it does not develop the skills needed to use these technologies efficiently and creatively.

Currently, the needs of organizations have changed due to the continuous flow of information, which is followed not only by investors but also by different third parties, so that large companies must present in real time the data needed to stakeholders, in order to demonstrate transparency and remain competitive. Given the magnitude of the latest financial scandals that led to the emergence of economic crises, gaining confidence is no longer an option for companies, but a necessity to remain on the market, both in terms of legal regulations and in terms of competitiveness (IASB , 2016).

The automation of accounting processes is not a new approach, but has been in use for three decades, thanks to the fact that it has a positive impact on the accounting activities (IASB , 2016), both by improving the performance and by the fact that they can provide feasible statistics and forecasts on the future costs of organizations. However, at the time of the above studies, the level of automation was much lower than the current reality, when the volume of information is much higher. In this framework, process automation allows companies to remain competitive, otherwise the costs would be too high to carry on a profit-generating activity.

Robotization of processes not only helps to reduce costs, it also brings a significant improvement in the quality of the data, reducing the risk of human error. Currently, we can talk about automating accounting records along with artificial intelligence-based technologies, such as optical character recognition (OCR), without the need for practitioners' professional reasoning to perform document recording activities. However, on the other hand, there are challenges such as the need to establish a correct strategy by companies, which will allow to achieve the operational objectives in an optimal way, but also negative aspects, such as the decrease of the number of jobs and the limitation of the possibilities of professional development (IASB , 2016).

### **3. Evolution of information technology tools in accounting - empirical aspects of research**

The current level of digitization in the current economic context, as well as forecasts in the field of information technology, have led to the need to have better trained professionals in the digital field, regardless of the professional area.

In the last 10 years, a clear series of changes has been observed in the requirements for admission to the training stages, both from the regulatory bodies and from the prestigious international professional bodies in Europe, such as: Association of Chartered Accountants (ACCA) , The Institute of Accounting Experts in England and Wales (ICAEW) and the Institute of Management Accounting Experts (CIMA), which currently have the objective of highlighting the changes, through which the accounting profession passes due to the increasing volume of data, which is becoming more and more more difficult to process and manage in the absence of adopting optimal IT solutions ([www.iaesb.org](http://www.iaesb.org)) .

In the financial-accounting field, the first reports addressing the need for development came from professional bodies, which managed to provide a complete picture of the future of the profession in the context of digitization. One of the most important articles was published in 2012 by the ACCA, which analyzes a wide range of technologies and challenges, some of them emerging at that time, which are considered to have the potential to have a significant long-term impact. medium and long on accounting processes. This is how the use of technologies such as big data, artificial intelligence and cloud computing platforms can improve accounting activities, by reducing the level of primary analysis and the time allocated to redundant processes. At the same time, the need to understand how these technologies work and what are the main challenges that can lead to the loss or theft of confidential data once exposed in the digital environment is emphasized. In new analysis ([www.iaesb.org](http://www.iaesb.org)) professionals are advised not to reject the benefits that these technologies can bring and to take the leading role in improving accounting processes with the help of digitization. At the same time, the current role change is strongly promoted, by migrating to management consulting activities, by increasing the level of added value.

Mobile technologies are by definition any kind of small electronic device, such as phones, tablets and laptops, which can be used anywhere and connected to a communications network. Currently these devices are used for a wide range of activities, starting from the basic communication, to the use of socialization platforms, as support for the development and learning activities, to carry out the professional activities, the use of banking services, booking a vacation,

setting temperature in the house and the list can continue ([www.iaesb.org](http://www.iaesb.org)) .

Mobile devices have surpassed the status of emerging technology, being used by most individuals every day. The existence of this high degree of acceptance and use of this technology by the majority of the population is mainly due to the socialization needs and to overcome the geographical barriers, and the specialized studies have shown that for a long time people have become much more attached to mobile devices than any other kind of technology ([www.iaesb.org](http://www.iaesb.org)).

The expansion of the use of this technology can also be explained by the emergence of the Internet of Things (IoT), which represents all electronic devices connected to the Internet. Thus, with the help of the applications installed on mobile devices, the user can manipulate various objects, such as the thermostat in the house and the cars, but also to monitor various objectives, thus having practical applications in most areas: health, security, agriculture, etc. , some examples that show how organizations can use various smart devices to secure customer activities and facilitate organizational processes are: reducing fraud using bank cards, monitoring the physical location of assets (automobiles, machines, containers and other stocks), reducing the interval time from the moment of an event to the actual registration of the transaction and the verification of the goods by the use of drones ([www.iaesb.org](http://www.iaesb.org)).

#### **4. Survey of the specific developments in the in Romania**

Romania, a country with an emerging economy, has started to become a point of interest for multinational companies in the case of providing services in the accounting field , due to lower labor costs, compared to the countries of origin of these companies, but also due to the sustainable economic growth and the good level of training of the practitioners. Thus, having a high level of outsourced services in Romania, the majority provided for organizations from developed countries, the need to have complete working skills with existing and emerging IT technologies is visible. The same trend can be observed in the case of other emerging or developed economies, and in this way the need to have better trained professionals to meet the needs of the current economy is emphasized ([www.iaesb.org](http://www.iaesb.org)) .

In recent years, an obvious change has been observed both in the accounting profession, which has begun to place a greater emphasis on the understanding and efficient use of technologies, as well as in the accounting processes, which have begun to be simplified through solutions and applications. information. Due to this aspect, the need to have new standards and sufficient knowledge in the field of computer technologies adopted in the last years in the accounting processes has developed. Thus, it can be observed how the evolution in the IT field manages to change the way of working, as well as the area of competence in the accounting field.

In order to have a clear vision on how the profession has begun to change over the last few years, a detailed analysis of these aspects is considered necessary. As a result, this chapter will present how professional bodies in the accounting field support practitioners in accumulating the necessary knowledge in the IT field and the degree to which the academic environment in the emerging countries of the European Union supports the long-term development of accounting professionals.

The use of mobile technologies in the business environment has made it possible to overcome geographical barriers and has succeeded in improving the level of communication and collaboration between entities. Thus it can be observed that at global level there is a continuous increase in the number of remote work places, where the employees work in most cases a few days a week or even entirely outside the company. It can be observed that the traditional model of companies gradually disappears under the beneficial influence of the technological progress that has as main advantages the reduction of the costs, the improvement of the communication level and the efficiency.

In the educational process, the use of mobile technologies has brought significant benefits, due to the fact that in this way students are more involved in educational activities, given that communication is more efficient, and the results are offered in real time, compared to traditional methods. teaching that sometimes fails to hold students' attention, as has been pointed out in the internet ([www.iaesb.org](http://www.iaesb.org)) .

The use of this technology in the accounting field brings a number of benefits, such as:

continuous access to information, overcoming geographical barriers, reducing costs and facilitating the process of recording accounting information. The use of mobile technologies, together with cloud platforms, brings significant advantages, because this way the communication between practitioners and clients can be made more efficient, and the quality of services will increase considerably. In the audit processes, mobile technologies are used to have a better electronic record of the supporting documents and in the processes of inventory and activity planning ([www.iaesb.org](http://www.iaesb.org)).

In addition to the advantages presented, this technology also brings a number of challenges to data security. Although the majority of the population uses a mobile device, a sufficient degree of knowledge about the associated risks cannot always be identified. Users are not always alert to the risk of data transmission or theft and have limited knowledge of the methods they can use to improve data security and reduce malware attacks ([www.iaesb.org](http://www.iaesb.org)).

## **5. The observation of the recommendations from international professional bodies**

In 2016, the CGMA conducted a study whose purpose was to highlight the degree of awareness on the impact that the evolution of technologies can have on the profession. The results of the research showed that most of the members of the professional body consider that the impact will be significant as long as the adoption of technologies for process automation will have the effect of reducing the costs and the time required to carry out the activities ([www.accaglobal.com](http://www.accaglobal.com)).

In order to be able to align the current and medium-term skills of the professionals in the financial-accounting field with the already existing requirements of the companies, in 2014 the International Education Accounting Standards Board (IAESB) changes the structure of the International Education Standard (IES 2) in order to introduce a new section for information technology ([www.iaesb.org](http://www.iaesb.org)). According to the modified version of the standard, practitioners must demonstrate through their training, an average level of competences in the field of controls for information systems and technologies, knowledge of data analysis procedures and efficient use of technologies in the decision-making process ([www.iaesb.org](http://www.iaesb.org)).

Although the new standard was to enter into force starting in 2015, in 2014 the ACCA changes the structure of the evaluation plan for the P3 - Business Analysis exam in order to align with the educational requirements ([www.accaglobal.com](http://www.accaglobal.com)). Thus, the criteria in the chapter dedicated to information technology are modified, by adding a new section, which focuses on identifying, analyzing and evaluating controls related to information systems and technologies and general knowledge of hardware and software. Some of the most important data security controls are included in the software knowledge part: access control, data integrity, security from the perspective of IT systems architecture and physical data security.

Thus it can be observed that at the level of international professional bodies, the necessary steps are taken for the proper training of the practitioners in order to develop a sufficient set of skills to meet the demands of the companies ([www.accaglobal.com](http://www.accaglobal.com)).

This 2014 change in the structure of the P3 exam is the first in a long list of changes, which continues to this day. A second change occurred in 2015, when within the same module were introduced the requirements for knowledge of big data technology, as well as how it can be used to develop managerial strategies. The latest change for the 2018 exams has introduced in the documentation for evaluation, the methods by which mobile technologies and cloud computing platforms can be used to develop strategies, and information security principles, such as ways to protect against cyber attacks and the development of controls. preventive. Therefore, it can be observed that during a rather short period, the ACCA changes the structure of the exams to meet the needs of the current economy ([www.accaglobal.com](http://www.accaglobal.com)).

## **6. A case study of fair value accounting**

On September 25 2019, an entity purchases 15,000 shares at the price of 1,000 m.u. (monetary unit) per share. Trading costs represent 1.75% of the value of the purchased shares (Nicolae, 2010).

Under accounting policies adopted by the entity, the target pursued by the entity is to trade the shares in the near future, aiming at achieving medium-term profit from these operations, and

classifies the shares acquired in the financial assets at fair value through profit or loss (FVTPL) category (Nicolae, 2010). The accounting account used (as proposed in the IFRS accounting plan ) to exemplify the accounting records was selected based on the formulated assumptions (Nicolae, 2010).

The acquisition is quoted on a non-regulated market and the entity has concluded, according to its policies, that the market is active and that it is also the primary trading market, in accordance with IFRS 13 (Nicolae, 2015).

### Accounting records

(Author processing)

Registration of the acquisition of shares :

Debit *Medium-term financial investments* 15,000,000  
Credit *Payments to be made for medium-term financial investments* 15,000,000

Record of transaction costs:

Debit *Expenses on fees payable for securities trading on the non-regulated market* 262,500  
Credit *Payments to be made for medium -term financial investments* 262,500

Payment of expenses:

Debit *Payments to be made for medium-term financial investments* 262,500  
Credit *Bank account* 262,500

Payment of debt on purchased shares:

Debit *Payments to be made for medium-term financial investments* 15,000,000  
Credit *Bank account* 15,000,000

Accounting records as at 31 December 2019

At December 31 2019, the share price dropped to 900 m.u. , and the fair value of the stake was 13,500,000 m.u. . The loss caused by keeping titles = 15,000,000 m.u. - 13,500,000 m.u. = 1,500,000 m.u. The registration is:

Debit *Losses related to medium-term financial assets and liabilities* 1,500,000  
Credit *Medium-term financial investments* 1,500,000

Accounting records on May 15, 2020

On May 15, 2020 the share price increased to 1.200 m.u. . As a result, a gain of fair value differences on the share of the shares held will be recorded, amounting to = 15,000 shares x ( 1.200 m.u - 900 m.u. ) = 4,500,000 m.u. :

Debit *Medium-term financial investments* 4,500,000  
Credit *Gains on long-term financial assets and liabilities* 4,500,000

Accounting records on 31 May 2021

On May 31, 2021, the entity signs a share sale contract at a price of 1,500 m.u. . The selling price is equal to the market share quote valid for the date of sale = 15,000 shares x ( 1,500 m.u - 1,200 m.u. ) = 4,500,000 m.u.

Recording of the valuation at fair value:

Debit *Medium-term financial investments* 4,500,000  
Credit *Gains on medium-term financial assets and liabilities* 4,500,000

Registration of sale of shares = 15,000 shares x 1.500 m.u = 22,500,000 m.u. :

Debit *Debtors from transactions on the non- regulated market* 22,500,000  
Credit *Medium-term financial investments* 22,500,000

Subsequent collection of due amounts:

Debit *Bank account* 22,500,000  
Credit *Debtors from transactions on the non-regulated market* 22,500,000

This example illustrates the periodic update of long-term financial investments at fair market value by recording the gains or losses generated by the fluctuation in fair value on the current profit and loss for the year.

When implemented in practice, entities may also consider other accounting records alternatives as long as there is a fair presentation of the results in profit or loss and in the statement of financial position.

## 7. Conclusions

In my opinion, the use of information technology tools opens new paradigms regarding the information flow of modern accounting (Nicolae, 2015).

The large-scale introduction of information technology tools in the accounting decision-making process of the different categories of entities allows the exponential expansion of the accounting information field. The use of artificial intelligence tools is currently in the process of being implemented. The medium of accounting information thus developed hitherto unsuspected dimensions.

Currently processing possibilities of huge volumes of data in accounting, temporarily delocalized data applications, the use of virtual registries allow real-time analysis and decision making in the organization of accounting of different entities.

## 8. References

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