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SECTION II
FINANCIAL AND ACCOUNTING POLICIES

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THE FISCAL IMPLICATIONS REGARDING THE GRANTING OF GIFT VOUCHERS WITHIN THE MARKETING ACTIONS

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Abstract

The present paper aims through a study, to highlight the type of method of evading taxes and duties to the consolidated state budget, by granting gift vouchers, as part of a marketing and product promotion campaign, to individuals who they did not have the quality of employees of the company.

The purpose of this research is to identify and study the reasons for granting gift vouchers, in marketing actions and the consequences of incorrect interpretation / application of legislation.

Through the research carried out, it was found that the phenomenon of granting gift vouchers currently has a significant impact on the Romanian economic and social reality.

In order to reduce the phenomenon of circumvention, a monitoring, surveillance and control mechanism should be more firmly established, as well as the amendment of legislation, which is a consequence of inaccuracies or imperfections of laws. Non-taxation by withholding and transferring contributions to the consolidated state budget is a violation of legislation and a decrease in the consolidated state budget.

Following the study, it resulted that the granting of gift vouchers is in fact an additional remuneration granted to employees of distributors strictly for carrying out the activities for which they are employed by them, being a disguised form of payment of salary rights.

Keywords: *gift vouchers, marketing, salary contributions, income tax, budget*

JEL Classification: *M31, M41, M51*

1. Introduction

Understanding and deciphering future trends is extremely important for decision making in any activity, including marketing.

In order to keep up with the changes in society that have occurred, especially in the digital age, companies must define their own marketing concept adapted to the requirements, goals and objectives of each one.

Marketing has evolved as a function of the enterprise, but also as a science with the economic development of the last 50 years.

However, business people, researchers and marketers look at the definition and content of the marketing concept from different points of view.

In Romania, the trend of transition to a mature market, aware of the marketing methods used by companies for sales is growing.

Regarding the strategy of economic agents, it is an important link in increasing the flow of consumption and purchase, by giving gift vouchers to the final consumer.

In the present paper, a study is presented at the CLUB SRL Company, regarding the granting of gift vouchers within a marketing and product promotion campaign, to individuals who did not have the quality of employees of the company.

The study showed that the granting of gift vouchers is in fact an additional remuneration granted to employees of distributors strictly for carrying out the activities for which they are employed by them, being a disguised form of payment of employee rights.

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Non-taxation by withholding and transferring contributions to the consolidated state budget is a violation of legislation and a decrease in the consolidated state budget.

2. Literature review

Kotler Ph. delimited sales marketing and explained with the help of additional concepts that: the marketing process begins long before the actual sale. Thus, the marketing activity has as starting points the needs, desires and demand of consumers. These are satisfied by goods and services and evaluated according to the expected value and satisfaction and those obtained (Kotler Ph., 2003).

Roşca, Al., Suggests that: buyers preferences represent a positive motivation, expressed by emotional compatibility with a product, service, a brand, marketing company, person, etc. It is not an internal function of the organism, but is the result of human contact with a qualitative element of objects through which needs are met, a trait acquired in the connection between man and goods that meet his needs (Roşca, 2012).

Munteanu V., Zuca M., states that accounting engineering is defined by some authors as representing: the process by which, given the existence of gaps in rules, accounting figures are manipulated and, taking advantage of flexibility, choose those measurement and information practices which allow the transformation of summary documents from what they should be into what managers want ”or“ the process by which transactions are structured in such a way as to allow the “production” of the desired accounting result (Munteanu, Zuca, 2011).

Todor et. all., states in the paper - The degree of compliance based on excise duties in Romania between 2002 and 2015, that: the mechanisms of the competitive market and the tendency of modern states to intervene in the tax economy, we can easily see the significant role of taxes, either that we refer to the direct or indirect ones, being used as a lever of economic policy, through which we can accentuate or slow down certain areas of activity and increase or decrease consumption in a certain category of goods or services (Todor, et. all., 2017).

3. Materials and methods

The consumer's behavior towards the product is about the buyer's contact with the product in the commercial network (stores).

This involves the consumer carrying out the following activities:

- locating the product in the store;
- examination of the product;
- the actual purchase by paying at home its equivalent value.

At the same time, the other ways in which a consumer comes into contact with a product should be mentioned: receiving samples at home or in the store, or receiving a gift. Contact may also be indirect by observing the use of the product by third parties.

The second aspect of the consumer's behavior towards the product is represented by the brand loyalty.

Currently, under the influence of factors such as the variety of product categories, the availability of information about offers, similarities between products, time pressure on the consumer, brand loyalty has decreased.

Depending on the involvement of the consumer and the number of brands purchased in a certain period of time, there are 4 types of buying behaviors:

- brand loyalty;
- searching for variety;
- repeat purchase;
- varied derived behavior.

A consumer is loyal to a brand if he buys it repeatedly and is convinced of the value of that brand.

Brand loyalty is the intrinsic commitment of the consumer to buy a particular brand repeatedly. Fidelity differs from the repetition of the purchase in that the latter means only a behavioral manifestation without a strong motivation from the consumer.

The search for variety refers to the consumer's desire to buy different brands out of curiosity, while the varied derivative behavior occurs under the influence of external factors, such as stock depletion or better price at another brand.

Starting from this model, consumers can be in the following situations:

- loyal consumers of a brand;
- loyal consumers with the occasional change of brand;
- consumers who change loyalty from one brand to another;
- consumers looking for variety in the entire offer available at a given time.

Thus, multi-brand strategies are more aimed at consumers looking for variety.

The brand expansion strategy is aimed at loyal consumers looking for variety within a limited set of brands.

The characteristics of the goods with a suggestive effect on the customers are: the price, the packaging, the name and the image of the brand.

The packaging traditionally fulfills four functions:

- protection of the product during distribution;
- economic;
- ensuring optimal storage and use of the product;
- promotion, communication of product information.

In many cases, packaging can highlight a product, creating a relative advantage.

The consumer is influenced by the size and color of the packaging. The size of the package influences the choice of the desired goods and quantity. In general, consumers prefer large packaging to save time and money.

The color of the packaging is important to attract the consumer's attention but also to convey certain meanings.

Also, the change of the color of the packaging determines the change of the consumer's perception. At the same time, the packaging must allow the brand to be identified, which simplifies the purchase and makes it possible for consumers to gain loyalty, as well as the very useful information label, especially in the case of food.

The quality of the marketing strategy even if it is not a strict characteristic of a product has an important influence in ensuring its efficiency.

At the brand level, its image or symbolism is often the only relative advantage that an enterprise can offer.

Regarding the brand image, a high price means a high quality of the product, the consumers always establishing a relationship between price and quality.

The price is also used for the positioning of a brand on the market. In order to obtain a relative advantage, different distribution tactics can be used, such as the existence of a large number of product outlets and the corresponding display of products at the point of sale.

At the same time, marketing costs are divided into production, promotion, distribution and market research costs.

These costs are associated with the level of profit established by the company, thus resulting in the significance of the price in terms of marketing.

The price must cover at least variable costs and ensure a profit margin for the product to be effective.

The legislation applicable to gift vouchers is defined by Law no. 193/2006 - regarding the granting of gift vouchers and nursery vouchers and Law no. 165/2018 - regarding the granting of securities.

The legal framework for granting gift vouchers and nursery vouchers is provided by Law no. 193/2006:

[…] Art. 2 - Law no. 193/2006 - on the granting of gift vouchers and nursery vouchers (1) Gift vouchers can be used for marketing campaigns, market research, promotion on existing or new markets, for protocol, for advertising and publicity expenses, as well as for social expenses.

H.G. no. 1317/2006 for the approval of the Methodological Norms for the application of the provisions of law no. 193/2006 on the granting of gift vouchers and nursery vouchers: The activities and destinations provided in art. 2 para. (11) of Law no. 193/2006, with the subsequent modifications, they are generating expenses that fall within the provisions of Law no. 571/2003 on the Fiscal Code, with subsequent amendments and completions.

Companies may use gift vouchers for marketing campaigns, market research, promotion on existing or new markets, for protocol, for advertising and publicity expenses, up to the amounts intended to cover the face value of these vouchers, provided in their own budgets, approved by law, in separate items of expenditure, called gift vouchers. In this case, the fiscal regime applicable to the nominal value of the gift vouchers granted by the employers is the one established by the provisions of Law no. 571/2003, with the subsequent modifications and completions, for the expenses made by the taxpayers.

Individual employees who carry out an activity in an employment relationship, based on an employment relationship regulated by Law no. 53/2003 - regarding the Labor Code, with the subsequent amendments and completions, or by a special law, can benefit from gift vouchers granted by their employers, only for the destinations or events that fall within the social expenses. Employers give their employees gift vouchers, up to the amount provided in the expenditure budget approved according to the law, in a separate expenditure item called Gift vouchers for social expenses […].

Law no. 165/2018 - regarding the granting of securities:

[…] Article 2 para. (1) For the purposes of this law, the vouchers that may be awarded are: meal vouchers, gift vouchers, nursery vouchers, cultural vouchers and holiday vouchers.

(2) For the purposes of this law, unless expressly provided otherwise, the use of the terms voucher, meal voucher, gift voucher, nursery voucher, cultural voucher, respectively holiday voucher, shall be construed as reference to both paper and electronic securities.

4. Discussions

CLUB SRL acquires gift vouchers that it grants both to its own employees (for the occasions and within the limits provided by the Fiscal Code), and to legal collaborators, for the benefit of their employees (individuals), for marketing actions, market research, development on current or new markets.

The costs with gift vouchers hired by CLUB SRL have the role of boosting sales of products sold through distributors.

CLUB SRL organizes a promotional campaign, by issuing a Regulation, which establishes/ provides the following:

- area of development: the territory of Romania;
- development period: March - May;
- participants;
- any legal entity that sells the products distributed by CLUB SRL;
- the products participating in the campaign can be any of the products sold by the Organizer;
- giving gift vouchers.

CLUB SRL concludes contracts with distributors so that the sales incentive bonus is granted to the distributor (legal entity) taking into account the sales objective and its detailing for each employee of the collaborator.

The monthly sales objective of the distributor is therefore divided at the level of its employees, the contractual agreement is concluded between CLUB SRL and the distributor (without involvement/negotiation/participation of individuals), and gift vouchers are given to individuals employed by the distributor based on a Minutes which details each employee of the distributor and the number and value of gift vouchers due to each employee of the distributor.

Because the vouchers are awarded as a result of the relationship between the companies, not for the personal merits of the employees, the vouchers must first be received by the partner company and then distributed to the employees.

Considering the provisions of point 12 para. (2) of Title III of the Methodological Norms for the application of the Fiscal Code: the advantages in cash and in kind provided in art. 76 para. (3) of the Fiscal Code are considered to be any benefits received by the employee from third parties or as a result of the provisions of the individual employment contract or a contractual relationship between the parties, as the case may be (Law no. 227, 2015).

The company CLUB SRL must declare the value of the gift vouchers in the form 112 type insured 11- natural persons, who receive advantages in cash or in kind from third parties, […].

Regarding the establishment of the dependence of the activity carried out by the employees of the partners, the provisions of art. 7 point 3 are taken into account. of Law no. 227/2015 on the Fiscal Code, which defines the independent activity as the activity that meets at least 4 criteria from the following 7 criteria:

- the natural person has the freedom to choose the place and the way of carrying out the activity, as well as the work schedule;

According to point 1 para. (2) The methodological norms for the application of art. 7:

- point 3.1. provides: The criterion regarding the person's freedom to choose the place, the way of carrying out the activity as well as the work schedule is fulfilled when its three components are fulfilled cumulatively. In the legal report, the parties may agree on the date, place and work schedule depending on the specifics of the activity and the other activities they carry out.

In this case, the four conditions are not cumulatively fulfilled because the natural person does not have the freedom to choose the way of carrying out the activity taking into account the obligations from the contract, the criterion not being fulfilled by the natural person.

- point 3.2. provides: the natural person has the freedom to carry out the activity for several clients, but according to the methodological norms the natural person has the freedom to carry out the activity even with a single client if there is an exclusivity clause in carrying out the activity.

The natural persons in question carry out the activity, as employees, which does not exclude the possibility of carrying out an independent activity outside these contracts, a criterion fulfilled by the natural person.

- point 3.3. provides: risks inherent to the activity are assumed by the natural person carrying out the activity.

Compared to this criterion, we can say that the natural person is not in a position to assume risks of a professional and economic nature, motivated precisely by the fact that the person acting independently also assumes risks of a legal nature towards business partners/clients, these are the responsibility of the legal entity that sells the products of CLUB SRL.

As it can be ascertained, the legislator uses the phrase business patrimony which is defined by point 8 of the Methodological Norms for the application of art. 68 of Law no. 227/2015 as being constituted by all the rights and obligations related to the development of the activity that is registered in the Register - inventory.

So it is presumed that these individuals should carry out their activity under the conditions of the O.U.G. no. 44/2008 updated, regarding the development of the activity of

the authorized natural persons, individual enterprises and family enterprises, in order to be able to discuss the use of the business patrimony. In this situation we can see the following:

■ individuals have the quality of employee at the company that sells the products of CLUB SRL;

■ the activity carried out on the basis of employment contracts is carried out in the spaces that sold CLUB SRL brand products, and from the obligations registered in the contract it does not result that they would use some of the personal patrimony in carrying out the activity;

■ do not buy or sell products, the products are the property of distributors.

In conclusion, these persons in the realization of the object of the employment contract do not use the business patrimony in the sense defined by the Fiscal Code, as a result of which this criterion is not fulfilled.

◙ point 3.5. provides: the activity is performed by using the intellectual capacity and/or its physical performance, depending on the specifics of the activity, a criterion met by individuals;

◙ point 3.6. provides: the natural person is part of a professional body with the role of representation and supervision of the profession, according to the special normative acts that regulate the organization and exercise of the respective profession.

From the verifications performed in the REVISAL database on a significant number of individuals who obtained such incomes, it was found that they had only the status of employee or did not appear with other incomes declared from independent activity.

As a consequence, this criterion is not met, the natural persons not being part of a professional body according to the special normative acts that regulate the organization and exercise of the profession.

◙ point 3.7. provides: the natural person has the freedom to carry out the activity directly, with employed staff or through collaboration with third parties in accordance with the law;

In support we also bring the following arguments:

[…] Art. 67 of Law 227/2015 - The definition of income from independent activities provides in par. (1): Income from independent activities includes income from production, trade, services, income from the liberal professions and income from intellectual property rights, realized individually and / or in a form of association, including from activities adjacent. (3) The activities that generate income from independent activities included in art. 67 para. (1) of the Fiscal Code are for example:

Production activities; purchasing activities performed for the purpose of resale; organization of shows and the like;

[...] Art. 68 of Law 227/2015 - General rules for establishing the annual net income from independent activities, determined in real system, based on accounting data, para. (1) The annual net income from independent activities is determined in the real system based on the accounting data, as the difference between the gross income and the deductible expenses made in order to achieve income.

As can be seen: point 6 para. (3) of the Application Norms of art. 67 of Law 227/2015 on the Fiscal Code, defines the independent activity as the activity carried out by a natural person in order to obtain income that meets at least 4 criteria out of 7 provided in art. 7 point 3 of the Fiscal Code.

Following those presented above, we can conclude that when establishing the independence criteria, it was taken into account that: the respective natural persons to carry out a specific activity of the nature of those exemplified in para. (3) and at the same time to present a form of fiscal registration since at art. 68 stipulate that the annual net income from independent activities is calculated according to the accounting data.

5. Conclusions

Following the presented study, the following can be deduced:

■ natural persons who have received gift vouchers, are not part of a professional body regulated by special laws and do not carry out activity in a form of authorization regulated by O.U.G. no. 44/2008 updated regarding the development of the activity of the authorized natural persons, individual enterprises and family enterprises, situation in which the obtaining of incomes from independent activity related to the provisions of art. 67 and art.68 of the Fiscal Code was not possible.

As a result of those presented above, the work developed by these people cannot be an independent label in the conditions in which at least 4 of the 7 stated criteria are not met, and from those presented we found that at most 3 criteria are met (provided in pt. 3.2, 3.5 and 3.7 of Article 7 of the Fiscal Code);

■ tax payment obligations had to be calculated and withheld at the level of the Company (income tax and salary contributions) for gift vouchers granted for the benefit of individuals who are not employees of the Company;

■ non-taxation by withholding and transferring contributions to the consolidated state budget is a violation of legislation and a decrease in the consolidated state budget.

■ Following the study, it resulted that the granting of gift vouchers is in fact an additional remuneration granted to the employees of the distributors strictly for carrying out the activities for which they are employed, being a disguised form of payment of salary rights;

■ tax consequences: payment of income tax, contributions of a salary nature, interest and penalties.

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BUDGETARY PERFORMANCE IN THE CASE OF LOCAL PUBLIC AUTHORITIES, A TARGET TO REACH, BUT MORE THAN THAT, A MUST

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Abstract:
Starting from the motto "global planning, local action", the important role that is attributed to budgetary performance is given by the increasing budgetary constraints that public budget experiences, including the local budgets, by the insufficient financial resources needed for accomplishing development programs, starting from the local public administration level and reaching the integrative level of the European Union. Improving the performance at local level contributes to reaching objectives by the upper administrative staff.

Keywords: *local budget, budgetary performance, indicators, performance measurement*

Jel Classification: H70, H72

1. Introduction

Local public finances and their management permanently constitute important preoccupations for financial organisms, and the identification of modalities to improve their management is always current, due to the role and their importance in making local public authorities functional and in increasing the quality life of citizen.

The role and importance of local budgets increase along with the processes of decentralization and, more than that, they accelerate. The greater a country is decentralized, the more important is the decentralization role and efficiency.

Budgetary performance constitutes an important problem in the management of public expenditures for years. It represents the capacity of an administration to obtain resources in an economic manner and to use these resources in an efficient manner with a view to getting the desired result.

The importance of budgetary performance, the finding of most optimum solutions to use resources and through this, the gaining of citizen's trust in public policies are underlined in the most recent document of the European Commission on the performance framework for the EU budget belonging to the multiannual financial exercise 2021-2027 (Commission Communication, 2021).

2. Introducing Budgeting based on Performance, a Must

Studies in the field underline the fact that, the adoption of a coherent system to measure performance needs the clear defining of what we quantify, systems measuring the manner in which we use the performance measuring systems. The need of a system to measure performance may be justified, among others, by the fact that decisions on resource earmarking must be taken on clear founded bases, by using the so-called system of performance management.

The planning and budgeting capacity at local level and the fact that local structures do not have the same instruments as the national government may lead to obstacles in financing and managing local public funds under performance conditions and in such a manner as to ensure the reaching of sustainable development objectives. Attaining performance in managing budgetary funds, correlated with sustainable development strategies represents an extremely important and actual aspect local public authorities confront themselves with as well.

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The recent pandemic crisis has demonstrated how important the sustainability of public finances is. Public finance sustainability is not only a circumstantial preoccupation. This affects equity between generations and ilustrates principles which apply any moment to all governments and to local public authorities.

3. Theoretical and Practical Approaches on Budgetary Performance

Transformation in the public sector generated the necessity of a new public management (NMP), a concept that led to the emergence of a stream of reforms in the management of public services.

Improving economicity, efficiency and efficacy of public expenditures represents one of the NMP essential objectives and in order to reach this objective, structural changes occurred in the management of public finances. Out of these, the elaboration of budget on basis of programs, the passing from cash accounting to commitment accounting, the implementation of informational systems or the passing from conformity audit to performance audit have been adopted in the national legislation and have been implemented in the public administration in Romania (Hood, 1991).

The new public management implies additional attention on resource management, which includes, of course, not only cost reduction but also a special concentration on programs by which strategic objectives are reached.

The passing from traditional, linear budgeting, used as an instrument of resource earmarking and expenditure control, to budgeting based on performance was implemented on stages in the course of time, being initiated starting with the 50's of last century by developed States (pioneers in implementing this system being the United States of America at the Hoover Commission recommendation).

Further on, the majority of the European States put the condition that any new public policy be joined by a budgetary engagement that should define the resources it was going to be financed from. In this context, the introduction of budgeting based on performance led to fulfilling strategic objectives by a better control over budgetary expenditures.

According to the Guide drawn by the Unit of Public Policies from the Ministry of Internal Affairs in Romania, in Table no.1 we find a synthesis of advantages and disadvantages of linear budgeting vs budgeting based on performance in the local public administration:

Table no.1: Linear budgeting vs budgeting based on performance

	Advantages	**Disadvantages**
Linear budgeting	- facilitates financial control; - constitutes an adequate basis of earmarking when resources are limited.	- rigid, incapable to answer fast to some priorities in change or by creating some new public services; - difficult result assessment, not existing a direct relation between "what must be purchased" and "what must be accomplished"; - difficult to evaluate the cost-efficacy of reached objectives.

	Advantages	Disadvantages
Budgeting based on performance	- awareness of targets to be reached; - a greater flexibility in reallotting between articles and activities/programs; - public administration becomes more conscious of costs needed in order to get results; - it transfers the decision of resource earmarking to inferior levels.	- costs of existent programs, together with some which can be newly introduced, tend to exceed the level of collecting revenues; - insufficient control of processes in the interior of local administration.

Source: The Public Policy Unit – The Ministry of Internal Affairs, the Guide of Public Administration Institutions for the Improvement of the Process of Public Policies at Local Level, Bucharest, 2011

Budgeting based on performance requires a complex process, whose initiation must have as base some principles, which, according to Schick's approach, presented in Table no. 2, suppose that an authority must proceed as follows:

Table no.2: Allen Schick's "First" Approach on Budget

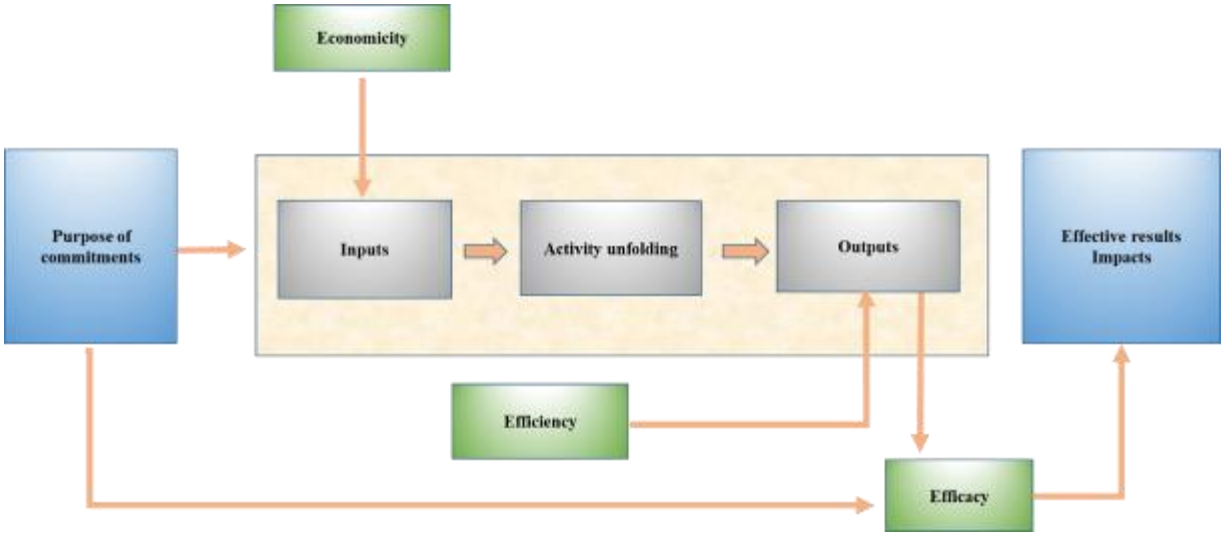
First	Only after
The creation of an environment to support and ask for performance	The introducing of budgeting based on results or performance
Controlling input	Controlling output
Cash accounting	Commitment accounting
External control performing	Internal control introduction
Internal control introduction	Managerial roles introduction
Safe accounting system operation	Introducing an integrated financial managing system
Budget drawing for the work to be performed	Budget drawing with a view to results to be obtained
Ensuring on the existence of an actual financial audit	The passing to performance audit
Adopting and implementing some predictable budgets	Ensuring that managers use trusted resources in an efficient manner

Source: Allen Schick, 1998

Managing funds of local budgets under economicity, efficiency and efficacy conditions represents, in essence, the using of financial resources under performance conditions. This approach is based directly on the obtained performance, the accent being laid on *resources, performance, results and impacts*. At the same time, measuring performance is possible only when there are criteria adapted to measure the quantity, quality and costs of *resources, performance, results and impacts*.

Whether it is an entity (a local public authority), a program, a project, a process or an activity, measuring performance involves a logical and causal cycle, as shown in Fig.no. 1:

Fig. no.1: The input/output model of the 3E interactions



Source: personal representation based on ISSAI 3000

Measuring financial performances in the local public administration in Romania, using the financial indicators, made the object of several approaches from the part of some professional NGO associations, exemplifying The Guide of Financial Performance Indicators drawn by the Federation of Local Authorities in Romania (FALR) in 2003, respectively the Brochure of Financial Economic Indicators – managerial analysis instrument of the local public administration drawn by the Association of Chief Economic Officers and Accountants in Romanian Counties (ADECJR) in 2004. Similarly, from a legal point of view, through the Common Order of the Ministry of the Administration and Internal Affairs and the Ministry of Public Finances in 2010, calculation methodologies have been approved, both on the calculation of the degree of personal income in the territorial-administrative units, and on the establishing of indicators regarding the execution of local budgets (Moldovan, 2014).

We appreciate as opportune the defining of these financial indicators, applicable within the territorial-administrative units in Romania, used in the measuring of financial performance, the one defined through legal framework being mandatory to report. All the same, there can be observed some shortcomings, which, from the perspective of measuring budgetary performance, may be structured on two directions:

♦ Existent financial indicators are of nature to photograph the existent situation at a certain moment (a part of the indicators being determined quarterly, and another part annually, in the course of the current financial exercise), but without an existing reference system (which would represent a critical level to avoid or optimum to touch for each indicator), without drawing analyses on how the financial indicators evolved in comparison with the previous financial exercise/exercises, which would be the causes that led to unsuccessful accomplishment and the eventual propositions of measures to improve, which should lead to reaching objectives, all these stated shortcomings are not likely to constitute a really useful instrument in the measuring of financial performance;

♦ The lack of some non-financial indicators (qualitative) cannot lead to an actual public budget based on performance, the accent being placed only on financial indicators (quantitative). The introduction of non-financial indicators is a must to draw, because the way it has already been scientifically demonstrated by approaching a "balanced dashboard", the improvement of an entity's performances is accomplished by cost reduction (using financial indicators) and by improving the process-quality or by improving the performed services (using non-financial indicators).

For a better and more comprising understanding, we consider it useful to present some practical ways to approach local budget performance, including at international level.

Thus, in the volume *Performance Budgeting for State and Local Government*, writers Kelly and Rivenbark offer an enhancing theoretical and practical framework for taking budget decisions based on the efficiency and efficacy of performing public services, pursuing the measure performance by surveys that satisfy citizens, encouraging, therefore, the involvement of citizens in the management of performance (Kelly and Rivenbark, 2011).

The work *The Analysis of Local Budgets and their Importance in the Fight against the Economic Crises Effects*, approaches the evaluation of financial and budgetary performances of administrations, both local and central. In this work, Pelinescu & all deal with the capacity of the central and local administration to control expenditures and to ensure resources to cover them given the economic crisis. According to these, it is essential to accomplish financial sustainability of the public budget and the autonomy of the local community based on budget equilibrium, so that local budget deficits should not generalize (Pelinescu et al., 2010).

Melkers and Willoughby made research on the effects of data measuring performance on taking budgetary decisions, on communication and on other governmental operations of local governments in USA, showing, in the study *Models of Performance-Measurement Use in Local Governments: Understanding Budgeting, Communication, and Lasting Effects,* that the use of performance measuring by local departments is omnipresent, as well as the fact that there are subtle distinctions in using performance measuring for budgetary purposes and processes within and in-between the governing levels within USA (Melkers and Willoughby, 2005).

Another work, *Strategic Performance Management: A Balanced Approach to Performance Management Issues in Local Government,* deals with budgetary performance from the perspective of management in the local administration, showing that the accent in the local governing system was laid on financial performance and, to a lesser extent, on the manner in which the community perceives performance (Kloot and Martin, 2000).

The accent on local public performance is also exposed in the work *Moduri de abordare a performanței în administrația publică locală din România (Ways of Approaching Performance within the Local Public Administration in Romania)*, in which writer Cazacu underlines that performance analysis in the local public administration must be accomplished in terms of general indicators, defined on basis of responsibilities established by the legal framework for the local public administration authorities, but, more especially, by the way in which the executive and deliberative authorities from the territorial-administrative unit fulfil their strategical objective and electoral assumptions (Cazacu, 2021).

4. Budgetary Performance Measuring Conditions

It is unanimously accepted that measuring the budgetary performance supposes the using in parallel of some financial indicators (quantitative) and of some non-financial indicators (qualitative). However, it is difficult to standardize a valid general model, due to the fact that the typology of defining and using financial and non-financial indicators depends, on one hand, on a series of internal factors such as the applicable legal framework, on the type of existent budget (unitary or federal), on the politics of every State concerning the measure in which it intervenes in economic and social life, on the dimension of budgets, on the decentralization degree etc., and on the other hand, on a series of external factors such as affiliation to super-State authorities (e.g. European Union at the level of Europe, because the super-State authority may influence the budgetary policy ruled by Member States), it may depend on the periods of economic crisis, and more recently on the pandemics.

All used performance indicators must fulfill certain quality criteria, according to requests formulated by Peter Drucker. Thus, indicators must be SMART, respectively, specific (specific objectives should be defined as precisely as possible), measurable (to be quantifiable), applicable (performant), relevant (to help to fulfilling objectives in order to be able to evaluate performance) and in time (pursuing target deadlines in order to be accomplished) (Drucker, 2001).

5. Conclusions

Reaching high budgetary performance at the local public authorities level surely is a target, but more than this, it is a must. Local decentralization has supposed the transfer of some more and more activities from the sphere of central authorities to the local ones.

The corresponding financing of these activities, given the conditions of some more and more accute budgetary constraints, makes local public fund management need the application of an adequate performance framework. Building GLDPs, performance centred, will lead to a 3E fund management having in view both necessities that may be anticipated, but also more dense challenges (such as the current ones related to the pandemics crisis) which suppose rapid and significative budget adjustments.

Similarly, in Romania, in the actual context of the local public administration reform, of the decentralization process and local autonomy strengthening and, implicitly, financial one, performance measuring represents one of the most important aspects. Creating a modern and efficient system of public administration is considered a need with a view to understanding the local public administration reform, so that it aligns to the European Union standards (The European Commission, 2020).

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ECONOMETRIC ANALYSIS OF THE RELATIONS BETWEEN AVAILABLE INCOME

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Abstract:

The tax system and the tax burden, as we have identified in previous statistical analyzes are factors that can support development, insofar as they are balanced between different categories of taxpayers and apply at a level accepted by them. In practice, the efficiency of taxes, as revenues to the state budget, is adjusted by their collection rate, which, for various reasons - subjective or objective - varies in significant proportions at the state level.

Keywords: *dynamics, analysis,income,econometric,*

JEL: M41, E62

Introduction

Because, as we have shown, in Romania the collection rate is among the lowest, and tax revenues throughout the transition period have been a major constraint on promoting public investment as a support for development, we will further analyze the direct link between the various categories of revenues subject to taxation and GDP dynamics. In this way, it can be highlighted whether the persistence of poverty in Romania, respectively the reduced dynamics of its reduction is an effect of applying an inadequate fiscal model to the distribution system of potential income / gain of taxpayers or depends more on the tax burden and perception to this social responsibility. From the analysis of the considered data series we then move on to the development of a panel model, to identify the link between a) adjusted gross disposable income of households, gross domestic product and employee remuneration and b) poverty rate, budget expenditures and remuneration of employees.

Research methodology

1. The nature of the series

a. "GDP - Gross Domestic Product" series

Gross domestic product at market prices, current prices, in PPS per capita (Gross domestic product at market prices, PPS per capita) is tested. The stationarity tests for the level series are applied.

Table no. 1. Testing the grossness of the gross GDP series

Date: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.93673	0.0017	26	402
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	1.96368	0.9752	26	402
ADF - Fisher Chi-square	27.9052	0.9975	26	402
PP - Fisher Chi-square	29.5627	0.9948	26	416

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

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The Levin, Lin & Chu test rejects the hypothesis that the GDP series has unit root in the panel. The Im, Pesaran and Shin W-state, ADF - Fisher Chi-square and PP - Fisher Chi-square tests do not reject the unit root hypothesis for the individual series. Since the series is not stationary in level, we test the stationarity of the GDP series calculated by simple differentiation, ie: d(GDPit) = GDPit¬ – GDPi,¬t-1.

The tests are presented in the following table.

Table no. 2. Testing the stationarity of the differentiated GDP series
Exogenous variables: individual effects
Automatic selection of the maximum offset
Automatic gap length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-10.9770	0.0000	26	382
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	201.174	0.0000	26	382
PP - Fisher Chi-square	197.829	0.0000	26	390

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the series (GDP) has unit root in the panel. The tests Im, Pesaran and Shin W-state, ADF - Fisher Chi-square and PP - Fisher Chi-square reject the unit root hypothesis for the individual series.

Given the test results, in econometric models, the series GDP - Gross domestic product at market prices, current prices in PPS per capita (Gross domestic product at market prices, Current prices, PPS per capita) can be used in level, only for the panel as a whole, and if it is used to estimate individual effects, then it will be differentiated.

b. Series "Adjusted gross disposable income of households per person in PPS"

The seasonality of the VSPA series - Adjusted gross disposable income of households per person in PPS is tested. Stationarity tests are applied for level series.

Table no.3. Gross VSPA series stationarity testing
Date: 2005 2015
Exogenous variables: individual effects
Automatic selection of the maximum offset
Automatic gap length selection based on SIC: 0 to 2

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.33562	0.0004	26	256
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	0.86368	0.8061	26	256
ADF - Fisher Chi-square	45.5011	0.7257	26	256
PP - Fisher Chi-square	73.4814	0.0265	26	261

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the VSPA series has unit root in the panel and also the PP - Fisher Chi-square test rejects the unit root hypothesis for the individual series. Although the Im, Pesaran and Shin W-state and ADF - Fisher Chi-square tests do not reject the unit root hypothesis for the individual series, we will consider the Phillips-Perron type test, due to the small number of degrees of freedom, the individual series has only 11 records, corresponding to the period 2005-2015.

As such, in econometric models, the series VSPA - Adjusted Gross Disposable Household Income per Person in PPS (Adjusted Gross Disposable Household Income per Person in SPA) can be used level, in econometric equations.

c. Series "Remuneration of employees per hour worked, in euro"

The stationarity of the ULC series is tested - "Compensation of employees per hour worked, in euro" (Compensation of employees per hour worked, euro). Stationarity tests are applied for level series.

Table no. 4. Gross ULC series stationarity testing
Date: 2000 2017
Exogenous variables: individual effects
Automatic selection of the maximum offset
Automatic gap length selection based on SIC: 0 to 2

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-5.99330	0.0000	26	401
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.58502	0.2793	26	401
ADF - Fisher Chi-square	69.1961	0.0555	26	401
PP - Fisher Chi-square	101.697	0.0000	26	415

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the ULC series presents unit root in the panel and also the PP - Fisher Chi-square and ADF - Fisher Chi-square tests reject the unit root hypothesis for individual evenings. Although the Im, Pesaran and Shin W-state test does not reject the unit root hypothesis for individual series, we will still consider the Phillips-Perron type test, due to the small number of degrees of freedom (individual series have 17 records, corresponding to the period 2000- 2016). Consequently, in econometric models, the ULC series - Remuneration of employees per hour worked, in euros can be used in level, in econometric equations.

d. "Share of total general government expenditure in GDP" series

The stationarity of the series The share of total general government expenditure in GDP (%) is tested. The stationarity tests for the level series are applied.

Table no.5. Testing the seasonality of the series Share of total general government expenditure in gross GDP (%)

Date: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 3

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.48500	0.0000	28	427
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-4.66618	0.0000	28	427
ADF - Fisher Chi-square	110.377	0.0000	28	427
PP - Fisher Chi-square	86.1330	0.0060	28	447

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the CHELT series presents unit root in the panel and also the Im, Pesaran and Shin W-state tests, ADF - Fisher Chi-square and PP - Fisher Chi-square reject the unit root hypothesis for the individual series. Consequently, in econometric models, the series The share of total general government expenditure in GDP (%) can be used in level, in econometric equations.

e. "Poverty Risk" Series

The stationaryness of the series is tested the risk of poverty (limit point 60% of the median income equivalent after social transfers), thousands of people (RPR60) and in percentages (RPR60P), respectively the risk of poverty (limit point 70% of the average equivalent income), thousands of persons (RPR70) and in percentages (RPR70P). The stationarity tests for the level series are applied.

e1. At-risk-of-poverty (60% of median equivalent income, after social transfers), thousands

Table no.6. Testing the seasonality of the series Poverty risk (limit point 60% of the median equivalent income, after social transfers) thousands of gross persons

Date: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.22314	0.0000	26	277
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-2.83641	0.0023	26	277
ADF - Fisher Chi-square	88.0676	0.0013	26	277
PP - Fisher Chi-square	81.6686	0.0054	26	286

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the RPR60 series has unit root in the panel and also the Im, Pesaran and Shin W-state tests, ADF - Fisher Chi-square and PP - Fisher Chi-square reject the unit root hypothesis for the individual series. Consequently, in econometric models, the RPR60 series - the risk of poverty (limit point 60% of the median income equivalent to social transfers), thousands of people can be used in the level.

e2. Poverty risk (60% of median equivalent income, after social transfers), percentages

Table no.7. Testing the series' stationarity Risk of poverty (60% of median equivalent income, after social transfers) gross percentages

Date: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-4.24678	0.0000	26	300
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.75987	0.0392	26	300
ADF - Fisher Chi-square	72.7609	0.0302	26	300
PP - Fisher Chi-square	68.5415	0.0618	26	317

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the RPR60P series has unit root in the panel and also the Im, Pesaran and Shin W-state tests, ADF - Fisher Chi-square and PP - Fisher Chi-square reject the unit root hypothesis for the individual series. Consequently, in econometric models, the RPR60P series - the risk of poverty (limit point 60% of the median income equivalent to social transfers), in percentages can be used at the level.

e3. At-risk-of-poverty (limit point 70% of average equivalent income), thousands of people

Table no.8. Stability test of the series Poverty risk (limit point 70% of the equivalent median income) thousands of people

Sample: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.61901	0.0001	26	280
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat				
ADF - Fisher Chi-square				

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

The Levin, Lin & Chu test rejects the hypothesis that the RPR70 series has unit root in the panel and also the Im, Pesaran and Shin W-state tests, ADF - Fisher Chi-square and PP - Fisher Chi-square reject the unit root hypothesis for the individual series. Consequently, in econometric models, the RPR70 series - the risk of poverty (limit point 70% of the average equivalent income), thousands of people can be used in the level.

e3. Poverty risk (cut-off point 70% of average equivalent income), percentages

Table no.9. Testing the stationaryness of the series Poverty risk (limit point 70% of median equivalent income) percent

Date: 2000 2016

Exogenous variables: individual effects

Automatic selection of the maximum offset

Automatic gap length selection based on SIC: 0 to 1

Newey-West automatic bandwidth selection and Bartlett kernel

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-2.48139	0.0065	26	304
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-0.99376	0.1602	26	304
ADF - Fisher Chi-square	63.5402	0.1310	26	304
PP - Fisher Chi-square	90.8120	0.0007	26	316

** Probabilities for Fisher tests are computed using an asymptotic Chi-square distribution. All other tests assume asymptotic normality.

Testul Levin, Lin & Chu respinge ipoteza conform căreia seria RPR70P prezintă rădăcină unitate în panel. Testul PP - Fisher Chi-square resping ipoteza de rădăcină unitate pentru seria individuală. Testele Im, Pesaran and Shin W-stat, ADF - Fisher Chi-square și PP - Fisher Chi-square nu resping ipoteza de rădăcină unitate pentru seria individuală, dar pragul de acceptare este relativ modest (16%, respectiv 13%). Vom lua în considerare testul de tip Phillips-Perron, datorită numărului mic de grade de libertate pentru seria individuală. În consecință, în modelele econometrice, seria RPR70P – *riscul de sărăcie (punct limită 70% din venitul mediu echivalat), procente* poate fi folosită în nivel.

2. Panel type econometric models

The links between the variables, on two coordinates, are further tested

a) The link between the adjusted gross disposable income of households, the gross domestic product and the remuneration of employees

b) The link between the poverty rate, budget expenditures and employees' remuneration

2.1. The link between adjusted gross disposable income of households, gross domestic product and employee remuneration

It examines the link between adjusted gross disposable income of households (per capita, in PPS), gross domestic product (at market prices, current prices, in PPS, per capita) and the remuneration of employees (per hour worked, in euros).

The model tested is as follows:

$VSPA_{i,t} = a0 + a1GDP_{it} + a2ULC_{it} + \mu_i + \gamma_t + e_t,$

where

VSPAi, t - adjusted gross disposable income of households (per capita, in PPS), in country i, year t;

GDPit - gross domestic product (at market prices, current prices, in PPS, per capita), in country i, year t;

ULCit - remuneration of employees (per hour worked, in euros), in country i, year t;

μi - individual country-specific effect i, invariable over time;

γt - the specific effect of year t, invariable in cross section;

eit¬ - error variable (idiosyncratic error);

a0, a1, a2 - homogeneity coefficients of the model.

The link between income and GDP is expected to be positive (a1> 0) and also the link between income and employee remuneration is positive (a2> 0).

a. Homogeneous panel

A homogeneous model (without individual effects between countries, or over time) of the type:

$VSPA_{i,t} = a0 + a1GDP_{it} + a2ULC_{it} + e_t,$

The results are presented in the following table:

Table no.10. VSPA regression analysis - GDP, ULC, homogeneous panel

Dependent variables: VSPA

Method: Pooled EGLS (Period SUR)

Date (adjusted): 2005 2016

Remarks included: 12 after adjustment

Cross-sections: 26

Total (balanced) observations in the panel: 287

Linear estimation after one-step weighting matrix

Period SUR (PCSE) standard errors & covariance (d.f. corrected)

Variabile	Coeficient	Std. Error	t-Statistic	Prob.
C	4263.949	341.3476	12.49152	0.0000
GDP	0.409000	0.014891	27.46702	0.0000
ULC	181.0728	17.09574	10.59169	0.0000

Weighted Statistics

R-squared	0.820258	Mean dependent var	2.299829
Adjusted R-squared	0.818992	S.D. dependent var	3.711332
S.E. of regression	0.945256	Sum squared resid	253.7563
F-statistic	648.0198	Durbin-Watson stat	1.995469
Prob(F-statistic)	0.000000		

The panel does not include Malta and Luxembourg, due to the lack of EUROSTAT data on adjusted gross disposable income of households for those countries.

The model was estimated using the SUR [Seemingly Unrelated Regression] method, a method that takes into account the possibility of correlating errors between countries (the possibility that a shock, such as a crisis, may affect all countries at some point).

The model is significantly econometric, and the coefficients are statistically significant. The model explains 82% of the dynamics of disposable income of households. The coefficients have the anticipated sign: â1 = 0.409> 0, which means a positive impact of GDP on the disposable income of households and also â2 = 181.07> 0, ie the effect of wages is also positive.

b. Individual effects induced by the remuneration of employees

In order to verify the existence of individual effects specific to each country, a model of the following type is constructed:

VSPAi, t = a0 + a1GDPit + (a2 + μi) ULCit + et,

that is, the distribution by country of the effect induced by workers' remuneration on disposable income of households is analyzed. The estimated model is as follows:

Tabelul nr.11. Analiza de regresie VSPA – GDP, ULC, țări

Dependent variables: VSPA

Method: Pooled EGLS (Period SUR)

Date (adjusted): 2005 2012

Remarks included: 8 after adjustment

Cross-sections: 26

Total (balanced) observations in the panel: 208

Linear estimation after one-step weighting matrix

Period SUR (PCSE) standard errors & covariance (d.f. corrected)

Variabile	Coeficient	Std. Error	t-Statistic	Prob.
C	1266.805	418.9756	3.023576	0.0029
GDP	0.474534	0.028413	16.70156	0.0000
μ-ULC-AT	302.1375	33.64024	8.981431	0.0000
μ-ULC_BE	179.6938	22.82558	7.872471	0.0000
μ-ULC_BG	329.7082	138.9527	2.372809	0.0187
μ-ULC_CY	382.1617	44.58587	8.571365	0.0000
μ-ULC_CZ	340.1873	68.57779	4.960605	0.0000
μ-ULC_DE	315.5233	29.10741	10.83997	0.0000
μ-ULC_DK	106.5499	24.17892	4.406729	0.0000
μ-ULC_EE	250.2690	70.36989	3.556478	0.0005
μ-ULC_EL	480.1727	45.75947	10.49341	0.0000
μ-ULC_ES	272.6447	35.25187	7.734191	0.0000
μ-ULC_FI	208.2319	29.25852	7.116967	0.0000
μ-ULC_FR	288.1425	24.33783	11.83928	0.0000
μ-ULC_HR	308.5524	54.65273	5.645690	0.0000
μ-ULC_HU	403.5228	71.35606	5.655060	0.0000
μ-ULC_IE	70.19941	34.82977	2.015500	0.0453
μ-ULC_IT	343.8378	32.46830	10.58995	0.0000
μ-ULC_LT	646.8752	82.61135	7.830342	0.0000
μ-ULC_LV	451.3019	79.77962	5.656857	0.0000
μ-ULC_NL	166.5684	28.75894	5.791884	0.0000
μ-ULC_PL	590.7132	82.80153	7.134085	0.0000

Variabile	Coeficient	Std. Error	t-Statistic	Prob.
μ-ULC_PT	499.7201	50.49056	9.897299	0.0000
μ-ULC_România	237.8409	109.1191	2.179645	0.0306
μ-ULC_SE	200.8107	33.21068	6.046570	0.0000
μ-ULC_SK	386.9534	68.22529	5.671701	0.0000
μ-ULC_SL	287.0379	40.27344	7.127225	0.0000
μ-ULC_UK	281.7867	28.67356	9.827407	0.0000

Weighted Statistics			
R-squared	0.999949	Mean dependent var	235.8502
Adjusted R-squared	0.999941	S.D. dependent var	376.5072
S.E. of regression	0.997792	Sum squared resid	179.2060
F-statistic	129820.4	Durbin-Watson stat	2.164396
Prob(F-statistic)	0.000000		

The model does not include Malta and Luxembourg, due to the lack of EUROSTAT data on adjusted gross disposable income of households for those countries.

Like the previous model, the SUR (seemingly unrelated regression) method was used in the estimation, which takes into account the possibility of correlating errors between countries. The structure between countries and the dynamics of GDP positively influence the evolution of the gross disposable income of households. The impact coefficient is â1 = 0.4745, which means that a one-unit increase in GDP is associated with a 0.4745-unit increase in household income. In the model, the effect of remuneration on the gross disposable income of households was distributed by country (a2 coefficients were associated with μi). The individual effects (country specific) are statistically significant and positive

c. Individual effects induced by employee remuneration and GDP change

In the model with country-specific effects, the evolution of GDP was not distributed by including individual impact coefficients (at country level), because the GDP series is only stationary globally (in the panel), and the individual GDP series is not stationary. In order to verify the existence of specific effects induced by the structure between countries and the dynamics of GDP, the theoretical model was modified, taking into account the fact that, individually, GDPi is a non-stationary series in level, but stationary after the first difference. Built model is:

$VSPAi, t = a0 + (a1 + \delta i) \cdot d(GDPit) + (a2 + \mu i) \cdot ULCit + et,$

where are the individual coefficients that measure the impact of GDP at the level of each country on the disposable income of households. The estimated model is as follows:

Table no.12. VSPA regression analysis - GDP, ULC, countries

Dependent variables: VSPA

Method: Pooled EGLS (Period SUR)

Data (adjusted): 2005 2016

Remarks included: 12 after adjustment

Number of countries included: 26

Total number of comments: 287

Linear estimation after one-step weighting matrix

White period standard errors & covariance (d.f. corrected)

Variabile	Coeficient	Std. Error	t-Statistic	Prob.
C	604.0904	346.7618	1.742091	0.0828
δ-GDP_BE	0.315292	0.002859	110.2938	0.0000
δ-GDP_BG	0.503317	0.044450	11.32329	0.0000
δ-GDP_CZ	0.662889	0.006096	108.7408	0.0000
δ-GDP_DK	0.280968	0.005781	48.59879	0.0000
δ-GDP_DE	0.435475	7.61E-05	5723.585	0.0000
δ-GDP_EE	0.357339	0.015435	23.15177	0.0000
δ-GDP_IE	0.081932	0.000183	447.6964	0.0000
δ-GDP_EL	0.571760	0.003689	154.9998	0.0000
δ-GDP_ES	0.499468	0.004632	107.8281	0.0000
δ-GDP_FR	0.601805	0.014187	42.42002	0.0000
δ-GDP_HR	0.123592	0.001159	106.6177	0.0000
δ-GDP_IT	0.716215	0.006127	116.8978	0.0000
δ-GDP_CY	0.583844	0.004497	129.8273	0.0000
δ-GDP_LV	0.450571	0.022397	20.11775	0.0000
δ-GDP_LT	0.360860	0.005657	63.78476	0.0000
δ-GDP_HU	0.738928	0.008524	86.69038	0.0000
δ-GDP_NL	0.704582	0.006780	103.9221	0.0000
δ-GDP_AT	0.609911	0.008247	73.95672	0.0000
δ-GDP_PL	0.776610	0.015623	49.70811	0.0000
δ-GDP_PT	0.420173	0.002807	149.7007	0.0000
δ-GDP_România	0.920809	0.002145	429.3115	0.0000
δ-GDP_SL	0.489105	0.006024	81.19162	0.0000

Variabile	Coeficient	Std. Error	t-Statistic	Prob.
δ-GDP_SK	0.410153	0.019699	20.82153	0.0000
δ-GDP_FI	0.144762	0.009618	15.05164	0.0000
δ-GDP_SE	0.473790	0.009097	52.08219	0.0000
δ-GDP_UK	0.789365	0.021381	36.91899	0.0000
μ-ULC_BE	342.7257	7.443863	46.04138	0.0000
μ-ULC BG	483.5703	50.81456	9.516373	0.0000
μ-ULC_CZ	-61.50618	26.40163	-2.329636	0.0207
μ-ULC_DK	316.6042	4.474448	70.75827	0.0000
μ-ULC_DE	384.5940	12.80320	30.03891	0.0000
μ-ULC_EE	649.5339	8.730889	74.39494	0.0000
μ-ULC_IE	613.6844	13.10280	46.83613	0.0000
μ-ULC_EL	344.7216	22.00666	15.66442	0.0000
μ-ULC_ES	274.9839	12.55269	21.90638	0.0000
μ-ULC_FR	188.3058	1.828522	102.9825	0.0000
μ-ULC_HR	1055.379	40.67801	25.94471	0.0000
μ-ULC IT	61.26577	8.518105	7.192418	0.0000
μ-ULC_CY	231.1969	16.33415	14.15421	0.0000
μ-ULC_LV	595.6490	1.072487	555.3903	0.0000
μ-ULC_LT	1085.150	75.81816	14.31253	0.0000
μ-ULC_HU	-172.2917	31.32432	-5.500255	0.0000
μ-ULC_NL	-80.62669	3.495186	-23.06793	0.0000
μ-ULC_AT	140.1713	2.862859	48.96200	0.0000
μ-ULC_PL	-135.8778	17.25702	-7.873771	0.0000
μ-ULC_PT	657.8751	27.00713	24.35931	0.0000
μ-ULC_România	-881.9978	97.05186	-9.087903	0.0000
μ-ULC SL	310.1286	14.92830	20.77454	0.0000
μ-ULC_SK	653.2798	3.464983	188.5377	0.0000
μ-ULC_FI	621.8544	2.092678	297.1573	0.0000
μ-ULC_SE	228.5653	1.893515	120.7095	0.0000
μ-ULC_UK	-56.30121	10.49076	-5.366745	0.0000

Weighted Statistics

R^2	0.999602	Mean dependent var	103.9863
Adjusted R^2	0.999513	S.D. dependent var	126.9360
S.E. of regression	0.991760	Sum squared resid	230.1597
F-statistic	11293.56	Durbin-Watson stat	2.033145

Conclusions

The homogeneity coefficient (â0 = 604.0904) is positive and significant at the 5% threshold (0.0828: 2 = 0.0414 <0.05). Otherwise, all coefficients in the model are statistically significant, at the standard threshold of 1%, the model as a whole is econometrically significant (F-statistic = 11293.56 and the associated probability is Prob (F-statistic) = 0.000000), and the errors are not autocorrelated (Durbin-Watson = 2.033145). The model explains in 99.96% the variation of the disposable incomes of the households.

As in the previous model, disposable income is positively correlated with the remuneration of employees in 20 of the 26 countries analyzed, between 2005 and 2015. Exceptions are the Czech Republic, Hungary, Poland, Romania, the Netherlands and the United Kingdom.

Regarding the individual (country-differentiated) effect of GDP on household disposable income (δ-dGDP coefficients), all impact coefficients are positive and are much higher than the average in countries for which the impact of ULC is negative. Compared to the average value (value in the homogeneous model, â1 = 0.409), the δ-dGDP coefficients are 0.6629 for the Czech Republic, 0.7389 for Hungary, 0.7766 for Poland, 0.9208 for Romania, 0.7046 for the Netherlands and 0.7894 for the United Kingdom.

For Romania, the model extracted from the panel is:

VSPA_RO = 604.09043 + 0.92081 · GDP_RO - 881.99783 · ULC_RO

which means that, in Romania, in the period 2005 - 2015, the main factor that led to the increase of the disposable income of the households was the GDP dynamics and less the evolution of the employees' remuneration.

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DYNAMICS OF THE FISCAL FREEDOM INDEX

Catalin Emanuel Ciobota[1]

Abstract:
In the historical evolution of society, prosperity has been a perennial goal, as well as freedom, in all its aspects. Economic freedom, as a fundamental right, expressed through the IEF composite index (Index of Economic Freedom, developed by The Heritage Foundation, Washington's No. 1 think tank.) Combines in one measure 12 categories of freedoms, from property to financial freedom - the freedom of individuals to work, produce, consume and invest according to their own decision; freedom of movement of labor, capital and goods, in so far as they do not affect the freedom itself.

Keywords: *dynamics, index, freedom, fiscal*

JEL: M41, E62

Introduction

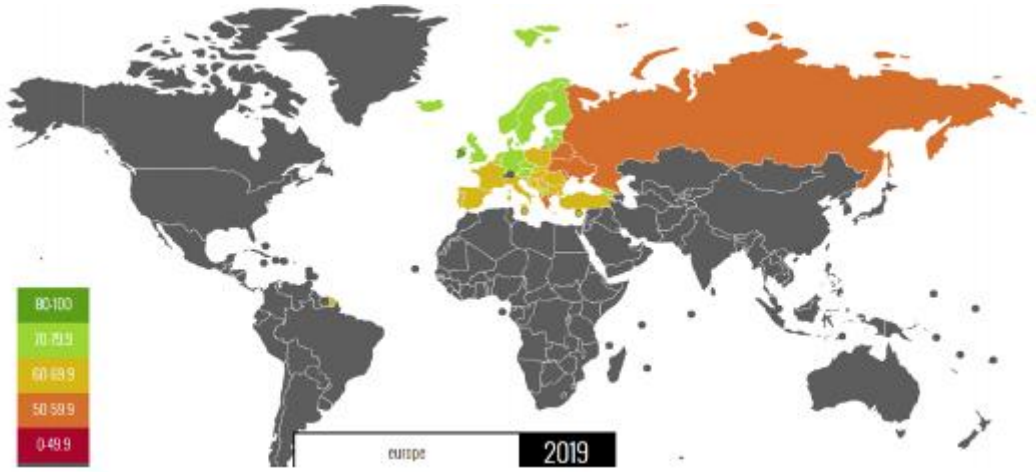
The Economic Freedom Index is a useful tool that currently allows the analysis of 186 economies around the world, facilitating analyzes by country, from the perspective of development, this index is a means of in-depth analysis of political and economic developments. The 12 indices on economic freedom and their evolution also provide a comprehensive set of principles and facts for those who want to understand the fundamentals of economic growth and prosperity.

Research methodology

To analyze economic freedom in Europe, the Index of Economic Freedom, Property Law, Government Integrity, Judicial Efficiency, Tax Burden, Government Expenditure, Fiscal Health, Business Freedom, Freedom of Work, Monetary Freedom, Trade Freedom, Investment Freedom were analyzed. and financial freedom. All indicators in Europe have average values higher than half the scale, with the lowest values being recorded for government integrity and judicial efficiency. The averages for these indicators are representative, the deviations are small, this translates into a homogeneity at the level of European countries regarding economic freedom.

Result

Figure 1 Map of the Economic Freedom Index, Europe, 2019



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In 2019, economic freedom is influenced by the analyzed variables, the regression model is valid (Table no.), And the parameters are significant. This means that the index of economic freedom can be determined by indices on freedoms.

Figure 2 Descriptive statistics

	Mean	Std. Deviation	N
Score	68,6273	6,85122	44
property_rights	70,0318	13,76782	44
government_integrity	55,8114	21,06251	44
judicial_effectivness	56,5909	15,46613	44
tax_burden	72,1023	14,55659	44
government_spending	46,6773	19,38270	44
fiscal_health	85,0636	15,07112	44
business_freedom	74,7977	9,43927	44
labor_freedom	61,1364	11,01099	44
monetary_freedom	79,8114	5,79194	44
trade_freedom	84,0159	3,89179	44
investment_freedom	74,8864	15,03827	44
financial_freedom	62,5000	15,86645	44

[1]

In 2019, economic freedom is influenced by the analyzed variables, the regression model is valid (Table no.), And the parameters are significant. This means that the index of economic freedom can be determined by indices on freedoms.

Figure 3 Model validity

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2018.347	12	168.196	128312.070	.000[b]
	Residual	.041	31	.001		
	Total	2018.387	43			

a. Dependent Variable: score

b. Predictors: (Constant), financial_freedom, fiscal_health, labor_freedom, business_freedom, government_spending, monetary_freedom, trade_freedom, judicial_effectivness, tax_burden, investment_freedom, property_rights, government_integrity

[1] Own analysis, using SPSS

Figure 4 Significance of parameters

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-.149	.205		-.724	.475	-.568	.270					
	property_rights	.083	.001	.167	66.998	.000	.081	.086	.794	.997	.054	.105	9.559
	government_integrity	.085	.001	.261	88.771	.000	.083	.087	.784	.998	.072	.075	13.263
	judicial_effectivness	.083	.001	.186	80.267	.000	.081	.085	.753	.998	.065	.120	8.310
	tax_burden	.084	.001	.178	107.903	.000	.082	.085	-.237	.999	.087	.240	4.173
	government_spending	.083	.000	.236	177.112	.000	.082	.084	.125	1.000	.143	.366	2.734
	fiscal_health	.083	.000	.183	197.773	.000	.082	.084	.374	1.000	.159	.757	1.321
	business_freedom	.083	.001	.115	78.926	.000	.081	.085	.549	.998	.064	.307	3.258
	labor_freedom	.083	.001	.134	134.851	.000	.082	.085	.408	.999	.109	.658	1.521
	monetary_freedom	.083	.002	.070	52.995	.000	.080	.086	.553	.995	.043	.372	2.691
	trade_freedom	.086	.003	.049	34.447	.000	.081	.091	.583	.987	.028	.320	3.122
	investment_freedom	.082	.001	.181	89.917	.000	.081	.084	.760	.998	.072	.160	6.234
	financial_freedom	.083	.001	.192	111.751	.000	.081	.084	.753	.999	.090	.221	4.534

a. Dependent Variable: score

All parameters are significantly non-zero, with changes in any freedom index being reflected in the economic freedom index. Economic freedom is a complex phenomenon and cannot be quantified or described by a single indicator due to its multidimensionality, in order to be studied it is necessary to use a relatively large number of indicators. In the study of the Index of Economic Freedom, the primary indicators take the form of quantitative statistical variables that are not independent, but we cannot say that they overlap perfectly. This results from the simple fact that all primary indicators address aspects of reality. The effect of partial overlaps can only be redundant information contained in the system of variables.

The reduction of the number of initially proposed variables can be achieved using multidimensional analysis - factor analysis. In this way not only factors are determined, but also mathematical relationships are established that determine the connection between the initial variables and factors, with the property that the latter largely reproduce the information given by the initially established variables. Basically, due to the method of rotating the factors, using Hotelling's method, the solution generated by applying the factor analysis is one of an infinity of existing solutions. The analysis of the data in the correlation matrix (Correlation Matrix) gives us information about the correlation coefficients and, at the same time, helps us to avoid multicollinearity and to identify possible variables that can be removed later from the analysis. We observe strong correlations between: government integrity, judicial efficiency and property rights; government spending and tax burden; freedom of investment and financial freedom, etc. We can consider the model valid due to the value of 0.821 (value close to 1) of the KMO test and Bartlett's sericity level (413.985, Sig = 0.000), and the four extracted factors explain in a proportion of 84.1% the variance of the twelve variables.

Figure 5 KMO test[1]

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.821
Bartlett's Test of Sphericity	Approx. Chi-Square	413.985
	df	66
	Sig.	.000

[1] Own analysis, using SPSS

Discussions

The 12 variables were grouped into four factors with eigenvalues greater than 1, as follows (Extraction Sums of Squared Loadings):

• factor 1 explains 47.30% of the variance of the included variables;

• factor 2 explains 16.28% of the variance of the included variables;

• factor 3 explains 12% of the variance of the included variables;

• factor 4 explains 8.82% of the variance of the included variables. In the context of the initial factorial solution, not subject to rotation, the factors explain 84.41% of the variance of the analyzed values, the difference of 15.6% remaining unexplained by this factorial model.

As can be seen from the analysis of the four factors, there is a redistribution of variance explained by each factor, factor 1 loses the degree of saturation in favor of the other three factors. Basically, the value of the saturations for each factor changes in the conditions in which the value of the total variance remains unchanged.

Conclusions

In the applied factor analysis, the Economic Freedom Index, if we consider each variable as a factor, from the graphical representation of the 12 factors we can consider that the first four components have the highest value.

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EXERCISING THE PREVENTIVE FINANCIAL CONTROL IN ORDER TO ENSURE THE INCLUSION IN THE BUDGETARY LIMIT OF THE PERSONNEL EXPENSES

Viorica (IUGA) DINDĂREANU[1]

Abstract

The need for control is determined by the fact that in modern society the fundamental criterion of efficiency defined by increasing and improving the qualitative aspects is permanently promoted to the detriment of the quantitative ones of all activities carried out at the level of a public interest entity of economic, social or administrative nature. . Thus, through control, any public interest entity is concerned to be able to access information in a current and operative way regarding the management of financial, material and human resources at its disposal, one of the most important forms being preventive financial control (CFP).

Keywords*: preventive financial control (CFP), public interest entity, resource management, expenditure making, legality.*

Codes JEL*: M41 – Accounting, M42 – Auditing.*

1. Introduction - purpose of preventive financial control (C.F.P.), scope and methodology for exercising it

The C.F.P. "is exercised over all operations that affect public funds and / or public patrimony". At the same time, "The commitment and ordering of the expenses is carried out only with the prior visa of own preventive financial control and of the delegated preventive financial control, as the case may be […]".

The head of the economic entity is responsible for the organization of the C.F.P. depending on its specificity, and "aims to identify projects of operations […] that do not comply with the conditions of legality and regularity and / or, as the case may be, of falling within the limits and destination of budget and commitment appropriations and through which - would prejudice the public patrimony and / or the public funds ".

The C.F.P. at the level of the public interest entity constitutes an activity of increased scope and complexity and is exercised at the conclusion of a procedural flow related to an operation with financial influences on the respective entity. At the exercise level of the C.F.P. "are aggregated all the risks from the compartments that were successively involved in the respective operation […] having the role of articulating the different types of previous verifications by assuming the specific responsibility".

The C.F.P. is carried out through a systematic verification of the totality of the operations with financial impact on the public funds or the public patrimony aiming at aspects such as:

- legality control - from the perspective of verifying compliance with the specific legal requirements in force at the time of that operation;
- regularity control - regarding the observance of all the principles, procedures and regulations applicable to the operations on which the C.F.P .;
- budgetary control - involves verification from the perspective of compliance with the limits and destination of approved amounts.

The Own Preventive Financial Control (C.F.P.P) resides from the systematic verification of the operations with financial impact on the entity of public interest and is exercised from the perspective of two main axes:legalitate și regularitate;

- compliance with the approved budgetary limits..

The Delegated Preventive Financial Control (CFPD) is organized at the level of economic entities within which economic operations are carried out "which may affect the balanced

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execution of budgets or which are associated with risk categories determined by the specific methodology of risk analysis" (Point 7.1 ., C. The delegated preventive financial control, Order No. 923/2014) and is exercised through the delegated controllers appointed by the Minister of Public Finance, with the following attributions:

- on its own initiative or at the request of either the authorizing officer or the Minister of Public Finance, issues advisory opinions on the subject of compliance, efficiency, economy, effectiveness of operations affecting public funds;monitorizează execuția bugetară pe criterii de echilibru și prudență;
- monitoring and counseling regarding the C.F.P. from the perspectives of legality, regularity and last but not least limits and budgetary destination.

The methodological and procedural framework applicable in the sphere of C.F.P. is created from the disposition and in the coordination of the head of the entity according to their specificity through a complete set of operational procedures for granting the C.F.P. and internal provisions, summarizing the following types of procedures, but not limiting them:

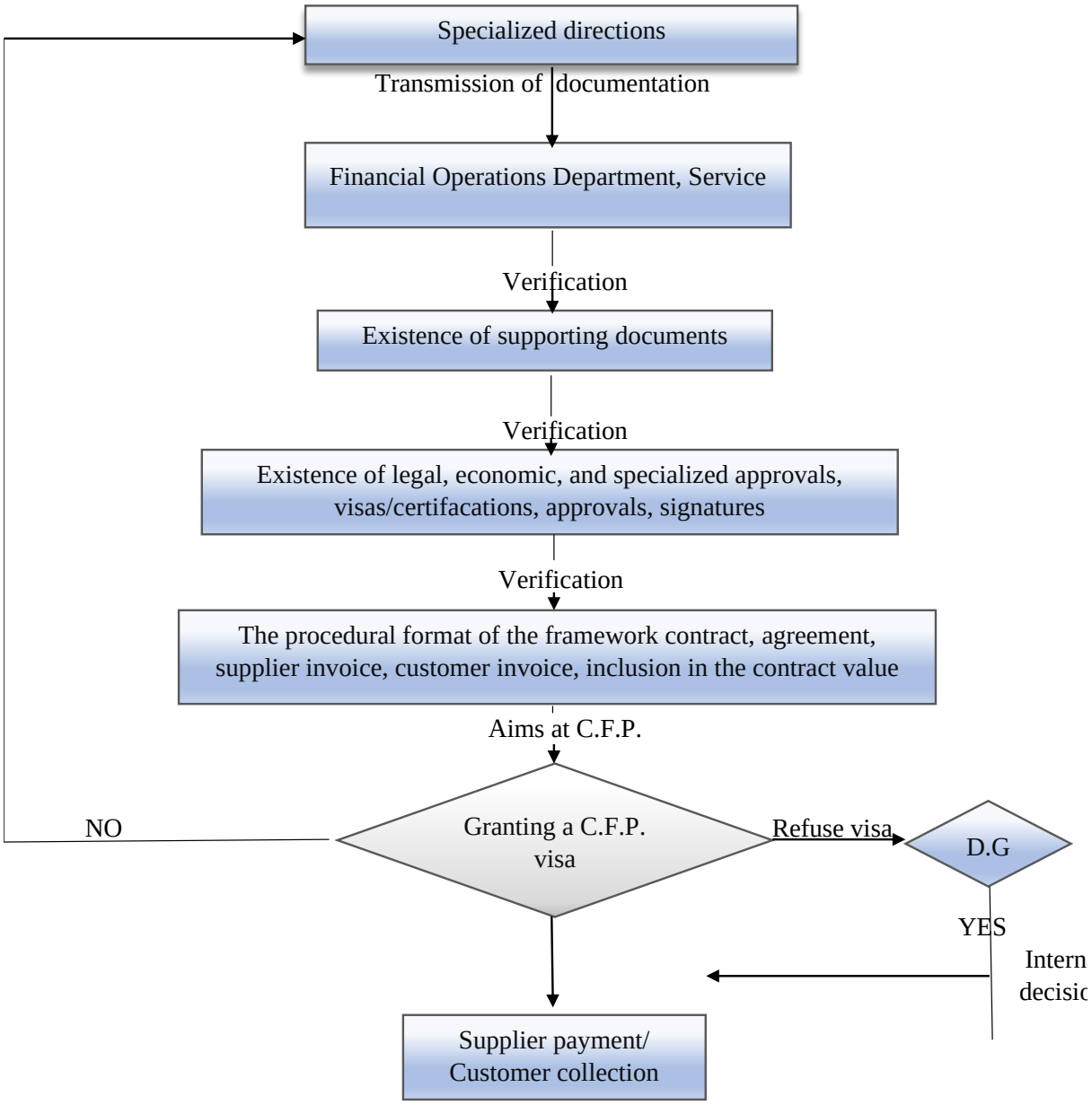
- the operational procedure for granting the C.F.P. generous;
- the operational procedure for granting the C.F.P. on procurement contracts;
- the operational procedure for granting the C.F.P. on invoices issued by suppliers;
- the operational procedure for granting the C.F.P. on invoices issued to customers
- operational procedure for individual evaluation of the activity of the C.F.P. etc …

The general purpose of the operational procedures lies in the way in which it is recommended to carry out the activity of C.F.P. within the public-interest entity for the identification of operational projects (hereinafter referred to as operations) which do not comply with the conditions of legality and regularity and / or, as the case may be, within the limits and destination of budgetary and commitment appropriations would harm public assets and / or public funds.

Persons designated to exercise the C.F.P. are responsible by internal provisions of the head of the public interest entity and involves the route described by the process diagram in Figure no. **1. Process diagram C.F.P.**

At the same time, the operational procedure describes the manner of exercising the attributions with the exercise of the C.F.P. by designated employees. At the same time, the pillar principles of exercising the C.F.P. are presented, respectively: professional competence; decisional independence conditioned by the separation of attributions; objectivity; moral conduct; confidentiality; incompatibility.

Figure no. 1. Process diagram C.F.P.



Source: own conception

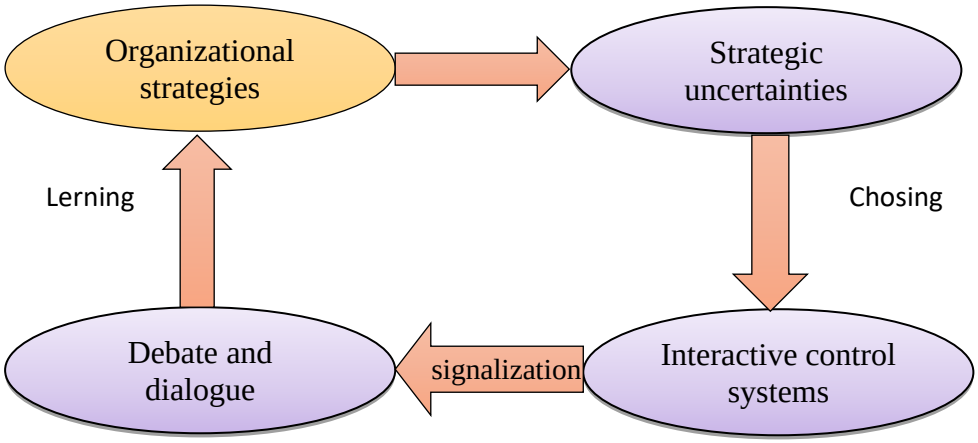
Literature review

From the multitude of specialized works that in our opinion interfere with the topic of scientific research (study) and which denote the relevance in capitalizing the financial control exercised over the economic-financial activity carried out at the level of a public interest entity, were retained:

- The work "Accounting, control and governance" (Albu C., N., Albu N., Feleagă L, 2016) as a tribute to Professor Niculae Feleagă, is an impressive collection of valuable works dedicated to the illustrious professor and whose content interferes with the theme the present scientific approach;
- The paper entitled "Types of control and organizational learning: a review of literature and research directions" (Albu C., N., Albu N., Feleagă L, 2012) which is based on another prestigious work, Accounting, control and governance (Cătălin Nicolae Albu, 2012), brought to our attention the debate regarding the relationship between

interactive control and learning, represented as in the figure below:

Figure no.2. Interactive control systems and organizational learning



Source: Albu C., N., Albu N., Feleagă L., autor: Cătălin Nicolae Albu, *Contabilitate, control și guvernanță*, Editura Economică, București, 2012, pg. 343 (preluare Wegmann, 2003; Brühl, 2004);

- Through the scientific paper entitled "Corporate governance in listed and state-controlled companies in the Romanian energy system" (Feleagă L., Bătae OM, 2020) we were confirmed once again, the importance of internal control and implicit financial control in good management of any public interest entity. Thus, the recommendation of the authors of the paper in question summarizes the fact that, "[…] in the entities in which the Romanian state is a shareholder to adhere to a uniformity of the type of information presented" and also to strengthen transparency in the area of internal control.
- Scientific research whose topic is "Peculiarities of improving internal financial control in Russian corporations" (T., E., Karmanova, E., N., Podsevalova, L., A., Mityurnikova, A., A., Silaeva, M., A., Atamanova, 2018) reveals the methods and elements of financial control, financial fraud and ways to identify and prevent it.
- The paper "Improving financial control over the governmental system" (N., A., Zavalko, O., V., Panina, V., A., Kovalev, A., G., Zhakevich, K., A., Lebedev , Improving Financial Control over the Government System, 2017) aims at analyzing the dangers targeting the banking system in the Russian Federation and violating the law on the use of state financial resources.
- The paper Financial-fiscal control (Boulescu M, 2007) through which I became more acquainted with the concept of financial control, from the perspective of the managerial function it performs, object and forms, and not only.

Research methodology

The present scientific research is defined as a systematic process through which observable and verifiable data are collected, starting from empirical models and represents a sustained approach in order to identify the truth in the context of established objectives, through theoretical and applied study, the latter exercised by techniques and methods such as observation, comparison and experiment.

By relating to the defined objectives, scientific research falls into three directions of approach, namely:

- *descriptive study, by accurately describing the characteristics of some situations*;

- *the formative study, carried out by exposing some perspectives on some phenomena;*
- *the evaluative study, which resides in determining the effects / consequences of certain actions*;

The scientific approach meets the requirements of several typologies of research, namely: descriptive, fundamental, qualitative, quantitative and last but not least conceptual.

The present scientific research is presented in a speculative approach in which approximately 40% of the content is dedicated to the documentary activity, and approximately 60% represents the innovation part, dedicated to novelties, presenting it in a unique perspective mainly based on reformulation. and analysis. Moreover, the present scientific research is highlighted by originality and substantiality alike.

Critical analysis of the way of exercising the preventive financial control at the level of a public interest entity.

The purpose of this application exposition was to highlight the importance of the C.F.P. and at the same time the relationship created between the financial management control, the budgetary control and the C.F.P. Starting from one of the main objectives of the financial management control organized and exercised at the level of a public interest entity, that of verifying the observance of the "legal provisions in the execution of the income and expenditure budget of the economic operator and its subunits, following: […] The realization of the revenues and the classification in the level of the approved expenses; " (Art. 2, letter c., Point 1, GD no. 1.151 / 2012) was analyzed in Chapter X "Substantiation data" presented at the approved BVCs related to the years 2018, 2019, 2020 and it was found that they were not the approved indicators were achieved as follows: "The average monthly earnings per employee (lei / person) determined on the basis of adjusted salary expenses" was exceeded while "Labor productivity in value units on total average staff (thousand lei / person)" no was performed, the situation being presented in the table below:

Tabel no. 1.

Comparative analysis of the indicators approved by the annexes to the B.V.C. at the entity studied for the years 2018, 2019, 2020

Year	Average monthly earnings per employee (lei / person) determined based on adjusted salary expenses			Labor productivity in value units per average total staff (thousand lei / person)			Number of staff forecast at the end of the year (thousand lei)		
	Approved	Accomplished	Excess	Approved	Accomplished	unfulfilment	Approved	Accomplished	
2018	5.307,75	5.426,54	102,24%	1.129,12	1.097,60	97,21%	2.110	2.112	100,09%
2019	5.427,97	5.488,86	101,12%	707,30	611,00	86,38%	2.110	1.986	94,12%
2020	5.532,40	5.854,00	105,81%	725,27	678,95	93,61%	2.083	1.980	95,06%

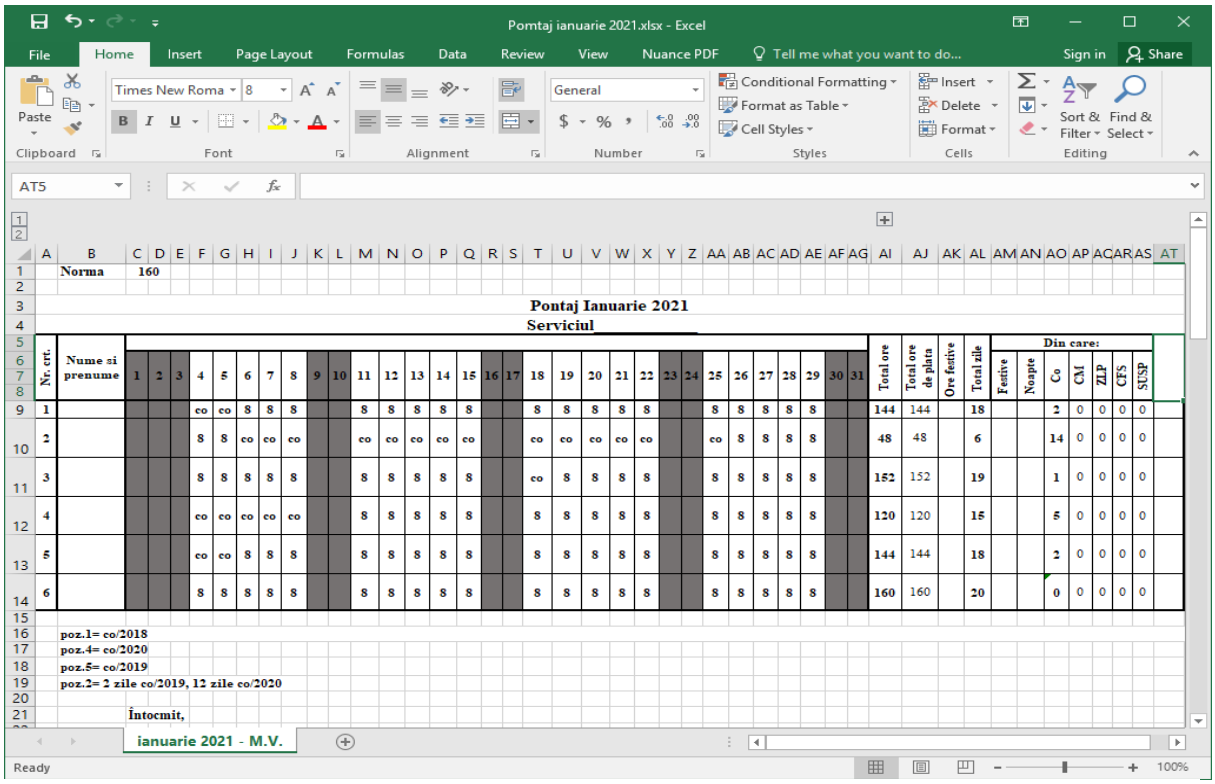
Source: own conception

The analysis of the presented data summarizes the following:

- the average monthly earnings per employee (lei / person) determined on the basis of salary expenses was exceeded every year, while labor productivity in value units on total average staff (thousand lei / person), was achieved considerably below the threshold value approved and appropriated by the management of the public interest entity;
- in 2018 the indicator "Number of staff forecasted at the end of the year" was exceeded by 0.09% (2,110 - approved vs. 2,112 - achieved) in violation of art. 10, para (1), lit. a) of Ordinance 26 / xxxx which provides: "(1) The execution of revenue and expenditure budgets is made in compliance with the following rules: a) salary expenses, number of staff at the end of the year, approved by revenue and expenditure budgets, represents maximum limits that cannot be exceeded "which constitutes a contravention according to art. 13, lit. (e) of Ordinance 26/2017, punishable by a fine from 5,000 lei to 10,000 lei;

- at the level of 2020, the indicator Gross result (profit / loss) was not achieved according to the Government Decision on approving the revenue and expenditure budget for the year xxxx of the public interest entity, respectively it registered an annual loss of 27,426.98 thousand lei 3.33 times higher than the loss approved by BVC, respectively 8,236.10 thousand lei.

Tabel no.2. Timesheet



Pontaj ianuarie 2021.xlsx - Excel

Norma 160

Pontaj Ianuarie 2021

Serviciul

Nr. crt.	Nume si prenume	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total ore	Total ore de plata	Ore festive	Total zile	Din care: Festive	Noapte	Co	CM	ZLP	CFS	SUSP
1					co	co	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			144	144		18			2	0	0	0	0
2					8	8	co	co	co			co	co	co	co	co			co	co	co	co	co			co	8	8	8	8			48	48		6			14	0	0	0	0
3					8	8	8	8	8			8	8	8	8	8			co	8	8	8	8			8	8	8	8	8			152	152		19			1	0	0	0	0
4					co	co	co	co	co			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			120	120		15			5	0	0	0	0
5					co	co	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			144	144		18			2	0	0	0	0
6					8	8	8	8	8			8	8	8	8	8			8	8	8	8	8			8	8	8	8				160	160		20			0	0	0	0	0

poz.1= co/2018
poz.4= co/2020
poz.5= co/2019
poz.2= 2 zile co/2019, 12 zile co/2020

Întocmit,

ianuarie 2021 - M.V.

Ready

Source: own conception

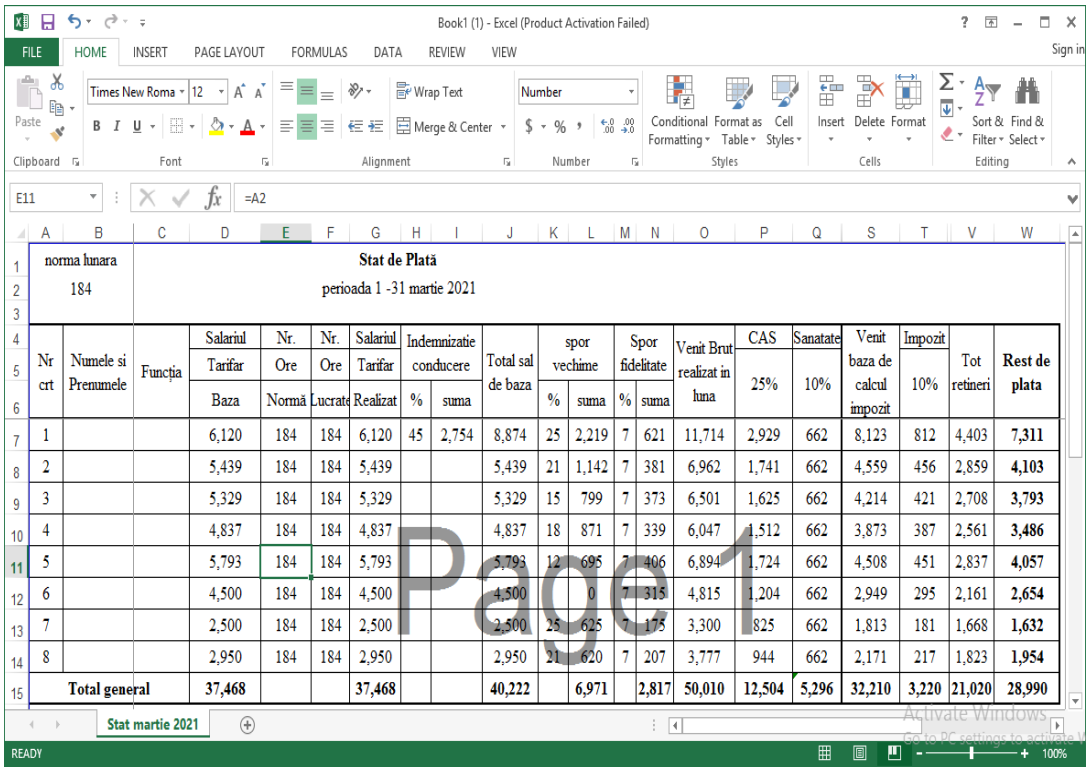
Exceeding the number of staff and salary expenses led us to check how to exercise the C.F.P. in terms of staff costs, requiring a consistent set of financial-accounting documents. Thus, a first document requested was the timetable which is drawn up either on the basis of the conditions of presence or of the electronic card by which the records of the hours worked daily by each employee are kept. At the same time, the timetable highlights the name of the employee, the norm of hours for each month, the hours worked daily by each employee, overtime or holidays, days of medical leave or rest leave, presented according to the table above.

At the same time, the C.C.M. in force, the C.I.Ms were checked. and the additional documents to the C.I.M.s, whose structure is included in the C.C.M. of the studied public interest entity.

The payroll / payment list are the verified documents and represent those financial-accounting documents prepared according to the requirements of Order 3,512 of November 27, 2008 and on the basis of which the salaries of the employees of the public interest entity are transferred. It should be mentioned that the payrolls are kept for 50 years in the archives of the public interest entity (Art. 25, Law 82/1991).

The payroll is drawn up on a monthly basis and is based on the employees' time sheets, documents by which the monthly contributions are retained, the advance lists (where applicable), the approved requests for rest leave, medical certificates, etc. and is presented as in the table below:

Tabel no. 3. Payment statement for March



norma lunara 184

Stat de Plată

perioada 1 -31 martie 2021

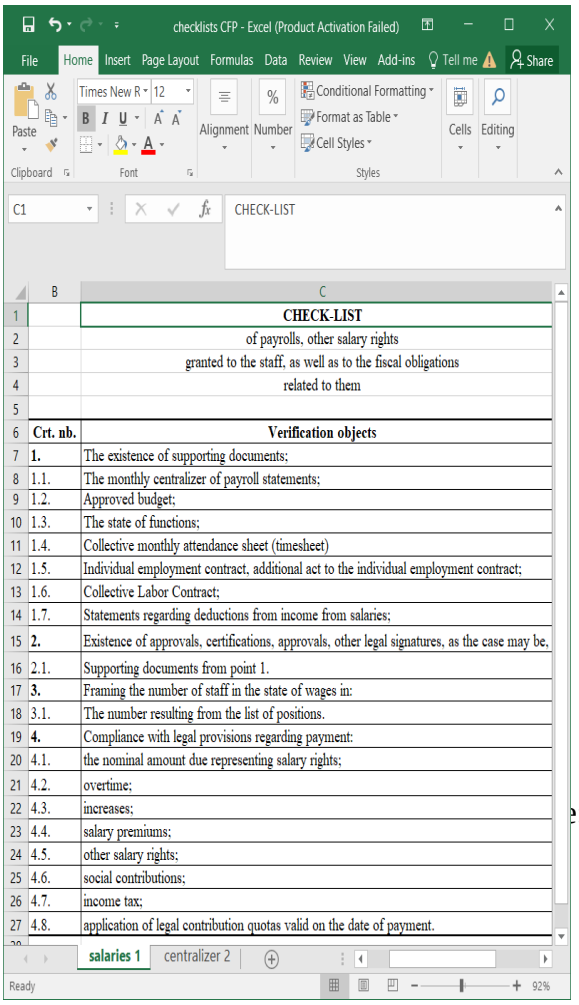
Nr crt	Numele si Prenumele	Funcția	Salariul Tarifar Baza	Nr. Ore Normă	Nr. Ore Lucrate	Salariul Tarifar Realizat	Indemnizatie conducere %	Indemnizatie conducere suma	Total sal de baza	spor vechime %	spor vechime suma	Spor fidelitate %	Spor fidelitate suma	Venit Brut realizat in luna	CAS 25%	Sanatate 10%	Venit baza de calcul impozit	Impozit 10%	Tot retineri	Rest de plata
1			6,120	184	184	6,120	45	2,754	8,874	25	2,219	7	621	11,714	2,929	662	8,123	812	4,403	**7,311**
2			5,439	184	184	5,439			5,439	21	1,142	7	381	6,962	1,741	662	4,559	456	2,859	**4,103**
3			5,329	184	184	5,329			5,329	15	799	7	373	6,501	1,625	662	4,214	421	2,708	**3,793**
4			4,837	184	184	4,837			4,837	18	871	7	339	6,047	1,512	662	3,873	387	2,561	**3,486**
5			5,793	184	184	5,793			5,793	12	695	7	406	6,894	1,724	662	4,508	451	2,837	**4,057**
6			4,500	184	184	4,500			4,500		0	7	315	4,815	1,204	662	2,949	295	2,161	**2,654**
7			2,500	184	184	2,500			2,500	25	625	7	175	3,300	825	662	1,813	181	1,668	**1,632**
8			2,950	184	184	2,950			2,950	21	620	7	207	3,777	944	662	2,171	217	1,823	**1,954**
Total general			**37,468**			**37,468**			**40,222**		**6,971**		**2,817**	**50,010**	**12,504**	**5,296**	**32,210**	**3,220**	**21,020**	**28,990**

Source: own conception

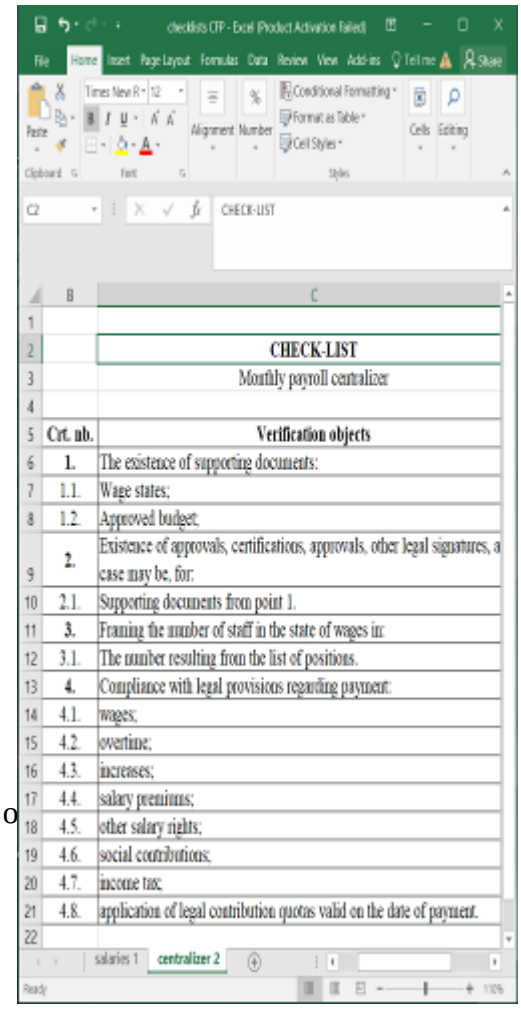
In addition to the financial-accounting documents already mentioned, the monthly centralizers of the payment statements were also subject to verification.

According to the operational procedures and internal provisions, we found that at the level of the public interest entity the CFP is exercised both on the payment statements and on the monthly centralizers of the payment statements for which predefined checklists are drawn up as can be seen in the table below:

Tabel no. 4. Check – List



		CHECK-LIST
		of payrolls, other salary rights
		granted to the staff, as well as to the fiscal obligations
		related to them
Crt. nb.		**Verification objects**
1.		The existence of supporting documents;
1.1.		The monthly centralizer of payroll statements;
1.2.		Approved budget;
1.3.		The state of functions;
1.4.		Collective monthly attendance sheet (timesheet)
1.5.		Individual employment contract, additional act to the individual employment contract;
1.6.		Collective Labor Contract;
1.7.		Statements regarding deductions from income from salaries;
2.		Existence of approvals, certifications, approvals, other legal signatures, as the case may be,
2.1.		Supporting documents from point 1.
3.		Framing the number of staff in the state of wages in:
3.1.		The number resulting from the list of positions.
4.		Compliance with legal provisions regarding payment:
4.1.		the nominal amount due representing salary rights;
4.2.		overtime;
4.3.		increases;
4.4.		salary premiums;
4.5.		other salary rights;
4.6.		social contributions;
4.7.		income tax;
4.8.		application of legal contribution quotas valid on the date of payment.

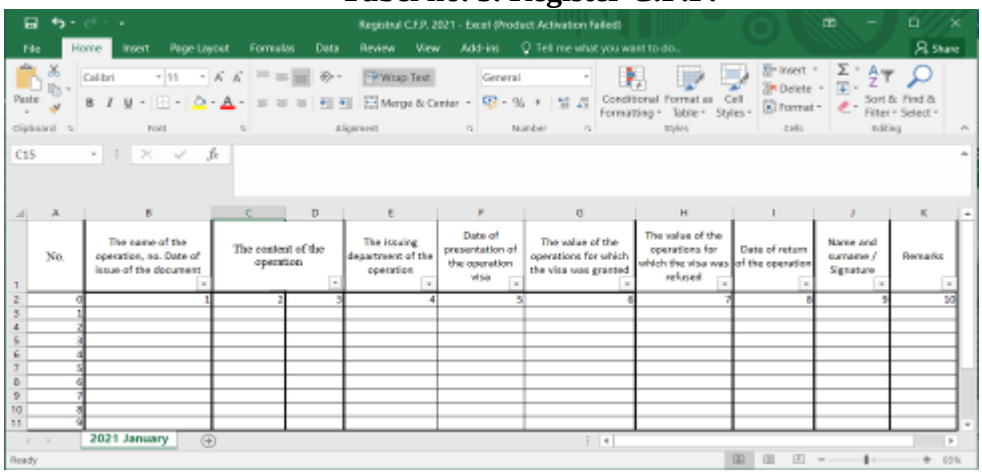


	CHECK-LIST
	Monthly payroll centralizer
Crt. nb.	**Verification objects**
1.	The existence of supporting documents:
1.1.	Wage states;
1.2.	Approved budget;
2.	Existence of approvals, certifications, approvals, other legal signatures, a case may be, for:
2.1.	Supporting documents from point 1.
3.	Framing the number of staff in the state of wages in:
3.1.	The number resulting from the list of positions.
4.	Compliance with legal provisions regarding payment:
4.1.	wages;
4.2.	overtime;
4.3.	increases;
4.4.	salary premiums;
4.5.	other salary rights;
4.6.	social contributions;
4.7.	income tax;
4.8.	application of legal contribution quotas valid on the date of payment.

Based on the analysis of data and information contained in the documents mentioned during the practical application, we formulate some opinions that can contribute to improving the indicators related to salary expenses, but also to increasing the relevance of financial-accounting information, thus:

- in order to ensure compliance with the budgetary limits regarding staff costs, it is recommended that the additional documents to the C.I.M. to be presented at the C.F.P.;
- tracking the number of staff for the current year;

Tabel no. 5. Register C.F.P.



No.	The name of the operation, no. Date of issue of the document	The content of the operation		The issuing department of the operation	Date of presentation of the operation visa	The value of the operations for which the visa was granted	The value of the operations for which the visa was refused	Date of return of the operation	Name and surname / Signature	Remarks
	1	2	3	4	5	6	7	8	9	10
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
11										

Source: own conception

Conclusions

The concern for financial control is to manage resources as efficiently, effectively and efficiently as possible, thus avoiding radical interventionist decisions that converge with the measures of the authorities, which in fact should be geared towards a consistent set of stimulating public policies. At the same time, it is absolutely necessary for all managers of public interest entities to act in a transparent manner, to apply clear rules in a unitary way, but especially to adopt rigorously substantiated decisions by capitalizing on all the valences of financial-accounting information. Moreover, state authorities must be "hand in hand" with the management of public interest entities and the business environment in order to ensure a feasible balance between nationally applicable solutions and the benefits of the free market internationally.

The critical analysis of the way of exercising the preventive financial control at the level of the studied public interest entity highlights the fact that it must be developed and adapted to the specifics of the activity as it results from the presented case, respectively to ensure compliance with budgetary constraints. recommended as additional documents to the CIM to be presented at the C.F.P.

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8. Ordinul nr. 923 din 11 iulie 2014 *pentru aprobarea Normelor metodologice generale referitoare la exercitarea controlului financiar preventiv*, emitent Ministerul Finanțelor Publice, republicat, cu modificări și completări ulterioare, M.O. nr. 28 din 15 ianuarie 2016.

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INSURANCE MARKET ANALYSIS DURING THE PANDEMIC

Adriana, Năstase (Dumitrache)[1]

Abstract:

The social and global context involves many structural and funcţional changes, and the task of the insurance market involves unprecedented changes and becomes very difficult. The paper is based on research of statistical data resulting from national reports on the evolution of the insurance market in the last 5 years, information collected based on additional reports, completed based on accounting and technical-operational records, submitted by insurance companies. The results of the analysis highlight the fact that the evolution and structural changes of the insurance demand are subject to the socio-economic conditions of the reference period strongly influenced by the pandemic, but also to the legislative conditions, legal and financial facilities, and interest in promoting various forms of insurance, both on the part of the insurance company and the insured. Among the recommendations of this paper is the fact that insurance organizations in Romania must embrace change in Europe in general and in Romanian in particular, and take the opportunity to guide their employees to performance by putting them first.

Keywords: insurance, performance, motivation

JEL Code: G22

1. Introduction

In the market economy, insurance is a sector of benefits of the natural economy of each country that contributes to the protection of goods and persons against the various risks taken in insurance. Insurance has a growing role in increasing gross domestic product and investment placements. The insurance sector is revealed as an economic sector by the fact that its product, protection against agreed risks, so insurance, in various forms is sold to potential buyers who thus become real insured against a price, represented by insurance premiums accepted to be paid. The Financial sustainability of insurance is correlated with economic development and access to income, and interest is boosted by the level of culture and training, property relations and other factors. The insurance market is a complex, dynamic concept, with practical values at national and international level. The insurance market can be characterized by the state or the way of manifestation of the relations it implies, by its size, by the organizational framework as well asby the way of achieving the competition.

2. Theoretical approach

Most experts support the traditional approach to insurance, according to which insurance is a means of distributing to a large number of individuals and legal entities, the damage caused by a phenomenon or complex of phenomena to a small number of them.(Ciurel, V., Straton, G., 2011) However, other specialists support other aspects of the insurance issue, and one of these aspects is treating insurance as a service provider, a financial intermediary and a financial asset in an economy full of uncertainties. (Iulian Văcărel, Florian Bercea, 1998)

Compared to other companies, insurance companies have the freedom to decide, but are constrained to exercise special caution in their activity so as not to become insolvent, so as not to jeopardize payment commitments to policyholders.(Cistelecan et al., 2013)

The evolution and structural changes of the insurance application are subject to the socio-economic conditions of the reference period, the legislative conditions, the legal and financial facilities offered, as well as the interest in promoting various forms of insurance, both for the insurance company and as well as for the insured person.(Tanasescu et al., 2007). At present, the macroeconomic climate is extremely favorable for the development of the

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insurance industry. The positive trend will continue in the future, stimulating the increase in demand for insurance products. The introduction of tax incentives and other types of compulsory insurance should guarantee the insurance industry consistent growth rates in the coming years.

No matter how much care we take to avoid problems or protect the family and personal belongings, the risk exists in our lives bringing material and financial losses. Risk, the basic element from which an insurance starts is used in the negative sense of the events we do not want, so the insurance appears as a form of protection in the form of a contract. (Negru, T., 2006) The insurance financially compensates the effects of an unfavorable event. The funds for the financial compensation of the insured are created by the insurer from the premiums paid by the persons or organizations that bought insurances.

Managing the effects of the crisis generated by the COVID-19 pandemic remained the main concern of the states in the first part of 2021. Although Romania registers according to the reports of the Financial Supervisory Authority, lower levels of the gross written premiums indicator, compared to the European average, development prospects of the insurance sector remain favorable. Therefore, increasing the confidence of consumers in the insurance industry, launching new insurance products and adapting them to the needs of the population, as well as the development of financial education remain effective ways to strengthen the insurance sector in Romania. From an economic point of view, in 2021, European states and not only were strongly affected by the health crisis caused by the Covid-19 pandemic but economic forecasts for 2022 indicate the recovery of EU and euro area economies, being revised upwards, The insurance company offers a number of types of financial instruments that are associated with a certain level of risk and profit, and the insured opts for those investment programs based on his risk aversion and desire to earn.

The evolution of the main indicators on the insurance market, in the period 2017-2021

The analysis of the evolution of the insurance market in the period 2017-2021 takes into account the following indicators: insurance density, gross written premiums related to general insurance and related to life insurance and gross claims paid by the insurer related to general insurance and related to life insurance.

The insurance density is an indicator that is calculated as the ratio between the value of gross written premiums (exclusive reinsurance activities and gross written premiums on the territory of other states) on the Romanian territory and its inhabitants, respectively the resident population, is an indicator that shows how much spends, on average, the inhabitant of a country on insurance products. The insurance density indicator has an upward trend in the analyzed period and in 2020, the insurance density in Romania was at a value of 630 lei / inhabitant, increasing by about 5% compared to the previous year, when a value of 599 lei per resident population. (figure 1).

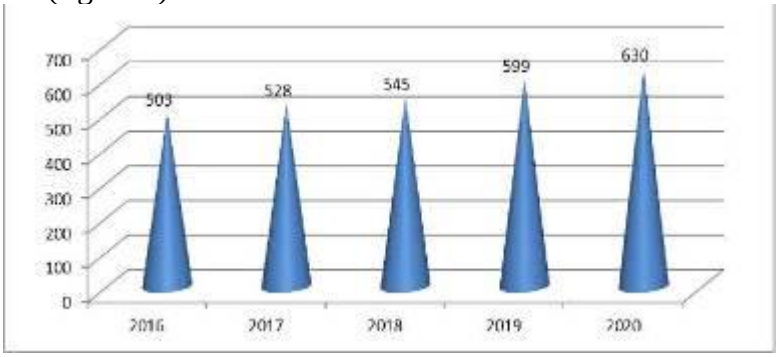

Figure 1. Insurance density

Source: processed after the report of the Financial Supervisory Authority

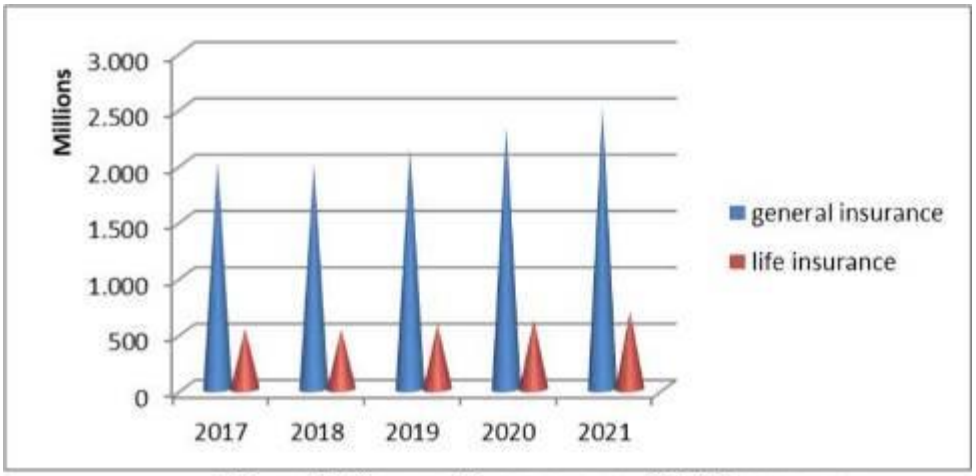

Figure 2. General insurance and life insurance

Source: processed after the report of the Financial Supervisory Authority

Insurers accumulated in the first quarter of 2021 gross written premiums amounting to approximately 3.19 billion lei, a volume increasing by approximately 8.2% compared to the same period of the previous year. Regarding the gross written premiums related to general insurance, they are worth about 2.5 billion lei, increasing by 7.3% compared to the same period of the previous year. Regarding the gross written premiums related to life insurance, they amount to approximately 688 million lei, increasing by 11.6% compared to the first quarter of 2020. (figure 2)

In the first quarter of 2021, the insurance companies reported gross claims paid (excluding maturities and partial and total surrenders), cumulated for the two categories of insurance, in the amount of 1,671,293,799 lei. To the gross claims related to life insurance are added maturities, partial and total surrenders, all cumulated being in the amount of 5,651,013 lei, a value decreasing by approximately 5.7% compared to the similar period of the previous year. (figure 3)

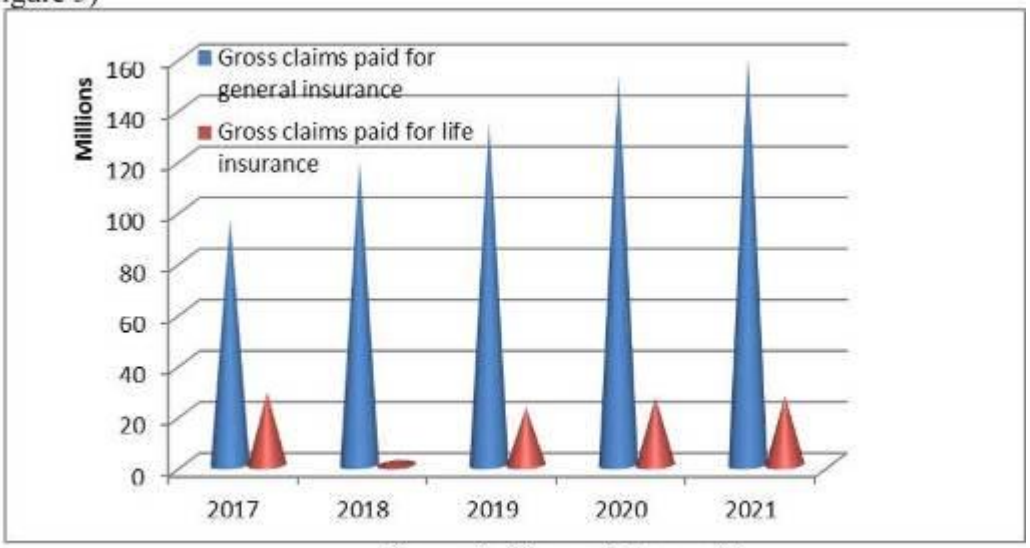

Figure 3. Gross claims paid

Source: processed after the report of the Financial Supervisory Authority

The amount of 1,595,501,369 lei is related to general insurance contracts (95%), registering an increase of 4.7% compared to the first quarter of 2020 (1,523,522,090 lei). The amount of 75,792,430 lei are amounts paid for gross claims, related to life insurance, registering an increase of 30% compared to the first quarter of 2020 (58,227,149 lei).

At the end of the first quarter of 2021, the insurance companies had set up gross technical reserves totaling 19,804,517,159 lei, increasing by 2.8% compared to the end of 2020 (19,266,059,649 lei), distributed over the two insurance categories, as follows: gross technical reserves set up for non - life insurance recorded a volume of 11,034,238,741 lei, representing 56% of the total technical reserves, and for life insurance, the companies constituted reserves amounting to 8,770,278,418 lei, a level corresponding to a share of 44% of the total technical reserves.(figure 4)

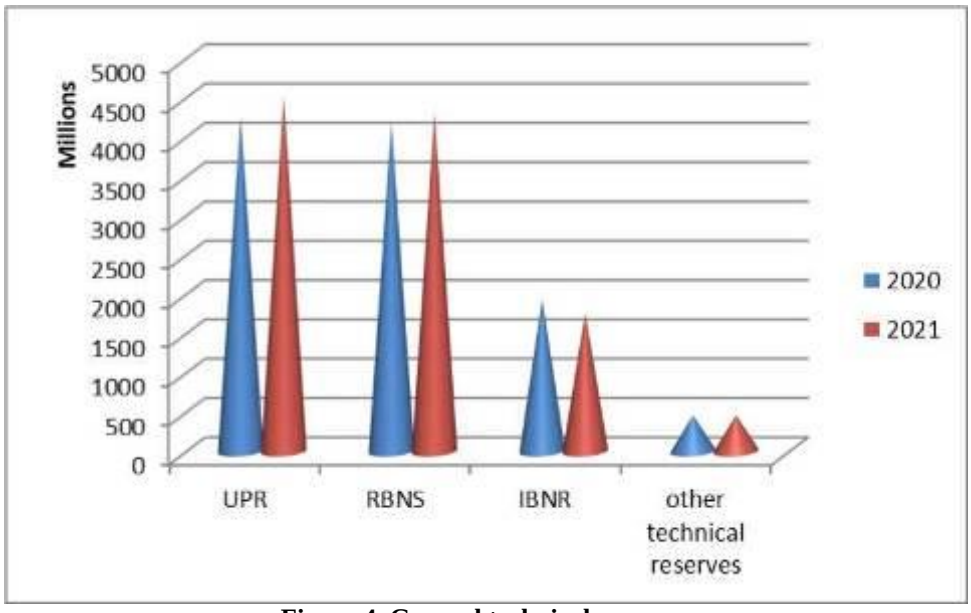

Figure 4. General technical reserves
Source: processed after the report of the Financial Supervisory Authority

The increase in the value of technical provisions in life insurance is both the effect of underwriting new risks and the fluctuation of the calculated value of reserves due to changes in the parameters included in the technical basis (eg the risk-free return used to calculate the present value of future cash flows; payments, the rate of annual bonuses included in the insured amount, etc.). (figure 5)

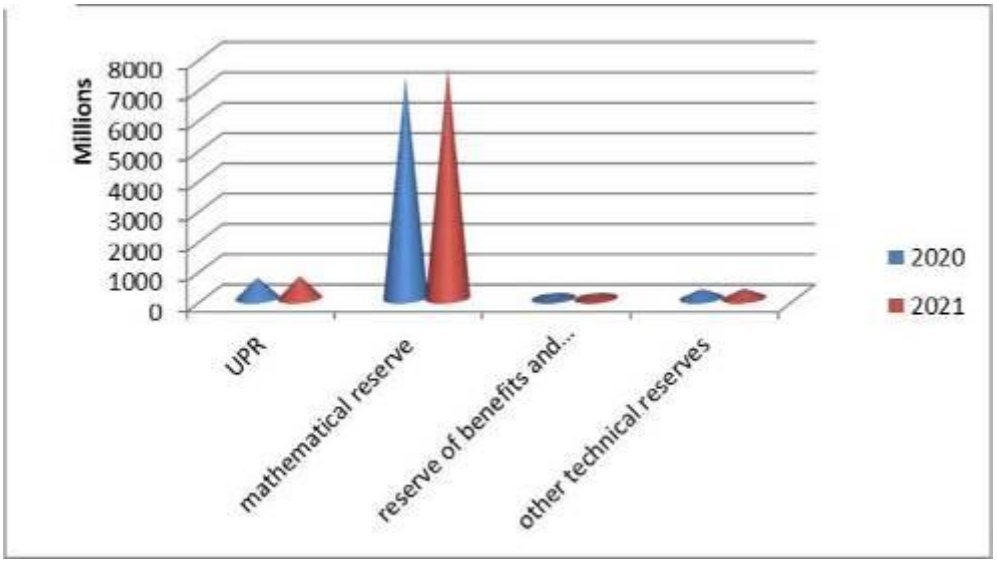

Figure 5. Life insurance technical reserves
Source: processed after the report of the Financial Supervisory Authority

Conclusions

Romanian insurance companies must embrace change in Europe in general and in Romanian in particular and take the opportunity to guide their employees to performance by putting them first. The freedom of movement of economic agents on the insurance market responds to an essential criterion of the functioning of the market economy, that of openness to the economic and social environment. An update is needed on how to motivate work in the context of changes that permanently affect the social and economic environment. The period of recent years has been dominated by significant changes on all levels. Thus, from the legislative changes to the crisis situation generated by the Coronavirus pandemic, the organizations faced a series of activity disruptions. These, if not managed properly, can have particularly serious negative effects on the stability of companies, and a basic element is the human resource. it can be stated that in an economy full of uncertainties, insurance favors the development of the population's savings towards the financial market. No matter how much humanity has evolved, one thing is very clear: humans cannot control everything that happens around them. This paper can be improved by including in the analysis of the insurance market the multitude of indicators characteristic of it as well as the influence on the evolution of the insurance market in the period considered.

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THE IMPACT OF THE COVID-19 PANDEMIC ON THE ROMANIAN INSURANCE MARKET

Maria-Elena Gheordunescu[1]

Abstract

The COVID-19 pandemic has had a negative impact on the world's economy, insurance market included. Thus, the year 2020 began with the appearance of a new risk to the financial markets, completely related to the rapid spread of COVID19, with significant effects on the entire Romanian insurance market, a rather strong effect being registered by the travel insurance market, mainly due to the collapse of tourism.

However, the Romanian insurance market maintained its "5th position in 2020, with a slightly growing regional market share, from 5.88% in 2019, to 6.3% in 2020 ". This was due to the fact that Romania was one of the few insurance markets in Central and Eastern Europe that ended last year with a positive growth rate of 2.7%, while - with few exceptions - the most important markets in the region ended the year on a negative trend.

This paper aims to present the situation, effects and trends of the Romanian insurance market in the pandemic context. Based on the quantitative method, but also the qualitative one, this paper is an exploratory research, highlighting relevant information in the field of insurance.

Keywords: *insurance market, insurance, non-life insurance, life insurance, insurers, gross written premiums*

JEL Classification: *I 15*

1. INTRODUCTION

The insurance market has undergone many changes and transformations over the 30 years of market liberalization, constantly adapting to new legislation and consumer needs: from handwritten street-corner receipts and policies in the past, to 100% electronically generated policies in the present. However, in this difficult context created by the COVID-19 pandemic, maintaining both a balanced market that meets the needs of policyholders and an active link with the customers has become a priority for operators in the insurance industry everywhere.

In 2020, insurance companies authorized and regulated by the Financial Supervision Authority (ASF) and their branches operating in Romania, subscribed gross premiums amounting to approximately 12.5 billion lei, 5.4% increase compared to the value registered in 2019 (11.88 billion lei). In the first half of 2021 they were worth 6.39 billion lei, an increase of approximately 13.6% compared to the similar period of the previous year.

However, in the context of the pandemic, insurers have made sustained efforts to develop and improve online communication solutions with insurance consumers, in the sales segment, but especially in the service and compensation segments. Nevertheless, the reality of all markets is that a beneficial and constructive business relationship depends very much on human contact.

2. RESEARCH METHODOLOGY

Given the above, the main objective of this paper is an analysis of the Romanian insurance market in the 2020-2021 period through the use of specific terms.

The purpose of the research was to present the market situation in the two pandemic years, highlight the trends of the insurance market, as well as highlight some measures taken by Romanian insurers.

This paper is based on various types of data provided by the insurance market through various sources of information, which gives it a qualitative and quantitative character.

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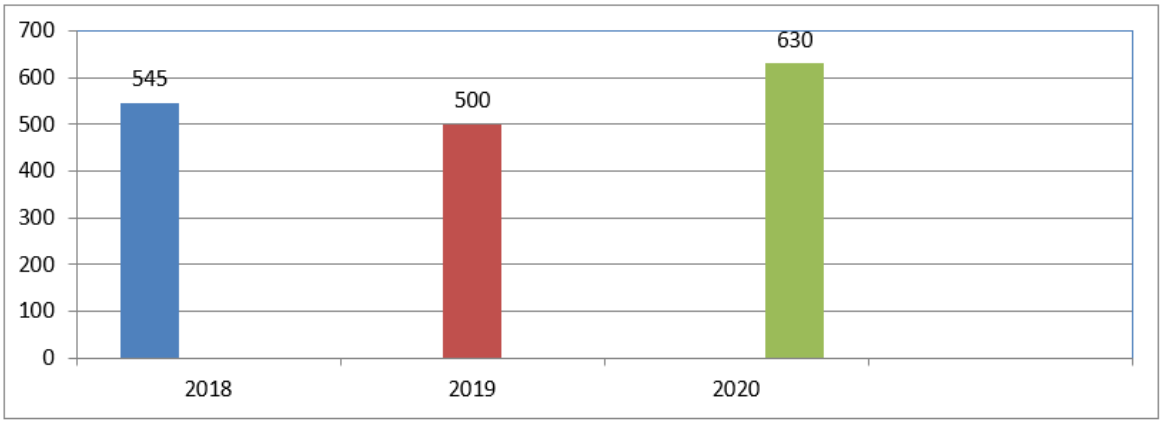
3. DATA ANALYSIS

Managing the effects of the COVID-19 pandemic crisis, which began in 2020, has remained the main concern of many states around the world. The current health crisis has generated a high level of uncertainty throughout the year, and a significant impact on the global level of macroeconomic financial developments.

Thus, it was found that in 2020, the insurance density in Romania was at a value of 630 lei / inhabitant, increasing by about 5% compared to 2019. This is calculated such: the ratio between the value of gross written premiums (exclusive reinsurance activities and gross premiums written on the territory of other states) on the territory of Romania and its number of inhabitants. That being an indicator that shows how much the average inhabitant of a country spends on insurance products.

Graph no.1

Insurance density in Romania in the 2018-2020 period



Source: created by the author based on the information from the Report on the evolution of the insurance market-ASF Romania, https://asfromania.ro/ro/a/1947/informare-de-pres%C4%82---raportul-privind-evolu%C8%9Bia-pie%C8%9Bei-asigur%C4%83rilor-%C3%AEn-anul-2020

On the Romanian insurance market in 2020, the insurance companies authorized and regulated by ASF subscribed gross premiums amounting to approximately 11.5 billion lei, sums that have increased by approximately 4.6% compared to the value recorded in 2019, managing to adapt and overcome the challenges posed by the COVID-19 pandemic. Thus, the gross written premiums related to general insurance (GA) amounted to about 9.28 billion lei, increasing by 6.3% compared to 2019, and the gross written premiums related to life insurance (AV) were in the amount of approximately 2.22 billion lei, decreasing by 1.6% compared to 2019.

Table no. 1

Dynamics of distribution by insurance segments in the period 2019-2021

	2019	**2020**
AG	8.734.210.208	9.281.000.982
AV	2.256015186	2.219.478.274
TOTAL	**10.990.225.394**	**11.500.479.256**
AG TOTAL (%)	79%	81%
AV TOTAL (%)	21%	19%

Source: created by the author based on the information from the Report on the evolution of the insurance market-ASF Romania, https://media.hotnews.ro/media_server1/document-2021-03-25-24689101-0-evolutia-pietei-asigurarilor-2020.pdf

Also this year, 2020, the Romanian insurance market remains dominant in the category of general insurance, car insurance, which includes class A3 (Insurance of land transport, other than rail) and class A10 (Motor third party liability insurance, including carrier liability), representing approximately 71% of the total gross premiums written for the general insurance business and 57% of the total gross premiums written by the insurance companies.

Regarding the life insurance segment, it registered a slight decrease in 2020 compared to 2019, the volume of gross written premiums continues to be at higher values, exceeding the level of 2.2 billion lei in 2020, being supported by an increase of 1.6% of the subscriptions for class C1, Life insurance, annuities and supplementary life insurance, which represents about 65% of the total subscriptions for life insurance. This modest decrease in life insurance activity was due to the reduction in the volume of gross premiums written for Class C3, Life Insurance and Annuities, related to investment funds, which holds a share of 27% in total PBS for life insurance activity.

Regarding health insurance, it continued to register positive dynamics in 2020, with a volume of subscriptions of over 451 million lei, increasing by approximately 18% compared to 2019, increasing their share in the total gross written premiums by companies authorized and regulated by ASF to 3.9% from 3.5% in 2019.

Considering the main insurance companies on the Romanian market, on December 31, 2020, 28 insurance companies were active on the insurance market, authorized and regulated by the Financial Supervisory Authority, out of which 15 practiced only general insurance (GA) activity, 7 have practiced only life insurance (AV) activity and 6 practiced composite activity.

Table no. 2

Companies with the highest volume of premiums written and their share in the total market (non-life insurance and life insurance) in 2020

No.	Company	Market Share
1.	City Insurance	20,07%
2.	Omniasig VIG (fosta BCR ASIGURĂRI VIG)	12,03%
3.	Allianz-ȚiriacAsigurări S.A.	11,43%
4.	Euroins Romania AsigurareReasigurare S.A.	11,40%
5.	GroupamaAsigurări S.A.	9,24%
	Total 1-5	**64, 18%**
6.	NN Asigurări de Viață S.A.	7, 42%
7.	Asirom Vienna Insurance Group S.A.	5,51%
8.	Generali Romania AsigurareReasigurare S.A.	5,39%
9.	BCR Asigurari de viață Vienna Insurance Group S.A.	3,24%
10.	UniqaAsigurari S.A.	3,21%
	Total 1-10	**88,94%**
	Other companies	11,06%
	Total	**100%**

Source:https://asfromania.ro/files/analize/Evolutia%20pietei%20asigurarilor%202020_20210318_site24032021.pdf

This year, 2020, on the first place in the market (general insurance + life insurance) is the company CITY Insurance, with a share of 20.07%, followed by OMNIASIG VIG with a share of 12.03% and ALLIANZ-TIRIAC Asigurări, with a market share of 11.43%. The list is completed by EUROINS Romania with a market share of 11.40%, GROUPAMA Insurance with a share of 9.24%, NN Life Insurance with a market share of 7.42%, ASIROM VIG with a share of 5.51 %, GENERALI Romania with a share of 5.39%, BCR Asigurări de Viaţă with a share of 3.24% and UNIQA with a share of 3.21%. It is found that in 2020, approximately 89% of the total volume of gross written premiums was achieved by a total of 10 insurance companies.

Regarding the total volume of gross premiums written for general insurance, in 2020, it was 9,281,000,982 lei, increasing by 6.3% compared to 2019. The first 10 insurance companies that subscribed to premiums related to general insurance accumulated a value of 8,871,747,032 lei, which represents about 96% of the total of this activity segment.

Table no. 3

Ranking of insurance companies according to the premiums written for general insurance in 2020

No.	Company	Market Share
1.	City Insurance	24,9%
2.	Omniasig VIG (fosta BCR ASIGURĂRI VIG)	14,9%
3.	Euroins Romania AsigurareReasigurare S.A.	14,5%
4.	Allianz-ȚiriacAsigurări S.A.	12,1%
5.	GroupamaAsigurări S.A.	11,0%
	Total 1-5	**77,0%**
6.	Asirom Vienna Insurance Group S.A.	5,8%
7.	Generali Romania AsigurareReasigurare S.A.	5,4%
8.	UniqaAsigurări S.A.	4,0%
9.	Pool –ul de Asigurare P.A.I.D.	1,8%
10.	OnixAsigurări S.A.	1,7%
	Total 1-10	**95,6%**
	Other Companies	4,4%
	Total	**100%**

Source:https://www.1asig.ro/Piata-asigurarilor-in-2020-TOPUL-jucatorilor-articol-3,100-65750.htm

Regarding the life insurance, the gross premiums subscribed by insurance companies for their life insurance premiums activity registered a value of 2,219,478,274 lei in 2020, a slight decrease, by about 1.6%, compared to the same period of the previous year. Also, a high degree of concentration was maintained at the end of 2020, so that 5 companies held a share of about 81% of the total volume of premiums written in this segment, with cumulative subscriptions amounting to 1,788,478,677 lei.

Table no. 4

Ranking of insurance companies according to the written premiums for life insurance in 2020

No.	Company	Market Share
1.	NN ASIGURARI DE VIATA SA	38,5%
2.	BCR ASIGURARI DE VIATA VIENNA INSURANCE GROUP S.A.	16,8%
3.	BRD ASIGURARI DE VIATA S.A.	11,0%
4.	ALLIANZ - TIRIAC ASIGURARI S.A.	8,5%
5.	SIGNAL IDUNA ASIGURARE REASIGURARE S.A.	5,8%
	Total 1-5	**80, 6%**
6.	GENERALI ROMANIA ASIGURARE REASIGURARE S.A.	5, 4%
7.	ASIROM VIENNA INSURANCE GROUP S.A.	4,4%
8.	UNIQA ASIGURARI DE VIATA SA	3,8%
9.	GRAWE ROMANIA ASIGURARE S.A.	2,1%
10.	GROUPAMA ASIGURARI S.A..	2,1%
	Total 1-10	**98,4%**
	Other companies	1,6%
	Total	**100%**

Source:https://www.1asig.ro/Piata-asigurarilor-in-2020-TOPUL-jucatorilor-articol-3,100-65750.htm

Of the total gross premiums for life insurance, the highest shares are held by classes C1: Life insurance, annuities and supplementary life insurance, and respectively C3, Life insurance and annuities, related to investment funds, which together accumulate about 92% of the total gross premiums written for the life insurance business.

At the level of the entire insurance market, the number of insurance contracts in force at the end of 2020 was 16,220,803, increasing compared to the previous year by about 4.8%. The number of insurance contracts in force at the end of 2020 for non-life insurance represents about 91% of the total number of contracts. The number of contracts in force at the end of 2020 for the general insurance business increased by about 6.4% compared to the previous year, while the number of contracts in force for life insurance (AV) decreased by about 8.9 %.

Table no.5

The evolution of the number of insurance contracts in the period 2019-2020

	2019	**2020**
AG	13.861.989	14.745.829
AV	1.618.694	1.474.974
TOTAL	**15.480.683**	**16.220.803**

Source:https://www.1asig.ro/Piata-asigurarilor-in-2020-TOPUL-jucatorilor-articol-3,100-65750.html

In 2020, insurance companies reported gross indemnities paid (excluding maturities and partial and total repurchases), cumulated for the two insurance categories, in the amount of 6,095,341,490 lei, as follows: 5,862,518,682 lei are related to general insurance contracts (96%), registering an increase of 1.6% compared to 2019 (5,769,804,707 lei) and 232,822,808 lei are amounts paid for gross indemnities, related to life insurance, registering a slight decrease, with about 0.1 %, compared to 2019 (233,053,161 lei).

Managing the effects of the crisis caused by the COVID-19 pandemic remained the main concern of the states in the first half of 2021. Thus, the situation on June 31, 2021 shows that in the insurance market there were 27 insurance companies, authorized and regulated by ASF (Authority of Surveillance, of which 14 practiced only general insurance activity ("AG"), 7 practiced only life insurance activity ("AV") and 6 practiced composite activity.

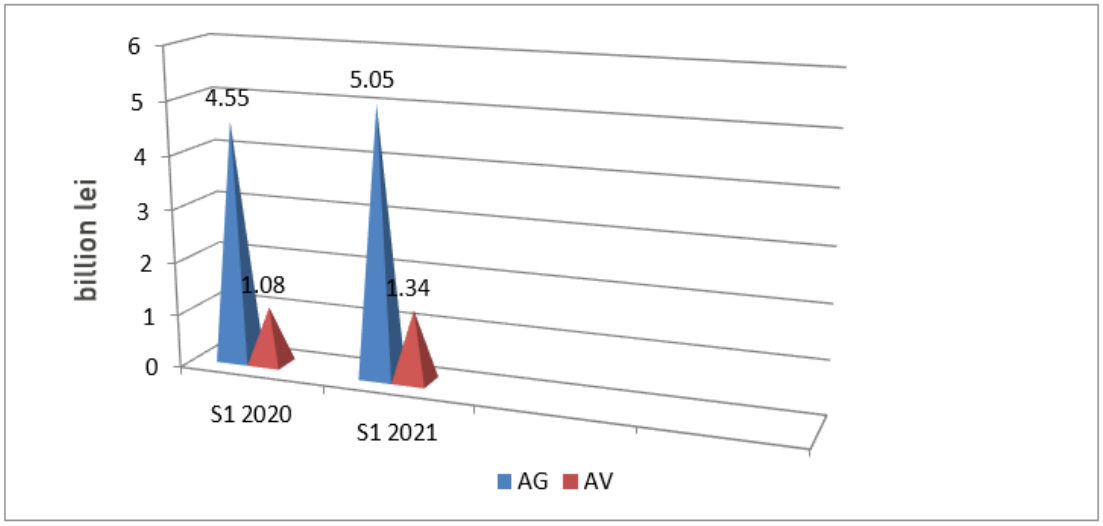
Regarding the gross written premiums of the general and life insurance (AG and AV), the insurers accumulated in the first half of 2021 gross written premiums (PBS) amounting to approximately 6.39 billion lei, an increasing volume of approximately 13 , 6% compared to the same period in 2020:

- gross written premiums related to general insurance (GA) amount to about 5.05 billion lei, increasing by 7.3% compared to the same period of the previous year;

- the gross written premiums related to life insurance (AV) are in the amount of approximately 1.34 Billion lei, increasing by 24% compared to the first half of 2020.

Graph no.2

Evolution of gross written premiums in the period 2020-2021



Source: created by the author based on the Report on the evolution of the insurance market-ASF Romania https://asfromania.ro/uploads/articole/attachments/61691d44a6d09214130837.pdf

Regarding the geographical distribution of the premiums, it is observed that in the case of both general and life insurance, the contracts with the most important cumulative value are made in Bucharest and Ilfov, followed by, at a significant distance, the North-West and Center regions.

In the first half of 2021, approximately 88% of the total volume of gross written premiums was realized by 10 insurance companies out of the 27 companies that carried out insurance / reinsurance activity on June 30, 2021.

Table no.6

The companies with the highest volumes of written premiums and their share in the total market (general insurance and life insurance) in the first half of 2021

No.	Company	Market share
1.	City Insurance	20,62%
2.	Allianz-ȚiriacAsigurări S.A.	11,94%
3.	Omniasig VIG S.A.	11,42%
4.	Euroins Romania AsigurareReasigurare S.A.	11,39%
5.	GroupamaAsigurări S.A.	8,72%
	Total 1-5	**64, 08%**
6.	NN Asigurări de Viață S.A.	7, 16%
7.	Asirom Vienna Insurance Group S.A.	5,49%
8.	Generali Romania AsigurareReasigurare S.A.	4,92%
9.	BCR Asigurari de viață Vienna Insurance Group S.A.	3,53%
10.	BRD Asigurări de Viață SA	3,02%
	Total 1-10	**88,21%**
	Other companies	**11,79%**
	Total	**100%**

Source: https://asfromania.ro/uploads/articole/attachments/61691d44a6d09214130837.pdf

As for the total volume of gross premiums written for non-life insurance in the first half of 2021, they were over 5 billion lei, up 11.1% compared to the same period in 2020. The top 10 insurance companies that have written premiums related to general insurance

accumulated a value of 4.84 billion lei, which represents about 96% of the total of this business segment.

Table no.7

Ranking of insurance companies according to the premiums written for non-life insurance in the first half of 2021

No.	Company	Market Share
1.	City Insurance	26,9%
2.	Omniasig VIG	14,45%
3.	Euroins Romania AsigurareReasigurare S.A.	14,41%
4.	Allianz-ȚiriacAsigurări S.A.	12,65%
5.	GroupamaAsigurări S.A.	10,48%
	Total 1-5	**77,0%**
6.	Asirom Vienna Insurance Group S.A.	5,92%
7.	Generali Romania AsigurareReasigurare S.A.	4,68%
8.	UniqaAsigurări S.A.	3,79%
9.	OnixAsigurări S.A.	1,72%
10.	Pool –ul de Asigurare P.A.I.D.	1,67%
	Total 1-10	**95,85%**
	Other Companies	4,15%
	Total	**100%**

Source: https://asfromania.ro/uploads/articole/attachments/61691d44a6d09214130837.pdf

We find that of the total gross premiums written for non-life insurance, the highest shares are held by classes A10 - Civil liability for the use of land motor vehicles, A3 - Land vehicles, excluding rolling stock and A8 - Fire and natural disasters (for goods other than insurable in classes A3 - A7).

We note that these three classes in the first part of 2021, have a share of about 84% of the total gross written premiums for the general insurance activity.

Table no.8

Structure by general insurance classes S1 2020-S1 2021

class	PBS AG (lei)	PBS AG (lei)	Share S1201
	S12020	S12021	
A10	2.066.335.187	2.357.136.545	46,66%
A3	1.110235.323	1.243.692.424	24,62%
A8	607.026.075	652.006.308	12,91%
Other classes	765.202.693	799.165.733	15,82%
Total	4.584.799.279	5.052.001.010	100,00%

Source: created by the author
https://asfromania.ro/uploads/articole/attachments/61691d44a6d09214130837.pdf

For life insurance, the gross premiums written by the insurance companies registered a value of 1,339,735,088 lei in the first half of 2021, increasing by about 24% compared to the same period of 2020. There is also a high degree of concentration at the end of the first semester by 5 companies that held a share of about 81% of the total volume of premiums written in this segment, with cumulative subscriptions exceeding the value of 1 billion lei.

Table no.9

Ranking of insurance companies according to the premiums written for life insurance in the first half of 2021

No.	Company	Market Share
1.	NN ASIGURARI DE VIATA SA	34,17%
2.	BCR ASIGURARI DE VIATA VIENNA INSURANCE GROUP S.A.	16,85%
3.	BRD ASIGURARI DE VIATA S.A.	14,41%
4.	ALLIANZ - TIRIAC ASIGURARI S.A.	9,25%
5.	SIGNAL IDUNA ASIGURARE REASIGURARE S.A.	5,91%
	Total 1-5	**80, 58%**
6.	GENERALI ROMANIA ASIGURARE REASIGURARE S.A.	5, 83%
7.	UNIQA ASIGURARI DE VIATA SA	4,28%
8.	ASIROM VIENNA INSURANCE GROUP S.A.	3,89%
9.	GROUPAMA ASIGURARI S.A.	2,08%
10.	GRAWE ROMANIA ASIGURARE S.A	1,82%
	Total 1-10	**98,49%**
	OTHER COMPANIES	1,51%
	Total	**100%**

Sursa: ***Report: The evolution of the insurance market in the first half of 2021,https://asfromania.ro/uploads/articole/attachments/61691d44a6d09214130837.pdf

We can see that the life insurance, annuity and supplementary life insurance, class C1, registered in the first half of 2021 a slight increase of about 25% compared to the same period before 2020, and this class represents about 64% of the total subscriptions for life insurance; and Class C3, Life and annuity insurance, related to investment funds, represents 27% of the total life insurance subscriptions, registered an increase of 29% compared to the first half of 2020.

In terms of the number of insurance contracts reported in the entire insurance market, their value at the end of the first half of 2021 was over 17 million, up from the same period last year by about 8%.

For non-life insurance, the number of insurance contracts in force at the end of the first half of 2021 was about 91% of the total number of contracts.

For life insurance, the number of contracts in force at the end of the first half of 2021 increased by about 8.8% compared to the first half of 2020, while the number of contracts in force for life insurance decreased by about 3%.

In the first half of 2021, the insurance companies reported the gross indemnities paid (excluding maturities and partial and total repurchases), cumulated for the two categories of insurances, in the amount of 3,278,533,357 lei, as follows:

- for the general insurances, the gross indemnities paid were of 3,121,136,469 lei (95%), registering an increase of 9.7% compared to the first semester of 2020 (2,844,208,291 lei);

-for life insurance, the gross benefits paid were 157,396,888 lei, registering an increase of 47% compared to the first half of 2020 (107,268,780 lei). Gross indemnities related to life insurance are added to maturity, partial and total redemptions, all cumulative being in the amount of 386,535,405 lei, a value decreasing by approximately 1.4% compared to the similar period of the previous year.

4. CONCLUSIONS

In 2020, the insurance market ended the year with a volume of gross written premiums, increased compared to 2019, even if the year 2020 was marked by uncertainty due to the COVID-19 pandemic. The same trend is observed in the first 6 months of 2021, in the general insurance segment.

At the same time, one of the leaders of the insurance market, City Insurance was left without the operating license and for which the Financial Supervision Authority (ASF) requested the opening of bankruptcy proceedings towards the end of September 2021. City Insurance managed to sign for another 20% advance in the ranking of the largest general and life insurance companies in the first half (S1) of 2021, reaching subscriptions of 1.31 billion lei, according to the ASF report on the evolution of the market insurance in H1 / 2021.

It was found that even during this period strongly influenced by the COVID-19 pandemic, there was and is an interest in insurance, especially for car insurance, home insurance, health insurance and life insurance. However, there is still a major deficit in protecting the population from risks. Thus, many families in Romania could be financially affected in the event of the death, illness or inability of one of the members to support their standard of living.

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THE SCOREBOARD - A TOOL IN MANAGING THE ECONOMIC ENTITIES FOR THEIR PERFORMANCE IMPROVEMENT

Florin – Cristian GHEORGHE[1]

Summary

The Scoreboard is the tool that emphasizes the way of generating actions to improve the performance of the economic entity2. The use of the scoreboard as a tool of leading the economic entities is recommended in any analysis or managerial activity in which managers point out the effectiveness of the continuation under the same or other conditions withtin the economic activity, based on the information regarding the results of the various activities' implementation.

Key words: scoreboard, performance, management, entitity, strategy.

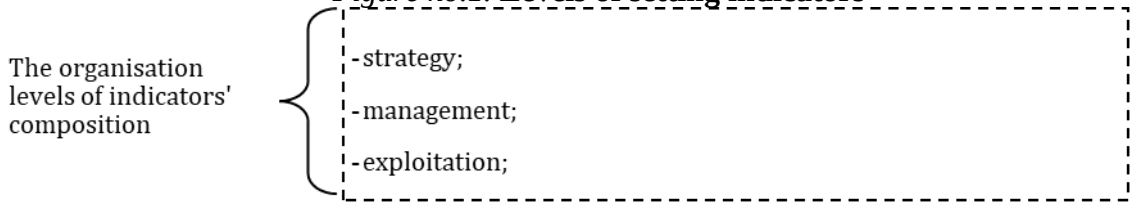
JEL Code *M41 – Accounting*

1. Introduction

From a conceptual point of view, the determination and reporting of the global result serves to present in a single (integrated) size all the elements of income, expenses, gains and losses, aiming at increasing transparency in financial reporting. The replacement or completion of the traditional income statement with a global format that integrates in the current result including operations directly in own equities, considers that the relevant measure of performance is not given by the net result indicator, but by that value that measures variation equity (valued at market values), or in other words, the enrichment of shareholders.

The structure of a scoreboard is designed to track physical and economic indicators in order to achieve performance, but also to anticipate it, and the composition of indicators at ascending and descending level determines all three levels of the organization of an economic entity, as shown in the figure below[3]:

Figure no.1. **Levels of setting indicators**



(own source adapted from : Ristea, M., Olimid, L., Calu, D. A., Sisteme contabile comparate, CECCAR Press, Bucharest , 2006, p. 347

The scoreboard finds its usefulness in different contexts[4], as shown in Figure no.2.

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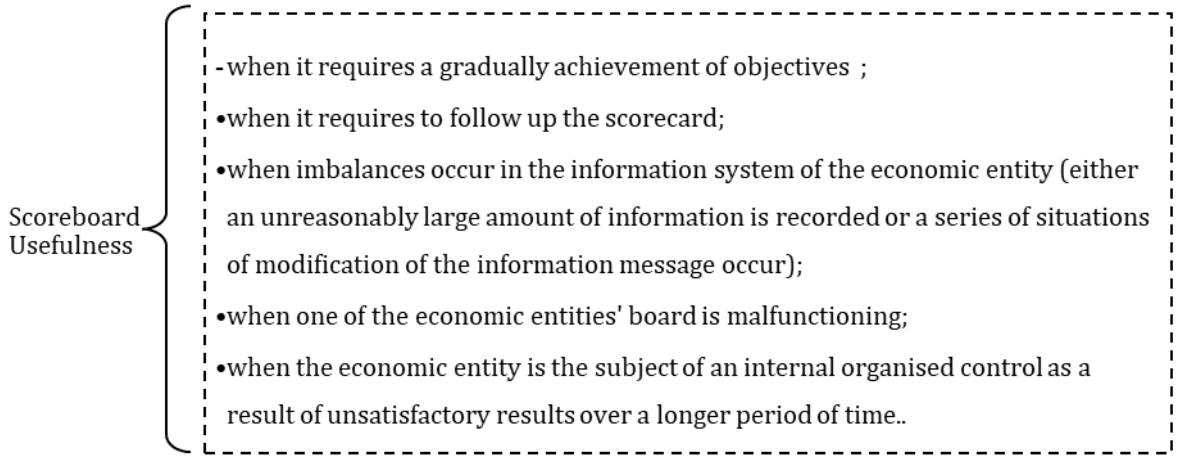
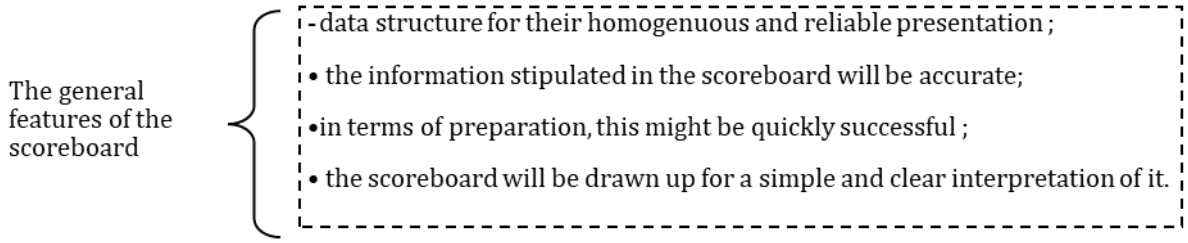
Figure no.2. **Situations of scoreboard usefulness**



(own source: adaption from: Cucui, I., Man, M., Costurile și controlul de gestiune, Editura Economică, București, 2004, p. 263)

The role of synthesis for the activity of the entity that aims to achieve efficient strategies determines the scoreboard fulfillment of a series of features presented in figure no.3

Figure no.3. **The scoreboard features**



(own source from: Jaba, O., Gestiunea producției și operațiilor. Metode și tehnici ale managementului operațional al producției, Editura Economică, București 2002, p. 356)

2. Literature review

Considering the scoreboard, **the financial analysis** is defined as the study of an enterprise by an outside observer (or from within the enterprise) that can be a potential investor, a banker. or any other entity eager to know the financial situation of the undertaking.[1]

The occurence of the analysis as a research method was outlined in order to break down a phenomenon or an activity in its component parts, in order to better know them. We can consider of utmost importance the approach of financial activities or phenomena, by using a set of concepts, techniques and instruments [2], (including the scoreboard), afterwards the focus on the consumption of resources and interpretation of the results based on cause-effect or structural-functional relationships.

In an economic environment pressed by the globalization phenomenon, whose tendency is to turn complicated thing into a complex one, the economic and financial analysis has the role of explaining the economic and financial phenomena through the relationships delimited within a set of elements (structural analysis) and through the factors of influence

[1] Forget J. (2005) *Analyse financière. De l'interprétation des états financiers a la compréhension de logiques boursières*, Paris: Editions d' Organisation, pg. 13
[2] Cohen, E. (2006) *Analyse financière*, Paris: Economica, pg. 63

(factorial analysis). However, the analysis can be carried out in various forms (types) in order to respond as well as possible to the established objectives, and the stages of its achievement can be adapted to the concrete economic conditions.

We consider that regarding its importance, the activity of economic and financial analysis, on the basis of the scoreboard as well, is placed in the middle of existing links between the functions of the enterprise and the functions of the management meaning that the achievement of any management's attribute implies the conduct of economic analysis as an indispensable tool for substantiating decisions.

In the current conditions of increasing the complexity degree of the enterprises' economic activity as well as the decision-making, the economic and financial analysis is positioned as an essential coordinator of the global strategic diagnosis, and of the economic-financial ones in particular. The financial analysis aims at an in-depth understanding of the financial balances and dynamics of entities.[1]

3. The relevance of reporting comprehensive income

The methodology of the research designed for this study and related to the proposed objectives is based on: preliminary documentation, bibliographic documentation, identification of information from financial and non-financial reports that can be useful in this approach, analysis of all the collected information, establishment of ways of interpreting the information and results presenting.

In order to accomplish the research objective, it was necessary an empirical study on the main processes in the entity, by using the scoreboard process, based on the information provided by the accounting model, as well as by involving the descriptive research method as a research method or as a way of knowledge, and the preliminary study to get information and explanations too.

The methodology of using the scoreboard targeted techniques and procedures that proved to be useful as some strengths and weaknesses of the business financial management were established either to maintain the existing strategies or to substantiate new strategies for the entity development.

3. The Supply Process Scoreboard

In the supply process, the Scoreboard is a tool to assess the process from the following perspectives: the financial perspective, the quality perspective and the staffing perspective. In the table no.1, such a picture is presented:

Table no. 1 Supply chain scoreboard within an economic entity of construction field

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted score
0	1	2	3	4	5
Financial perspective	Cost cut-offs of raw materials (building materials) by 5%	Raw material costs (mil. lei)	42	5,73	5,66
		Costs of non-compliant procurement (mil. lei)	31	0,29	0,11
		Accuracy of payments to suppliers (%)	17	99,81	99,99
		Inventory (per day)	10	8,00	7,03
Quality perspective	A greater control over the quality of purchased raw materials (timber)	Quantity reduction of non-compliant purchased timber (cm.)	25	70,00	68,00
	The improvement of timber supply and transport process	Supply and transport infrastructure (cars no.)	25	5,00	6,50
		Selection of timber suppliers (no. of suppliers)	25	11,00	15,00
		The improvement of checking the timber acquisition (criteria no.)	25	8,00	11,00

[1] Forget, J. Forget J. (2005) *Analyse financière. De l'interprétation des états financiers a la compréhension de logiques boursières,* Paris: Editions d' Organisation, pg. 9

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted score
0	1	2	3	4	5
Staff perspective	Programs for professional development	The staff qualification growth (% of qualified personnel)	37	50,00	60,00
		The improvement of negotiation abilities with suppliers (% of qualified personnel)	39	54,00	60,00
		Increasing the motivation of the supply department staff (% incentive)	24	5,00	5,00

(*Source*: adaption from Mendoza, C., Zrihen, R., Le tableau de bord: en V.O. ou en version américane? Comparaison entre le tableau de bord et le balanced scorecard, Revue française de comptabilité nr.309/1999, p.64 și Popa, V., Topolică, M., Utilizarea tabloului de bord ca instrument de pilotare a unei organizații parte a lanțului de distribuție/aprovizionare,Conferința Coromar, Iași, 28-29 sept. 2007, p. 360-381 disponibil la adresa https://virgilpopa.com/old/articole/coromar/2_utilizarea_tabloului_de_bord.pdf)

4. The scoreboard of production process

The production scoreboard consists of four perspectives such as: the financial perspective, the quality perspective, the innovation perspective and the staff perspective. All the axes affected in the instrument panel are of the same importance. The production process instrumentation is shown in Table 2:

Table no.2. The production scoreboard within an economic entity of construction field

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted Score
0	1	2	3	4	5
Financial perspective	Cost reduction of production	Raw material costs (mil. lei)	31	6,90	6,70
		Costs of non-compliant procurement (mil. lei)	16	0,30	0,20
		Salary-type costs	13	4,80	4,58
		Processing costs (mil. lei)	40	14,80	14,59
Quality perspective	The improvement of the production in terms of quality	The waste in production process (% of the production value)	20	0,31	0,10
		Errors in the production process (% of the production time)	20	1,88	0,51
		Optimization of manufacturing time (%)	17	99,00	100,00
		The usage level of production equipment (%)	25	20,00	10,00
		The implementation grade of quality standards (%)	18	90,00	100,00
The innvation perspective	Designing and launching new products	The number of new products created in the last 5 years	16	6,00	5,00
		Investments in new technologies and equipment (mil. lei)	40	210,00	220,00
		Labour productivity (%)	8	90,00	100,00
		The automation degree of production (%)	36	77,00	82,00
Staff perspective	The qualification increasing of the production personnel	The qualification level of employees in production (%)	30	67,00	70,00
		The comparison between the payroll level from production department and the other departments	31	61,00	60,00
		Training programs from the last 5 years (no.)	21	5,00	5,00
		The importance of the management team in the production process (%)	18	66,00	70,00

(*Source*: adaption from Mendoza, C., Zrihen, R., Le tableau de bord: en V.O. ou en version américane? Comparaison entre le tableau de bord et le balanced scorecard, Revue française de comptabilité nr.309/1999, p.64 și Popa, V., Topolică, M., Utilizarea tabloului de bord ca instrument de pilotare a unei organizații parte a lanțului de distribuție/aprovizionare,Conferința Coromar, Iași, 28-29 sept. 2007)

5. The scoreboard of delivery process

For the delivery process, the scoreboard targets four analysis perspectives: the financial perspective, the quality perspective, the customer perspective and the staff perspective. The scoreboard of the delivery process is presented in Table 3.

Table no.3. The scoreboard of delivery process

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted score
0	1	2	3	4	5
Financial perspective	Delivery cost reduction	Delivery, administrative and customer service costs (mil. lei)	34	1,90	1,65
		Inventory costs for finished products put up for sale (mil. lei)	17	0,09	0,07
		Customers' liability costs (mil.)	10	0,20	0,20
		Costs for products promotion and discounts (mil. lei)	20	0,91	0,80
		Wages	19	1,10	1,20
Quality perspective	Improving order management	The non- compliant delievered products (%of sales value)	18	0,90	0,10
		Percentage of unsatisfied customers (% of all customer)	20	3,00	1,00
		Optimization of delivery time (%)	12	99,00	100,00
		The usage level of production equipment (%)	30	12,00	10,00
		The implementation grade of quality standards (%)	20	80,00	100,00
Customers' perspective	Increasing customer satisfaction	Policy of customers' liability (% implementation level)	17	73,00	89,00
		Increasing the market on customers by improving the lead database (%)	38	63,00	80,00
		Level of response to customer requirements (%)	30	83,00	100,00
		The order- delivery cycle (per day)	15	33,00	30,00
Staff perspective	The personnel qualification growth	The qualification level of employees in the delivery department (%)	29	71,00	87,00
		The level of workers' wages in the delivery department compared to the other departments	28	15,00	15,00
		Training programs from the last 5 years (no.)	25	5,00	5,00
		The importance of the management team in the delivery process (%)	18	67,00	68,00

(*Source*: adaption from Mendoza, C., Zrihen, R., Le tableau de bord: en V.O. ou en version américane? Comparaison entre le tableau de bord et le balanced scorecard, Revue française de comptabilité nr.309/1999, p. 64)

6. General scoreboard

Taking into account the analyzed scoreboards on the processes within an economic entity in the construction field, the herein structure for the general scoreboard comprises the following four perspectives,: the financial perspective of the economic entity, the perspective of the entity's clients, the staff perspective and the internal perspective, which also concern the quality of the activities and the products carried out within the economic entity. The general scoreboard is presented in Table no.4:

Table no. 4: The general scoreboard within an economic entity in the construction field[1]

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted score
0	1	2	3	4	5
Financial perspective	Profit increase by 10 %	Total turnover profit rate	40	15,00	20,00
		Procurment costs (mil. lei)	10	2,05	1,80
		Increase of sales value (%)	20	28,00	30,00
		Production costs (mil. lei)	20	0,88	0,80
		Wages	10	1,00	1,00
Customers' perspective	Market share increase by 5%	New product launch (in the last 5 years)	19	5,00	5,00
		Increasing the market for customers by improving the database of all potential customers (%)	20	60,00	80,00
		Optimization of delivery time (%)	11	99,00	100,00
		The usage level of production equipment (%)	30	13,00	10,00
		The implementation grade of quality standards (%)	20	80,00	100,00
	Increasing customer satisfaction	Policy of customers' liability (% implementation level)	18	73,00	80,00
		Increasing the market on customers by improving the lead database (%)	40	60,00	80,00

[1] Mendoza, C., Zrihen, R., *Le tableau de bord: en V.O. ou en version américane? Comparaison entre le tableau de bord et le balanced scorecard*, Revue française de comptabilité nr.309/1999, p. 64

Axes	Objectives	Indicators	Weight of indicators %	Score	Predicted score
0	1	2	3	4	5
		Level of response to customer requirements (%)	30	80,00	100,00
		The order- delivery cycle (per day)	12	29,00	30,00
Staff perspective	The personnel qualification growth	The qualification level of employees (%)	30	79,00	90,00
		Working conditions improvement (%)	27	15,00	15,00
		Training programs from the last 5 years (no.)	25	5,00	5,00
		The importance of the management team (%)	18	67,00	70,00
Interral perspective	The products quality improvement	The innovation and automation degree of production (%)	38	70,00	80,00
		Implementation of quality standards (%)	29	70,00	100,00
		Investing in new equipment and technologies (mil. lei)	33	200,00	210,00

(*Source*: adaption from Mendoza, C., Zrihen, R., Le tableau de bord: en V.O. ou en version américane? Comparaison entre le tableau de bord et le balanced scorecard, Revue française de comptabilité nr.309/1999, p.64 și Popa, V., Topolică, M., Utilizarea tabloului de bord ca instrument de pilotare a unei organizații parte a lanțului de distribuție/aprovizionare,Conferința Coromar, Iași, 28-29 sept. 2007, p.360-381 disponibil la adresa https://virgilpopa.com/old/articole/coromar/2_utilizarea_tabloului_de_bord.pdf)

7. The scoreboard of performance indicators

The balance sheet is the component of financial statements that mirrors the finality from an economic and financial perspective. In most cases it does not fully cover management's demands, which causes the analysis and interpretation of performance indicators to be carried out through the scoreboard tool.

A scoreboard of performance indicators represents the method for indicators' selection, order and presentation, thus facilitating the rapid identification of a structure summary at entity level, and becoming a tool designed to gather in a focused way and synthesize the information indispensable for managers. This allows the accurate identification of situation, by facilitating a permanent and strong information of the decision-makers about the dynamics of the events related to the action led and on the way in which the phenomena specific to the conducted activities evolve. The scoreboard of performance indicators is a system of indicators, in absolute and relative quantities, used for the process of evaluating, controlling and regulating operatively the entire activity of the economic entity. Just like a synoptic picture, this scoreboard sorts, structures, equalizes and makes available the most important informational components necessary for the management to cover in an operational manner, the activity of phenomena and indicators, in accordance with the path outlined by the activity programming.Whether it is the case of the narrow scoreboard, which contains a small amount of information, or of the complex scoreboard, which targets a wide range of information on all investigated activities, there is recommended a set of requirements at the same time. Compliance with these requirements is a guarantee of the effective use of performance indicators' scorecard by the management of construction entities.

A balanced scoreboard provides a coherent pattern of performance. However, it facilitates the implementation of the strategy and allows the reflection on the relevance of the choice, but sometimes generates ambiguity.

At the same time, it offers the responsible decision-makers the possibility to communicate with those oriented to obtain information on the development of economic and financial phenomena, as well as to draw the attention of the responsible persons to the key points of the economic and financial analysis aiming at improving the results.

The use of the scoreboard offers the possibility to focus actions on certain aspects, setting for them objectives entrusted to accountability centres. Regardless of the accounting model and the strategy for economic and financial analysis, the scoreboard of performance indicators is one of the methods that should not be missing from any entity as it will lead to a better functioning from an economic and financial point of view following the adoption of rapid and scientifically based decisions.

In the context of the multiple advantages offered by the use of this instrument at the entities' level in the construction field, there can be mentioned aspects regarding the

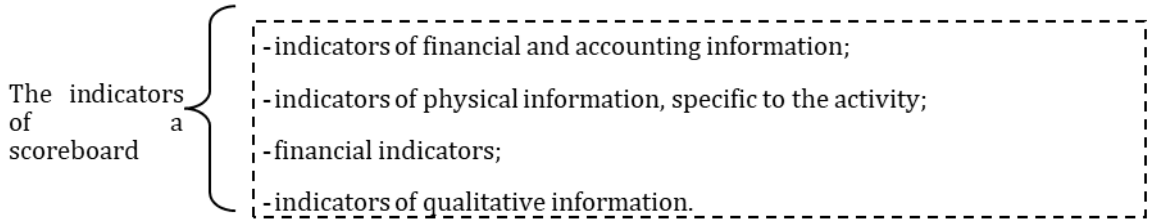
amplification of the substantiation degree of the decisions adopted by making available to the decision-maker some operative, relevant information, regarding the main economic and financial aspects of the entity; reasonable use of the working time by directing the activity towards the key problems faced by the entity on which the scoreboard, through the situations drawn up, draws the "alarm signal"; increasing the responsibility of the managers for the carried out activity, the scoreboard offering them in a synthesized way the critical aspects and areas on which they are going to orient their efforts; creation of superior, favorable conditions for a high functionality of the entity assembly; ensuring a high quality of reporting to the various bodies. The scoreboard allows the determination of whether the entity's performance is aligned with the overall business strategy and highlights the direct link between business strategy, goals and performance, which facilitates basic predictions followed by quick reactions for those responsible. The definition and implementation of scoreboards allows for a balanced and integrated view of the entity's performance and the establishment of a performance measurement system that highlights the sources of potential problems. However, the limits of this instrument must not be omitted.

The distinction between *lagging indicators* and *leading indicators* is often relative, as it does not fall on the traits for each category (result indicators and action or operation indicators). Most of the proposed indicators are those of results. The *lagging indicators* will be rather those that look at financial performance, and *leading indicators* are relative to internal processes and organizational experience. The causal relations between the two categories are far from rigorous.[1]

The traditional scoreboards are focused on financial performance, taking nto consideration the act of defining performance and monitoring indicators EVA (Economic Value Added-Added Value), ROS (Return of Sale-Profitability), ROE (Return of Equity-Financial Profitability), MVA (Market Value Added-Market Value-Added Market).[2]

The indicators of a scoreboard may be ordered and presented according to a structure shown in Figure No. 4.

Figure no.4: The indicators of a scorebaord



(*Source*: adaption from: Tabară N., Briciu S., Actualități și perspective în contabilitate și control de gestiune, Editura Tipo Moldova, Iași, 2012, p. 251)

The performance of economic and financial information is determined by the completion of some steps rendered through a dashboard, a process presented in Table no.5

[1]Tabară N., Briciu S., *Actualități și perspective în contabilitate și control de gestiune*, Editura Tipo Moldova, Iași, 2012, p. 238
[2]Kebel P., Selmer C., *L' executive Scorecard, în Balantzian G., Tableaux de bord. Pour diriger dans un context incertain*, Edition d' Organisation, Paris, 2005, p. 113

Table no. 5: Scoreboard of performance indicators for 2018-2020 in an economic entity in the construction field

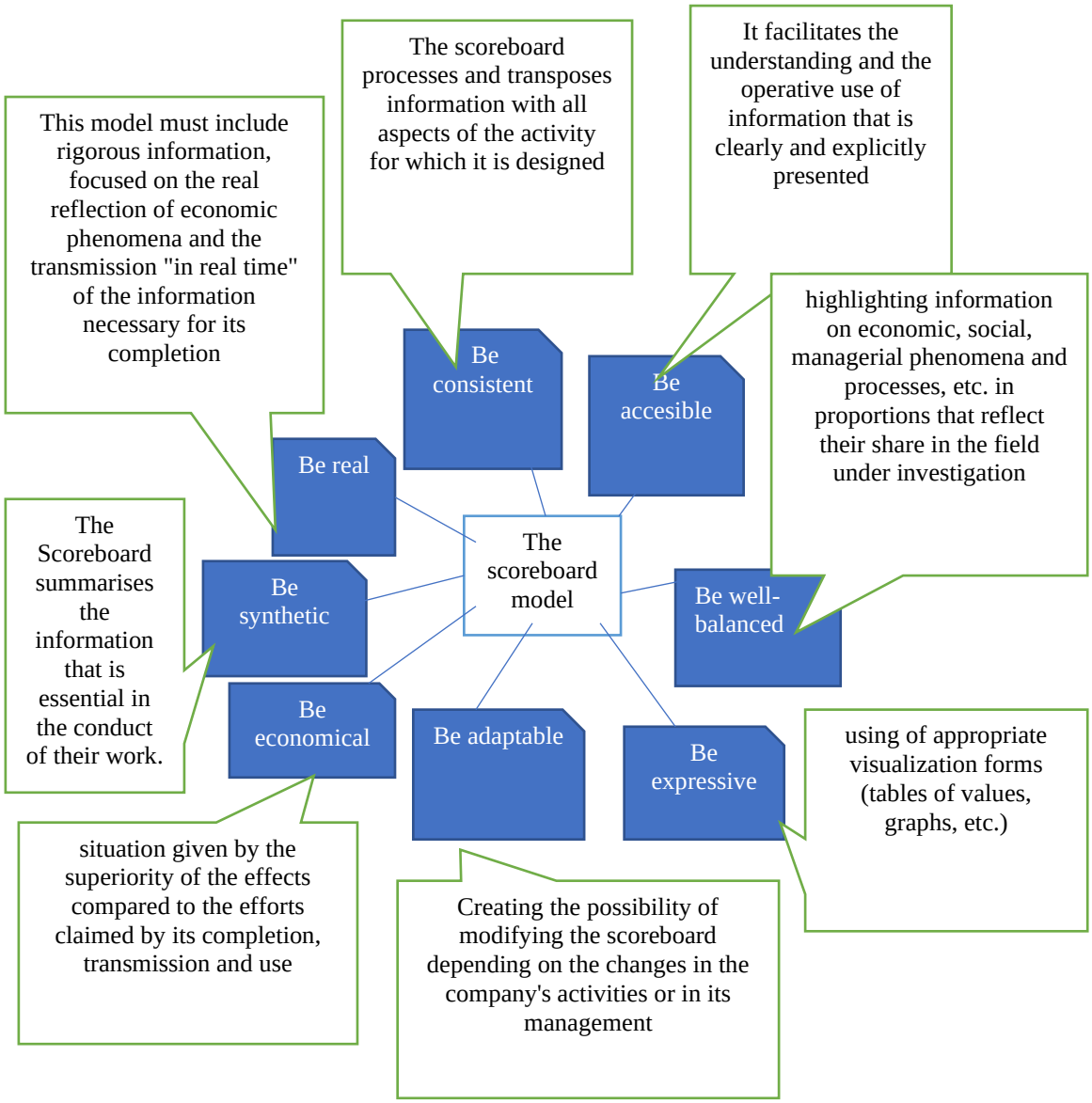
Indicator no.	Indicator name	U.M.	Recommended values	2018	2019	2020
0	1	2	3	4	5	6
1.1	Net profit	lei	Growth ratio (> 1)	428.140	511.039	689.924
1.2	Net profit margin	%	Growth ratio (between 1 and 15)	8,12	9,85	12,55
1.3.	Rate of return on assets	lei/1000	Growth ratio (> 1)	139,28	152,30	210,55
1.4	Rate of return on equity	lei/1000	Growth ratio (> 1)	286,94	337,88	412,85
1.5	Financial profitability	%	Growth ratio (> 1)	24,69	32,28	41,28
1.6	Rate of economic return	%	Growth ratio (> 1)	22,75	22,84	35,60
1.7	Equity profitability	%	Growth ratio (> 1)	48,59	70,69	105,48
2.1	Stock rotation	No. of days	Decrease ratio (< 1)	50,17	24,17	33,64
2.2	The period of claims recovery	No. of days	Decrease ratio (< 1)	29,55	43,17	30,33
2.3	The period of debt payment	No. of days	Decrease ratio (< 1)	27,94	41,26	31,29
2.4	Rate of return on fixed assets	Lei/1000	Decrease ratio (> 1)	4285,94	3284,35	3737,34
2.5	Rate of current assets' efficiency	Lei/1000	Growth ratio (> 1)	95,04	137,56	99,10
3.1	Patrimonial solvency	%	> 30	57,43	49,11	58,90
3.2	Immediate liquidity	point	Almost 1	0,93	0,92	0,94

(*Source*: adaption from an article by Rusu,C., Bălan, S., Congresul profesiei contabile din România "Profesia contabilă între reglementare și interesul public", Indicatori de performanță ai întreprinderilor mici și mijlocii, Editura CECCAR, București 2008, p. ***473)***

Both in the restricted form of the scoreboard, in which the specific information is diminished and in the complex form, there are included many elements and aspects related to the structure, strategy, production, this tool is necessary to cover a diverse range of characteristics[1] according to Figure no.5.

[1]Cucui, I., Man, M., *Costurile și controlul de gestiune*, Editura Economică, București, 2004, p. 269

Figure no. 5:. The specific scoreboard model's features



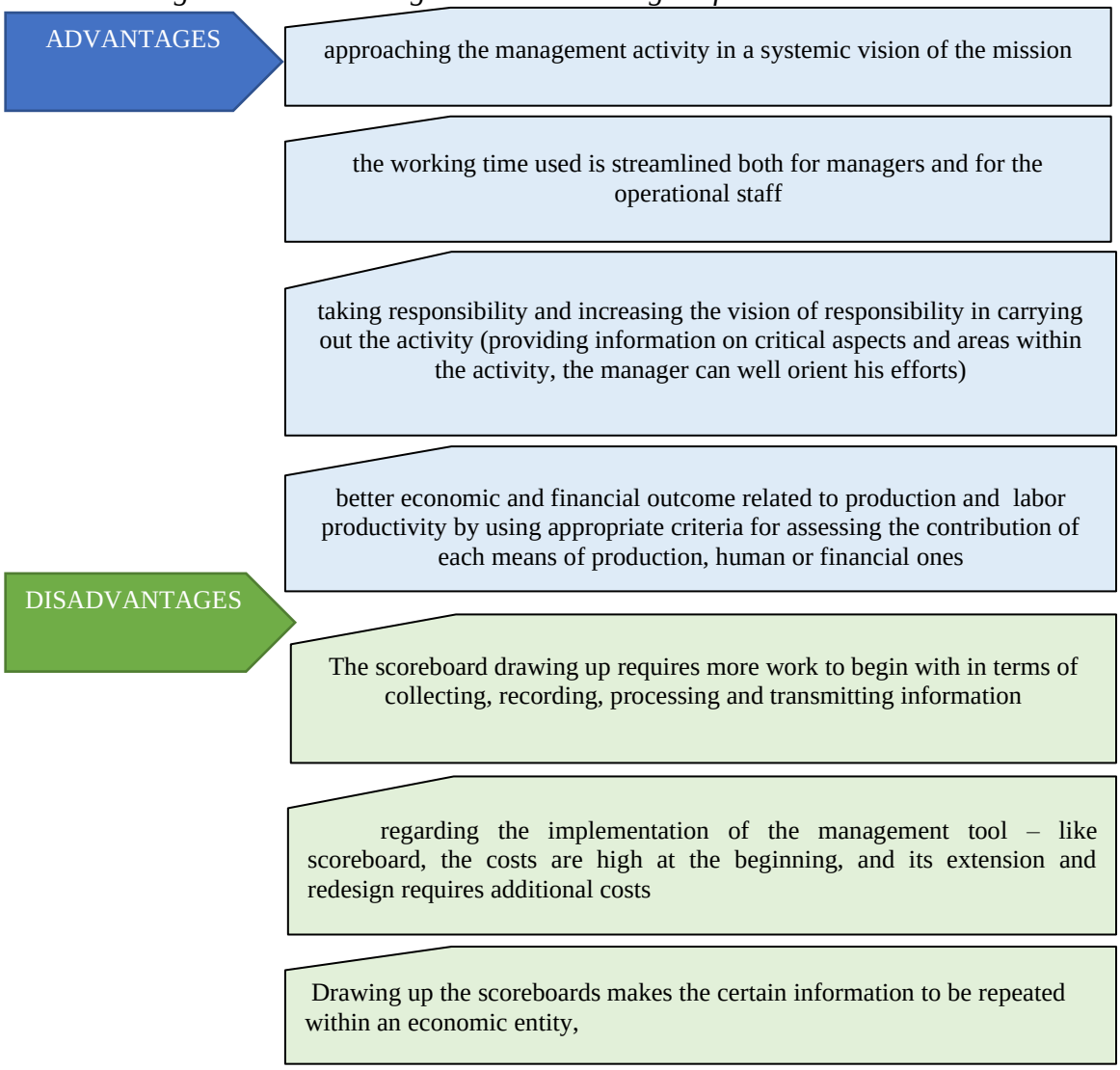
(*Source*: adaption from Cucui, I., Man, M., Costurile și controlul de gestiune, Editura Economică, București, 2004, p. 269)

The assigned task must actually be the objective of the establishment and operation of any economic entity. The orientation towards the mission achievement at the level of the entity operating in the construction field, must start from the conception that the performance is not achieved regardless the level of costs, but progressively, over a long period of time, correlating with the level of human and material resources it determines solid, sustainable and valuable results for the next period.[1]

The scoreboard, characterized as a means of action by management, helps to highlight the mission at the level of a building entity through the person responsible for this aspect.[2]. In figure no. 6 there are presented the advantages and disadvantages of the Scoreboard instrument analysis.

[1]Bărbulescu, C., *Pilotajul performant al întreprinderii. Proiectare și funcționare,* Editura Economica, București, 2000, p. 102
[2] Cucui, I., Man, M., *Costurile și controlul de gestiune*, Editura Economică, București, 2004, p. 283

Figure no.6. Advantages and disadvantages of the Scoreboard tool



(*Source*: adaption from Verboncu, I., Tabloul de bord: teorie, metodologie, aplicatie, Editura Tehnica, București 2001, p. 99)

8. Conclusions

Considering its structure, **the Scoreboard** contains minimal information and represents a symmetrical presentation tool generally consisting of figures or graphs without detailed explanations. It is imperative for the information presented in the Scoreboard to relate only to the area on which the responsible person can act, so that it can be easily understood, analysed and used as quickly as possible. This information is systematically brought to the attention of the scoreboard user and relies mainly on the streamlining of the activities in the entity.

The use of scoreboards has a significant role in taking into account the entity's strategic objectives guiding the management of processes or centers of responsibility.

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PREDICTIVE ACCOUNTING, INFORMATIONAL SUPPORT OF ECONOMIC AND FINANCIAL POLICIES

Claudia Nicoleta Guni[1]

Abstract

Accounting information is the raw material and the finished product for any company both for the exercise of functions and for efficient management. The interest of the human community in the research of the future is growing rapidly. Concerns regarding the further development of economic and social systems at both micro and macro level, are nowadays, priority objectives of management. That is why the current concerns are mainly focused on the standardization of accounting work methods, for integrated data processing and the use of new technologies, including in the field of artificial intelligence. From data processing and accounting information, we are moving, rapidly, to knowledge-based accounting and, in perspective, to knowledge society accounting.

Keywords*: model concept, information system, accounting balance, accounting forecasting*

JEL Classification: G3; G32; G34

1. Introduction

Any activity carried out in the economic, social, cultural, financial field has as its objective a well-defined purpose. Achieving the goal involves the implementation of concepts, scientific determinations of a wide variety, specific to a certain field. For an economic activity, the basic object is, parallel to the satisfaction of a social need, more or less known, more or less ordered, the realization of a profit.

The main objective of an economic activity is, in parallel with the satisfaction of a social need, more or less, the main purpose of accounting is to provide financial information on the economic entity. The financial information provided by an accounting system is necessary for decision makers to plan and control the activities of the economic entity. Financial information is also required from third parties - beneficiaries, creditors, potential investigators, the government and the public - who have invested capital in the business or who have a certain interest in the activity in question, who will use the information on the financial situation and the results of the operation.

In order to provide useful financial information on the company, we need some means to track daily business activities and then to sum up the results in accounting reports. The methods used by a business to keep track of financial activities and to summarize these activities in periodic accounting reports form the accounting system.

Investment and loan decisions require the application of detailed analyses of carefully assessed information. They also require the ability to foresee and predict. The correct information is obtained by understanding the data from which it is derived as well as by applying analytical tools that help to extract and evaluate it. The forecast, which is essential for estimating opportunities and risks, is also rooted in understanding: the elements that comprise data and the factors that can change them.

2. Accounting forecast

Starting from the recognition of the role of education as the main pillar in the construction of a European area of knowledge, we appreciate that in the current context we need a broader vision of the educational process in a world more dynamic than ever, that can have the ability to meet all present and future requirements. In the society of the future, education will have the essential role in creating the new way of life specific to a society based on knowledge and learning.

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The knowledge-based society is a term defined for economic rather than sociological reasons. The knowledge-based economy is defined by the fact that knowledge and education are treated as activities that are productive goods of a company and on their basis, "products" can be made, which can then be sold at very high prices and benefits. Moreover, knowledge is considered as the main form of capital, replacing actual labor and fixed capital.

At the turn of the 21st century, the knowledge society tends to take on global proportions. At the same time, realizing the rapid moral wear and tear of knowledge and skills, contemporary society is preparing to adopt a new approach to education to become a lifelong learning society.

Presently we are talking about a global market, favored by the elimination of customs barriers, the practically instantaneous circulation of information, the installation of transnational companies almost everywhere.

The change in the way of thinking changes not only the emotional-conceptual framework, but also the accents of the actions in the plan of the economic process, with direct implications on the strategic priority directions of the economic policy. If in pre-industrial and industrial societies the emphasis is on classical factors of production, in the knowledge economy the qualitative valences of the human factor must be rediscovered, which, not infrequently, appeared quantified in expression as a residual factor.

After all, future knowledge workers and service providers need to have the chance to move on to knowledge-based work, to be able at all stages of life to continue their training, to orient or reorient themselves professionally, depending on the demands of the working market.

The extraordinary increase in the importance of information, the speed and the very low circulating costs, has changed the whole structure of contemporary society. We now live in a world of services, of personalized products that are constantly renewed in a globalized competitive struggle.

With the development of business economic and financial evolution within the exchange company, accounting has developed principles, methodologies, methods, procedures and means of documented recording of phenomena and processes in companies, in standard, predominantly valuable, reflecting, at the same time, on the results of the activities, as well as the legal economic relations between the economic agents. At the same time, data-based accounting has standardized and nominated specific documents, information flow regulations and working regulations. These regulations are also adapted to the requirements of integrating economic information systems with the standards of the European Union, in particular with regard to economic and financial situations that involve new information elements.

Every activity requires a program, which represents a point of reference, a reporting basis. In these conditions, accounting, through its instruments, is necessary to target the future of the company, without affecting its essential function defined by its object. The main purpose of the forecast is to eliminate the situation that, through the present actions, to cause, in the near or distant future, the impossibility to act quickly, operatively, efficiently. Forecasting does not eliminate the unforeseen, but it can eliminate or reduce the negative consequences of the unforeseen. Therefore, in the accounting theory and practice in some countries, the alternative of the forecast accounts and implicitly the forecast balance was conceived. It is also true that in practice various forecasting instruments are used under certain names, such as the "budget system" which outlines cash and non-monetary flows, but without being summarized in a forecast balance sheet.

At the same time, the use of performance-based valuation methods implies the existence of a forecasting balance in its entirety or elements thereof. The methods of elaboration and presentation of the forecast accounting documents are different, there being no unitary methodology in the field. In this context, it is further proposed a variant of elaborating the forecast balance sheet and its capitalization in the economic practice.

The main features of data-based accounting can be distinguished by:

❖ The rigor of the processing and the content of specific documents, following strict accounting rules, even in the conditions of using accounting software;

❖ Its inflexibility and to a certain extent its rigidity, given the fact that it is more difficult to adapt to organizational structures of change;

❖ Accounting autonomy or insufficient integration with the other functional subsystems of the enterprise. The statement is based on the fact that the same operation supports successive records in various registers, and in the operation of computer programs the data collection from the other compartments is done manually, most of the times without automatic processing through other programs;

❖ The diversity of ways of applying accounting from the particularities of each category of company;

❖ The difficulties of exercising control and economic-financial audit starting precisely from the organizational and size diversity of the companies. Internal and external control bodies are often discouraged by a large amount of data to be verified; frequent legislative changes amplify the workload needed to draw useful conclusions for administrators and managers. Computer programs do not entirely help the correct and complete evaluation, in obtaining the best results;

❖ Emphasizing the ascertaining function of accounting and neglecting its predictive function; the mere finding of anomalies, after they have taken place, does not help to rectify the situation by eliminating harmful factors; nor do the positive aspects echo to be perpetuated as a result of the use of accounting information; thus, the economic-financial analyses of the past or future facts have an extremely low weight in the administrative and management activities.

The hypotheses underlying the company's business forecasts must be presented clearly and concisely. Without them, the figures in the forecasted financial statements have no value, in fact demonstrating how the expected results are achieved.

3. The concept of model and accounting balance

Modern accounting is recognized as a basic component of business management. Accounting is the means managers are informed about the financial situation and the progress of their companies, thus contributing to ongoing planning, operation control and decision-making procedures. Accounting provides a method of systematic recording and evaluation of business activities.

Much of the information a business manager needs comes from accounting data. The ability to analyze and use this data helps managers meet their goals.

In all forms of society, individuals and groups make economic decisions that determine the exchange of property at the given price. In order to negotiate the price, it is necessary to have a unit of measurement or a means of exchange, which is known by all the members of the company, and which is thus understood by all. In modern companies, this medium of exchange is almost always defined in terms of money - money is used to designate the prices or values of property.

Due to its widespread application, the use of the common unit of measurement develops a fundamental role in the economic, legal, political and sociological analysis - meaning that due to the continuing need to capitalize and quantify objects, all social sciences require quantitative information.

The above analysis suggests that the definition of accounting depends on what information is required at any given time by several groups within the company. In any case, in terms of accounting, we need to adopt a more practical philosophy - one that allows us to at

least choose certain definitions of operation that we can use as a framework. There are several possible definitions of operation for accounting.

A more detailed analysis of the terms used in the definition of accounting reveals some interesting features. In order to understand accounting, we need to understand the nature of measurement and communication, the qualities of economic information, the decision theories and practices, and we need to try to identify the users of accounting information.

The discovery of connections and legalities that would not be noted otherwise is realized in accounting, through modeling. One can appreciate the modeling in accounting as a tool for knowing the reality of value movements, it contributes to verifying the correctness of the thinking process, which leads to the substantiation of decisions.

The model is a necessary means in linking the theory to the practice and it offers the possibility to operate, verify and control the concrete realization of the decisions taken.

Accounting models can be grouped according to several criteria. According to the function they perform, we distinguish: heuristic models and leadership models.

Heuristic models include complex conditions, importance coefficients and multiple conditionings; the solution obtained improves the results, there is at most information regarding the distance in between the solution found and an optimal solution obtained with an optimization model. The advantage of using heuristic models is given by the ability to obtain descriptions that include qualitative aspects of the evolution of systems, and the algorithms contain a volume of processing that makes them operational even if the dimensions of the model are very large.

Leadership models are directly related to the needs of the decision-making act, being intended to formulate the answer to a certain problem. This type of model simplifies the real connections of the phenomena reflected in accounting, looks for combinations and performs a certain operation based on criteria chosen by the research specialist in accounting. Management methods facilitate the process of directing an activity by allowing the choice of the optimal option. We include here the models in the sphere of production cost, those of cost optimization, sales, forecasting.

The economic equilibrium appears as a solution of an economic model describing a state of rest and resulting from the opposition between the identifiable desires of people and the obstacles in their realization. Viewed this way, the economic balance becomes a state of concordance between the interdependent elements and all the variables necessary to be correlated in the creative activity. Permanent maintenance of balance is possible through careful planning and personal monitoring.

4. The efficiency of accounting models in managing economic activity

The object of accounting also circumscribes the complete and uninterrupted pursuit of the movements and transformations of the patrimonial elements of the economic and social units in the phases of the economic circuit.

Accounting must ensure not only the knowledge of the patrimonial elements at a certain time but also the changes in the sense of increasing and decreasing the patrimonial elements during a management period. Accounting materializes its objectives in the process of reflecting and knowing the movements of values, through specific instruments, namely the accounts.

This procedure is designed to allow the successive changes of each means to be traced, as well as their existence at a given time.

The account is the most representative procedure of the accounting method for achieving its object of study. The account was the basis of various economic calculations and led to the crystallization of fundamental concepts in accounting. Through chronological calculation, the science of accounts has managed to maintain the equality between the consumption of production factors and their results.

Accounting performs, in the economy of organisms, periodic synthesis calculations, it offers the management the reconstruction of the past period, using its own means. The trial balance, the balance sheet, the profit and loss account constitute the finished product, but they can also be used to foreshadow the future, through comparative analyses and forecast calculations.

The category of procedures specific to the accounting method also includes the checking balance. It ensures the observance in accounting of the permanent balance imposed by the double registration of economic operations, being an essential instrument in verifying the correctness of the entries in the accounts and for drawing up real and complete balance sheets.

The checking balance is presented in the form of a chart of accounts in the General Ledger Register, which includes columns for the name and symbol of the accounts, initial balances, movements or turnovers within a period, and the final balances. The checking balance architecture is based on the balance Assets = Liabilities. Checking balances can be classified according to the following criteria: depending on the types of accounts that make them up, the number of equalities they contain, the content and the graphic form of presentation.

The control of each synthetic account entered in the synthetic balance is done with the help of the analytical balance. There must be a full concordance between the analytical balances opened for each account and the synthetic balance. Thus, the initial balance, the debit and credit turnover as well as the final balance in the analytical balance must correspond to the amounts transferred to the synthetic one.

The power of knowledge of accounting and the usefulness of its knowledge have been highlighted by specialized literature and confirmed by socio-economic practice. Over time, accounting has revised or changed its concepts and theories, but kept its fundamental theoretical principles intact. This science has always, as time went on, constantly expanded its area of knowledge and action. It had the courage to extend its field of study from enterprises, to institutions, to the national economy.

The cognitive value of accounting modeling consists precisely in the participation of the models in the phases preceding the action of scientific knowledge. In this way, accounting modeling and models acquire the mission of being the rational skeleton of the cognitive process.

5. Conclusions

As a component of the economic information system, accounting provides most of the information for decision making at the micro and macro economic level. The task of management is to make decisions that ensure the continued viability of the organization and to control the implementation of those decisions. It is a part of the total information, valid for management. It is important to know the partial role of accounting.

Accounting represents only one part of the complex set of informational and organizational structures. The role of accounting is to provide relevant financial information within those structures. Accounting will rarely provide sufficient information as to allow an informed decision to be made or to monitor the implementation of organizational plans. Accounting can contribute to the managerial process in several ways. It has a role in identifying and measuring information: that is, in determining how the factors associated with a particular decision are recognized and quantified. The appropriate way to approach these issues may depend on the decision to be evaluated as well as on the available alternatives of the organization. Most accounting deals with techniques and procedures, but our definition also describes accounting as a process. Practical techniques are implemented in a human process, and accounting will be influenced and will influence the human context in which it is located, which in our case is the context of managerial decision making.

The current activity within the company constantly leads to the development of decision-making processes of different magnitude and importance. The finality of each such process consists in the adoption of the decision. Its effective application exceeds, through

implication and effects, the boundaries of the information-decision-making system of the company, involving most of its subsystems. In fact, if we analyze the decision-making process in connection with the other processes that take place within the company, we will find the existence of sequences of procedural cycles.

At the basis of the decision-making process there is an event or a situation whose appearance is interpreted by decision makers as the motive of the decision-making process. It is obvious in this case the fact that an event triggers a decision-making process, only if it receives from the decision-maker the character of a "triggering event".

In any case, it must be emphasized that the interpretation of information is a vital part of an accountant's job, and it is clear that this must be seen as an integral part of the communication process. It should be mentioned that the definition of accounting does not extend to decision making. Of course, many accountants become involved in decision-making, but in such cases they play a managerial role rather than an accountant role. We do not want to say in any way that accountants should not be involved in management, but it is important to differentiate between accounting and decision making. It is important that the information provided by the accountant to be as objective as possible, and if accountants do not have a clear distinction between accounting and decision-making in their minds, there is a high risk that they will unconsciously manipulate the information provided so that the decision they make is the one they want.

In the decision-making process, the role of the accountant is to provide correct, timely, accurate and useful information. In order to achieve this, the accounting officer must collect the appropriate information and report it in a manner relevant to management.

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THE INFORMATIVE ROLE OF OTHER FINANCIAL STATEMENTS - INFORMATIVE SOURCES FOR MANAGERS

Claudia Nicoleta Guni[1]

Abstract

In the systemic conception, the enterprise is considered as an open system that involves inputs, processing, outputs and self-control. From an economic point of view, no activity can be carried out without financial support, often materialized in money, which leads to the idea that the company's treasury is the bridge between the supply, production, commercial, accounting and personnel. It is appreciated that the balance sheet study provides the analysis with a static view of the enterprise, because the variables contained in the balance sheet are presented in the form of stocks that characterize the situation at a given time.

Keywords: *functional balance, exigibility, liquidity, partial contribution of assets, economic information system*

JEL Classification: G3; G32; G34

1. Introduction

The economic agent is in permanent connection with the market and its components: the market of raw materials, the market of means of production, the labor market, the capital market, the market of goods and services. The exchanges carried out on these markets, meaning the sale-purchase and collection, respectively the payment of the exchange elements are called flows.

The information value of cash flows was little known and rarely requested by users in practice. The accounting profession was not interested in providing this type of information, as long as there was no methodology for setting up cash flows and no mandatory requirement in this regard. However, conceptual issues regarding the establishment of cash flows and the informational valences of this type of information have been the subject of academic debates and communications. In the first stage of the accounting reform, the French advisers presented the informational role of the Financing Chart, but the Romanian normalizers did not show interest in this document.

In conclusion, companies that prepare financial statements in accordance with the regulations implementing the Accounting Law are not required to draw up a table of cash flows. Instead, companies that prepare financial statements in accordance with international accounting standards are required to draw up a statement of cash flows, which must be included in the annual financial statements.

2. International cash flow regulations

In the conditions of globalization of economies, globalization of capital markets and an increasingly fierce competition, it is found that each country has its own practice and its own accounting system, which puts the user of financial statements in front of conflicting information, difficult to control and especially to compare.

The variety and complexity of the issues related to the good management of the treasury creates a wide field of analysis and debate for specialists and practitioners in the field, all the more so as this subject practically influences the activities carried out by all economic agents. In times of weakening of the financial market, of reducing the role of self-financing and increasing inflation, of limiting credit and raising interest rates, the role of the treasury in the life of an economic entity is becoming increasingly relevant.

The treasury is considered a main indicator for the financial analysis, because it provides information on the change in the basic values of cash, between the beginning and the

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end of a period, but also the structure of this variation generated by the specifics of the transactions carried out by the enterprise.

An enterprise that constantly generates significant cash flow is at the same time solvent, profitable and able to ensure its development. For this reason, the purpose of a treasury statement is to provide information about the company's ability to generate liquidity and about the use that the company has given them during the financial year.

In France, specialists have attached, in different contexts, several definitions of treasury: in a narrower sense, it designates the total liquidity or availability of the company; In a broader sense, the treasury includes debit balances with the bank and investment securities that can be converted into cash.

First, it includes in the contents of the active treasury, the debts, whose liquidity, respectively exigibility, are immediate. In detail, the treasury assimilates the following elements to cash: investment securities and current accounts receivable.

At international level, cash flows have been taken into account in the activity of standardization of accounting precisely out of the desire to make available to users of financial statements information about the company's capacity.

The statement of cash flows shows the flows, known as receipts and payments during the period. That being said, it shows where the liquidity came from and how it was spent, thus explaining the causes of their variation.

In the American literature, when analyzing the cash flow statement, it is usually stated that it serves the following purposes:

- ♦ allows the forecast of future cash flows;
- ♦ allows the evaluation of management decisions;
- ♦ allows the determination of the company's ability to pay dividends to shareholders, repay loans received from creditors and pay the interest due to them. The chart helps investors and creditors to predict whether the company in question can access payments on time;
- ♦ shows the relationship between the net result and the company's cash flows;

The format of the cash flow statement in the US accounting is based on the 1987 FAS 95 Standard, as amended by FAS 102. The corresponding international standard, in its revised form, IAS 7 of 1994, followed the American standard for most regulations.

The objective of IAS 7 is to draw up policies for the preparation, presentation and publication of these financial statements. The general classification of economic flows, according to the financial theory is as follows:

- flows that have an immediate or deferred impact on cash flows
- accounting movements without immediate or delayed impact on cash flows which have the role of correcting the financial result by adjustment records when performing inventory and the record of delimitation in time of the incomes and expenses and the time delimitation record of income and expenses
- accounting movements without immediate or deferred impact on cash that materialize in the records to correct the value of assets or liabilities: depreciation, provisions, revaluation differences.

3. Framework for organizing cash flows in Romania

The statement of cash flows provides useful information on the change in the company's financial position, allowing the assessment of the company's ability to generate future cash flows and cash equivalents in the operation, investment and financing activity and ensures their proper use.

An entity's treasury occupies the central place in the economic information system, as all operations under the financing, investment and operating cycles are expressed in value.

The entity's treasury represents the bridge between the three activities delimited above and plays the role of a flow regulation filter within the fundamental relationship: money-goods-money.

In the specialized literature, the basis for the grouping of flows are mainly two criteria:

➢ the patrimonial criterion - which defines the flows as rights and obligations that do not necessarily have an impact on cash;

➢ the functional criterion - corresponding to the three types of activities specific to an enterprise.

Within the entity's information system, the treasury comprises all decisions, rules and procedures that have as their main objective the maintenance of the financial balance and the increase of the financial value of the entity. The treasury of an economic entity should not be confused with the cash available to it at a given time, but it represents what remains of the stable resources, after the fixed assets have been financed and also the need to finance the current activity.

The treasury chart analyzes the variation of the treasury, which is the difference between the cash at the end and the cash at the beginning of the financial year. The treasury comprises cash and cash equivalents such as current accounts and financial investments that can be exchanged for cash in a relatively short period of time and without the risk of a significant change in value.

The flow chart provides a dynamic presentation of the financial situation, completing the balance sheet and the income statement and allowing the assessment of the impact of the operations performed by the economic agent on its financial structure and treasury.

The financing chart generally summarizes the variations in the size and composition of the financial statement that arise from the operations and facts that give rise to the interactions between the enterprise and its economic and social environment. It is a document with financial dominance, which reflects all the operations that have contributed to the evolution of the patrimony and the company, directly or indirectly over a given period, generally a set period of time.

4. The need for and benefits of cash flow information

The variety and complexity of the aspects related to the good management of the company's treasury create a wide field of analysis and debate for specialists and practitioners in the field, especially since this topic practically concerns the activities carried out by all economic agents.

Most users of accounting information are interested in the fluidity of the activity of an enterprise and in particular its ability to ensure an appropriate rotational speed for cash flows. Such a request cannot be met by the accounting information provided by accrual and profit-oriented accounting.

In this way, it is necessary to exploit the accounting information, therefore knowing the cash flows, these being the correspondent of the patrimonial flows that transit the enterprise, with immediate impact on the liquidities.

The specialized literature considers that as part of the task of cash flow accounting, the preparation of a summary accounting document, together with the balance sheet and the profit and loss account, with the role of highlighting them. If the balance sheet shows the financial condition of the enterprise at a given time and the profit and loss account reflects the transactions carried out during a financial year, the statement of cash flows has established its presence by the need for information on how to obtain and use cash and cash equivalents.

When used in conjunction with other financial statements, the statement of cash flows provides information that allows users to assess changes in an entity's net assets, its financial structure, as well as the ability of the enterprise to influence the value and timing of cash

flows, in order to adapt to ever-changing circumstances and opportunities. Cash flow information is useful in determining an entity's ability to generate cash and enables users to develop models for assessing and comparing the present value of the future cash flows of different entities. This information also increases the comparability of reporting operating results between different entities, as it eliminates the effects of using different accounting treatments for the same transactions and events.

A statement of cash flows allows users of financial statements to:

- ❖ to assess the company's ability to generate liquidity;
- ❖ to determine cash requirements;
- ❖ to predict the maturities and the risk of future receipts;
- ❖ to compare the company's results by eliminating the effects of using different accounting methods for the same operations and events,

Cash flows are defined by the International Organization for Standardization as all cash inflows and outflows and their equivalents generated by operating, investing and financing activities.

In the case of small businesses, the need for this chart is often challenged, as accounting standards do not make it mandatory. But banks do require such information as part of the lending project, and managers are instructed to give an important place not only to profit and profitability, but also to cash flows.

In a market economy, the company must be seen as a system that exists and operates through its relationships with third parties, relationships that materialize through wealth flows. The extent to which these flows take the form of cash is of interest to both third parties and the management of the unit, because only in this way can the system function.

In conclusion, cash flow information is useful to enable users to develop models for assessing and comparing the present value of the future cash flows of different enterprises. Such information also strengthens the comparability of data on the operating performance of different enterprises, as it eliminates the effects of using different accounting processes for the same operations and events.

5. Conclusions

The treasury of an enterprise takes the central place in all representations of the economic information system, because all economic operations are expressed in value, and most of them involve internal or external transfers of money. At the same time, the treasury plays a filtering role for most of the operations that take place in its perimeter through the restrictions imposed by the financial coverage of these operations. The financial balance sheet provides support for a traditional financial analysis which aims at describing the patrimony in order to assess the patrimonial evaluation of the enterprise necessary for both the owners and the creditors. The study of the profit and loss account gives a dynamic view of the activity, because its variables are in principle flows, which derive from the operating cycle, allowing the understanding of how the result is formed: the income entered in the credit of the account constitutes inflows, and the expenses entered in the debit constitute outflows.

Users of financial statements want the best possible information about a company's ability to make payments, its cash flow needs, as well as the ability to compare the results of different companies, eliminating the impact of using different accounting methods for similar transactions.

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ECONOMIC GROWTH. FROM STATISTICAL INDICATORS TO POPULATION WALLETS

Marius Gust[1]

Abstract:

Forecasts, but also official statistics indicate for Romania large and very large increases in gross domestic product. Thus, values of 7% for 2021 are mentioned, and if the increases from the third quarter of 2021 to the previous quarter of the previous year are reported, the values exceed 13%. The question therefore arises as to whether or not these increases are reflected in the income and consumption of the population. Also, if GDP growth is not found in the incomes of the population where they appear and who are the beneficiaries of these increases. Consequently, this Communication seeks to answer the question of how much of this growth is reflected in the living standards of the population. The Communication also aims to answer the question of why these increases are bypassing the general public and whether this view is merely an illusion.

Keywords: *gross domestic product, remuneration of employees, gross operating surplus, taxes on production and imports, actual final consumption of households.*

JEL classification: *O11*

CREȘTEREA ECONOMICĂ. DE LA INDICATORII STATISTICII LA PORTMONEUL POPULAȚIEI

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Rezumat: *Prognozele, dar și statistica oficială indică pentru România creșteri mari și foarte mari ale produsului intern brut. Astfel, pentru anul 2021 sunt menționate valori de 7%, iar dacă se raportează creșterile din trimestrul al III-lea din 2021 la trimestrul anterior din anul anterior, valorile depășesc 13%. Prin urmare se pune problema cât din aceste creșteri se reflectă sau nu se reflectă în veniturile și consumul populației. De asemenea, dacă creșterile PIB nu se regăsesc în veniturile populației unde apar și cine sunt beneficiarii acestor sporuri. În consecință prezenta comunicare vrea să răspundă la întrebarea cât din aceste creșteri se reflectă în nivelul de trai al populației. De asemenea, comunicarea își propune să răspundă și la întrebarea de ce aceste creșteri ocolesc publicul larg și dacă această părere este doar o iluzie.*

Cuvinte-cheie: *produs intern brut, remunerarea salariaţilor, excedentul brut de exploatare, impozite pe producţie şi importuri, consumul final efectiv al gospodăriilor populației.*

Clasificare JEL: *O11*

1. Introducere

Undeva, în luna august 2021, FMI a dat publicităţii noile prognoze economice pentru România după publicarea concluziilor analizei anuale pe care o face cu fiecare ţară conform articolului IV din statutul instituţiei și spunea că “Prognozăm o creştere economică de 7% în 2021 care să fie susţinută de creşterea consumului privat şi acompaniată de o creştere tranzitorie a inflaţiei. Investiţiile publice vor fi susţinute de creştere fondurilor europene în special de noul program. Deficitul de cont curent este prognozat să se reducă moderat pe termen mediu odată ce consolidarea fiscal (reducere deficitului bugetar) îşi va produce efectele, iar decelerarea creşterii economice va îndrepta economia spre nivelul de potenţial optim”. [Alexandru Nanu, Ziarul financiar, FMI prognozează o creştere economică de 7% pentru România în 2021, o estimare mai bună decât cea anterioară dar o scădere a creşterii economice la 4,8% anul viitor; Odată ce criza va trece cursul valutar trebuie să fie mai flexibil29.08.2021]

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Ceva mai devreme, în iulie 2021, Comisia Europeană estima că economia europeană se va redresa mai rapid decât se estimase anterior, iar economia României ar urma să crească cu 7,4% în 2021 şi 4,9% în 2022 [Comisia Europeană, Reprezentanța în România, Previziuni economice de vară ale CE pentru România: 7,4% creştere economică în 2021 şi 4,9% în 2022, 7 iulie 2021].

Evident, cele două predicții anterioare avea la bază cifrele bune calculate de statisticieni români pentru țara noastră, dar care stârneau un entuziasm deosebit printre politicieni. Iată un exemplu.

”V-am promis veşti extraordinare din economie: 13% creştere economică. Sună bine, nu? Mai ales că am trecut împreună prin contextul nefericit de anul trecut, când economia globală a suferit cea mai mare lovitură din ultima sută de ani. Economia României a fost închisă. În acel moment, nu aveam soluția pe care o avem astăzi, nu aveam vaccinul”, a spus Cîțu. „Am fost singurul optimist. Am promis că economia României va avea o revenire rapidă, o revenire în V. Am lucrat din greu şi am reuşit. Pentru asta vă mulţumesc vouă, dragi români. Nu aş fi reuşit fără voi. Adevărații eroi sunteți voi. Cifrele arată că economia României a depășit criza economică în doar un an”13,6% e o cifră pe care trebuie să o reţinem. Indiferent de comentariile în spațiul public, această cifră atestă că ne-am făcut foarte bine treaba. Guvernarea României nu e afectată de campania internă în PNL. Pentru mine, interesul românilor este cel mai important”, a spus Cîțu. „Întâi investim, avem creștere economică şi după aceea rezultatele sunt împărţite tuturor românilor, prin mecanismele economiei de piață și nu pe criterii politice. Obiectivul nostru este ca România să devină o destinație pentru investițiile cu valoare adăugată mare. Acest lucru este posibil cu o forță de muncă bine educată, dar și bine plătită”, a mai spus el.[Digi 24, MONICA BONEA, Florin Cîțu: „13% creştere economică. Sună bine, nu? Adevărații eroi sunteți voi”, 17.08.2021].

Într-adevăr, în 17 august 2021 Institutul Național de Statistică a publicat un comunicat de presă referitor evoluția PIB în trimestrul ii 2021 [INS, Comunicat de presă, Domeniul: Produsul Intern Brut, date semnal, 17.08.2021, https://insse.ro/cms/sites/default/files/com_presa/com_pdf/pib_tr2r2021.pdf]. în care încă de la început se spune din prima frază ”comparativ cu trimestrul i 2021, produsul intern brut în trimestrul ii 2021 a fost, în termeni reali, mai mare cu 1,8%”, iar în doua frază ” că faţă de acelaşi trimestru din anul 2020, produsul intern brut a înregistrat, în trimestrul II 2021, o creştere cu 13,0% pe seria brută şi cu 13,6% pe seria ajustată sezonier.

Deci nu 13% sau 13,6%, ci doar 1,8%. Aceasta a fost creșterea PIB din trimestrial al II-lea al anului 2021, în condițiile în care îl comparăm cu ultima valoare disponibilă cea din trimestrul I al anului 2021. Evident dacă comparăm PIB din trimestrul al II-lea al anului 2011 cu o valoare din trecut, de exemplu cea din 2020, valoarea va fi mai mare, pentru că valorile trecute sunt mai mici. De exemplu, dacă comparăm PIB din trimestrul al II-lea, 2021, cu cel din trimestrul IV, anul 2006, înainte de intrarea în Uniunea Europeană, va rezulta că acesta a crescut cu 221%, adică mai mult față de triplu (290,49 mld lei. față de 90,5 mld). În plus, comparația PIB din trimestrul al II-lea 2021 cu PIB din trimestrul al II-lea 2020, când pe fondul crizei sanitare și a lock down-ului creșterea economică a fost negativă, PIB scăzând foarte mult (a coborât cu 27 mld. lei față de trimestrul I al anului 2020), va conduce la valori mari anormale.

O a doua observație, trebuie făcută cu mențiunea din comunicatul INS, cum că este vorba de niște date semnal, estimări la 45 de zile după finalizarea semestrului, în condițiile unor informații reduse și cu probabilitatea mare de a fi revizuite (precizări care se găsesc chiar în comunicatul INS), PIB –ul corect rezultând la circa 2 ani de la sfârșitul perioadei respective (între momentul finalizării trimestrului și cei doi ani finali, autoritățile publicând mai multe date provizorii) Așa că aceste date ar trebui privite cu circumspecție, mai ales că Autoritatea care se ocupă de statistici în România obișnuiește frecvent că revizuiască datele și uneori corecțiile sunt chiar însemnate.

Între timp, momentul 17 august 2021 și prezent INS a publicat două comunicate, cu date provizorii, referitoare la creșterea PIB-ului în semestrul II 2021. În, primul cel din 7 august, valorile rămân la nivelul datelor semnal, dar în cel din 11 octombrie lucrurile sunt chiar mai bune. Astfel, PIB din trim. 2/2021, a crescut cu 1,9% față de trimestrul anterior și cu cu 13,9% pe seria brută şi cu 14,4% pe seria ajustată sezonier, faţă de acelaşi trimestru din anul 2020 [INS, Comunicat de presă, Domeniul: Produsul Intern Brut, date semnal, 7.10.2021, https://insse.ro/cms/sites/default/files/com_presa/com_pdf/pib_tr2r2021_2.pdf].

În context, au apărut din ce în ce mai multe voci, de la oameni politici și până la publicul larg, care (1) manifestă neîncredere față de aceste cifre (adică de le contestă) și (2) argumentând că nu se văd în buzunare (sau cum spunea cineva în urmă cu câțiva ani, pentru că ea este deja în buzunarele altora [Cristian Păun, De ce nu vedeți creșterea economică „record" în buzunarele voastre? Pentru că ea se află deja în buzunarele altora, Republica, 02.02.2018, https://republica.ro/de-ce-nu-vedeti-cresterea-economica-zrecord-in-buzunarele-voastre-pentru-ca-ea-se-afla-deja-in-buzunarele], deși am fost asigurați de prin-ministrul în funcție, dl. Florin Cîțu, la momentul publicării datelor semnal că "Întâi investim, avem creștere economică şi după aceea rezultatele sunt împărţite tuturor românilor, prin mecanismele economiei de piață și nu pe criterii politice".

2. Aspecte metodologice

De fapt, expresia creșterea economică se referă la dinamica produsului intern brut. .

Produsul intern brut măsoară valoarea adăugată realizată din activităţile de producţie și servicii ale unităţilor economice rezidente, în decursul unei perioade (trimestru sau an). Produsul intern brut trimestrial la preţ de piaţă se estimează prin mai multe metode [INS, Produsul intern brut trimestrial Precizări metodologice, 2021, https://insse.ro/cms/files/statistici/comunicate/pib/a21/precizari_metodologice_tr2_2.pdf]:

a) metoda de producţie: PIBT = VAB+IP-SP, unde: VAB = valoarea adăugată brută la preţ de bază; IP = impozitele pe produs; SP = subvenţiile pe produs;

b) metoda cheltuielilor: PIBT = CFG+CFS+FBC+E-I, unde: CFG = consumul final efectiv al gospodăriilor populației; CFS = consumul final efectiv al statului; FBC = formarea brută de capital; E = exportul de bunuri şi servicii; I = importul de bunuri şi servicii;

c) metoda veniturilor: PIBT = R+EBE+IMP-SUB, unde: R = remunerarea salariaţilor; EBE = excedentul brut de exploatare; IMP = impozite pe producţie şi importuri; SUB = subvenţii pe producţie şi importuri.

Principalele surse de date utilizate pentru estimarea produsului intern brut trimestrial:

- surse statistice: anchete infraanuale privind producţia industrială, de construcţii, servicii, comerţ; contul de producţie al agriculturii calculat pe baza datelor furnizate de Ministerul Agriculturii; anchete infraanuale privind câştigurile salariale şi efectivul de salariaţi; surse financiar-contabile: bilanţuri contabile ale instituţiilor financiare;

- surse administrative: execuţia bugetului de stat şi a bugetelor locale, precum şi a bugetului asigurărilor sociale de stat;

- balanţa de plăţi externe.

În concluzie, pentru a evalua impactul creșterii economice asupra populației ar trebui să ne uităm la evoluția componentelor: remunerarea salariaților și consumul final efectiv al gospodăriilor populației.

În același timp, pentru a avea mai multe informații, am ales datele trimestriale despre produsul intern brut, evoluția acestuia și cele două componente care fac obiectul studiului (remunerarea salariaților și consumul final efectiv al gospodăriilor populației) din ultimele 11 trimestre, primul fiind trimestrul IV 2018 (2018T4), iar ultimul trimestrul II 2021 (2021T2), perioadă care incluse impactul crizei pandemice.

3. Analiza formării PIB-ului

În ultimele 11 trimestre încheiate valoarea PIB-ului trimestrial al României (calculat în prețuri curente ca serie ajustată sezonier și in funcție de numărul de zile) a avut valori de peste 250 mld. lei, cu două excepții 2018T4, momentul de bază al intervalului analizat și 2020T2, momentul debutului crizei pandemice, când a coborât la valori de cca. 240 mld. lei. Valoarea maximă a fost atinsă în 2021T2, peste 290 mld. lei, deci o creștere de peste 50 mld. lei, față de valorile minime.

Cea mai importantă componentă a PIB-ului, după metoda veniturilor o reprezintă excedentul brut al exploatării, componenta valorii adăugate care rămâne la dispoziția întreprinderilor, care a avut valoarea maximă în 2021T2, aproximativ 145 mld. lei, iar valoarea minimă 121 mld lei la momentul debutului pandemiei. Această componentă contribuie cu minim 50% la formarea PIB-ului țării noastre, dar are o ușoară tendință de scădere de la circa 52% la 50% sau chiar ușor sub această valoare.

Tabelul nr. 1. PIB-ul trimestrial al României (după metoda veniturilor)

Componentele PIB	2018	2019				2020				2021	
Mld lei	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
Remunerarea salariaților (RS)	93,9	98,9	102,4	103,2	105,6	107,6	105,4	109,2	112,1	113,1	116,9
Export net	0,0	0,0	0,1	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1
Excedentul brut de exploatare (EBE)	127,6	130,7	137,1	137,3	138,3	141,7	121,0	129,2	139,7	142,1	144,8
Impozite nete pe producție+import (IN)	23,6	22,4	25,3	24,7	26,8	22,0	17,2	24,1	22,3	25,2	30,8
Produs intern brut	244,5	254,8	263,5	264,7	271,8	274,8	241,0	260,0	277,5	283,6	290,5

Sursă: insse.ro

A doua componentă a PIB-ului, după metoda veniturilor o reprezintă remunerarea salariaților, care a avut valoarea maximă tot în 2021T2, 117 mld. lei, iar valoarea minimă a fost de 94 mld. lei, în primul trimestru din intervalul analizat 2018T4. În trimestrul de debut al crizei pandemice a remunerarea salariaților a scăzut la 105 mld. lei, o valoare medie. Contribuția acestei componente a crescut de la cca. 39%, în toate trimestrele de dinainte de pandemie, la un maxim de aproximativ 44% în trimestrul de debut al acesteia, pentru ca în trimestrele următoare să evolueze către valoare de referință, de 39%, dar continuă să rămână cu un procent peste acesta.

Tabelul nr. 2. Structura PIB-ului trimestrial al României (după metoda veniturilor)

Componentele PIB	2018	2019				2020				2021	
	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
Structura PIB											
RS	38,6	38,8	38,9	39,0	38,9	39,2	43,7	42,0	40,4	39,9	40,3
EBE	52,2	51,3	52,0	51,9	50,9	51,6	50,2	49,7	50,3	50,1	49,9
IN	9,6	8,8	9,6	9,3	9,9	8,0	7,2	9,3	8,0	8,9	10,6
Discrepanță statistică	-0,5	1,1	-0,5	-0,2	0,4	1,2	-1,1	-0,9	1,2	1,2	-0,7
Produs intern brut	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0

Sursă: insse.ro și calcule ale autorului

A treia componentă a PIB-ului, după metoda veniturilor, o reprezintă impozitele nete pe producție și comerț, cu un maxim de cca 31 mld. lei, iar valoarea minimă în trimestrul de debut al crizei sanitare, 17 miliarde lei. Ca și contribuție la obținerea PIB-ului, această componentă avea o pondere de circa 9-10% înainte de pandemie, pentru a coborî la circa 7%, în trimestrul de debut al crizei sanitare, după care pare să crească, revenind la valorile standard sau chiar depășindu-le. În ultimul trimestru al intervalului analizat 2021T2, impozitele nete pe producție și comerț, continuă să fie cu 1% peste valorile de referință.

Deci, cum cele mai mari valori se înregistrează în 2021T2, iar cele mai mici (doar două componente (impozitele nete pe producție și comerț și excedentul brut al exploatării) în 2020T2 este clar că sporurile cele mai mari sunt între cele două momente.

În ceea ce privește contribuțiile la formarea PIB-ului scăderea cu 2% a contribuției excedentul brut al exploatării, se transmite în proporții aproape egale (de 1%) către remunerarea salariaților, respectiv, impozitele nete pe producție și comerț.

Tabelul nr. 3. Variațiile PIB-ului trimestrial al României (după metoda veniturilor)

Indicator	2008	2019				2020				2021	
	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
Variații față de trimestrul anterior											
RS	1.562,4	4.451,5	3.488,8	755,6	2.460,4	1.972,7	-2.174,3	3.737,1	2.988,7	959,7	3.819,4
EBE	1.666,2	3.064,6	6.462,4	217,1	917,0	3.479,6	-20.759,9	8.230,5	10.466,6	2.389,9	2.779,3
IN	1.611,8	-1.149,5	2.891,5	-595,0	2.055,1	-4.743,9	-4.805,4	6.826,0	-1.779,6	2.891,9	5.585,9
Discrepanță statistică	-1.632,6	3.898,2	-4.170,8	897,6	1.598,4	2.324,9	-6.025,8	193,1	5.755,5	-57,3	-5.343,5
Produs intern brut	3.207,8	10.264,8	8.671,9	1.275,3	7.030,9	3.033,3	-33.765,4	18.986,7	17.431,2	6.184,2	6.841,1
Variatii anuale față de sfârsitul anului anterior											
RS	-	4.451,5	7.940,3	8.695,9	11.156,3	1.972,7	-201,6	3.535,5	6.524,2	959,7	4.779,1
EBE	-	3.064,6	9.527,0	9.744,1	10.661,1	3.479,6	-17.280,3	-9.049,8	1.416,8	2.389,9	5.169,2
IN	-	-1.149,5	1.742,0	1.147,0	3.202,1	-4.743,9	-9.549,3	-2.723,3	-4.502,9	2.891,9	8.477,8
Discrepanță statistică	-	3.898,2	-272,6	625,0	2.223,4	2.324,9	-3.700,9	-3.507,8	2.247,7	-57,3	-5.400,8
Produs intern brut	-	10.264,8	18.936,7	20.212,0	27.242,9	3.033,3	-30.732,1	-11.745,4	5.685,8	6.184,2	13.025,3

Sursă: insse.ro și calcule ale autorului

Dacă ne referim la sporurile trimestriale sau anuale, observăm că, atât în ceea ce privește produsul intern brut, cât și componentele acestuia, cresc continuu, singurele abateri se remarcă în 2020T2, când toți indicatorii scad pe fondul crizei sanitare, și impozitele nete, care au o evoluție oscilatorie.

Tabelul nr. 4. Structura variațiile PIB-ului trimestrial al României (%) (după metoda veniturilor)

Indicator	2018	2019				2020				2021	
Structura creșterii PIB	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
RS	48,7	43,4	40,2	59,2	35,0	65,0	6,4	19,7	17,1	15,5	55,8
EBE	51,9	29,9	74,5	17,0	13,0	114,7	61,5	43,3	60,0	38,6	40,6
IN	50,2	-11,2	33,3	-46,7	29,2	-156,4	14,2	36,0	-10,2	46,8	81,7
Discrepanță statistică	-50,9	38,0	-48,1	70,4	22,7	76,6	17,8	1,0	33,0	-0,9	-78,1
Produs intern brut	100	100	100	100	100	100	100	100	100	100	100

Sursă: insse.ro și calcule ale autorului

Dacă ne referim la structura sporurile trimestriale ale PIB, observăm că în șase trimestre din totalul de 11, cea mai mare parte a sporului este oprit de creatorii de valoare (întreprinderi, antreprenori privați etc) sub forma excedentului brut al exploatării, iar valoarea alocărilor din spor este de peste 50% (o singură excepție în 2020T3). Remunerarea salariaților doar în trei ani a fost vizată de ca prima destinație a sporului și acest lucru s-a întâmplat în 2019, iar impozitele nete a avut rolul de amortizor, din această destinație suportându-se surplusurile care depășeau suma remunerărilor salariale și excedentelor brute ale exploatării.

Tabelul nr. 5. Variații ale componentele PIB-ului trimestrial al României (după metoda veniturilor)

Indicator	2018	2019				2020				2021	
	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
Creșterea remunerării salariaților (%)	-	4,7	3,5	0,7	2,4	1,9	-2,0	3,5	2,7	0,9	3,4
Creșterea trimestriala a preturilor de consumi (%l	-	1,6	1,44	-0,14	0,8	1,1	0,73	-0,01	0,31	2,01	1,29
Creștere netă a salariilor (%) in raport cu preturile de consum	-	3,1	2,1	0,9	1,6	0,8	-2,8	3,6	2,4	-1,2	2,1
Indicele prețurilor de consum (2018T4=100%)		101,6	103,1	102,9	103,7	104,9	105,6	105,6	106,0	108,1	109,5
Remunerarea salariatilor (mld. lei prețuri 2018T4)	94,5	97,4	99,4	100,2	101,8	102,6	99,8	103,3	105,8	104,6	106,8
Remunerarea salariatilor (mld. lei prețuri curente)	94,5	98,9	102,4	103,2	105,6	107,6	105,4	109,2	112,1	113,1	116,9
Diferențe - mld. lei	0,0	-1,6	-3,0	-2,9	-3,8	-5,0	-5,6	-5,8	-6,3	-8,5	-10,1
Deflatorul PIB (%l	-	6,3	7,1	6,4	7,3	3,7	1,4	4,1	4,7	3,3	5,5
Creștere netă a salariilor (%) in raport cu deflatorul PIB	-	-1,6	-3,6	-5,7	-4,9	-1,8	-3,4	-0,6	-2,0	-2,4	-2,1
Creșterea excedentului brut al exploatării (%)	-	2,4	4,9	0,2	0,7	2,5	-14,6	6,8	8,1	1,7	2,0
Creștere netă a excedentului brut (%) in raport cu deflatorul PIB	-	-3,9	-2,2	-6,2	-6,6	-1,2	-16,0	2,7	3,4	-1,6	-3,5
Creșterea impozitelor nete pe producție și importuri	-	-4,9	12,9	-2,3	8,3	-17,7	-21,8	39,6	-7,4	13,0	22,2
Raport remunerarea salariaților/excedent brut al exploatării	0,74	0,76	0,75	0,75	0,76	0,76	0,87	0,84	0,80	0,80	0,81
Raport remunerarea salariaților/impozite nete	4,00	4,41	4,04	4,17	3,94	4,88	6,11	4,54	5,03	4,49	3,80

Sursă: insse.ro și calcule ale autorului

Creșterea procentuală a componentei remunerarea salariaților (cuprinsă între 0,7% și 4,7%), pe fondul unei inflații scăzute (calculată la prețurile de consum), conduc la valori pozitive, adică o creștere reală a remunerării salariaților: Excepție fac doar două trimestre, ambele după izbucnirea crizei pandemice: 2020T2 și 2021T1. Dacă comparăm creșterea componentei remunerarea salariaților cu deflatorul PIB, valorile sunt permanent negative, ceea ce înseamnă o scădere a puterii de cumpărare a puterii de cumpărare a acestei componente.

Remunerarea salariaților nu cunoaște schimbări majore nici dacă calculăm valoarea reală a acesteia în prețuri 2018T4. Este adevărat cunoaște o scădere, datorită unui indice de preț ceva mai consolidat, dar pe ansamblul perioadei avem o creștere reală de peste 12 mld lei (în prețuri curente creșterea fiind de peste 22 mld lei). Totuși, cea mai mare parte a creșterii este în anul 2019 (peste 8 miliarde) și doar 5 miliarde de lei în cele șase semestre ale lui 2020 și 2021. În plus, mai remarcăm o scădere reală de peste un miliard în 2021T1, este adevărat integral recuperată în 2021T2.

Cealaltă, componentă, excedentul brut al exploatării are dinamici mult mai mari, cuprinse între 0,7% și 8,1%, ceea ce face ca din comparația acestor creșteri cu deflatorul PIB să mai rămână două trimestre cu valori pozitive.

Dacă comparăm mărimea componentei remunerarea salariaților cu excedentul brut al exploatării, că prima este inferioară, reprezentând între 75% și 87%, cu tendința de creștere și atingerea maximului la momentul izbucnirii crizei pandemice, după care coeficientul se aplatizează, îndreptându-se către valori de circa 80%. Astfel întreprinderile își opresc mai mult din valoarea adăugată creată, decât cedează salariaților.

Dacă comparăm mărimea componentei remunerarea salariaților cu impozitele nete, observăm că prima componentă este mult mai mare față de a doua, valorile fiind cuprinse între 3,81 și 6,11, ambele limite înregistrându-se după debutul crizei sanitare. De la valori în jurul lui 4-4,5, înainte de criza pandemică, ajunge la un maxim de 6,11 în 2020T2 (momentul lock down-lui), după care începe să scadă către valorile dinainte de criză. Această evoluție confirmă rolul de amortizor pe care îl au impozitele nete, din această componentă făcându-se alocări către remunerarea salariaților sau excedentul brut al exploatării, atunci când acestea au tendință de scădere.

Tabelul nr. 6. Strictura componentei remunerarea salariaților a PIB-ului trimestrial al României (după metoda veniturilor)

Remunerarea salariaților	100	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0	100,0
Agricultura, silvicultura si pescuit	2,1	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	2,0	1,9
Industrie	22,5	22,1	22,3	22,1	21,9	21,6	21,1	20,9	20,8	20,8	21,1
Constructii	5,2	5,4	5,6	5,7	5,8	5,7	5,9	5,8	5,8	6,0	6,1
Comert	22,1	22,0	21,8	21,9	22,0	21,9	21,3	21,5	21,5	21,8	21,4
Informatii si comunicatii	5,9	6,1	5,9	6,0	6,2	6,5	6,6	6,5	6,8	7,0	6,9
Intermedieri financiare si asigurari	2,3	2,2	2,3	2,2	2,3	2,3	2,3	2,3	2,3	2,4	2,5
Tranzactii imobiliare	0,5	0,6	0,6	0,6	0,6	0,5	0,5	0,5	0,5	0,5	0,5
Activitati profesionale, stiintifice si tehnice; servicii administrative si activitati de suport	8,2	8,3	8,3	8,4	8,3	8,1	8,1	8,1	8,1	8,2	8,2
Administratie publica si aparare; asigurari sociale din sistemul public; invatamant; sanatate si asistenta sociala	28,1	28,2	28,1	28,0	27,5	27,8	28,7	28,8	28,6	27,8	27,5
Activitati de spectacole, culturale si recreative; reparatii de produse de uz casnic si alte servicii	3,1	3,1	3,2	3,2	3,3	3,5	3,5	3,7	3,6	3,7	3,8

Sursă: insse.ro și calcule ale autorului

Cea mai mare parte din componenta remunerarea salariaților se realizează în trei sectoare de activitate și aceasta fără variații mari de-a lungul celor 11 trimestre analizate. Astfel, 27-28% din această componentă se realizează în administrația publica si apărare, asigurări sociale, învățământ, sănătate și asistență socială și câte 21-22% în industrie și comerț. Deci aproximativ trei sferturi din componenta remunerarea salariaților a PIB-ului se realizează în trei sectoare de activitate.

Tabelul nr. 7. PIB-ul trimestrial al României (după metoda cheltuielilor) și structura acestuia

Indicator	2018	2019				2020				2021	
	T4	T1	T3	T3	T4	T1	T2	T3	T4	T1	T2
Produs intern brut - mld lei	244,5	254,8	263,5	264,7	271,8	274,8	241,0	260,0	277,5	283,6	290,5
Consumul individual efectiv al gospodăriilor populației											
mld lei	176,3	179,4	183,5	186,6	196,8	186,4	169,6	182,9	189,7	193,4	189,1
sporuri față de trimestrul anterior **mld lei**	0,0	3,2	4,1	3,1	10,2	-10,4	-16,7	13,2	6,8	3,8	-4,4
% față de 2018T4	100,0	101,8	104,1	105,9	111,7	105,7	96,3	103,8	107,6	109,7	107,3
% față de trimestrul anterior	100,0	101,8	104,1	105,9	111,7	105,7	96,3	103,8	107,6	109,7	107,3
indici de pret trimestriale	100,0	101,6	101,4	99,9	100,8	101,1	100,7	100,0	100,3	102,0	101,3
indici de pret cumulați (2018=100)	100,0	101,6	103,1	102,9	103,7	104,9	105,6	105,6	106,0	108,1	109,5
Consumul real al populației **mld lei**	176,3	176,6	178,1	181,3	189,7	177,7	160,6	173,1	179,0	178,9	172,7
Sporurile reale ale consumului populației **mld lei**	0,0	0,4	1,4	3,2	8,4	-12,0	-17,1	12,6	5,8	0,0	-6,3
pondere în PIB	72,1	70,4	69,7	70,5	72,4	67,8	70,4	70,3	68,4	68,2	65,1

Sursă: insse.ro și calcule ale autorului

Am analizat și formarea PIB-ului după metoda cheltuielilor (varianta serie ajustată sezonier și in funcție de numărul de zile lucrătoare) și, în acest caz, am observat evoluția consumul individual efectiv al gospodăriilor populației. Din analiza datelor se observă că în întreg anul 2019 consumul individual al populației a crescut cu circa 20 mld. lei, de la 176 la 196 miliarde lei, după care au urmat două trimestre T1 și T2 din anul 2020, în care consumul populației a pierdut 27 mld, aproape de 1,5 ori față de creșterea din anul 2019. Consumul populației îți revine începând cu 2020T3, recuperând în ultimele două trimestre ale lui 2020, cca. 20 mld lei și încă cca 4 miliarde lei în 2021T1, dar fără să ajungă la valoarea de la sfârșitul anului 2019 și începutul crizei pandemice. Din păcate în 2021T2, consumul populației revine la scădere și mai pierde aproximativ 4,5 miliarde, îndepărtându-se din nou de la valoarea de la sfârșitul lui 2019. Și este vorba de date măsurate în prețuri curente. Dacă, atașăm inflația, măsurată la prețurile de consum reducerea consumului este și mai mare. Astfel pe fondul izbucnirii crizei pandemice, în primele două trimestre ale lui 2020, reducerea consumului este de 29 miliarde lei, cu două miliarde peste seria măsurată în prețuri curente, iar după o revenire de 19 miliarde lei în ultimele două trimestre ale lui 2020, scăderea consumului revine în primele două trimestre ale lui 2021, valoarea consumului populației din 2021T2 fiind cu 3,5 miliarde sub valoarea din decembrie 2018, cu 17 mld. lei sub valoarea din decembrie 2019, dar și sub valoarea din decembrie 2020 (cu 6 miliarde).

De fapt consumul populației își ajustează dimensiunea și ca pondere în PIB, pierzând 7% în 2021T2, față de 2018T4, cea mai mare parte în 2020 și 2021, iar evoluția cifrelor pare să continue și este posibil ca în trimestrele următoare din 2021 tendința să continue, iar dacă nu va fi compensată de celelalte componente să afecteze chiar creșterea PIB-ului.

4. De ce totuși creșterea economică este o iluzie pentru populație

Deci, iată că într-adevăr, o bună parte din creșterea economică din 2020 și 2021 nu se regăsește în buzunarele publicului larg. Sau mai bine zis ea nu se regăsește în buzunarele tuturor ci doar în anumite buzunare.

Din datele anterioare pare că de creșterea economică din 2020 și 2021 s-ar regăsi în buzunarele salariaților, pentru că retribuirea muncii a înregistrat creșteri și nu s-ar regăsi în buzunarele celor din zonele rurale, care muncesc în agricultura de subzistență, a pensionarilor, a tinerilor, a lucrătorilor care muncesc la negru, în general, buzunarele tuturor acelora care nu au statutul de salariat (pentru că am văzut un regres al consumului, dar nu și al remunerări salariaților).

Totuși, e puțin probabil ca absolut toți salariații să fi simțit creșterea economică din ultimii 2 ani. Iată câteva argumente:

a. Cele mai multe contracte de muncă ale salariaților se încheie pe perioadă nedeminată și nu au prevăzute clauze de revizuire a salariilor, adică au salarii fixe. Ceea ce înseamnă ca, pe de o parte, au fost depreciate de inflație, iar pe de altă parte, nu au beneficiat nici măcar parțial de creșterile nominale ale PIB, din ultimii doi ani. Probabil singurele salarii care au crescut în perioada analizată au fost cele ale unor salariați bugetari, precum și cele care se situau la nivelul salariului minim pe economie (1 ianuarie 2019 - 2080 lei, 1 ianuarie 2020 - 2230 lei,1 ianuarie 2021 - 2300 lei), dar , după cum se observă, sporurile fiind mici, ele au avut un impact marginal. De exemplu, DP, în articolul ”Cotă unică vs impozit progresiv. Cum se împart românii după nivelul salariilor și care sunt argumentele pro și contra impunerii progresive” [HotNews.ro, 14 noiembrie 2021], menționează că numărul de contracte de muncă încheiate la nivelul salariului mediu este de 1.369.646, ceea ce înseamnă o creștere anualizată, pentru 2021, de 1,15 miliarde lei, adică 0,1% din PIB-ul relativ cert al anului 2020.

b. Structura salariilor în România conține o dispersie atât de mare, iar inegalitatea este atât de răspândită în țara noastră încât chiar creșterile economice mari este imposibil să se reflecte rapid și, culmea, în toate buzunarele. Iată, în tabelul nr. 8, plecând de la sursa anterioară care ar fi structura salariilor din România (din mediul privat) și ce pondere ar avea în suma remunerării salariaților din primele două trimestre ale lui 2021 (230 mld. lei).

Tabelul nr. 7. Salariile din mediul privat și componenta remunerarea salariaților a PIB-ului

Valoare / Interval salariu minim	Număr contracte total	Număr contracte % în total	mijloc interval	valoare lunară estimată (mil lei)	valoare estimată pentru primele 6 luni (mil lei)	% în componenta remunerarea salariaților T1+T2
2300	1.369.646	30,00	2300	3.150	18.901	8,22
2300-3000	819.242	17,94	2650	2.171	13.026	5,66
3000	309.431	6,78	3000	928	5.570	2,42
3000-4500	1.018.970	22,32	3750	3.821	22.927	9,97
4500-10000	861.648	18,87	7250	6.247	37.482	16,30
10000-30000	179.597	3,93	20000	3.592	21.552	9,37
peste 30000	6.950	0,15	45000	313	1.877	0,82
Total	4.565.484	100	-	20.222	121.333	52,75

Sursă: DP - ”Cotă unică vs impozit progresiv. Cum se împart românii după nivelul salariilor și care sunt argumentele pro și contra impunerii progresive” [HotNews.ro, 14 noiembrie 2021 și calcule ale autorului

Deci în primele șase luni ale lui 2021 salariile din mediul privat ar reprezenta cca. 53% din componenta PIB remunerarea salariaților (la care se adaugă salariile din sistemul bugetar și din întreprinderile publice). Dar, salariile cu valori de până la 3000 de lei brut ar reprezenta doar 16% din valoarea componentei PIB remunerarea salariaților, deși ele ar reprezenta 55% din numărul total de contracte de muncă din sistemul privat românesc. Și mai edificator, salariile sub 900 de euro brut (4500 lei), adică aproximativ 80% din numărul de contracte de muncă din sistemul privat, dar reprezintă 26% din remunerarea salariaților (aproape de perfecțiunea curbei Paretto). Este evident că orice creștere economică este preluată de către decidenți, fiind redistribuită de către aceștia – factori politici, manageri de întreprinderi, patroni de întreprinderi – pentru că ei controlează organismele de decizie, de la cei care produc valoarea. Probabil, că nici în zorii capitalismului, nu se întâmpla acest lucru.

c. Indicele preturilor de consum. De ani de zile, populația și sindicatele sunt deosebit de critice legat de construcția indicelui prețurilor de consum. Sau mai degrabă, de discrepanța dintre prețurile reale din piețe și magazine și jumătățile de adevăr sau poate sferturile de adevăr din statisticile referitoare la prețuri. Nu este o problemă de tehnică statistică, indicele fiind corect calculat, este o altă problemă care conduce la neîncrederea populației și autoritățile statului / politicieni. Una simte populația (în buzunar), altceva spun autoritățile la televizor. Poate construcția unui alt indice al prețurilor de consum, cu bunurile și serviciile de strictă necesitate sau eliminarea complexității actualului indice ar mai reduce din discrepanța de care vorbeam (nu toți consumăm și nu sunt esențiale pentru viața de zi cu zi: specialităţi de

panificaţie, margarina, citrice şi alte fructe meridionale, articole de galanterie, pasmanterie şi mercerie sau servicii de genul confecţionat şi reparat îmbrăcăminte şi încălţăminte). Un indice de preț calculat mai corect, ar atrage atenția asupra faptului ca publicul larg este afectat de inflație (cum se întâmplă în prezent, din păcate această perioadă nu este prinsă în analiză), de crize economice, că plusurile de la nivelul PIB-ului rămân la o minoritate și nu se propagă către publicul larg. Marea parte a publicului este de bună credință și recurg la fapte reprobabile și imorale, tocmai pentru că văd că deși muncesc de dimineața până seara și își respectă contractul social, sunt ocoliți de beneficii, în dauna unora care au aceleași drepturi ca și ei.

d. Polarizarea puternică este o trăsătură a societății și economiei României o caracteristică atât a anilor ’90, cât şi a celor prezenți. Consecința este că valorile medii calculate nu au o relevanță practică. Concret, distribuțiile indicatorilor economici sunt puternic asimetrice spre dreapta, adică o minoritate din economie/societate au rezultate peste medie în ceea ce priveşte cifra de afaceri, activele totale sau valoarea adăugată brută etc., iar majoritatea au rezultate sub medie. De exemplu, investigarea firmelor care au valoarea adăugată brută la o diferență de ±10 % față de media sectorului companii va cuprinde doar 1 % din firme. Lărgirea intervalului de variație la ±25 % față de medie va urca mulțimea firmelor la 3 %, iar majorarea variației la ±50% caracterizează 8 la sută din populația de firme active din România [Florian Neagu, Florin Dragu, Adrian Costeiu, După 20 de ani: schimbări structurale în economia României în primele decenii postdecembriste, BNR, Caiet de studii nr.42/ 2016]. Ori acest lucru are consecințe precum:

- Translatarea efectelor favorabile sau nefavorabile semnalate de cifrele macro la situația individuală a firmelor nu este pertinentă.
- Tendințele la nivel agregat au fost generate de către un număr scăzut de firme în timp ce majoritatea covârşitoare a firmelor active din economie au avut o evoluție nesemnificativă.
- Gândirea de politici sau modele care pleacă de la ipoteza existenței unui agent reprezentativ în economie trebuie schimbată pentru că se potrivește doar la o minoritate (10%).
- Factorii de decizie trebuie să-și schimbe modul de interpretare a valorilor macroeconomice, pentru că majoritatea (cca 90%) arată altfel.

5. Concluzii

Deși statistica oficială, dar și o serie de prognoze ale unor instituții economice și financiare internaționale dau pentru România cifre mari, totuși aceleași statistici indică că doar o parte din aceasta ajunge la public. Astfel, din creșterea economică, cea mai mare parte revine întreprinderilor, sub forma excedentului brut al exploatării, apoi o altă parte, populației care are calitatea de salariat și în sfârșit statul, sub forma impozitului. Totuși consumul populației din ultimele trimestre cunoaște un regres puternic, ceea ce ne spune că sunt mulți care nu beneficiază de creșterea economică: cei din zonele rurale, cei care muncesc în agricultura de subzistență, pensionarii, tinerii, lucrătorii care muncesc la negru, în general, nu se regăsește în buzunarele tuturor acelora care nu au statutul de salariat.

Dar este discutabil și faptul că această creștere economică s-ar regăsi în buzunarele tuturor salariaților. Acest lucru este demonstrat de numărul mare de contracte de muncă încheiate la nivelul salariului mediu pe economie, de structura salariilor, de valorile înregistrate de indicele prețurilor de consum, de polarizarea puternică este o trăsătură a societății și economiei României.

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OVERVIEW OF CREDIT ACTIVITIES OF BANKS IN THE DEVELOPED ECONOMIES

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Abstract:

Credit cycles have long been a feature of advanced economies, and their analysis is relevant for monetary policy purposes. Among the various lending measures, the aim of this paper will be focused on credit activities of banks, giving a thorough analysis of the evolution of bank credit to the private sector, one of the most important indicators of banking development, moreover the effects of the COVID-19 health crises on its trend. This indicator will be further explained and graphically demonstrated for all G7 countries, thus analyzing the characteristics and evolution of lending in advanced economies. The study of the credit activity of the advanced economies of the G7 countries demonstrated the efficiency of banking systems to recover from financial crises and to maintain a very good credit rating, characterized by an upward trend in the evolution of lending. The financial system of the developed economies has maintained the overall stability, while COVID-19 continues to have a significant impact on economic and financial activity worldwide. Banks in these countries have tightened access to corporate credit amid the resurgence of the coronavirus pandemic.

Keywords: *Banking Sector, COVID-19 Crisis, Credit Activity, Developed Economies.*

JEL Classification: *G21*

1. Introduction

The essential role of bank credit as input in the production of goods and services places banks in a unique and influential position, so that any inefficiency of credit allocation or other market distortions in the banking sector are almost certain to be felt throughout the economy. The weakness of bank credits in many economies following the global financial crisis has led to intense debate about their economic implications.

Advanced Economy is a term used by the International Monetary Fund (IMF) to describe the most developed countries in the world. Advanced economies are also sometimes called developed, industrialized and mature economies. The seven largest economies in terms of GDP based on market exchange rates are the United States, Japan, Germany, France, Italy, the United Kingdom and Canada, also known as the Group of Seven (G7).

The financial systems of developed countries are based on banks or capital markets. In addition to traditional banks that rely on lending as their main function, in these countries a very important role is also played by investment banks that deal with securities transactions. Countries with more developed financial systems tend to grow faster, especially those with large private banks that channel credit to private enterprises and liquid stock exchanges.

Credit cycles have long been a feature of advanced economies, and their analysis is relevant for monetary policy purposes. Among the various lending measures, the aim of this paper will be focused on credit activities of banks, giving a thorough analysis of the evolution of bank credit to the private sector, one of the most important indicators of banking development, moreover the effects of the COVID-19 health crises on its trend. This indicator will be further explained and graphically demonstrated for all G7 countries, thus analyzing the characteristics and evolution of lending in advanced economies.

In the first part of the paper will be analyzed the literature related to credit activities, focusing on studies conducted for advanced economies. In particular, the analysis will be carried out based on research into the characteristics and evolution of lending in G7 countries. In the second part will be studied the graphical and descriptive analysis of the evolution of the

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indicator “bank credit to the private sector as percent of GDP” for the seven advanced economies, during the years 2001-2020.

The global economic shock resulting from the COVID-19 pandemic has seen sharp changes in production and consumption patterns in the real economy, with repeated effects on credit markets. Given the severe economic impact of COVID-19, the loan can provide much-needed capital solutions to companies under pressure, helping to preserve jobs and resume economic activity.

This paper aims to contribute to the state of knowledge of the subject in the academic literature and to capture the attribution of the evolution of credit activity, as a process of undeniable importance, which promotes the economic development of the country.

2. Literature Review

A banking system has many different structural dimensions, which are difficult to capture in one measure. "By designating the coherent set of various categories of banks with domestic or foreign capital, state or private, as well as combinations thereof, operating in a country, the banking system meets the needs of each stage of economic and social development." (Spulbăr and Nițoi (2011, p.22)).

The essential role of bank credit as input in the production of goods and services places banks in a unique and influential position, so that any inefficiency of credit allocation or other market distortions in the banking sector are almost certain to be felt throughout the economy (Shaffer, 2004).

After the financial crisis of 2008, the bank credit growth fell sharply in real terms and in the following years remained moderate in most major economies and group of countries. A massive infusion of government funds and credit easing policies into advanced economies, designed to combat a recession and support bank balance sheets, has not been translated into increased lending to the private sector (Cartas and McConagha, 2010).

Over the last 30 years, credit has grown steadily in most advanced and emerging economies. At the same time, the globalization of the banking sector, the increase of cross-border asset ownership and the rapid development of securitization and financial engineering have increased the interdependence of the banking and credit markets across the country's borders. The theoretical literature on credit market frictions has highlighted the importance of credit in shaping the links between the financial market and the real economy (Gertler and Kiyotaki, 2010). On the empirical side, many have studied the relationship between economics and financial development and found that better-functioning financial intermediaries accelerate economic growth (Levine, 2005). Countries with more developed financial systems tend to grow faster, especially those with large private banks that channel credit to private enterprises and liquid stock exchanges. In particular, a negative shock to the US real credit is transmitted to the credit in the euro area, the United Kingdom, Japan and some emerging market economies with a high degree of financial openness, with a particularly profound impact on the UK, possibly due to the strong ties in banking sectors between the UK and the US (TengTeng Xu, 2012).

Credit cycles have long been a feature of advanced economies, and their analysis is relevant for monetary policy purposes. Indeed, for monetary analysis, the relevance of the evolution of credits to the private sector over the cycle stems from the fact that they are the main counterpart of money aggregation, so their assessment is necessary for understanding and interpreting monetary developments (ECB, 2011). Moreover, in the euro area, unlike the United States, bank loans are the most important source of external financing, not only for households but also for non-financial corporations. Therefore, they play a very important role in shaping the evolution of the economic activity and in transmitting the monetary policy position to the economy.

The banking system that exists in the United States is a dual banking system, in which state and national banks are leased and supervised at various levels. This translates into differences in the way credit is regulated, legal loan limits and variations in state-to-state regulations. The dual structure has stood the test of time, and most economists agree that it is necessary for a solid and vibrant banking system like the US (Kenton, 2020). The Federal Reserve (central bank) is the one that regulates money lending by establishing reserve requirements that indicate the amount of money that banks are allowed to borrow. Depending on the evolution of the US economy, the Federal Reserve will regulate different values to suit the needs of the economy at that time, using either an expansionary monetary policy or a contractionary one (Mittal, 2018). The lower the requirement, the more money the banks get to make money, because they can borrow more money.

Germany's banking system comprises three pillars: private commercial banks, public sector banks and cooperative banks, which are distinguished by their legal form and ownership structure. The pressure to strengthen further in the coming years comes from low interest rates and banking regulations in recent years, such as Basel III, which have substantially increased banks' capital requirements. German banks fear that, in particular, real estate and corporate finance could be particularly affected and could seriously restrict banks' lending capacity. However, coupled with low interest rates and extraordinarily favorable overall financing conditions, loans to companies and the self-employed increased by EUR 974 billion in 2019, up from the previous year (+ 4.3%), according to ECB analyzes (2020).

The banking sector is one of France's six main economic assets, according to the OECD. Banks finance the development of businesses, as well as individuals, very dynamically in France. Credit is one of the main growth factors. Lending activity remains both dynamic and solid. The level of non-performing loans is very low (2.5% at the end of December 2019), as the cost of risk (as a proportion of average total assets) decreased from 0.41% in 2009 to 0.11% in 2019.

Italian banks have faced an unfavorable macroeconomic environment from a stronger overall position than they did at the beginning of the 2008 financial crisis. Much has changed since then: credit risk is reduced, capitalization increases, restructuring and consolidation takes place and profitability recovers. In 2019, the quality of Italian banks' assets continued to improve steadily, both in terms of flows and the stock of non-performing loans. The impact of the pandemic crisis on credit quality will be mitigated by the effects of government measures. The restructuring and consolidation of the Italian banking sector is in a continuous development, partly induced by the change of the regulatory environment and the digital revolution.

The United Kingdom, like the United States, has a highly developed stock market that heavily finances the economy. There are more than 360 monetary financial institutions in the UK. The blockade due to the pandemic has caused a significant slowdown in bank lending to households. Consumer credit demand is projected to decline by 15.9% in 2020, the largest annual decline since registrations began in 1993. Mortgage lending is projected to increase, but only marginally, by only 2.6% in 2020 (Luttig, 2020).

Banking in Australia is dominated by four major banks: the Commonwealth Bank of Australia, Westpac Banking Corporation, Australia and New Zealand Banking Group and National Australia Bank. A feature of Australia's banking system is the use of interbank lending to help banks operate as efficiently as possible. The role of the Reserve Bank includes ensuring liquidity in the banking system, including acting as a lender of last resort in times of liquidity crisis. The Australian bank debt market started slowly until 2016, with declining loan volumes; however, it did better than overseas markets, which experienced lower activity due to the fact that sub-investment borrowers were negatively affected by the sharp fall in commodity prices (mainly oil). Refinancing has returned due to improved lending conditions, as have financing for acquisitions due to a relative increase in mergers and acquisitions (Ellison, 2018).

The Japanese banking system is comparable to that of other industrialized countries, is stable and well regulated, and offers many options for business and personal accounts. There are a variety of institutions, from large international banks to smaller regional ones. Japanese banks offer loans and mortgages at very low interest rates, however they can be difficult to insure. In addition to requiring applicants to have a certain income level, most banks will grant loans and mortgages only to Japanese citizens, permanent residents, or foreign nationals with a Japanese spouse. Demand for loans in Japan is growing again. After a decline in 2010 and 2011, the slow recovery has become visible again. In Japan, private sector credit is largely channeled through the banking system. Debt financing represents almost 60% of corporate financing, most loans being channeled through the banking system (Lam and Shin, 2012). All banks are active in housing loans and consumer loans. Loan intermediation in Japan has been affected by the average low nominal interest rate.

Banks account for about two-thirds of the business credit market in Canada. Banks are prudent lenders and are constantly working to make creditworthy companies in Canada available for lending. Banks account for 70% of total loans to businesses through commercial loans, short-term promissory notes, known as bankers' acceptances, non-residential mortgages and other credit products. Maintaining these sound and fundamental principles of prudent lending is important to Canada's banking system and also in the interests of all Canadians. Canadian banks remained strong, contributing substantially to economic growth.

The central bank's responses to COVID-19 have been extraordinary in terms of speed, size and scope. Much lighter monetary policy, the massive provision of liquidity and specific credit support for the real economy have played a role in stabilizing financial and credit conditions. The US Federal Reserve announced as many emergency programs in eight days (March 14-23, 2020) as in all of 2008. In addition, the Fed implemented more programs in 4 months than in the entire global financial crisis. On the net, there is evidence that the central bank's actions have been positive for access to credit and the real economy in very difficult times (Mosser (2020)). In response to the economic collapse, central banks, including the Fed, have launched a massive set of programs to address both the real and financial suffering caused by the pandemic (Fleming et.al. (2020)).

G7 economies are witnessing an early recovery. But whether this recovery will be rapid depends on the trajectory of COVID-19 in these countries. Central banks in advanced economies have responded quickly and strongly to these financial and economic disruptions. This has been accompanied by measures to support economic activity, including lower policy rates, the introduction of new or expanded asset purchase programs and schemes to reduce long-term interest rates and support the flow of credit to businesses, and households (Vallence and Wallis (2020)).

3. The Evolution of Bank Credit to the Private Sector in the G7 Countries

In this part of the paper, the indicator “bank credit to the private sector as percent of GDP” will be further explained and graphically demonstrated for all G7 countries, thus analyzing the characteristics and evolution of lending in advanced economies.

The Figure nr. 1. below shows the evolution of bank credit to the private sector as percent of GDP for the period 2001-2020 in the USA.

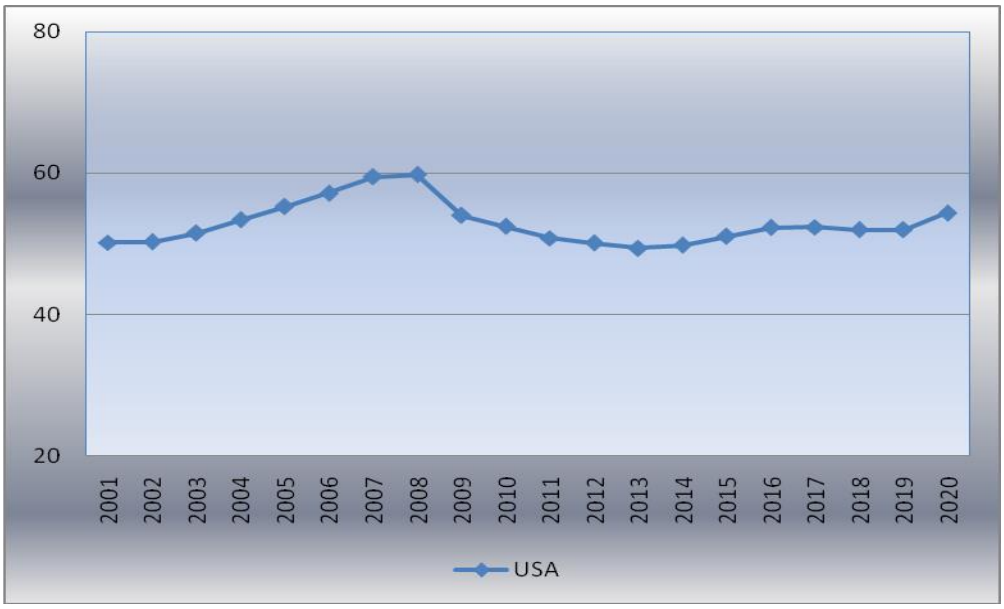

Fig. nr. 1. The evolution of bank credit to the private sector as percent of GDP (2001-2020) – USA**, Source:** own processing according to the data taken from https://www.theglobaleconomy.com/

Bank credit is an important source of financing for the business sector, but the USA is a notable exception to other countries in the world, with a highly advanced capital market, where companies can also exploit well-developed stock and bond markets to finance projects. The average value for the USA during this period was 52.86%, with a minimum of 49.36% in 2013 and a maximum of 59.78% in 2008. The most recent value in 2020 is 54.35%. In recent years, credit quality has increased for US banks. The percentage of non-performing loans is lower, credit quality problems are mainly limited to commercial and industrial loans of large banks, and credit weakness is concentrated in a small number of lending industries.

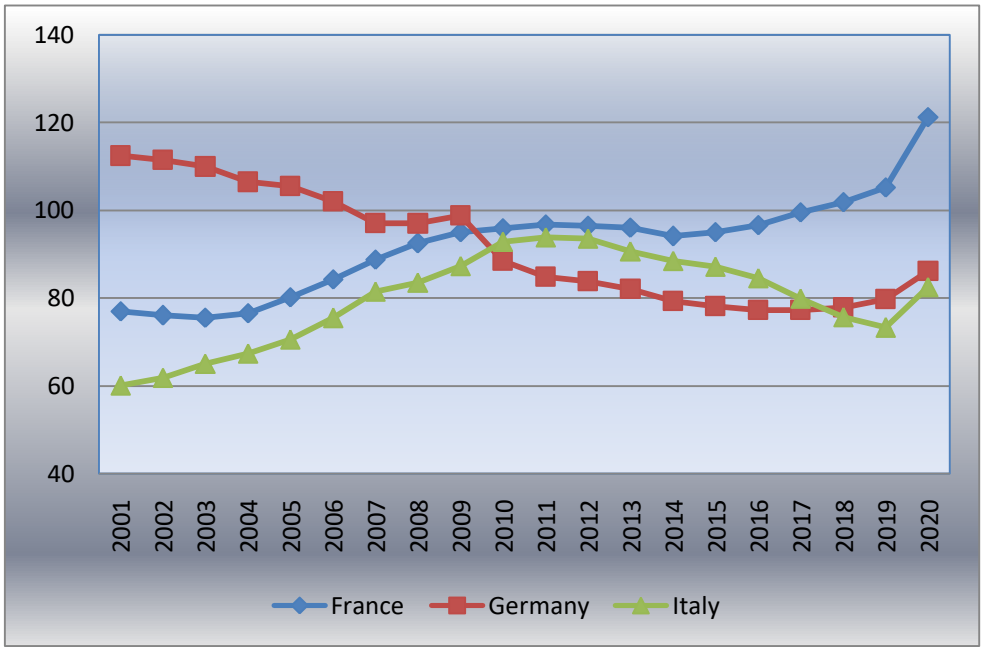

Fig. nr. 2. The evolution of bank credit to the private sector as percent of GDP (2001-2020) – France, Germany, Italy**, Source:** own processing according to the data taken from https://www.theglobaleconomy.com/

The Figure nr. 2. above shows the evolution of bank credit to the private sector as percent of GDP in France, Germany and Italy, during the years 2001-2020. The average value for France during this period was 92.24%, with a minimum of 75.55% in 2003 and a maximum of 121.19% in 2020. The most recent value in 2020 is 121.19%. The average value for Germany during this period was 91.79%, with a minimum of 77.3% in 2016 and a maximum of 112.42% in 2001. The most recent value in 2020 is 86.15%. The average value for Italy during this period was 79.79%, with a minimum of 60.12% in 2001 and a maximum of 93.92% in 2011. The most recent value in 2020 is 82.5%. From Figure nr. 2. it can be seen that Germany is the country that had high percentages of credit to the private sector in the pre-crisis period and after the crisis these values decreased more than in France and Italy.

In the Figure nr. 3. it is represented the evolution of bank credit to the private sector as percent of GDP in the United Kingdom, during the years 2001-2020.

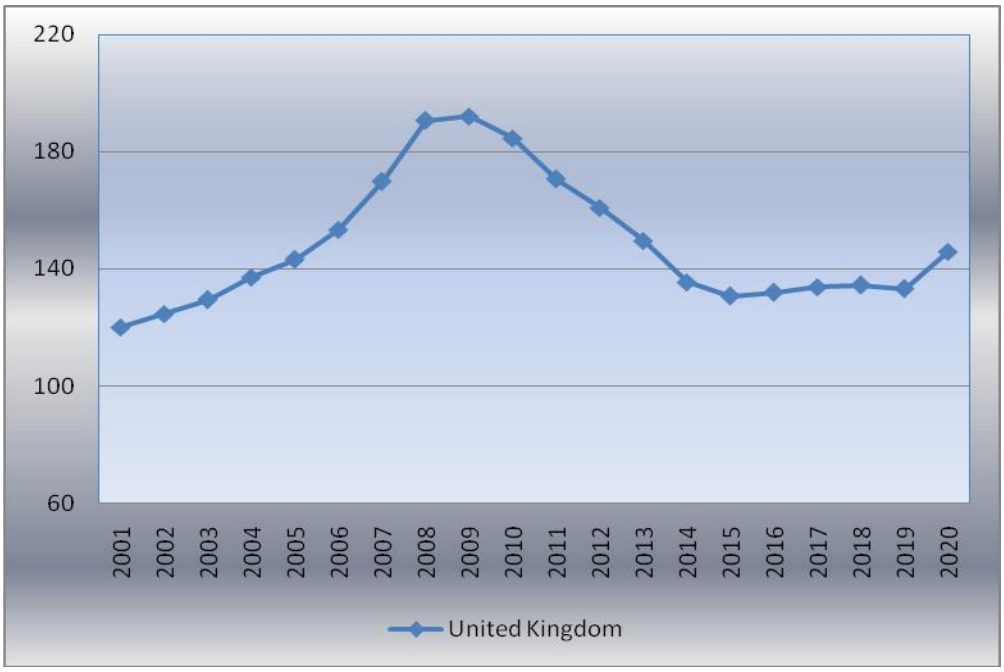

Fig. nr. 3. The evolution of bank credit to the private sector as percent of GDP (2001-2020) – United Kingdom**, Source:** own processing according to the data taken from https://www.theglobaleconomy.com/

The average value for the UK during this period was 148.57%, with a minimum of 120.15% in 2001 and a maximum of 192.12% in 2009. The most recent value in 2020 is 145.88%. Compared to other countries, the values recorded for the United Kingdom are significantly higher.

In the Figure nr. 4. below it is represented the evolution of bank credit to the private sector as percent of GDP in Japan, during the years 2001-2019. The average value for Japan in this period was 101.07%, with a minimum of 93.38% in 2004 and a maximum of 109.64% in 2019. The most recent value in 2019 is 109.64%.

Concluding, the study of the credit activity of the advanced economies of the G7 countries demonstrated the efficiency of banking systems to recover from financial crises and to maintain a very good credit rating, characterized by an upward trend in the evolution of lending. The indicator used, namely bank credit to the private sector, is a very important one related to banking development. But even these countries have had periods in which they have faced problems and decline in lending.

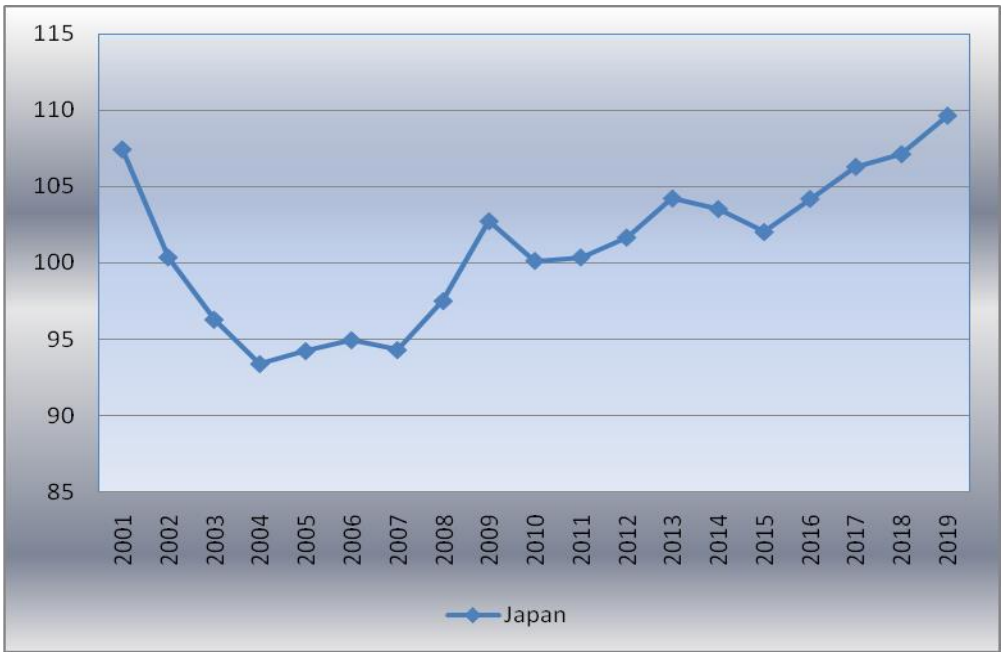

Fig. nr. 4. The evolution of bank credit to the private sector as percent of GDP (2001-2019) – Japan**, Source:** own processing according to the data taken from https://www.theglobaleconomy.com/

4. Conclusions

Bank lending to the private sector in the G7 countries stagnated after the banking crisis and declined in many key global economies in the following years. This continuing drought in bank lending in developed economies is not just a matter of appetite, it is a matter of regulation. Eager to prevent a recurrence of the banking crisis, regulators are now asking banks to hold more capital against their activities, which makes loans more expensive.

The study of the credit activity of the advanced economies of the G7 countries demonstrated the efficiency of banking systems to recover from financial crises and to maintain a very good credit rating, characterized by an upward trend in the evolution of lending. The indicator used, namely bank credit to the private sector, is a very important one related to banking development. But even these countries have had periods in which they have faced problems and decline in lending.

In recent years, credit quality has increased for US banks. Germany was the country that had high percentages of credit to the private sector in the pre-crisis period and after the crisis these values decreased more than in France and Italy. Compared to other countries, the values recorded for the United Kingdom were significantly higher.

The financial system of the developed economies has maintained the overall stability, while COVID-19 continues to have a significant impact on economic and financial activity worldwide. Banks in these countries have tightened access to corporate credit amid the resurgence of the coronavirus pandemic. A tighter supply of credit could stifle growth and force some companies into insolvency, pushing up unemployment and creating a self-consolidating downward spiral.

G7 economies are witnessing an early recovery. But whether this recovery will be rapid depends on the trajectory of COVID-19 in these countries. Central banks in advanced economies have responded quickly and strongly to these financial and economic disruptions. Unlike monetary policy and liquidity instruments, many of the targeted credit programs in different countries are new to the COVID crisis. In countries with active corporate credit markets, central banks have introduced or expanded corporate bond and commercial paper purchase programs to support lending to larger firms.

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THE ROLE OF SUPREME AUDIT INSTITUTIONS IN BUILDING RESILIENCE DURING THE COVID 19 PANDEMIC

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Abstract:

The ninth pandemic of the last century has taken the whole humanity by surprise, as no country in the world is prepared for a crisis of this magnitude. The new coronavirus has ruthlessly hit both the world economy and health systems around the world, with devastating consequences for the public sector, the private sector, but especially for people's lives.

This paper aims to analyze the role of supreme audit institutions in building resilience during the COVID 19 pandemic, while highlighting the value and benefits of these institutions in the public sector, both in normal conditions, but especially in deep crisis, as it is today.

The main conclusions reached by the supreme audit institutions within EUROSAI regarding the first pandemic year are also analyzed.

Keyword: *supreme audit institutions, resilience, COVID 19, public sector*

JEL Code: H12, M42

1. Introduction

In the context of the crisis generated by the infection with the novel coronavirus, the negative side effects of the SarsCov2 virus infection are outlined one by one. These include the economic crisis, the collapse of global health systems, rising government debt as a result of loans to prevent and combat diseases caused by the novel coronavirus, as well as bankruptcy and massive job losses, simultaneously with the negative impact on the educational process at all levels.

All these manifestations take place before our eyes, and the return to normalcy seems to be a desideratum that can hardly be achieved.

Under these conditions, the states of the world are trying to recover their economies and find solutions for a pandemic that seems far from being over. In this context, the role of public management is particularly important in ensuring economic stability and recovery.

2. The concept of resilience in the COVID-19 era

Although with the advent of vaccines against COVID 19 it was initially thought that the pandemic would end, it seems that this is not the case. Citizens' reluctance in some parts of the world about vaccines and their lack in underdeveloped countries have substantially slowed down the road to return to normalcy. All this is perceived as a failure of the governments of these states.

The term "resilience" refers to "someone's ability to return to normal after suffering a shock (emotional, economic, etc.)" (https://dexonline.ro/definitie/rezilienta). In the context of the COVID 19 pandemic, the use of the concept of resilience has become a normality, given that all states in the world, being severely affected by the crisis generated by the pandemic with the novel coronavirus, are trying hard to return to the previous state of normalcy.

In order to combat the negative effects generated by the pandemic, the world's states have taken various measures, often similar, given the fact that, in such a situation when no

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one knows exactly the magnitude of the crisis, it was necessary to think of measures to have rapid results in terms of keeping the novel coronavirus infection under control, but at the same time with the most limited effects on national economies.

The development stage of national economies at the time of the outbreak of the novel coronavirus pandemic was of great importance in terms of the impact on national economies, but especially the impact on health systems. It is clear that developed countries initially had a lower impact on the health system, due to the fact that they had already invested in efficient health systems that would meet the new needs, but nevertheless, with the evolution of the health crisis, all global health systems have collapsed.

At European level, the term "resilience" is most often used in the context of the Recovery Plan designed at European Union level, in order to support Member States in increasing their capacity to minimize the effects of the pandemic and to transform, in order to be able to deal much better with possible future crises (https://ec.europa.eu/info/strategy/recovery-plan-europe_en).

An important place in the European Recovery Plan is the temporary financial instrument NextGenerationEu, whose role is to support Member States in their efforts to repair the damage caused by the COVID 19 pandemic (https://europa.eu/next-generation-eu/index_ro). This tool focuses on the concepts of health, environmental and digitization.

Figure 1. **The composition of the temporary financial instrument NextGenerationEu**

Source: made by author

NextGenerationEU includes the *Recovery and Resilience Facility*, the central element through which the European Union provides Member States with funds for economic and social recovery in the context of the COVID 19 pandemic, through the national recovery and resilience plans drawn up by each Member State, as a condition for receiving the aforementioned funds.

The funding for Member States in the form of grants and loans through national reform and resilience programs is intended to support key areas, but also the transition to a green, digital and resilient Europe that can better cope with future crises (https://www.europarl.europa.eu/news/ro/press-room/20210204IPR97105/parlamentu-aproba-un-mecanism-de-redresare-si-rezilienta-de-672-5-miliarde-eur).

In the context of the allocation of European funds to the Member States and in terms of verifying the compliance with their use for the purpose for which they were approved, the

European Court of Auditors stated in an opinion that the Court's audit rights are necessary to be clearly defined in this context (Avizul nr. 6/2020 al Curții de Conturi Europene).

The audit of funds allocated through the Recovery and Resilience Facility will be audited by the European Court of Auditors, with the support of the supreme audit institutions of the Member States. Practically, at national level, the funds allocated to each state will be audited by the supreme audit institution of that state (in the case of Romania, by the Audit Authority of the Romanian Court of Accounts), every six months.

3. The role of supreme audit institutions in the reconstruction of the public sector

Supreme audit institutions (generically called SAIs), dubbed "the custodians of public finances", are one of the most important institutional pillars of the rule of law.

Through their duties under the regulatory frameworks, the supreme audit institutions have, in particular, the function of detecting existing deficiencies at the level of public sector entities. However, a number of supreme audit institutions have among their responsibilities the function of guidance/ counseling (Pleşa IT, Stegăroiu I., 2019), which they used even in the crisis generated by the COVID 19 pandemic, being a prevention function. This function has been extremely useful from a public sector perspective, given that supreme audit institutions have a lot of experience in the operations of public entities, being a real support for them in the heavy conditions of the public sector.

Figure 2. **The role of supreme audit institutions in the context of the COVID 19 pandemic**

Source: made by author

According to the international audit standard INTOSAI P-12 *The Value and Benefits of Supreme Audit Institutions - Making a difference in the lives of citizens* (developed by INTOSAI - International Organization of Supreme Audit Institutions), the role of supreme audit institutions is vital in society (INTOSAI P -12). They make a decisive contribution to strengthening the accountability, transparency and integrity of governments and public sector entities, thus demonstrating their relevance to citizens, Parliament and key stakeholders.

Perhaps the most important provision of INTOSAI P-12 is that to refers to the fact that supreme audit institutions must be model organizations for other public sector institutions. In practice, they must act in such a way as to be a standard of good practice in terms of ethical conduct, transparency, the provision of quality services and the strengthening of institutional capacity, through the exchange of professional knowledge and experience.

Regarding the role of supreme audit institutions in the context of the pandemic of COVID 19, at the XXV UN-INTOSAI Symposium, held online from 28-30 June 2021 (Report 25th UN / INTOSAI Symposium) were presented the main results of the external public audit activity carried out by these institutions.

The focus of the specific activities carried out was on the audit carried out in the field of health, the audit of public procurement carried out during the state of emergency, as well as on the main measures taken by state governments in response to the crisis generated by the COVID 19 pandemic. Also, some supreme audit institutions have strengthened collaboration with public sector entities, through the guidance function, where the law of organization and operation allows this (SAI Egypt, SAI Estonia, SAI Germany, SAI Indonesia, SAI Palestine).

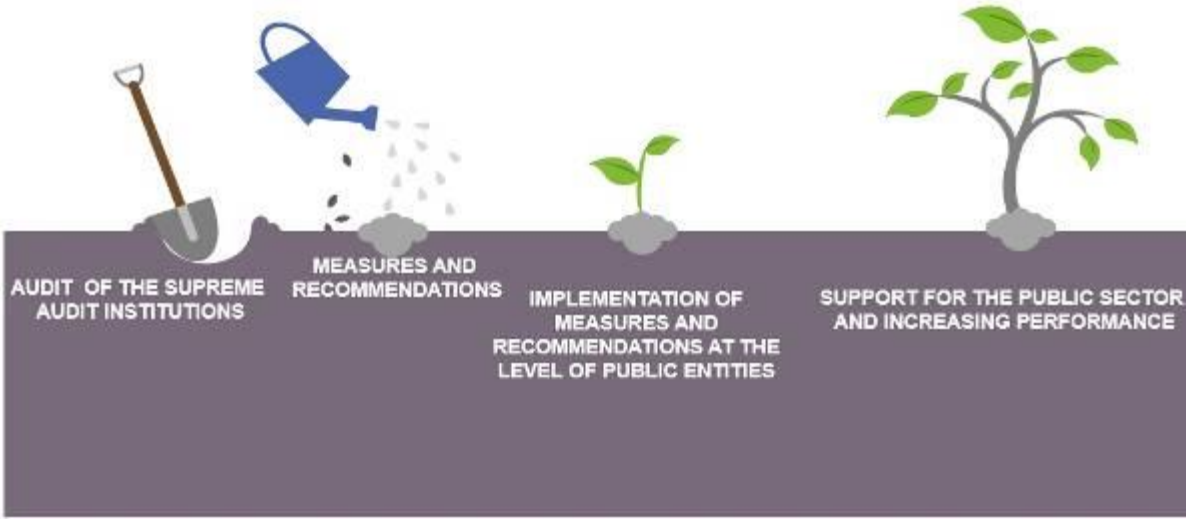
In the same context, the Symposium report highlighted that the COVID 19 pandemic acted as a link between supreme audit institutions and public sector entities, in those cases where the guidance function performed by a number of SAI allowed them to provides support to entities to meet the challenges and difficulties encountered in a pandemic context. At the same time, the conclusions of the UN-INTOSAI Symposium showed that the importance of supreme audit institutions is once again recognized by the United Nations in the context of the pandemic, in promoting the efficiency, effectiveness, accountability and transparency of public administration.

The response of supreme audit institutions was also analyzed in the European context by the Contact Committee of the Supreme Audit Institutions of the European Union, which conducted in July 2021 an audit compendium on the response of supreme audit institutions to the crisis caused by the COVID 19 pandemic. This compendium contains information on the main audit actions carried out by the supreme audit institutions of the Member States of the European Union and the conclusions presented in the reports prepared by them (Compendiu de audit, 2021).

The compendium is structured in two parts: the first part contains information on the impact of the COVID 19 pandemic on the European Union and the impact on Member States, and the second part contains information on the activities carried out by a number of supreme audit institutions in EU Member States in the context of the COVID 19 pandemic. The information contained in the second part of the Compendium prepared by the Contact Committee of the Supreme Audit Institutions of the European Union is divided into priority areas: public health, digitization, socio-economic response, public finances and the associated risks as well as the overall response from different levels of government.

The reconstruction of the public sector in the context of the losses caused by the COVID 19 pandemic also depends to a large extent on the support and involvement of supreme audit institutions. This support can be provided both through measures and recommendations issued following audits performed under the law (Figure 2) and through the guidance/counseling function that is performed by some supreme audit institutions, within the mandate conferred by law.

Figure 3. **The role of supreme audit institutions in the public sector**



Source: made by author

Regarding the public sector, we can certainly say that the supreme audit institutions contribute to increasing the resilience of public entities, through the activity of external public audit. During the audit missions carried out in the context of the COVID 19 pandemic, there were cases when the supreme audit institutions issued recommendations whose implementation by the management of public entities may increase the resilience of public sector entities, which leads to an overall resilience of the public sector (Curtea de Conturi a României, 2020).

The implementation of the measures and recommendations issued by the supreme audit institutions in order to eliminate the deficiencies found at the level of public entities is the responsibility of the management of these entities. As long as management understands that these measures and recommendations issued as a result of external public audit activities must be implemented, the shortcomings identified are eliminated, and the potential threats that may arise in the day-to-day work of the audited entities can be counteracted.

In the pandemic context we face today, a proactive attitude of public management can only be beneficial to the public sector and, implicitly, to its citizens. On the other hand, the COVID 19 pandemic is an opportunity for supreme audit institutions to permanently demonstrate the relevance of their work to stakeholders, according to INTOSAI's international auditing standards (Figure 3).

The external public audit, taking into account the new reality and the crisis generated by the COVID 19 pandemic, needs new approaches in this context. In addition to the three main types of public external audit carried out by supreme audit institutions (compliance audit, financial audit and performance audit), it may be necessary to increase real-time audits (Culea M, Constantin D., 2021), such as and new approaches to public sector systems through systemic audit, in order to gain an overview of these systems.

The importance of external public audit in the public sector is also underlined by some authors (Cordery, C., Hay, D., 2021), who believe that in the future, disasters and constraints related to existing limited resources will have a significant impact on the audit. The fact that the management of public resources is performed by the executive, the supreme audit institutions will continue to play an extremely important role in this context, from the perspective of government accountability regarding the use of these resources.

3.1. The main conclusions of the supreme audit institutions after the first pandemic year

The first pandemic year offered to all lessons from which everyone must draw their own conclusions.

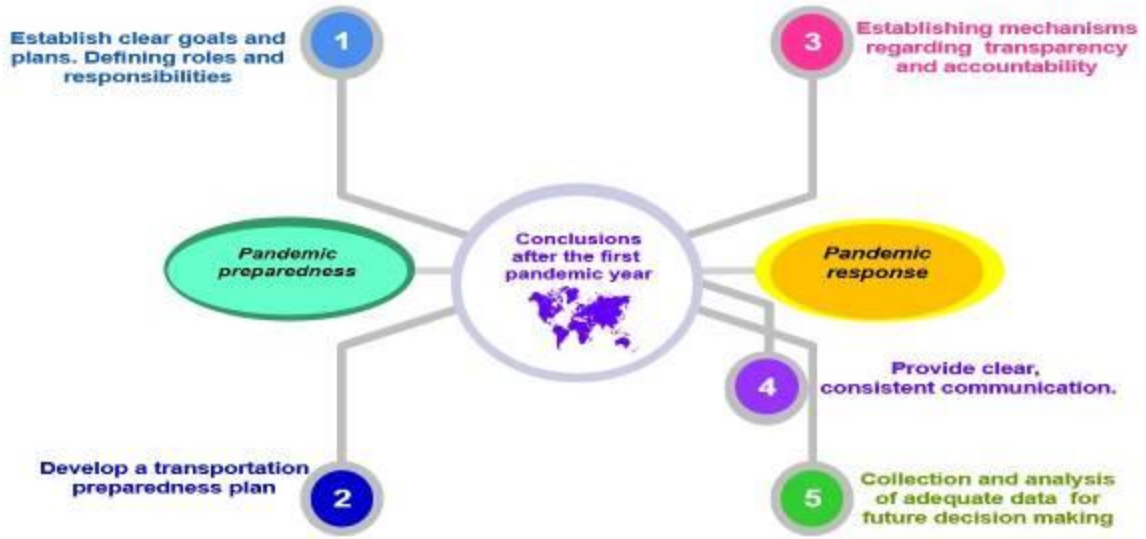
Regarding the supreme audit institutions, after the first year of the pandemic they identified the main challenges they faced: difficulties in terms of human resources, as well as difficulties in carrying out the specific activity of external public audit, given that the latter is based exclusively on audit evidence which, in some cases, can only be obtained on the spot, by direct observation or inspection by auditors.

At the international level, the approach regarding the conclusions after the first pandemic year within the external public audit community has two components: identification and analysis of the elements resulting from the specific external public audit activity of public sector entities and the analysis of the impact on the supreme audit institutions' own activity, the two aspects being presented in the following.

At INTOSAI level, the COVID-19 Initiative of the Policy Finance and Administration Committee prepared a report for external stakeholders on the lessons learned by the international external public audit community (PFAC, 2020). Thus, according to this report, supreme audit institutions now have an even more important role to play in continuing to improve governments' efforts to prepare for future pandemics.

The main conclusions of this report refer to two important phases in terms of pandemic management (Figure 4). On the one hand, preparing for a possible pandemic is extremely important, and on the other hand the response to the crisis generated by the pandemic can make a difference from many perspectives. After the first year of the pandemic, the supreme audit institutions noted that setting clear objectives and plans, as well as defining the roles and responsibilities of all structures involved in pandemic management, is a cornerstone. Given that transport is a key element in crisis management (not necessarily pandemic ones), the development of a transport preparedness plan is another key element presented by the supreme audit institutions.

Figure 4. **The main conclusions of the supreme audit institutions after the first pandemic year**



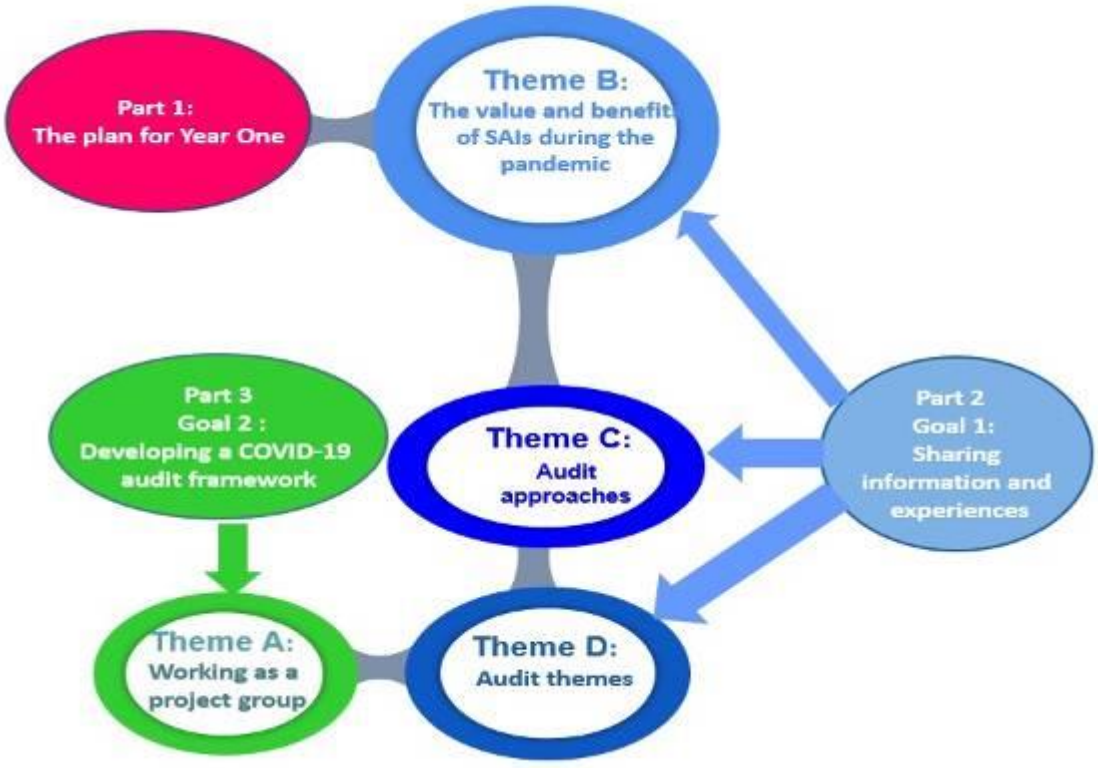
Source: adaptaion after *PFAC - Coronavirus Pandemic: Initial Lessons Learned from the International Auditing Community, 2020*

The response to a pandemic crisis is the second phase indicated by the supreme audit institutions in the report's analysis. Thus, they identified three important elements that contribute to the management of the pandemic: establishing mechanisms for transparency and accountability, ensuring clear and consistent communication, and collecting and analyzing appropriate data for future decision-making. All these aspects are closely related to the management of the structures involved in the management of the pandemic. As far as the management of public entities is involved and takes into account the elements highlighted by the supreme audit institutions, we can say that there are chances that the pandemic can be kept under control.

EUROSAI (European Organization of Supreme Audit Institutions) also prepared a paper in April 2021 (EUROSAI Project Group on Auditing the response to the COVID-19 pandemic, April 2021) on the response to the pandemic and the main conclusions regarding the first pandemic year. This report was prepared by the EUROSAI Project Group on Auditing the response to the COVID-19 pandemic, a working group set up in May 2020 at the organisation's level.

The report presents the approach of the EUROSAI Project Group on Auditing the response to the COVID-19 pandemic regarding the activities carried out in the context of the analysis on the role and importance of supreme audit institutions in the COVID 19 pandemic crisis, as well as how to disseminate identified good practices (Figure 5).

Figure 5. **Approach of the EUROSAI Project Group on Auditing the response to the COVID-19 pandemic**



Source: adaptation after *EUROSAI Project Group on Auditing the response to the COVID-19 pandemic, 2021*

Within the EUROSAI Project Group on Auditing the response to the COVID-19 pandemic, audit reports are constantly being developed in this context, being always at the disposal of the supreme audit institutions.

4. Conclusions

In the context of the COVID 19 pandemic, the concept of resilience has become increasingly important in the public sector. This is due to the impact of policies and measures taken in this sector on the lives of citizens. The resilience of public sector entities is a desirable feature during crises, as their impact on citizens' lives is lower the more resilient they are.

The quality of public finances and their management, both in normal times and especially in the context of the crisis caused by the COVID 19 pandemic, has been of constant interest to citizens. All eyes were on the management of public entities, which had to adapt to the new conditions of normalcy.

The role and importance of supreme audit institutions, in terms of specific public external audit activities, is becoming particularly important. Through the measures and recommendations issued, the supreme audit institutions make a decisive contribution to the efficient management of public finances and to the reduction of the negative phenomena that are amplified during the crises: fraud and corruption.

Regarding the resilience of the public sector in the context of the crisis caused by the COVID 19 pandemic, this can be amplified by the involvement of supreme audit institutions, both through specific external public audit activities and through the guidance function, available at to some of these institutions, based on the mandate given by their law of organization and functioning. All this is possible with the intensive involvement of public management.

Although the pandemic is not over yet, we can say with certainty that the role of supreme audit institutions will grow, not only in ensuring the resilience of the public sector, but also in the benefits to citizens around the world.

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CONSIDERATIONS REGARDING THE MOST IMPORTANT CRISIS OF THE 21st CENTURY

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Abstract:

This article aims to introduce the concept of financial stability and to identify the most important crises that have occurred since 2000, both at a global and at an European level, in order to identify the measures taken by central banks as a result of the outbreak of those crises.

Throughout time, world economies have been subjected to events that have drastically changed the attitude of central banks and have had significant effects on the economic environment. After the outbreak of the financial crisis of 2007-2008, central banks adopted a series of expansionary monetary policies in order to support the banking system and/or to avoid a strong economic downturn. However, despite the measures taken by central banks (extending the conventional monetary policy instruments) to stimulate the economic growth, they have proved to be ineffective therefore central banks had to introduce a series of unconventional monetary policy instruments. The second part of this article focuses on the European Debt Crisis while the third part focuses on the actual pandemic crisis and the measures taken by the central banks in order to prevent an even bigger economic crisis.

Key words: *monetary policy, central bank, monetary policy instruments, unconventional policy*

JEL Classification: E52, E58

Introduction

Financial stability is a widely discussed concept in the literature and has become a major concern of central banks, especially as a result of the global financial crisis of 2007-2008. Schinasi G. (2004) believes that „a financial system is a range of stability whenever it is capable of facilitating (rather than impeding) the performance of an economy, and of dissipating financial imbalances that arise endogenously or as a result of significant adverse and unanticipated events. FED (2021, on-line) sees the financial stability as being „about building a financial system that can function in good times and bad, can absorb all the good and bad things that happen in the U.S. economy at any moment". European Central Bank (2021, on-line) defines financial stability as „a condition in which the financial system – which comprises financial intermediaries, markets and market infrastructures – is capable of withstanding shocks and the unravelling of financial imbalances".

Throughout time, world economies have been the subject to events that have drastically changed the attitude of central banks and which had significant effects on the economic environment. After the outbreak of the financial crisis of 2007-2008, central banks adopted a series of expansionary policies in order to support the banking system and avoid a strong economic downturn. However, despite all these measures taken by central banks (extending the conventional monetary policy instruments) to stimulate the economic growth, they have proved to be ineffective therefore central banks had to introduce a series of unconventional monetary policy instruments.

1. The Financial Crisis of 2007-2008

The quick spreading of the global financial crisis in the fall of 2007 left deep scars on the world economy. Even though most countries have overcome the shocks caused by the outbreak of this crisis, the effects are still visible, several of the affected states being unable to rise to the financial strength they had before the crisis.

The global financial crisis of 2007-2008 did not come out of nowhere: it was the consequence of several monetary measures and, in particular, because of cheap lending. The

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most important measure taken by the FED in this regard was reducing the federal funds rate from (05.2000-06.2003), from 6.5% to 1%. Even though this measure had good intentions, the results were not as expected: the population took advantage of the decrease in loan rates and proceeded to buy houses, their price experiencing an upward trajectory that showed no signs of slowing down. As a result, FED began to raise federal funds rates, which remained at 5.25% until August 2007.

All of these caused great difficulties to the US population: owners could not sell their houses because their prices were too low compared to purchasing prices which meant that even if they tried to sell them, their earnings could not be enough to pay their debts and for those who had flexible or indexed mortgages, their costs increased as their house value decreased. Subprime lenders began to go bankrupt one by one, and by August 2007 it was already obvious that financial markets could no longer control this subprime lender crisis, and moreover, this problem became international.

By the beginning of 2008, the US economy was in a complete recession. Even though FED reduced its reference rates by 0.75, the bad news continued to flow. The climax of the recession was marked by the collapse of Lehman Brothers, the largest bankruptcy in US history. Also in the same month, financial markets were in free fall, and most US indexes suffered the largest losses to date.

As a result of the bailout plan which included measures like acquisitions of toxic assets by the government or making huge investments in bank securities, the US economy was revived. However, the effects of the financial crisis have been devastating for the US economy: unemployment rate grew to 10% and more than 3.8 mil Americans lost their houses because of enforcement.

The financial crisis had a significant impact on the world economy. Post-crisis effects have weighed heavily on the economic growth and financial stability. Next, we will briefly present the international effects of the global financial crisis of 2007-2008:

a). financial crisis in Africa - The financial crisis came at a time when African countries were beginning to emerge from the effects of the food and energy crises. Among the first effects of the crisis were: the tightening of credit, the decline in the purchasing power of African currencies and the decline in stock markets. However, the low level of financial integration in Africa meant that African economies were relatively isolated from the direct impact of the financial crisis because, compared to emerging countries, Africa's external financing was extremely low (4% in 2007). Poor financial integration indicates why Africa has not suffered heavy losses due to the global financial crisis and why not a single African country has announced a bank bailout plan on a scale comparable to the more developed countries;

b). financial crisis in South America - Latin America has been severely affected by the crisis. However, although financial conditions were deteriorated, the financial shock itself was less powerful than the ones faced during the two previous regional crises. Moreover, in the case of South America, there was more room for countercyclical macroeconomic policies. The measures implemented were quite wide and diverse because the effects of the crisis were different from one country to another, which required the use of different instruments;

c). financial crisis in Asia - The biggest and most immediate impact of the financial crisis could be seen on the financial markets: stock market indexes in the region were severely affected by the free fall of global financial markets. The highly trade-dependent Asian economies have suffered the most because of declining exports and imports. The collapse of demand was transmitted through the integrated supply chain, with dramatic effects on intra-regional trade. Even countries with large reserves, a comfortable current account position and a strong political framework, such as South Korea, were hit hard by the crisis. Since in many Asian countries monetary rates were very close to zero, they resorted to the introduction of unconventional monetary policy measures (Japan, South Korea). Moreover, most of the Asia

Pacific region governments have introduced multi-annual fiscal stimulus packages to support the economic growth.

As far as Europe is concerned, the global financial crisis has had a significant impact on all European regions. Of course, the effects and responses to the crisis have varied significantly from one country to another due to different economic circumstances and the significantly different degree of development of the European countries. Although the impact of the financial crisis was initially more pronounced in the United States than in Europe, the response to monetary and fiscal policy was much better in the first case.

Europe immediately adopted a series of measures to fight the crisis. Eurozone countries have implemented several massive reform. Some of them even received financial assistance from the European Financial Stability Facility (EFSF). The unconventional monetary policy measures implemented by the European Central Bank have also played an important role in the recovery of European economies.

According to the European Commission (2009), among the most important monetary policy actions of the European Central Bank following the global financial crisis of 2007-2008, between October 2008 and June 2009 were:

- reduction of the monetary policy interest rate by 50 pp. from 4.25% to 3.75% (October 2008);
- reduction of the monetary policy rate by another 50 pp. reaching 3.25% in November 2008;
- the European Economic Recovery Plan (November 2008);
- the process of lowering the monetary policy rate continued in December 2008 when it reached 2.50%;
- lowering the monetary policy rate to 2% in January 2009;
- March 2009: the value of monetary policy reached 1.50%;
- in April 2009 the European Commission proposed a series of measures to improve fiscal transparency;
- April 2009: monetary policy rate was reduced to 1.25%;
- May 2009: monetary policy drops to 1%.

However, in 2008-2013, 112 European commercial banks suffered from the global financial crisis and had to close their gates. Most banks failures could be observed in the United Kingdom where 31 bank were closed, followed by Italy with 20 bank failures and Iceland (15). Of course, there were countries that did not face bank failures (France, Norway, Bulgaria, Czech Republic, Poland, Romania, etc.). In terms of the annual number of bank failures in Europe, most of them were recorded in 2008 (27), followed by 2011 and 2012 (26 bank failures each). In 2009 there were 16 bank failures, while in 2010 only 15. The situation started to calm down starting with 2013 when only 2 bank failures were registered.

The European Central Bank initially gave a bigger importance to liquidity injection in order to restore the interbank activity. Starting 2010 the bank focused on the purchase of sovereign bonds as a result of the sovereign debt crisis known as the European debt crisis.

The implementation of unconventional monetary policy by the European Central Bank can be divided into three phases:

- first phase (09.2008-12.2009) – in this phase the ECB focused on providing support to the banking system;
- second phase (01.2010-12.2012) – the period in which the European debt crisis manifested and during this phase the European Central Bank focused on the purchase of government bonds;
- third phase (starting mid. 2013) – the Central Bank adopted a more aggressive monetary policy strategy with large-scale acquisitions, targeted lending policies and even negative interest rates.

The European Central Bank started using negative interest rates by charging the commercial banks for their reserves held by the central bank. The expected effects of this

strategy were reducing the amount of money that commercial banks had in their reserves held by the central bank and use them for reducing the lending interest rate together with increasing the prices of the financial market products. Naturally, the adoption of such a strategy has brough with it a number of concerns regarding the effects that these negative rates may have on the commercial banks' profitability. However, the commercial banks found other ways to maintain their profitability, namely by increasing their fees.

Another strategy approached by the European Central Bank was to use the forward guidance. Quantitative easing was another unconventional monetary policy decision taken by the ECB following the global financial crisis of 2007-2008. Quantitative easing refers to large-scale acquisitions of securities by central banks. As a result of the purchase programs implemented in 2009-2010 and 2011-2012, the European Central Bank created a total amount of 100 billion euros. Subsequently, at the beginning of 2015, the European Central Bank adopted the Asset Purchase Program (APP), which consisted of four securities acquisition programs (Corporate Sector Purchase Programme – CSPP, Public Sector Purchase Programme – PSPP, Asset-Backed Securities Purchase Programme – ABSPP and Third Covered Bond Purchase Programme - CBPP3). The Asset Purchase Program (APP) aimed to purchase monthly securities, summing up by the end of the programme an amount of 2,650 billion euros. After a period in which the program was stopped, during the meeting of the Governing Council of the European Central Bank, it was decided to restart the program, starting with November 1st 2019, with a monthly procurement rate of 20 billion euros. Other unconventional monetary policy actions taken by the ECB involved supplementary long term refinancing (SLTROs) and very long term refinancing operations (VLTROs), outright monetary transactions (OMTs) and securities markets programme (SMP).

2. The European Debt Crisis

The sovereign debt crisis has been fueled by excessive lending, speculative asset price bubbles and loss of competitiveness. One of the most important weaknesses of the European Monetary Union since day one has been the combination of a unique monetary policy with a decentralized fiscal policy. The monetary policies of the Eurozone is set by the European Central Bank and is the same for all Member States while fiscal policies are different for every EMU state. Member States are more prone to borrowing than other states, and when one of them is facing difficulties due to the very high level of debt, the consequences are spreading across the Union as well.

In order to fight this weakness, a framework of rules has been created. Among the most important principles included in this legislative framework are the one according to which the annual budget deficits must not exceed 3% of the gross domestic product and the one according to which the public debt of a state must not exceed 60% of the gross domestic product. The no-bailout principle also prohibits Member States from taking responsibility for another Member States' debts.

However, Member States' loans have not been properly managed. Following the outbreak of the subprime crisis in the United States, European countries experienced a series of systemic crises that broke out at various times in 2007-2011. In most cases, the sovereign risk was highlighted only later, after the materialization of the banking crises. Systemic crises initially emerged between 2007 and 2008, in countries where the banking system was more vulnerable to external shocks. During 2007-2011, 21 systemic episodes took place, ten of which involved significant adjustments to external positions, and eight of them involved the emergence of sovereign risk.

Regarding the countries that have suffered the most because of the banking crisis and the sovereign crisis, Spain, Portugal and Ireland encountered problems between 2008 and 2009, when a series of interventions to maintain financial stability took place. Another group

of countries (Cyprus, Greece, Italy and Slovenia) experienced systemic crises in 2009-2011 due to the deterioration of the macroeconomic environment, the emergence of credit risk and sovereign risk, which affected the financial stability of these states.

At the end of 2009, the representants of Greece announced that the debts reported by the Greek authorities up to that date did not describe the actual situation of the state (they were much higher than the ones reported). Moreover, the debt values of countries such as Italy, Portugal and Spain have also become a problem for the European Union because their government debt-to-GDP ratio was very close to Greeks'. These countries have not been able to repay or refinance their government debt and have not been able to save their commercial banks without the help of European Central Bank, European Monetary Fund and European Financial Stability Facility.

Theoretically, a state cannot go bankrupt – that is why6 a lot of commercial banks, especially from Germany and France, bought and exposed themselves massively to Greek debts. These bond buyers assumed that any bond issued by an Eurozone state had the same degree of security as any other Member State. Because of the sovereign debts, since 2010, lenders have been demanding higher interest rates from European Monetary Union countries. These higher rates caused many difficulties in financing budget deficits and some of these countries have increased taxes and reduced budget spending to fight the crisis.

By far the most affected state by this sovereign crisis was Greece. Greece needed assistance from the Eurozone until May 2010 and received several bailouts from the European Union and the European Monetary Fund in exchange for some austerity measures imposed by the EU to reduce public spending, as well as a tax increasement.

These measures, together with the precarious economic situation, have caused social disorder, raising the possibility for Greece to leave the European Monetary Union. However, Greece eventually began to show signs of recovery, which kept the state in the Eurozone. Within five years, the Greek economy was recovered, the evolution of gross domestic product has reached from double-digit negative values to over 2%, while the unemployment rate has dropped from 27% to 16%.

Other European states affected have applied for bailout measures one after the another, as it follows: Ireland in November 2010, Portugal in May 2011 and Spain and Cyprus in June 2011.

3. The Pandemic Crisis

The current pandemic crisis is an unique challenge, with severe economic and social consequences felt by the entire world. In order to prevent the spread of the virus, the affected states have established measures like social distancing and even quarantine. These measures have had major implications for the world economy.

Globally, central banks (in particular FED, ECB and BOJ) responded to the economic crisis that occurred as a result Covid-19 really fast by adopting a series of monetary instruments, both conventional and unconventional, in order to fight the possible recession that may occur. Central banks immediately started to inject money in order to provide liquidity to households and businesses. They maintained negative interest rates and aggressively expanded quantitative easing programs..

V. Shevchenko (2020) tried to identify the nature and types of economic shocks generated by the coronavirus pandemic in 2020 in Europe. According to him, the coronavirus pandemic created clusters of shocks like: psychological shocks - which caused stress and fears due to uncertainty about the spread of the virus and its effects on humanity - medical shocks, economic shocks - as a result of the restrictive measures taken worldwide, which led to contractions in the production and services sectors - financial shocks - the need to cover extraordinary expenses in order to fight against coronavirus - and social shocks - rising unemployment, work and online education .

Analyzing the US response to the current pandemic crisis, a complementary approach to monetary and fiscal policy can be seen, with FED buying extraordinary amounts of securities and US government running a deficit of around 17% of estimated GDP. As in the case of the global financial crisis of 2007-2008, FED brought the discount rate as close to zero as possible and stabilized financial markets by using emergency liquidity.

The economic effects of the coronavirus pandemic in the United States have been dramatic: the unemployment rate rose in April 2020 by 11.2 pp compared to February 2020, reaching about 15%, and real gross domestic product fell by more than 10 % in the first six months of 2020. To limit the impact of the economic blockade, the federal government has run unprecedented fiscal deficits. A key feature of public debt management was the acquisition of government securities, which began in March 2020.

In the United States, both fiscal and monetary policy responses have been beyond comparison when it comes to their scope, promptitude and effects. These measures provided support for US economy during 2020, unemployment rate dropping by 6% until March 2021.

The outbreak of the coronavirus pandemic in February 2020 had a significant impact on Eurozone economies. Even though the health crisis has manifested itself in all states at the same time, some of them have been affected sooner than others. All of these led to an asymmetry, which made the transmission of the European Central Bank's monetary policy less uniform. As a result of these obstacles, monetary decision-makers had to show up and support the economies.

According to Lagarde, C. (2020) "COVID-19 has delivered the largest shock to the European economy since the Second World War. Key macroeconomic indicators have plunged on a scale and at a speed previously unseen. Industrial production fell by 18% month-on-month in April. Durable goods production was down by almost 15% in the same period and new car registrations dropped by around 50%. If the ECB's baseline macroeconomic scenario for 2020 is borne out, the euro area will lose as much output in two quarters as it had gained over the previous 15 years – and growth will not recover in full until the end of 2022."

As we mentioned before, the response to the pandemic crisis was a quick one. In this regard, the European Union, together with the Member States, established four priority axes. According to the European Council, these were:

- "limiting the spread of the virus;
- ensuring the provision of medical equipment;
- promoting research for treatments and vaccines;
- supporting jobs, businesses and the economy."

The European Central Bank has adopted monetary policy and banking supervision measures to limit the effects of the health crisis. The Central Bank did change its main policy rates because their value was already very low: the monetary policy rate was at 0%, the deposit facility rate was 0.25% and the lending facility rate was 0.50%. Instead, the central bank used unconventional monetary policy instruments similar to those applied during the global financial crisis of 2007-2008 (quantitative easing, negative interest rates and forward guidance).

In March 2020, the European Central Bank announced the Pandemic Emergency Purchase Program (PEPP), with an initial value of EUR 750 billion and a current value of EUR 1.850 billion, which aimed to intensify the credit process by lowering lending rates. The Pandemic Emergency Procurement Program (PEPP) is an unconventional monetary policy measure initiated in March 2020 to counter the major risks that could affect the monetary policy transmission mechanism during the pandemic crisis.

The measures taken by the European Union in order to counteract the negative effects of the pandemic crisis have mostly had the desired effects, stabilizing markets and relaxing the existing financial conditions in early 2020. Throughout the pandemic, the euro area has seen a low level of the cost of lending, with economic agents and households being able to borrow at interest rates set at

an all-time low of 1.46% and 1.32%, according to the European Central Bank (2020). All this has ensured favorable conditions for the recovery of European economies.

Conclusions

In this article we wanted to introduce the concept of financial stability and to identify the most important crises that have occurred since 2000, both at a global and at an European level, in order to identify the measures taken by central banks as a result of the outbreak of those crises.

The first chapter presents the most important information regarding the global financial crisis of 2007-2008 and the measures taken by the central banks in order to fight the secessions. Second chapter focuses on the European debt crisis while in the third one we talk about the current pandemic crisis.

In conclusion, we can say that during the analyzed period, the global economy faced a series of economic shocks which disturbed the financial stability. The economic environment continues to be characterized by uncertainty as a result of the current pandemic crisis but we believe that, like proven in the past, the actions taken by the central bank will bring the global economy back to being stabile.

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THE PECULIARITIES OF THE ISLAMIC ACCOUNTING SYSTEM IN THE CURRENT ECONOMIC CONTEXT

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Dragomir Georgiana[2]

Abstract:
This paper treats the particularities of the islamic accounting system in the context of a much more different culture compared to the culture from any other country. Islamic accounting represents the process of identification, measurement and reporting of financial activities which is necessary for decision making, calculation of zakat and calculation of real benefits of islamic investments operations as per compliance with islamic laws. As a lifestyle, islamic religion has given a special attention to business activities. Thus, in economic activities, divine forgiveness must be the ultimate goal and accounting as an instrument which offers information in economic environment, must serve this purpose. Currently, islamic accounting becomes more and more important, since it is a field which gains a lot of attention in the whole world as a result of the spread of Islam in the new territories. The objective of this study is to evidence the particular characteristics of the islamic accounting system, along with its history and evolution. More than that it presents the need of islamic accounting system in islamic society and its benefits.

Keywords: Accounting, Islam. Quran, Sharia Law, Zakat

1. Introduction

Islam is the second largest religion in the world after christianity, with 1.9 million followers called muslims, which represent approximate 4.9% from the total world's population. The holy book of Islam is the Quran, which pictures word by word of God's words and lists lessons and normative examples of prophet Mohamed.

Sharia law is a religious law which is being part from the islamic tradition and derives from the religious precepts of islam, particularly from the Quran. Islamic Sharia law is governing mulsims' rituals and aspects of everyday life, including financial and banking sectors.

Zakat is one of the five pillars of islam alongside prayer, fasting, mercy and pilgrimage to Mecca. As per Sharia law, it should be payed by all muslims.

Accounting is a particular instrument of a national culture, because is influenced by the economic, social legal and even political and religious developments in each country. Accounting is the science and the art of recording, classifying, analysing data, presenting and interpreting information about business activities incurred by the firm during a certain period of time, so that its overall activity results and its financial position can be ascertained.

The aim of an accounting system is not to impose a purely technical system, but a socio-technical activity or system which reflects the characteristics of a particular society. In islamic society the type of accounting used alongside conventional accounting is the islamic accounting. Thus, islamic accounting can be defined as an accounting framework which plans to furnish clients with data empowering them for a better management of their organizations and establishments, as indicated by the Sharia law or islamic law.

This paper represents a summary of islamic accounting history and analyses similarities and differences between islamic and conventional accounting.

2. The coordinates of the islamic accounting system

The accounting organized in the form we use today has its origins from Italy and Luca Pacioli, the so called father of modern economics or father of accounting. His book, 'Summa de Arithmetica, Geometria, Proportioni et Proprotionalita', published in 1494 CE is considered the first test on accounting (Ramachandran and Kakani, 2005). Although, it's

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being said that Luca Pacioli is not accredited to be the inventor of accounting system, however he is considered to be the first person who codified and published about the accounting system. This is because merchants have been using an accounting methodology and used in trade and commerce around the middle ages (Ramachandran and Kakani, 2005).

Accounting in the islamic world can be traced back even farther than these above mentioned claims (Ramachandran and Kakani, 2005). The population which lived in the Middle East during the time of Prohet Mohamed, was a population of which the entire economic system was reliant on trade and commerce. Even the Prophet himself worked as a merchant (Chapra and Whaples,2008).

The arrival of Islam through the revelation of the Quran provided instructions on every aspect of life, including economic transaction (Chapra and Whaples,2008). The base of the islamic economic system comes from Quran, which offers examples of how to conduct business in a permissible manner. Therefore, the emergence of islamic accounting system was essential and in the same time inevitable.

The Quran provided guidance on how to conduct accounting activities and seeing as the divine revelation began around 610 CE, this would mean that Islamic accounting was present some 800 years Pacioli's book (Zaid, 2004). This fact is not surprising as the writing of accounting history was dominated by english writers who focus and discus private sector accounting in english speaking countries of the 19th and 20th century (Parker, 1993). Therefore the scope of accounting history, is much wider from a geographic point of view, because does not limit only to the english speaking countries, and also from a time point of view as accounting was present prior to the modern era.

With the development of Islam, the islamic economic system was developed as well, along with all activities therein. The expansion in trade within and beyond the muslim world promoted the development of a mechanism which would ensure the acceptable accountability of cash, goods received and distributed (Iqbal and Mirakhor, 2011). This became very important in the year 624 CE when the zakat was introduced and it was necessary the existence of accounting for calculation and payment of zakat. Also, it was very important for those individuals conducting business, specifically entrepreneurs to develop a writing and bookkeeping system for accounting operations, to ensure that their acts were compliant with Sharia law.

The formal introduction of accounting books, concepts and procedures occurred during the time of the second Caliph, Umar bin al-Kattab, who ruled between 634-644 CE (Parker,1993).

Since the development of accounting in the Islamic state was associated with zakat, its formal establishment was initiated for government purpose. Namely, it was implemented for the recording of Public Treasury revenues and expenses (R. Haniffa et al, 2004).

The accounting system developed and practiced in the Islamic state can be divided into 7 types (R. Haniffa et al, 2004):

- Stable Accounting;
- Construction Accounting;
- Rice Farm Accounting (Agricultural Accounting);
- Warehouse Accounting;
- Mint Accounting (Currency Accounting);
- Sheep Grazing Accounting;
- Treasury Accounting.

The mandatory recording procedures helped the development and implementation of accounting system in the Islamic state. Some examples of recording procedures developed and applied by government authorities, as well as individual entrepreneurs, include (Ambashe and Alrawi, 2013):

- Transactions had to be recorded immediately, as soon as they occurred.
- Transactions had to be classified according to their nature.
- Receipts were recorded on the right hand side of the page (sources of these receipts also needed to be disclosed) while payments were recorded on the left hand side (with explanations).
- No spaces were to be left between transactions.
- Corrections, overwriting or deleting recorded transactions was prohibited.
- Monthly and yearly report had to be prepared.
- Yearly reports were reviewed and compared to prior year reports (auditing).

As it can be seen, the above procedures were implemented for diminishing the risk of fraud and manipulation and for enforcing some sort of accounting control.

Preparing of annual and monthly financial statements was mandatory, while budgeting was utilized as an internal control procedure for analysing and interpreting these financial statements. Therefore, we can notice that even audit was practiced and became mandatory to ensure the rightful implementation for a complete accounting system. Even though the accounting was practiced by the Islamic state from the early stages, the term accounting and accountant was not known at that moment of time. It is unknown when these terms were introduced, but it is possible that their occurrence coincides with the influence of colonization and introduction of western culture to the Islamic state in the 19th century.

After the fall of Islamic state in the 19th century, islamic economics saw a decline, where the conventional accounting system dominated overall in the world economics. Colonization of muslim in the 19th century represented adjustment to the western influence from a cultural point of view, to every aspect of the social life, even to the accounting practices. Even those majority muslim populated countries which were not colonized, like: Saudi Arabia, Afghanistan and Iran, had a significant western influence. The Ottoman Empire was influenced by german accounting principles and even the Wahhabi[1] influenced Saudi Arabia borrowed its accounting practices from the west (Naser and Nuseibeh,2003).

After the second world war, in the post-colonial period, muslims around the world were left with the dilemma if they should stay with the western accounting practices already embedded in their society or to adopt back islamic accounting practices.

Thus, islamic economics started to develop in the modern era in parallel with conventional economics, especially during the time of the islamisation, like Pakistan and Iran and in the Middle East after the price of petrol rose significantly in the early ‘70s. The increased need to set up islamic financial institutions and banks it led to the need for an accounting system which should be appropriate for those institutions and should understands the objectives of Sharia law. The first reference of islamic accounting in a literature writing in english language was in 1981, when Abdel-Magid proposed a tentative theory about islamic banks accounting practices (Napies, 2009).

Hence, islamic accounting in the modern context can be defined as accounting process which provides the necessary information to stakeholders enabling them to ensure that their entity is continuously operating under Islamic or Sharia Law, while fulfilling its socio-economic objective (Abel-Karim, 1999).

The islamic accounting principles are (Sultana, 2015):

- Islamic accounting must be interest free system as it is prohibited according to the Sharia law.
- This system must be transparent in recording transactions and there must be an efficient accounting system.

[1] Wahhabi – is a form of faith derived from islam; pursues literal interpretation of Quran

- Islamic accounting system should avoid income from gambling or any other unlawful business.
- Business transaction should be material and both the rights and obligations should be ensured
- Fairness and justice for all the related parties should be ensured under islamic accounting.

Principle objectives of islamic accounting are:

- Protection of funds intact and declaration of shareholding by all parties involved. Without registration of transactions we cannot determine which transactions are on the credit side and which are on the debit side.
- Establishing justice and preventing doubt.
- Helps to judge between stakeholders.
- Helps to establish financial results (profit and loss) on a specific period of time.
- Accounts the amount of zakat for a period of time and its distribution.
- Determine the structure of the shareholding in the islamic companies as per islamic laws.

3. Sharia law features and islamic accounting nature

Trade plays an important role in islam. Sharia law explains the way in which trade and business needs to take place from a legal perspective, and if they are acceptable by law (halal) or prohibited by law (haram).

The principles of trade governance and business governance in islam are defined by Sharia law, which defines even muslims' life. The sources of Sharia law are divided into 2 categories, the first one being the Quran and Sunnah (tradition) and second one, scholars' interpretations of islam.

The status of women in society defers in the whole world. Amongst various important characteristics associated with the inequality between men and women we can list the culture, tradition, social practice and religion. Contrary to the view of outsiders who misconceive islam as subjugating women, Quran regards both genders as equal in terms of moral responsibility, rewards and punishments. All too often, incorrect interpretations or selective reading of the Quran lead to impression that Islam subjugated women (Engineer, 2008; Hartman, 1914; Zayzafoon, 2005). Islam does not give man dominant status over women; rather, this religion treats both men and women equally. Engineer (2008) contends that Islam gives equal rights to man as well as women to contract, to enterprise, to earn and equal pay. This view point is consistent with Hartman's (1914) view that any property acquired by the woman through her own efforts our through inheritance belongs to her independently. This means that a husband can only intervene in managing his wife's wealth only with her permission.

The Quran explicitly states the equality between men and women in front of God. Furthermore in Quran are mentioned the following aspects:

- Forbids female infanticide;
- Instructs muslims to offer education to its children, daughters as well as boys;
- Insists that women have the right to refuse a potential husband;
- Offers women the right to divorce from their husbands in specific cases;
- Offers rights to women which are divorces by their husbands;
- Offers women the right to own or to inherit a propriety;
- While polygyny is allowed, is not encouraged and is less practiced the imagines in the west. The most is frequent in the Arabic Gulf, especially in Saudi Arabia.

The veil worn by muslim women is seen most of the time by the west as a symbol of subordination position in society, but in fact the significance and the use of vail varies a lot in

muslim societies. Quran encourage men and women to have a decent wear, but the actual interpretation and implementation of this rule varies a lot from one country to another. In modern society, stricter rules regarding women's clothing are mostly applied to evidence religious orientation of a specific state, like Saudi Arabia or Iran. On the other side in Turkey, women are not allowed to wear the veil in public offices or universities, because turkish government wants to maintain a secular identity.

Throughout the history, women played a very important role in important fields, such as: in policies/strategies making, in politics, in academic environment and in business. With all these, the active participation of women in business and finance is a contemporary phenomenon, which has its roots from western influence with regards to the lifestyle and how the business is organized. In the traditional way, islamic banks and finance have been dominated by men, but starting with past two decades we could see a growth in the numbers of women in these industries. A prominent role in the islamic banking and finance have been taken by women in Malaysia, because apart from the fact that they occupy majority of leadership positions in islamic banks, they play an important role as well in the overall development of islamic financing.

In Middle East area, even if women are thriving in islamic financing industry, just few of them are holding a leadership role. Preconceived ideas of women status in society still affects banking industry, however in the past years we can observe a gradually change in the society mentality in general.

According to islam, a person answers in front of God for all its actions and this philosophy constitute the basis of accounting principles in islam.

Sharia law offers a common source from where instructions about what is considered to be business ethic practices in islamic accounting are emerging. A very important aspect of business ethic practices in islamic accounting is the scope behind all activities and intentions of the involved parties.

Islamic accounting relies on 3 general principles and values: Responsibility, Justice and Truth (Trokic,2015).

Baydoun and Willet differentiate the principals and philosophies of western accounting to the islamic accounting, based on the below:

Characteristics	Convetional accounting system	Islamic accounting system
Philosophical viewpoint	• Economic rationalism	• Unity of God
Principles	• Secular • Individualistic • Profit maximisation • Survival of the fittest • Process concentration	• Religious • Communal • Reasonable profit • Equity • Armony with the environment
Criteria	• Based upon modern commercial law- permissive rather than ethical • Limited disclosure (provision of information subject to public interest) • Personal accountability (focus on individual who control resources)	• Based upon ethical law originating in the Islamic law • Full disclosure (to satisfy any reasonable demand for information accordance with Islamic law) • Public accountability (focus on the community who particpate in exploiting resources)

4. Zakat accounting

In islamic accounting one of the most important requirements for all muslims is to pay a religious "tax", called 'zakat". Zakat is one of the five pillars of islam alongside prayer, fasting, mercy and pilgrimage to Mecca (Tayob, 1999). Zakat has three different connotations, namely from a linguistic, theological and legal standpoint. From a linguistic point of view, zakat means purification or cleansing from something filthy, but in the same time means also praise, growth and increase. From a theological point of view, zakat means spiritual purification as a result of its payment. From a legal point of view, zakat means transfer of ownership of wealth of a specific person to individuals under special conditions.

Zakat has a socio-economic objective, through which muslims are obliged to pay this "tax" which represents a surplus from their wealth, to the needy people. Zakat makes part of a social system of islamic and its social objective is to act as a mechanism for wealth distribution from wealthy to needy, which reduce the social gap between rich and poor.

Zakat represents a mandatory payment, however is not consider to be a charity, nor a tax, because the charity is consider to be volunteered and taxes can be determine by the government for payment of any other purpose.

Thus, zakat is distinguished by taxation through various elements, as follows (Rahman, 2010):

	Zakat	Taxation
Concepts	• Source of regulation is Sharia law • Levy sanctioned by God only on the muslims • Rated and distribution are specified	• Source of regulations is determined by the government of the time • Levy sanctioned by government on its citizens • Rate and distribution is subject to government fiscal policy and changeable
Legal Impact	• Both zakat avoidance and evasion are not in line with the true spirit of zakat • Compliance is voluntary and non-compliance is subjected mainly in the Hereafter	• Tax avoidance is allowed but tax evasion is an offence • Non-compliance is a punishable offence according to the tax law
Economic and Social Impacts	• Integral part of social security system and part of a broder islamic economic system and fiscal policy • No such transfer of burden	• Source of public finance and tools of state's fiscal policy • If not efficiently handled, tax burden may be shifted to the public, which in turn may adversely affects the economy
Ethical and Spiritual Impacts	• Spiritual implications and mode of worship • Religious duty and the payer pays zakat as an act of submission to God	• Focuses mainly legal and economic implications • A financial responsibility towards state

From a conceptual point of view, zakat is first of all muslims' religious debt, and then a national debt, where else in the case of taxation the concept is of a national debt. From a legal perspective, zakat is regulated by Sharia law, where else taxes are regulated by laws created

by humans which can modify as per the state/government changes and/or economic changes. Zakat benefits are determined by the main source of the law in islam, which is Quran.

In muslim states, the state can impose taxes in addition to the zakat payment when is necessary. When governemt does not have enough funds to offer to its population the basic necessities, like health, defence, education etc. then the taxes are becoming mandatory.

Fundamental principles of Zakat

In zakat practice should be followed various fundamental principles, as follows:

- The wealth must be owned individually and legally. State of public wealth, donations and charitable proprieties are not part from zakat calculation;
- In determining of zakat value of payment, the wealth must be evaluated at the current market value, in order for the most relevant value to reflect;
- When zakat is evaluated, the calculation method must be detailed and accepted by both parties: the zakat collector and zakat payer. Zakat payer must be honest and to disclose all his/her financial situations.

Zakat must be collected just for specifics types of wealth. These types of wealth are mentioned in the Quran and utilized by people even from the Prophet Mohammed times for storage and distribution of the wealth as follows: Agricultural products; Mineral and marine products; Gold, jewelleries and notes; Commerce products; Animal products.

In addition, there are other categories of wealth which are subject to zakat, but which are consider to be 'modern' wealth which were also extracted from Sharia law after interpretation of islamic scholars, having as reference the evolution and changes in society and economy and the way of obtaining a wealth. Few examples will be:

- Revenues from exploitation of goods;
- Revenues from employees' wages;
- Securities, as shares, bonds, sukuk[1] etc;
- Assets of banking financial institutions.

Zakat becomes mandatory when 2 of the underlying conditions are met, which are nisab and haul.

The term 'nisab' represents the minimum value of wealth when the zakat calculation and payment is applied. For determining the nisab there are available two measurements: gold and silver. The nisab value in gold is almost 87.48 grams or the gold equivalent in cash at the market value. The nisab value in silver is 612.36 grams or the silver equivalent in cash at the market value.

The term 'haul' means that the cumulated wealth must be in the possession of the beneficiary a whole year before to be subject to zakat payment.

The percentage of zakat payment is defined by the Sharia law and is different from one activity to another:

- Gold, paper currency and jewelleries – 2.5%;
- Agriculture products (non-irrigated land) – 10%;
- Agriculture products (non-irrigated land) – 5%;
- Total annual assets of the industrialists and businessmen – 2.5%;
- Mineral products – 20%;
- Farmers are paying as per the number of livestock owned each year.

5. Zakat accounting for companies

For companies/businesses Zakat must be paid once a year, and the applicable rate is 2.5%.

Zakat is applicable to all types of businesses, even if their purpose is profit generation. Fixed assets of companies, like buildings, furniture, vehicles etc, are not part of zakat calculation.

[1] Sukuk- is a Islamic financial certificare as per Sharia law, ehich is similar to a bond in western finance

Zakat is calculated based on one of the two methods:

- Direct method
- Indirect method

The calculation procedure of each method is different, same as the calculation basis, however the final result should remain the same as long the calculation formula is applied correctly.

Direct method:

Zakat base = All assets subject to Zakat payment – All current liabilities (Commercial liabilities)

Indirect method:

Zakat base = All sources of internal funds (Shareholders' equity, provisions and adjusted net profit of the current year) + external sources of funds not exceeding deductible assets (long-term liabilities and liabilities that are known to have financed deductible assets) – non-zakatable assets – zakatble assets, or adjusted net profit for the year, whichever is higher

Assets		**Liabilities and shareholders' equity**	
USD		USD	
Current assets	9,000	Current liabilities	6,000
		Long term liabilities	7,000
Long term assets (Buildings and equipments)	8,000	Shareholders' equity	4,000
Total	17,000	Total	17,000

Indirect method of Zakat base calculation:

Article	USD
Long term liabilities	7,000
Shareholders' equity	4,000
Minus: **Long term assets**	(8,000)
Total	3,000

Direct method of Zakat base calculation:

Article	USD
Current assets	9,000
Minus: Current liabilities	(6,000)
Total	3,000

Payable Zakat = 3,000 x 2.5% = 75 USD

6. Conclusions

To conclude, this paper provides a wider opinion of Islamic accounting system evolution, as well as its purpose in Islamic society. More than that presents a comparison between the Islamic and conventional accounting system, where one of the basic differences between the two is the way the information is supplied. In Islamic accounting all information is supplied from a clear perspective, where else in conventional accounting the information provided is selective. We can understand that the values in islam, like honesty, honour, truth are much more important and have a bigger value in Islamic accounting system, comparing to the conventional accounting system. If Islamic values are strictly followed, then it can drive a decline in the fraudulent practices and other

suspect activities. Furthermore, will increase the social welfare of involved parties, because islam requests people to offer as much benefit as possible to the community. If Islamic accounting is followed in an appropriate manner will lead to an accounting process based on truth, justice, fairness, benefit, honesty and confidence.

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THE IMPACT OF THE EVALUATION METHOD UPON THE VALUE OF STOCKS, AT THEIR EXIT FROM THE PATRIMONY AGRICULTURAL ENTITIES

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Abstract:
From an accounting point of view, the choice of the appropriate method for evaluation of the goods/merchandises stocks at the at the at their exit from the patrimony represents, through the specific implications, a topical point. The aim of the present paper is to examine the specific calculation methods used in the evaluation of good/merchandises stocks, at the moment of their exit from the patrimony within the agricultural entities, based on an example approach. Through the paper work, there are presented some general aspects regarding the inventories, as well as the evaluation methods of the goods/merchandises stocks at their exit from the patrimony of the company. The conclusions try to highlight the strengths and weaknesses of each of the examined methods, considering their suitability for agricultural sector.

Keywords: *accounting, agriculture, FIFO method, LIFO method, WAC method.*

JEL classification: *M41.*

1. Introduction

From the accounting perspective, the choice for a suitable method for stocks' valuation at the at their exit from the patrimony is, by its particular implications, of great significance. The objective of this paper is to review the valuation methods used at their exit from the company's patrimony, with regard to the agricultural entities. Starting from various perspectives, there are a wide types of costs. The purpose of the management accounting is to guide managers so that they can carry out the mission of the organization as efficiently as possible. Further on, the main usefulness of the accounting, from the managerial point of view, is that it enables them to calculate costs (Boisvert, 1995, p.17). The first part of the work, contains the applicable definitions with regards the inventories, according to the Order no. 1752/2005, and as per IAS 2 – Inventories. Further on, there is presented a classification of inventories upon the four acknowledged criteria. In the second part, there are listed practical examples of the main valuation methods of inventories' stocks at their exit from the patrimony of the company, using the following methods: Weighted Average Cost (WAC), First In, First Out (FIFO) and Last In, First Out (LIFO), describing and exemplifying each separate method.

The international inventories' accounting is widely described in the "International Accounting Standards no. 2 (IAS 2) – Inventories". (IASB, 2013, p. A523)

Inventories include materials, works and services intended for consumption on their first use or to be held for sale if they are under the status of merchandises, or products derived from processing, as well as the goods in various stages of the production process.

Inventories may consist from:

- ✓ merchandises purchased for resale;

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- ✓ finished or semi-finished goods, manufactured by the undertaking;
- ✓ raw materials, materials, supplies, following to be used thorough the production process;
- ✓ the costs of provided services, in cases the undertaking has not yet recognized the related income.

Within the financial accounts of undertakings, the inventories are classified depending upon four criteria: physical; destination; operating cycle phase; and management creation place.

Corresponding to these criteria, there are considered the following types of inventories:

- ✓ **raw materials,** directly used for manufacturing of products, as part of their composition in whole or in part, in initial or transformed state;
- ✓ **consumables or supplies** comprise auxiliary materials, fuels, spare parts, seeds and planting material, feedstuffs, and other consumables participating indirectly or aiding the exploitation activity; usually, the goods belonging to this category can not be found in the product yielded;
- ✓ **Products** like semi-finished goods, finished goods and residual products;
- ✓ **Animals,** which did not fulfil the requirements to be entered under adult animals, animals for fattening, birds and honey bee colonies;
- ✓ **Production/work in progress,** consists of raw materials which have not yet passed through all production stages, products not subject to tests and technical acceptance, as well as works and services in progress or unfinished;
- ✓ **Merchandises,** i.e., goods that the undertaking is buying for resale;
- ✓ **Packaging,** comprise goods needed to protect the merchandise during transport and warehousing or for their commercial presentation.

Inventory items, hutting and provisional outfitting are part of different categories within inventories. In Romania, this class of patrimonial assets is given the following definition via the Implementing Regulation of the Accounting Act no. 82/1991: "*Inventories and orders in progress accounting comprises the whole goods and services within a patrimonial enterprise, intended:*

- ✓ *Either to be sold in the same condition or after their processing in the manufacturing process;*
- ✓ *Or to be consumed on their first use "*

At the exit from the patrimony or release for consumption, the inventories are evaluated, and their removal from company's assets is written -down at their original cost. The key issue of entries at removal from company's assets of inventories, be they purchased or manufactured, is that of the price used to valuate the removed inventories.

Provided that, during the business' carry out, the same types of goods are purchased at different prices, in order to evaluate the amounts of inventories sold as merchandises or consumed in production, relying on their original cost, the international standards and regulations recommend the following valuation methods (Toma, 2018, p.58):

- ✓ Weighted average cost method (WAC);
- ✓ First in, First Out method (FIFO);
- ✓ Last In, First Out method (LIFO);
- ✓ Standard cost method.

The selected method has to be put into practice consistently for similar items of the inventories type of fungible assets from one financial year to the other. If, exceptionally, administrators decide to change the method for a certain inventory item or fungible assets, in the explanatory notes, they will have to provide the following information:

- ✓ The reason for the method has been changed; and
- ✓ Its effects on the result.

An entity shall use the same costing methods for all inventories of a similar nature and use. For stocks with different nature or use, the use of different calculation methods may be justified. (Possler et al., 2011, p. 47).

2. Practical Exemplification

In order to exemplify the evaluation methods, the following example within an agricultural company is considered:

On 01.03.N, an entity has a wheat stock in its storage in order to use it in the agricultural production activity as follows:

- ✓ Initial stock: 600 measuring units (u.m.). x Lei 20 /m.u.
- ✓ Entries, at 3.03.N: 200 m.u. x Lei 22 /m.u.
- ✓ Entries, at 18.03 N: 300 m.u. x Lei 24 /m.u.
- ✓ Exit, at 10.03 N: 400 m.u.
- ✓ Exit, at 28.03 N: 500 m.u.

The value of exit is calculated using of the considered evaluation methods (WAC, FIFO, LIFO).

WEIGHTED AVERAGE COST METHOD

The weighted average cost (**WAC**) may be calculated monthly or after each entry operation as a ratio between the initial stock value plus the entries' value on the one side, and the quantity existing in the initial stock plus the quantity input, on the other side.

Using of the method implies the calculation of each basic item of the weighted average of costs, similar items in the inventory at the beginning of the period and of the cost of similar items purchased or produced during the period. The weighted average cost (WAC) is determined using the formula: (Bojian, 1999, p.112)

$$WAC = \frac{\text{Value of initial stock (Vis)} + \text{Values of goods (Vg)}}{\text{Quantity of initial stock (Qis)} + \text{Quantity of goods entered (Qen)}}$$

For the considered month, results:

$$WAC = \frac{(600 \text{ m.u. x } 20) + (200 \text{ m.u. x } 22) + (300 \text{ m.u. x } 24)}{600 \text{ m.u} + 200 \text{ m.u} + 300 \text{ m.u.}} = \frac{12000 + 4400 + 7200}{1100} = \frac{23600}{1100} =$$

$$= 21.45 \text{ m.u.}$$

The value of goods at exit from the patrimony is:

- 10.03 N 400 m.u. x 21,45 = 8580
- 28.03 N 500 m.u. x 21,45 = 10725

Value of wheat stock at the end of the month:

IS + En – Ex = 200 m.u. x 21,45 = 4290 m.u.

Table no. 1. Calculation the value of stock upon the of the monthly weighted average cost

Date	ENTRIES			EXITS			STOCK		
	Quant.	P/U	Value	Quant.	P/U	Value	Quant.	P/U	Value
1.03	-	-	-	-	-	-	600	20	12000
3.03	200	22	4.400	-	-	-	800	-	16.400
18.03	300	24	7.200	-	-	-	1100	21,45	23595
10.03	-	-	-	400	21,45	8580	700	21,45	15015
28.03	-	-	-	500	21,45	10725	200	21,45	4290
Total	**500**	**-**	**11.600**	**900**	**-**	**19305**	**200**	**21,45**	**4290**

Source: authors' own processing.

WAC calculated after each entry

- Entry at 3.03 N

$$WAC = \frac{(600 \text{ m.u. x } 20) + (200 \text{ m.u. x } 22)}{600 \text{ m.u} + 200 \text{ m.u}} = \frac{12000 + 4400}{800} = \frac{16400}{800} = 20.5 \text{ m.u.}$$

The cost of exit at 10.03 is calculated accordingly: 400 u. m. x 20.5 = 8200

$$WAC = \frac{(400 \text{ m.u. x } 20.5) + (300 \text{ m.u. x } 24)}{400 \text{ m.u} + 300 \text{ m.u}} = \frac{8200 + 7200}{700} = \frac{15400}{700} = 22 \text{ m.u.}$$

Results the cost of exit at 28.03: 500 m.u. x 22= 11000

Value of wheat stock at the end of the month: 200 u.m. x 22 = 4400

Calculations and operations of the above variant are reflected into the analytical inventory account as follows: Wheat stock: 4400 m.u.

Table no. 2. Calculation of the value of stock upon the WAC after each entry operation

Date	ENTRIES			EXITS			STOCK		
	Quant.	P/U	Value	Quant.	P/U	Value	Quant.	P/U	Value
1.03	-	-	-	-	-	-	600	20	12.000
3.03	200	22	4.400	-	-	-	800	20,05	16.040
10.03	-	-	-	400	20,05	8.020	400	20,05	8.020
18.03	300	24	7.200	-	-	-	700	22	15.400
28.03	-	-	-	500	22	11.000	200	22	4.400
Total	**500**	**-**	**11.600**	**900**	**-**	**19.020**	**200**	**22**	**4.400**

Source: authors' own processing.

The FIFO method (First In, First Out) implies the valuation of inventories at their exit from the patrimony of the company, at the purchase cost or at the production cost of the first batch in. Once it is depleted, the next batch cost is considered chronologically.

Table no. 3. Calculation the value of stock upon the FIFO (First In, First Out) method

Date	ENTRIES			EXITS			STOCK		
	Quant.	P/U	Value	Quant.	P/U	Value	Quant.	P/U	Value
1.03	-	-	-	-	-	-	600	600x20	12.000
3.03	200	22	4.400	-	-	-	600 200	600x20 200x22	 16.400
10.03	-	-	-	400	20	8.000	200 200	200x20 200x22	 8400
18.03	300	24	7.200	-	-	-	200 200 300	200x20 200x22 300x24	 15.600
28.03	-	-	-	200 200 100	20 22 24	4.000 4.400 2.400	 200	 200x24	 4.800
Total	**500**	**-**	**11.600**	**900**	**-**	**10.800**	**200**	**200x24**	**4.800**

Source: authors' own processing.

LIFO Method

This method consists in the valuation of the inventories' exits at their last entry cost. As each batch is depleted, inventories removed from company's assets are valuated at the previous batch cost, in a chronological order.

The LIFO method (Last In, First Out) implies valuation of inventories at their removal from the patrimony of the company, depending on the purchase cost or the production price of the latest batch in. Once it is depleted, the next batch shall be considered in a reverse chronological order. The Romanian undertakings can evaluate and enter into the accounting records the inventory-like goods at other costs too, under the condition to show them at actual costs in the regular reports. Such costs of entry into the books may be: default costs and invoicing costs.

Table no. 4. Calculation the value of stock upon the LIFO (Last In, First Out) method

Date	ENTRIES			OUTPUTS			STOCK		
	Quant.	U/P.	Val.	Quant.	U/P	Val.	Quant.	U/P	Val.
1.03	-	-	-	-	-	-	600	600x20	12.000
3.03	200	22	4.400	-	-	-	600 200	600x20 200x22	 16.400
10.03	-	-	-	200 200	22 20	4.400 2.000	- 400	- 400x20	 8.000
18.03	300	24	7.200	-	-	-	400 300	400x20 300x24	 15.200
28.03	-	-	-	300 200	24 20	7.200 4.000	200	200x20	4.000
Total	**500**	**-**	**11.600**				**200**	**200x20**	**4.000**

Source: authors' own processing.

4. Conclusions

Further to the analysis of the evaluation methods of stocks at their exit from the patrimony of the company in the data shown by Tables 1-4, the following can be noted:

Comparison of the two options relating to the weighted average cost (table 1) reveals that the evaluation of exits in the inventory by the first option (monthly WAC) has the advantage of a simple calculation, but does not allow for their exit during the period.

The second option (WAC calculated after each entry) allows for the evaluation of exits during accounting period, since the weighted average cost ratio (table 2) and the inventory cost of this method is influenced by the prices paid during the period.

The FIFO method (table 3) consists in the outputs' valuation in the order they have entered.

The outputs' valuation by the FIFO method usually leads to an increase in the financial result (profit) of the year. During the periods of increase in prices, the FIFO method yields the highest possible value of the financial year's result, and the cost of stock inventories which exit from the patrimony of the company is closer to the level of their entry cost.

Outputs' valuation using the LIFO method (table 4) usually leads to an diminution in the result of the financial year and the corporate tax. These effects are accentuated during the inflation periods, LIFO method yielding the lowest rate of results, and the cost of inventories which exit from the patrimony of the company assets is close to the cost of the most recent inventories entered into the accounting.

During the difficult (crisis) periods, the companies are advised to use the LIFO method, as by valuating consumptions by the prices closest to the "*price of the day*", it removes the consequences of an increased advantage by the effect of prices. (Possler et. al, 2011 p. 47).

Generally, LIFO method requires complex calculations and, as shown before, there are various methods to apply the calculation formula in practice. Under certain conditions, the LIFO formula may imply serious problems in the application process, for example when new materials are entered to replace other materials in the product or when there has been substantial stock liquidation, as a consequence of the sale of a branch or a regional office. Because of the complexity of the LIFO method, it is generally not feasible to make calculations for interim periods over one year of financial reporting of an undertaking. The financial statements for such interim periods usually rely on estimates to determine inventories' value using the LIFO method (valuation of inventories within the meaning of the international accounting standard IAS 2).

In Romania, of the presented methods, FIFO is the most used, as it is easier to apply and calculate, as opposed to the LIFO method, which leads to an increase in expenditures and in a diminution of the result of the financial year.

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AN EXEMPLIFICATION ANALYSIS OF MATERIALITY COMPUTATION BASED ON THE CLIENT'S SPECIFICS

Teodora-Cezara Porumbăcean[1]

Abstract

The study aims to assess the benchmark selection for the materiality level computation based on the auditee's specifics. The paper conducts an exemplification comparison analysis suggesting an appropriate benchmark for selecting the quantitative materiality level measurement of two entities that operate in different fields, have different business goals and are of interest for different categories of stakeholders. The paper exemplifies the rationale for selecting a benchmark based on the analysed companies' profile; one being profit-oriented, the most appropriate benchmark suggested is a blend between total revenue and profit before tax, while in the second case of a cost center company, a more relevant benchmark suggested is represented by the total expenses. After assessing the benchmark, the paper proposes the rule of thumb based on the suggested literature by considering that none of the entities is of public interest. The topic proposed in this study is of interest not only to the users of the financial statements and implicitly audit reports but also to the practitioners who could benefit from a deeper understanding of the rationale behind the materiality level benchmark selection. Moreover, this paper also contributes and expands the materiality literature about underlying materiality judgment.

Keywords: *Audit, Materiality, Financial Statements, Reporting*

JEL Classification: M40, M42

1. Introduction

There are multiple reasons for conducting an audit, including legal requirements imposed by the governments and their agencies or other authorised control authorities or for group purpose reporting. The auditor "seeks to achieve the main objective of the audit, i.e. to enhance the degree of confidence of intended users in the financial statements" (Masiulevičius & Lakis, 2018). In order to do so, according to ISA 200, the auditors have to identify whether "the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework".

Before the actual audit and assessment of the financial statements are made, the auditor expects that up to a certain level, some misstatements might occur in accounting and the financial statements. However, these possible inconsistencies might be considered material or not, depending on the materiality level set by the auditor. Anyhow, the insignificant misstatements should not impact any decisions that are to be made based on the financial statements. According to ISA 320, "significant misstatements, including omissions, are considered to be material if they, individually or in the aggregate, could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements".

According to the applicable framework for financial reporting, materiality "is an entity-specific aspect of relevance based on the nature or magnitude (or both) of the items to which the information relates in the context of an individual entity's financial report" (International Accounting Standards Board, 2018)

Moreover, it is relevant to mention that the level of materiality used should be orientated towards the users of financial statements; however, due to the fact that there is no specific guideline for measuring the quantitative part of materiality, the auditors compute the materiality level by calculating a percentage of some financial statement items and select the benchmark based on their understanding of the auditee and professional judgment.

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A general business understanding refers to matters such as clients' goals, key performance indicators, type of business, orientation for profit, public profile (listed or not listed on the stock exchange), seasonality and of course, any other particular aspects.

The study aims to assess the benchmark selection for the materiality level computation based on the auditee's specifics. In this regard, an analysis of two entities that operate in different fields, have different business goals and are of interest for different categories of stakeholders is proposed.

The topic proposed in this study is of interest not only for the users of the financial statements and implicitly audit report but also for practitioners who could benefit from a deeper understanding of the rationale behind the materiality level benchmark selection. Moreover, this paper also contributes and expands the materiality literature about underlying materiality judgment.

2. Theoretical Background and Literature Review

The interest in the materiality concept has increased over the years, and it definitely plays a significant role in performing the audit of the financial statements. The key aspect, which is actually the most important for the users of the financial statements, is the final product of the audit, namely the audit opinion, which depends on the level of materiality used by the auditors (Lakis & Masiulevičius, 2017).

The financial statements are relevant for various categories of users for decision-making purposes; thus, they have to present a true and fair image of the company. The auditor "seeks to achieve the main objective of the audit, i.e. to enhance the degree of confidence of intended users in the financial statements" (Masiulevičius & Lakis, 2018). In order to do so, according to ISA 200, the auditors have to identify whether "the financial statements are prepared, in all material respects, in accordance with an applicable financial reporting framework" (ISA 200, 2009).

Considering this, it is clear that "the aim of the audit is not to identify all the risks which would be of interest of the auditee but to carry out the audit within the framework of the materiality determined" (Masiulevičius & Lakis, 2018).

According to the applicable framework for financial reporting, materiality "is an entity-specific aspect of relevance based on the nature or magnitude (or both) of the items to which the information relates in the context of an individual entity's financial report" (International Accounting Standards Board, 2018)

According to Lakis & Masiulevičius, 2017 even though "the understanding of materiality and application of it should be the same and not depend on what auditors or audit companies perform audit of financial statements", it often happens that "different auditors apply different materiality values; therefore, the reliability of financial statements can be different depending on auditor or audit company".

Moreover, it is relevant to mention that the level of materiality used should be orientated towards the users of financial statements. However, Lakis & Masiulevičius, 2017 concluded that "the materiality level expected by users of financial statements is lower compared to the one, applied by an auditor; therefore, a big risk exists, that in many cases, the financial statements do not present such level of reliability which the users expect of financial statements".

Considering that "accounting and auditing standards do not provide certain guidelines for measuring the quantitative part of materiality", the auditors compute the materiality level by calculating a percentage of some financial statement items (Azad, et al., 2021).

In order to be able to make assumptions about materiality levels, auditors have employed various methods for quantitative measurement of this significance threshold. The methods used are single rules, variable or size rules, bland or averaging methods and formula methods (McKee & Eilifsen, 2000). In the case of single rules, the rule of thumb uses a single

financial variable, such as 5%profit before tax, 2% of total assets, 1% total equities or 2% of total incomes (Azad, et al., 2021).

In the case of variable rules, there is a range to be considered in terms of applied percentages and the size of the company. For example, 2–5% for a gross profit of fewer than 20 billion Rials, 1–2% for gross profit between 20 and 100 billion Rials, 5–1% for gross profit between 100 and 1,000 billion Rials, 5% for a gross profit of more than 1,000 billion Rials (Azad, et al., 2021).

As far as the last two listed methods are concerned, the blended or average rules "usually use four or five thumb rules and compute the materiality based on the mean, while formula methods are used based on a statistical analysis of a big sample of firms' materiality level" (Azad, et al., 2021).

In relation to the chosen benchmark, relevant financial data includes prior period's financial results and financial positions, the period-to-date financial results and financial position, and budgets or forecasts for the current period, adjusted for significant changes in the circumstances of an entity (for example, a significant business acquisition) and relevant changes of conditions in the industry of economic environment in which the entity operates.

For example, when, "as a starting point, materiality for the financial statements as a whole is determined for a particular entity based on a percentage of profit before tax from continuing operations, circumstances that give rise to an exceptional decrease or increase in such profit may lead the auditor to conclude that materiality for the financial statements as a whole is more appropriately determined using a normalised profit before tax from continuing operations figure based on past results" (ISA 320, 2009)

There are cases when using the profit before tax as a benchmark might not be appropriate or entirely relevant for the business due to volatile earnings, start-up entities, and earnings only slightly above the break-even point. Based on the professional judgement, the auditor can use various elements from the financial statements as benchmarks such as total revenue, total expenses, EBITDA, current assets, net working capital, total assets, net assets, total equity, operating cash-flow, debt-to-equity ratio, return on equity ratio.

If the above situations occur, and the auditor decides that the benchmark is not the profit before tax, other benchmarks can be considered in the following discussed scenarios. In case of volatile earnings, the auditor can adjust the figures based on the unusual occurring cases; if not possible, an average value of the profit from the previous year can be computed and set as a benchmark (ICAEW, 2012)

In case the audited company has earnings only slightly above the break-even point, EBITDA can be an option, or other components such as total revenue or total assets, depending once again on the client's specifics and that component that pays significant importance to the users of the financial statements. If discussing about start-up entities, profit is definitely not a key component for a start-up; thus, a benchmark based on revenue, equity or assets seems more appropriate (ICAEW, 2012).

In order to provide a clear understanding of some of the usual percentages and benchmarks used, some examples are listed in the upcoming part of the paper. In the case of a not-for-profit entity, a value of up to one per cent (1%) of total expenses/ total revenues, or up to one per cent (1%) out of the total assets will be used, but in certain circumstances for non-PIE (companies that are not listed on stock-exchange and their shares are not traded), this may be increased up to three per cent (3%) (AICPA, 2019).

In the case of a profit-oriented entity, a value of up to five per cent (5%) of profit/loss before tax (when discussing about continuous operations), but in certain circumstances for non-PIE oriented entities, this may be increased up to ten per cent (10%) (AICPA, 2019).

In the case of entities where Earnings Before Interest, Tax, Depreciation and Amortisation (EBITDA) is used as the benchmark, a value of up to 2.5% of EBITDA will be

considered, but in certain circumstances for non-PIE entities, this may be increased up to 3.5% (AICPA, 2019).

In the case of entities where net assets are used as a benchmark, a value of up to one per cent (1%) of net asset value will be considered, but in certain circumstances, for non-PIE entities, this may be increased up to 2.5% (AICPA, 2019).

Considering the various materiality computation methods and the lack of a clear guideline, it is pretty understandable why Kranacher (2007) suggested that this concept caused frustration in the public accounting profession, as it "requires a substantial degree of auditor judgement regarding what is important to users of financial statements when making economic decisions". Also, it is quite a must to understand when establishing this relevance threshold how any piece of information may influence any stakeholders, and of course, there is a risk that the auditor's judgement "may be questioned and sometimes litigated in a court of law" (Kranacher, 2007).

According to Chen, et al. (2008), who investigated the correlation between the performance materiality computed based on quantitative benchmarks and the size of accounting misstatements corrected by financial statements restatements, concluded that "62 per cent of the restatements involve income levels less than the planning materiality level", suggesting that it is not often the case that the auditors reconsider the used materiality level or the judgement behind its computation.

Moreover, when examining the materiality guidance used by some of the largest public accounting firms, Eilifsen & Messier Jr. (2015) identified the fact that there is "a high level of consistency across the firms in terms of the quantitative benchmarks (e.g., income before taxes, total assets or revenues, and total equity) used to determine overall materiality, the related percentages applied to those benchmarks, the percentages applied to overall materiality for determining tolerable misstatement, and what constitutes a clearly trivial misstatement".

Regarding the different approaches used by audit companies, Blokdijk, et al. (2003) found out that "Big 5 firms use lower planning materiality values than non-Big 5 firms, ceteris paribus, which is consistent with the production of relatively higher audit quality levels by the Big 5".

When considering the most appropriate and relevant benchmarks for materiality computation, the auditors should also look into the auditee's specifics according to Masiulevičius & Lakis (2018), who suggests that "carrying out the determination of performance materiality based on the business needs to every area separately would help to provide more detailed comments and insights about the risks of the areas concerned".

Also, as far as the audited company's specifics are concerned, Blokdijk, et al. (2003) stated that "planning materiality is not a constant percentage of a base, but increases at a decreasing rate with client size, also, planning materiality values increase with the quality of the client's control environment and the magnitude of the client's rate of return on assets while decreasing with the complexity of the client". Moreover, Blokdijk, et al. (2003) also suggests that "auditors use lower materiality values in situations where earnings might be managed to show a small profit or a small loss".

When performing inter-industry research on the materiality computation, Pany & Wheeler, (1989) identified that "among the various rules of thumb for calculating the materiality, sizable differences can occur depending upon the method and the industry", suggesting, therefore, once again, that the client specifics influence the judgement behind the usage of the most appropriate benchmark and computation method.

With an opposite perspective regarding the studies above mentioned highlighting the lack of proper guidance for the materiality level calculation, Bernardi & Pincus, (1996) argued after reviewing and comparing various auditors' judgements that "while auditor materiality judgments differ, these differences were not statistically significantly related to either fraud risk judgments or the amount of evidence the auditors chose to examine before

rendering their judgments". Moreover, the previously discussed study did not support the need for clear quantitative guidance regarding materiality.

Nevertheless, the literature also considers the current expectation gap about the materiality understanding, and in this regard, Houghton, et al. (2011) stated, "in general, stakeholders perceive that the concepts involved in audit materiality are not well understood and they point to the difficulty in providing educative materiality about it". In line with these findings, De Martinis & Burrowes, (1996) concluded that "a significant factor causing a widening, or at least a reinforcement, of the AEG is the non-disclosure of materiality and risk judgements in financial reports". Thus, in order to diminish this expectation gap, De Martinis & Burrowes, (1996) suggest that the auditors should disclose the materiality and the risk judgements in the financial reports.

3. Methodology

The study aims to assess the benchmark selection for the materiality level computation based on the auditee's specifics. In this regard, an analysis of two entities that operate in different fields, which, however, has no impact on the audit mission, have different business goals and are of interest for different categories of stakeholders is proposed.

Hence, the study performs a comparative analysis of the most relevant items from the financial statements of these two entities, provides a general business understanding highlighting the differences between the companies' orientations and suggesting an appropriate benchmark and the selection of the quantitative materiality level measurement. The data used in this paper are multiplied with a non-material coefficient, and it is used for exemplification purposes, as well the proposed business understanding and the companies' description.

The rationale behind the companies selection method is based on the fact that both entities require a financial audit, and the paper intends to present two opposite companies as far as the business model is concerned, but also regarding how the materiality level is computed, hence these two entities were considered suitable for this analysis.

4. Case Study Description

For the purpose of this exemplification case study, two companies operating in different industries are assessed, one that provides transport services and the other one that is an auto batteries producer. In this sense, the financial data from 2018 is used, which is considered to be, for both companies, one of the most stable financial years.

For exemplification purposes, the study refers to these two companies as "SC Transport SRL" and "SC Auto Batteries SRL". "SC Auto Batteries SRL" is currently one of the largest auto batteries producers in Romania. The company is the national leader, and its production capacity exceeds 2 million batteries/ year. The product portfolio includes multiple types of batteries that have reached numerous countries from Europe.

Another important aspect related to this company is the seasonality of the business. Due to the fact that the batteries have a greater exposure to crash in the cold periods of the year, sales have a sharp increase during the months of December to March.

"SC Auto Batteries SRL" is a joint-stock company, not listed on any stock exchange market, therefore considered by auditors as a non-PIE client. The company's revenue stream is mainly represented by the selling of batteries (finished products) to third party car-producers/re-sellers, and it also generates a low percentage of revenue from selling residual products and merchandise.

Another topic that is of importance to our analysis regarding business and environment understanding is represented by the regulations that have an impact on the company's activity, namely, Government decision no. 152/2005 regarding the control and prevention of pollution

production, Government decision no. 1132/2008 regarding battery, accumulator and waste, Law no. 818/2003 regarding the environment authorisation. Moreover, the company has to be also compliant with the statutory reporting framework OMF 1802/2014, and it is also subject to the fiscal code.

The company has been owned (more than 90%) since 2012 by a foreign entity. The Company is financed mainly by cash generated through operating activities, and the additional financing is ensured through bank loans (including factoring arrangements) and also grants received from the authorities. The statutory financial statements are prepared in accordance with OMFP 1802/2014.

The second company, "SC Transport SRL", provides transport services, and most of the revenues (90%) are generated through the relationship with the parent company from a foreign European country. The purpose for opening the Romanian subsidiary was the fact that the labour costs and other administrative expenses were lower than in other European countries.

The company has a large fleet of trucks, most of them being financed through financial leasing contracts. The company does not have any bank loans nor overdrafts, the activity being financed through cash obtained from operations.

The cyclicality or seasonality is not particularly relevant, as the transport business functions all year round and brings quite a stable income to the company. The level of technology used is quite common for transportation. The company continuously invests in the fleet. In 2017 the entity acquired 30 tractors head, while currently, it has over 200 trucks. The supply chain and supply costs are stable; no unexpected fluctuations were noted from one period to another. The legal and regulatory framework applicable to the entity is OMF 1082/2014, Fiscal code, Labor Law, Civil code for contractual basis and Competition Law.

The company has only one operating point, and the Romanian subsidiary is a cost center; most of the clients are intercompany; therefore, they are assessed based on the level of expenses. The entity's financing structure is similar to other companies in the industry, using operational profits, financial leasing agreements and intercompany loans.

5. Results and Discussion

The following section presents a suggested method for materiality computation in the case of the previously presented two companies explaining why a particular benchmark is more relevant in each auditee's case.

If analysing "SC Auto Batteries SRL", it is noted that both revenue and profit before interest are relevant. The revenue is essential for the company as part of the client's KPIs is to increase the revenue level from one period to another. Considering this, it is appropriate to compute the materiality based on the average between revenue and profit before interest. The rationale behind the benchmark selection is the following:

(1) The Company's main objective is to increase market share while enhancing profitability.
(2) Main KPI's are Revenue and EBITDA, but also PBT (profit before tax) .
(3) During the past years, the company recorded an increase in the revenue with 13% in 2016, 10% in 2017 and 8% in 2018, and the profit had a sinuous trend (with a PBT/Revenue ratio between 2.6% and 7.5%) being influenced mainly by market conditions like raw material prices (mainly lead price) and competition.

The considerations for the rule of thumb are the following:

(1) As mentioned at the beginning of the chapter, "SC Auto Batteries SRL" is a Non-PIE client, meaning that it is not listed on the stock exchange.
(2) The audit risk is considered low as the entity is not a higher-network risk client and does not operate in a high-risk industry.
(3) The categories of users of financial statements are limited.

(4) The company has one main shareholder.
(5) The Company is not listed, and therefore financial statements are not largely visible and are subject to the local statutory reporting.
(6) The Company has limited debt to banks.

Also, another relevant aspect when selecting the appropriate benchmark is also to take into account the audit history. There is a history of limited audit adjustments with no impact on fraud or management override risks. The financial statements are relatively simple; no particular issues were identified in the prior years, a proper business understanding was obtained, and there are no significant adjustments proposed in the prior years.

Considering all the mentioned above aspects, a mixed benchmark between revenues and PBT is an example of an appropriate benchmark for computing overall materiality, and it is consistent with the general guidance.

As a result, after exercising professional judgement, the following formula is considered in order to compute the overall materiality: 50%* [(PBT*9.5%) + (Revenues *2.5%)]. The actual amounts calculated based on this formula are presented in Table 1. Please note that the actual numbers were multiplied with a coefficient for confidentiality issues; the overall result, however, does not change in any significant ways.

Table 1. Materiality computation for SC Auto Batteries SRL

Benchmark Value	**Previous year**	**Current year**
	RON	**RON**
Total operating income	395.8 mil.	415.5 mil.
Total financial income	2.1 mil.	1.5 mil.
Total income	**397.9 mil.**	**417.1 mil.**
2.5%	9.9 mil.	10.4 mil.
Profit Before Tax	**24.8 mil.**	**31.2 mil.**
9.5%	2.4 mil.	3.0 mil.
Overall materiality value	**6.2 mil.**	**6.7 mil.**

(Source: author's own calculations)

The second assessed company is "SC Transport SRL", and a suggested appropriate benchmark for the materiality level computation is represented by the total expenses. As explained in the theoretical part, if the company is not a profit-oriented entity, another, a more relevant component of the financial statement is considered.

"SC Transport SRL" obtained profits in the last six years; however, the entity's target is not necessary to obtain profits as the local management has little influence on the result. This is due to the fact that the profit is set by the group company, and also tariffs are set by the group for intercompany sales (which represent 90% of total turnover). The purpose of running the Romanian subsidiary is to reduce costs at the group level, as the payroll and administrative costs are lower in Romania.

The company is considered a cost center for the sole shareholder from a foreign European country. Thus, 90% of the total turnover is generated from the transport services provided to the mother company, based on kilometers recorded on the EU territory and on the fixed price according to the contract. Therefore, the business model on which the company operates is cost plus mark-up agreed through an agreement signed yearly.

The rationale for rule of thumb selection which is 3.5% out of the total expenses, is the following:

(1) The distribution of, and the use of, the financial statements is limited to few users: the primary user is the parent company (sole shareholder of "SC Transport SRL").

(2) The entity has no loans or overdrafts neither from banks nor from the group; there are many financial leasing contracts signed by "SC Transport SRL", but these financial leasing contracts do not have covenants attached.

Considering these aspects, the overall materiality is computed as 3.5% out of the total expenses, and the calculation is presented in Table 2. Please note that the actual numbers were multiplied with a coefficient for confidentiality issues; the overall result, however, does not change in any significant ways.

Table 2. Materiality computation for SC Transport SRL

Benchmark Value	**Previous year**	**Current year**
	RON	**RON**
Total operating expenses.	216.5 mil	229.5 mil
Total financial expenses	6.0 mil	3.4 mil
Total Expenses	**222.5 mil**	**232.9 mil**
3.5%	7.8 mil	8.2 mil
Overall materiality value	**7.8 mil**	**8.2 mil**

(Source: author's own calculations)

As observed, in both companies' cases, the selection of the suggested benchmark is based on the relevance for the users of financial statements. In the case of the second company, the sole user is the mother company and considering that the company is a cost center, the most relevant benchmark is represented by the total expenses. On the contrary, the auto batteries producer company has a different purpose and KPIs; therefore, a benchmark such as total expenses would be not relevant for this client; hence, a suitable combination of the benchmarks PBT and Net income is more appropriate.

6. Conclusions

The aim of this paper is to assess the benchmark selection for the materiality level computation based on the auditee's specifics. In this regard, an analysis of two entities that operate in different fields, have different business goals and are of interest for different categories of stakeholders was conducted.

Based on the overall business understanding of the selected companies, one providing transport services and the other one that is an auto batteries producer, a benchmark that is the most significant to the users of the entity's financial statements was selected. In the case of "SC Auto Batteries SRL", the suggested relevant benchmark was a blend between total revenue and profit before tax based on the entity's focus and key performance indicators.

This decision was back-up taking into account that the entity's objective is to increase market share while enhancing profitability, but also due to the fact that over the prior analysed period, the company increased both financial statements line items mainly due to favourable market conditions like raw material prices.

As far as the rule of thumb is concerned, half of the 2.5% out of Net Income and half of 9.5% PBT were used for the overall materiality computation as the entity is not listed on a stock exchange. The applicable percentage range suggested by the literature is higher than in the case of a listed company; also, the audit risk is set at a low level, no significant prior year

adjustments were identified, and the categories and number of users of the financial statements are limited.

In the case of "SC Transport SRL", the situation was quite different, the company is considered a cost centre, obtaining 90% out of its total revenue based on the services rendered for the parent company. Therefore, the business model on which the company operates is cost plus a mark-up. Under these circumstances, the suggested benchmark was Total Expenses.

In addition, the rationale for selecting the rule of thumb of 3.5% out of the Total Expenses is the fact that distribution and the use of the financial statements are limited to few users: the primary user is the parent company. Also, the entity has no loans or overdrafts, neither from banks nor from the group. There are many financial leasing contracts signed by "SC Transport SRL", but these financial leasing contracts do not have covenants attached. Moreover, no significant prior periods adjustments were identified, and the overall client risk is low.

In conclusion, it can be observed that without adequately understanding the business and implicitly the company's risks, the auditor cannot establish an appropriate benchmark for the materiality level computation.

When selecting the materiality computation method, the auditors should consider the fact that some industries are more volatile, unpredictable and unstable than others, but also that some companies have a particular seasonality, facts that should all be considered from the planning phase of the audit.

The topic proposed in this study is of interest not only to the users of the financial statements and implicitly audit reports but also to the practitioners who could benefit from a deeper understanding of the rationale behind the materiality level benchmark selection. Moreover, this paper also contributes and expands the materiality literature about underlying materiality judgment.

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FINANCIAL STABILITY, THE OBJECTIVE OF DEVELOPMENT FINANCIAL MARKETS

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Abstract

In this paper is analyzed the degree of financial stability based on the evolution of the main stock market indices in Asia and the USA. I also considered it is appropriate to determine the volatility of these indices for a more eloquent analysis of the stability of these markets.

The modern financial system is characterized by an extremely complex structure and dynamics and, for this reason, any shock, imbalance manifests itself sharply, reaching the loss of stability. These aspects were argued by the consequences of the economic and financial crisis that destabilized the financial system that is still trying to recover.

The financial crisis has made us aware of the need to improve the analysis and management of the factors underlying the financial contagion and risk concentration, of interconnectivity.

Maintaining financial stability is a major concern for central banks and global financial sector supervisors.

Financial stability is also a constant challenge, largely due to the rapid pace of innovation and the ongoing structural evolution of financial systems. Relatively recent changes have included the development of a whole range of financial instruments and the increase in the number of new cross-sectoral market participants. These developments have generated an increasing number of possible channels through which economic and financial shocks can be generated and transmitted.

The stability of the financial system makes it necessary for its main components, namely the markets, the corresponding infrastructure and the financial institutions, to be able to absorb the disturbances together. Stability also requires that the financial system facilitate a flexible and efficient reallocation of the financial resources of those who save to investors, that financial risk be accurately analyzed and valued, and that it be managed efficiently.

***Key-words**: financial stability, volatility, crisis, stock market indices.*

***JEL Classification**: G00, G01, G10, G15, G19*

1. Introduction

International financial connections, new financial products and the wider distribution of risks have also increased the degree of international interconnection of financial markets. Therefore, skeptics have expressed concern about the sustainability of global financial integration, which is seen as a potential destabilizer of the world economy.

The global financial crisis revealed that existing instruments and models were not adequate to properly monitor the endogenous risks that arise within the highly interconnected network of the global financial system.

Following the global financial crisis and its consequences, financial stability has become a priority in almost all national jurisdictions. Despite all the events and consequences since 2008, there is still no agreement on the definition of the concept of financial stability.

The term has been defined in many ways by various authorities and academics. For example, the Board of Governors of the Federal Reserve System defines it as follows: “Financial stability means building a financial system that can work in good and bad times and absorb all the good and bad things that happen in the US economy at any time; it is not about preventing failure or stopping people or businesses from making or losing money. It's just to create conditions in which the system continues to work efficiently even with such events." Instead, the European Central Bank proposed an alternative definition: "Financial stability can be defined as a condition in which the financial system - which includes financial intermediaries, markets and market infrastructure - is able to withstand financial shocks and imbalances."

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Connectivity is also considered to be closely linked to the stability of the financial system. This stems from the assumption that financial connectivity can provide a means of risk-sharing between connected financial institutions, leading to increased stability of the system as a whole. In terms of connectivity between financial institutions, it has become an integral part of macro-prudential policies such as stress testing.

System-wide stress testing is now part of the financial authorities' toolkit and in many cases involves second-order effects and contagion effects. This has led to an increase in interest in this area, from academics to regulators and practitioners; however, this interest has focused mainly on the issue of risks or transmission channels arising from interconnection. While this is a natural thing and a dominant feature of connectivity, other important features require more attention to reach a maximum understanding of the nature of interconnection in the financial system.

The concept of final interconnection has been mainly associated with financial contagion, risk and financial fragility, this topic becoming of major interest after the global financial crisis. For example, Gai and Kapadia (2010) proposed an analytical model of contagion in financial networks which have an arbitrary structure, and Acemoglu et al. (2000) proposed a framework for studying the relationship between financial network architecture and the probability of systemic failures due to counterparty risk contagion.

In particular, Roukny et al (2014) study how the network structure of the interbank credit market introduces uncertainty in determining the individual default probabilities of banks, thus affecting the estimation of systemic risk. This result has important implications for measuring systemic risk, given that interconnection introduces an important source of complexity in calculating expected system-wide losses.

The study of the relationship between the network structure of a financial system and the stability of the system implies a compromise between the different forces of costs and the benefits of interconnections.

On the one hand, the diversification of risk exposures is inherent in a banking network, which can have a positive impact on a bank's stability. For example, in the housing context considered here, geographical diversification could allow a bank to reduce the impact of local market shocks.

On the other hand, in the event of a negative shock, the same interconnections could serve as channels of contagion. Which force dominates is an empirical question.

In order to clarify questions related to financial stability, it is essential to understand how individual agents or parts of the financial system sector interact with each other or with the real economy. A basic question concerns the effects on the financial system and the real economy when individual agents or certain market segments encounter difficulties. The significance of the interconnection is exemplified by the insolvency of Lehman Brothers in 2008, which it is considered a trigger for the global financial crisis. Although the bank was not very large, it was very interconnected within the global financial system. Its insolvency has exacerbated the turmoil in the markets and led to considerable losses worldwide. It jeopardized other banking and insurance institutions that were directly or indirectly connected to Lehman Brothers. Many institutions have been supported by extensive public rescue programs, which have led to increased public debt. Moreover, many countries have entered deep recessions.

From a financial stability perspective, an understanding of these transmission channels is vital in order to be able to measure the negative effects of the evolution of the financial system on the real economy and the financial system.

Losses can be amplified by side effects on the financial system and the real economy. If a shock occurs, the affected parties suffer immediate losses and transmit them through direct and indirect transmission channels, the shock spreading through the financial system

and the real economy as well. Often there are no losses due to a shock, but rather due to the side effects caused by an impact.

However, interconnection can also stabilize the financial system. How a shock is transmitted depends on the number of factors. In this regard, the degree of interconnection within system and shock size play a key role. Other relevant factors are the type of agent affected by a shock, such as banks or insurance corporations, and whether the shock affects assets, assets or liabilities, debt and equity.

The degree of interconnection determines the number of parts to which a shock is transmitted. Usually, a shock can be more resistant when it is spread everywhere to a large number of market participants. However, some studies (Acemoglu et al., 2015; Allen and Gale, 2000) show that if the magnitude of the shock exceeds a certain threshold, a strong interconnected system may be more fragile than a weakly interconnected system.

The number of specialized studies analyzing the issue of financial market interdependence is increasing.

Fratzscher (2002) is interested in the integration of European markets, and focuses on the role of volatility in the integration process. The analysis focuses on 16 markets, with markets that have adopted the single currency (Austria, Belgium, Finland, France, Germany, Italy, the Netherlands and Spain), markets that are part of the EU, but without adopting the euro (Denmark, Sweden and UK), respectively non-EU markets (Australia, Canada, Japan, Norway and Switzerland), from 1986 to 2000. Using a trivial GARCH model, which allows the governing coefficients of the process to be variable over time, Fratzscher (2002) suggests that European stock markets have become integrated since 1996.

Also in the author's opinion, European markets have replaced the US market as the dominant market in the world. Fratzscher (2002) also points out that the high degree of integration between markets can be explained by reducing exchange rate volatility and adopting a single currency.

Longin and Solnik (2001) are concerned with testing the hypothesis that correlations between markets increase in times of crisis, which is characterized by increases in volatility. Five countries, the United States, the United Kingdom, France, Germany and Japan; focuses on the links established between the United States and other markets. Their study covers a total period of 38 years, with monthly frequencies from January 1959 to December 1996. The authors use EVT to model the relationship between markets, and their results suggest rejecting the null hypothesis of multivariate normality in the negative queue, but not for the positive. Longin and Solnik (2001) indicate that cross-market dependencies are not related to levels of inter-market volatility, but are influenced by market direction, correlation coefficients increase in bear markets, but not bull.

Connor and Suurlaht (2013) examine the short- and long-term dynamics of variation and synchronization, as well as their response to changing macroeconomic variables, for 11 countries in the 19 euro area Member States. The authors highlight a trend towards more intense correlations in the analyzed period, as well as strong links between macroeconomic variables and the degree of synchronization between markets.

2. Methodology and data

To study the degree of financial stability, I performed an analysis of stock indices in the US and Asia. I analyzed the evolution of these stock market indices in the period 2010-2020. For a more conclusive analysis, we also determined the volatility, following the key moments in the financial markets. Specifically, I analyzed the evolution of the main stock market indices in Asia (Japan, Korea, Singapore, India, China) and United States of America.

The analyzed stock market indices are: N225E, KOSPI, STI, BSESN, CSI 300, DJI US.

3. Results

From the evolution of closing prices and the volatility of the main stock market indices in Asia, respectively USA (chart no.1 and no.2) it can be noted a high stability of the closing price of the index in Japan, followed by a relatively stable evolution of the one in India. Regarding the evolution of the closing price for the China-specific index, there is a peak in 2015.Korea has a strong instability followed by Singapore which shows periods of very high uncertainty and a corresponding financial risk.

In terms of volatility, Korea is highly volatile in the middle of 2011, falling to half in 2020. Singapore and China recorded a similar level of volatility in 2015. The Singapore stock market is found to be extremely affected by the current pandemic.

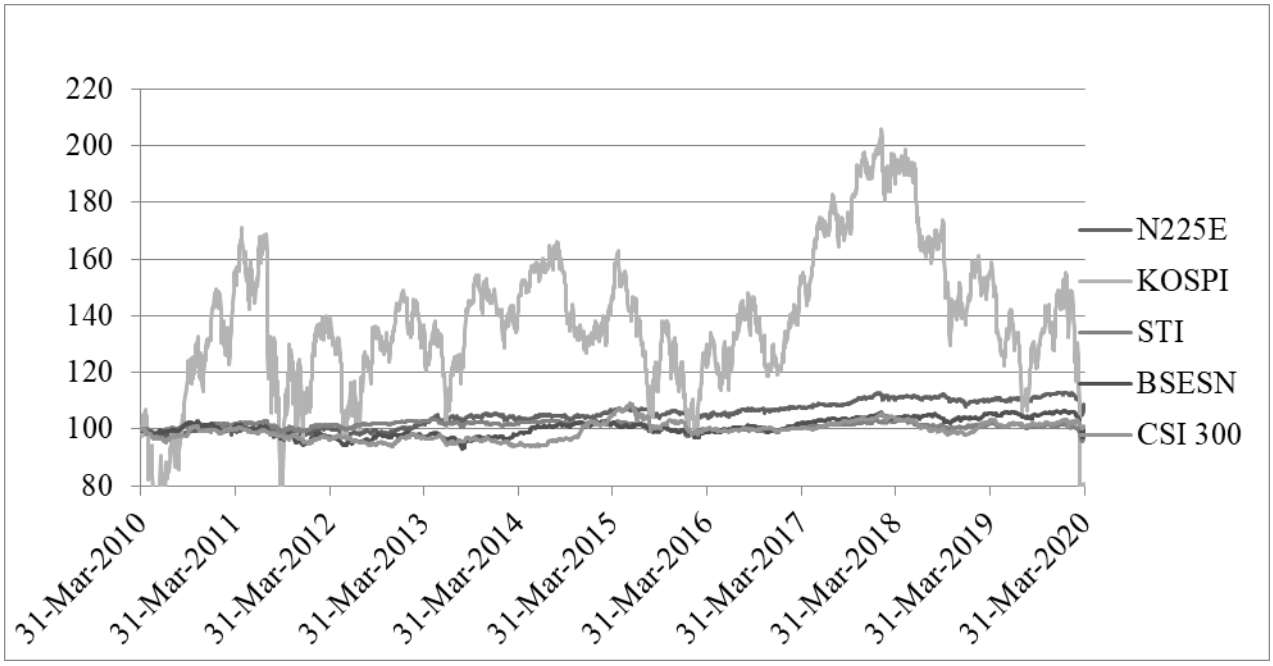

Chart 1 : Comparative evolution of closing prices for principals stock indices in Asia

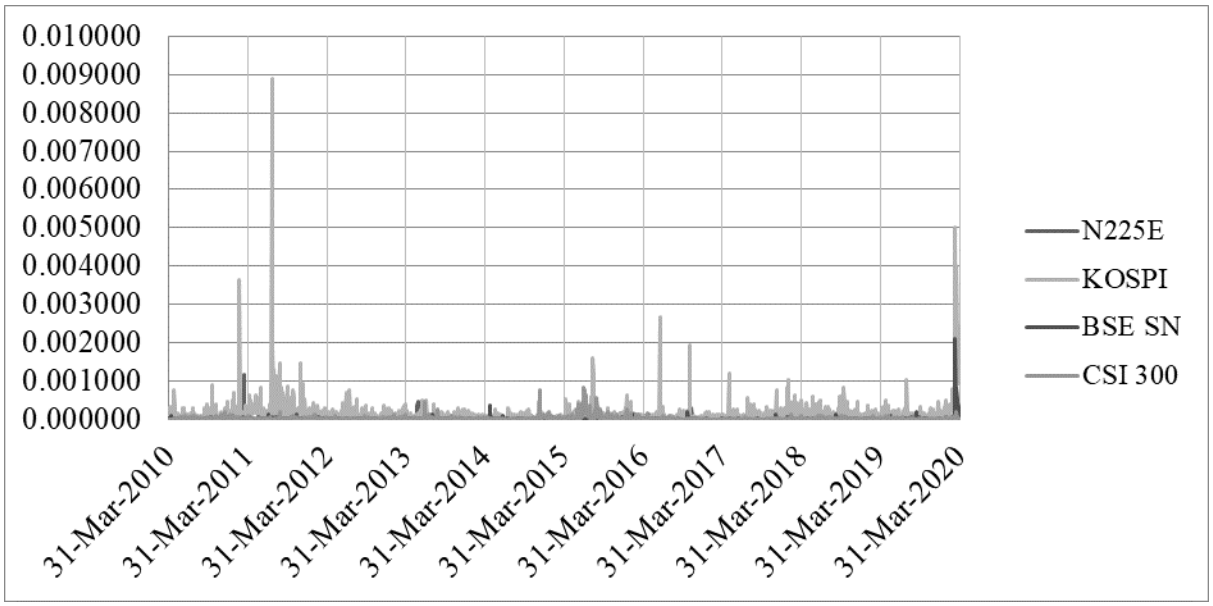

Chart 2: The comparative evolution of the volatility dynamics of the main stock indices in Asia

The evolution of the closing price and the volatility of the DJIUS index, (chart no.3), Dow Jones Industrial Average (DJIA), Dow Jones, or simply Dow, being a price-weighted measurement index of the 30 prominent companies listed on the stock exchanges. from the United States.

For most of the analysis period, there are periods of slow rise and fall in the reference price, with a maximum in 2020 and a minimum in 2010. Volatility is particularly high in 2018 and 2020. It is worth mentioning here the US trade war. China.

The end of 2020 brings, in the context of the current pandemic, a temporary crisis on the market, which appears after an intense period of growth.

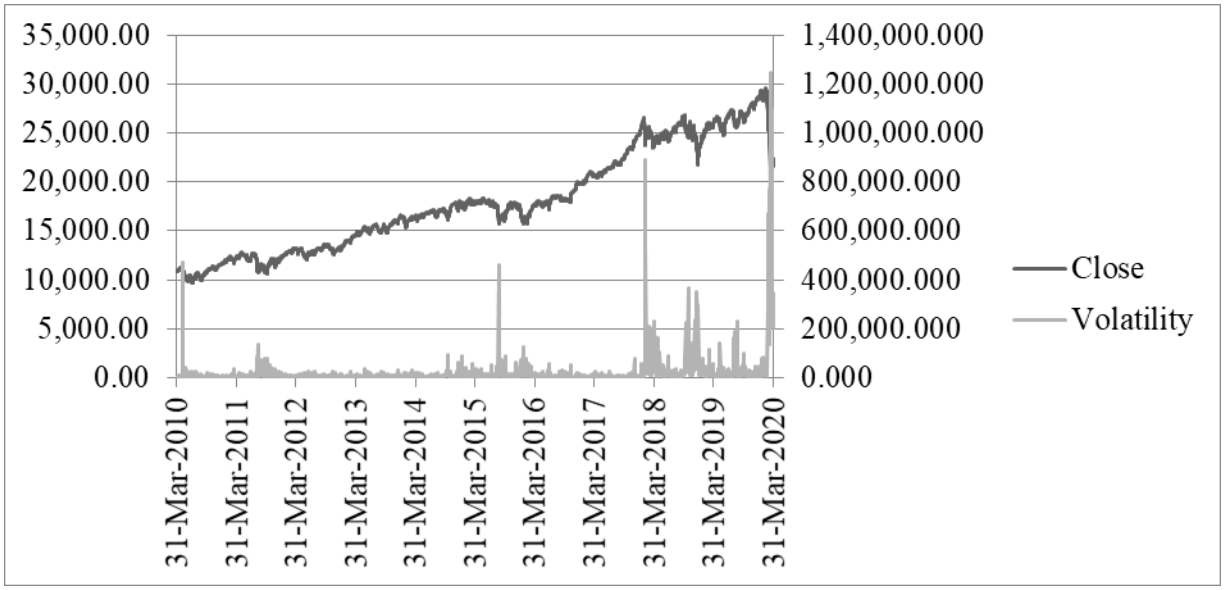

Chart 3: Evolution and volatility of the DJIUS index

We know that in times of crisis, regardless of economic fundamentals, investors act similarly. It has been observed that volatility is very sensitive in times of turbulence, namely the sovereign debt crisis, the Brexit referendum, the COVID-19 pandemic, which shows a high level of contagion during these events. The comparative analysis of volatility suggested to us how each country reacted, these aspects being previously detailed.

4. Conclusions

In recent decades, financial markets have faced many tensions generated by the global financial crisis and the sovereign debt crisis. Consequently, volatility, uncertainty and pessimism have characterized the financial market.

The international economic and financial crisis, the eurozone sovereign debt crisis, the Brexit referendum and, more recently, the economic crisis caused by the Covid-19 pandemic, as well as Community measures to strengthen the single market, have significantly influenced the European Union's financial markets. Under these conditions, many Member States have faced, since 2008, a high systemic risk, materialized in the development of economic and financial crises. Given this economic and financial context, it is extremely important to analyze the interdependence between financial markets.

From a financial stability perspective, an understanding of the transmission channels is needed in order to be able to measure the negative effects of the evolution of the financial system on the real economy and the financial system. Losses can be amplified by side effects on the financial system and the real economy. If a shock occurs, the affected parties suffer immediate losses and transmit them through direct and indirect transmission channels, the shock spreading through the financial system and the real economy as well. Often there are no losses due to a shock, but rather due to the side effects that have an impact.

This potential threat should be taken into account by the public authorities responsible for financial stability. Such a goal requires real-time monitoring of numerous uncertainty indicators to accurately assess the degree of uncertainty.

However, the policies needed to achieve such an objective are far from obvious and concern political actions (monetary, fiscal, international cooperation), but also regulation. No doubt this topic will fuel future research.

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THE HEALTH PRIVATE INSURANCE MARKET, TRENDS AND PERSPECTIVES

Gilda Toma[1]

Abstract

When any company finace, you choose the medical service!

A stable health education, as well as the expasion of some tax facilities on the private healthcare system, would be reprezentative in the reduction of certain state budget deficiencies and health insurance budget.You could say that time has come to put an emphasis on financial prevention, to hinder the occurance of an unwanted event, meant to offer financial compensation to each affected person and family. Although, by proportion, private health insurance, as well as life insurance occupies a quarter of the insurance market in Romania, whithout adopting incentive measures, this threshold cannot be overcome . Essential questions arise, if we discuss about the health insurance market: What can we adopr in our contry? What can we choose in the end, state medical services or private medical services? What economic impact would we find in the current conditions, as a result of the extreme situation of covid-19. If EU nations have respected the partnership within the healthcare system in order to stop this crisis, what did we not do as a European contry to master this sitiuation? Can we say, today, that our country's private system has brought its contribution in taking over the covid-19 cases, considering the possibility of a material, financial and medical collapse of the state healthcare system? Each EU Member State must define its own health system, determined by the possibilities of funding, demography, culture, legislation, government programs with possibilities to support and implement for the benefit of the population. Romania, has managed to train specialized medical staff, through state funding, so that some of the specialists are found in various countries, where we hope that by deepening their knowledge to find a way to return to the country and through sanitary levers, to need helps the return of the state or private health system. The Romanian management in the health system must become efficient in the shortest possible time, so that any sustainable development program even through European funds, to help the urgent implementation in the country. Starting from the idea that a healthy population contributes to the development of the country, we can choose our own path, levers and sources to achieve a strong health system.

Keys-words: *health insurance market-private medical services-financial compensation-prevention – doctor-medical assistence-economic medical-economic crisis- EuU nations-covid 19-collapse*

Classification JEL: *I10, I11, I13, I14, I15*

Introduction

In its economic sense, the market appears as a real network of communication between sellers and buyers, which aims at mutual information about what they have or what they want to buy, notions about the prices required or proposed in order to conclude transactions. When the market fulfills the functions of reproducibility of the economic system, two indicators are met cumulatively:

- the existence of a permanent contract, producers vs consumers of goods and services, the balance between demand and supply, between production and consumption both at macro-economic and micro-economic level;

-a role of communication of the necessary information to the economic agents, between producers and consumers.

By improving the information system, patients have the opportunity to make decisions in order to choose a quality medical act, thus reducing costs. As a result of an evaluation of the health activity, one can accept the idea that health is characterized by a subjective utility, it requires the study of the demand for medical services. In the field of medical services, an analysis is needed in the context of socio-economic factors, which justify the volume and quality of medical care. It can be said that from a theoretical point of view, health care services can be consumer goods, characterized by:-possibility of an asymmetry between the

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producer of medical services (doctor) and the consumer of medical services (patient);-the patient has an uncertainty regarding the quality of the medical act;-due to the fact that the demand for medical services is unpredictable, it can be said that its character is also irregular;-medical services have a high cost;

Due to the fact that the need for health has the capacity to benefit from a physical and mental state, the individual can carry out his activities in society, the need for health services implying the ability to benefit from a treatment. Usually, the demand for health can be influenced by:

- income of the insured;
- level of education;
- evaluation of one's health;
- assessment method;
- cultural level of the population;
- perception of the importance of life;

Health care can thus be influenced by the following factors:

- factors that depend on the patient (age, sex, education, perceived needs, income, health demand);
- factors that depend on health services (accessibility, costs, preventive care, health education);
- factors that depend on society (socio-economic development, demography, health perceived as value);

In the near future, we must be stable in a stable country with a healthy population. Under the existing legislation, private health insurance can be deductible up to 400 euros per year[1], when calculating income tax from salaries and compulsory social contributions, for each insured person. It can be deduced that through private health insurance each employer has a benefit that can be granted to employees in order to retain them. When the amount allocated to private insurance exceeds the ceiling, the difference is considered an advantage and can be included in the calculation basis for the income tax from salaries and implicitly on compulsory social contributions. The restriction of the legislation by capping the private health system, determines that theoretically the fiscal facilities provided at this moment by the state, to be in fact at half. By capping the 400 euros per year, it makes any employer contribute to insuring the employee with this amount, but he can no longer benefit from the deduction to his supplement[2]. We can also talk about the existence of voluntary health insurance, which can be borne by the employer for family members of the insured, but we can classify them in the category of cash benefits, in kind, which may be applicable to taxation, using the own income tax rule, considered in fact incomes assimilated to them[3]. If at the beginning there was only a private insurance system, it was extended by medical subscriptions, using the same ceiling.

1. The system of private health markets, the collection mechanism regarding the financing in Romania

From a financial point of view, if the first discussed the deduction and its applicability by the employer, the medical subscription, the deduction is valid when it can be granted to the employee by the employer, as a benefit or can be concluded individually by each. It can practically be said that the medical subscription aims at a limited applicability, for services based on prevention or of low and medium complexity, while the health insurance is in

[1] Gabriela Scîntee (2020) "Elements of health economics"
[2] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, (2020), "A European Data Strategy"
[3] David B Evans, Ajay Tandon, Christopher JL Murray, Jeremy A Lauer (2001) "Comparative efficiency of national health systems"

private, public, national or international system, it is characterized by a complex financial protection, which involves allocating large sums of money. As a form of medical protection, in which the state health system is sensitive, it is obvious that the levels of recovery of the health system are required, in order to provide a well-being of the population's health, by ensuring fiscal facilities for the private health system. Romania is extremely low, concerning the degree of coverage is for certain social categories of the country's population, the number of policies concluded being several hundred thousand lei, especially life insurance. Statistically speaking, according to ASF[1] data, it can be said that in mid-2019, health insurance accumulated gross written premiums amounting to 205 million lei, an increase of 24% compared to the previous year, and the number of contracts for the period of reporting for the same year, they had an increase of 18%. So private insurance can be offered by non-profit or for-profit insurance companies on an individual or group basis. In this sense, the health insurance premium is individual and actuarial, being calculated according to one's own risk of illness. As voluntary private insurance, the amount of the contribution will be determined by the package of services that can be provided, to which are added the administrative expenses and respectively the profit margin. The implementation of a private health system can therefore be offered to an employee or a group of employees of the same employer or of some unions, companies. Can a number of issues arise if insurance can be designed for individuals or groups of individuals? Can insurance companies be for-profit or non-profit? Any insurance company can operate with a legislative framework for which the state has an important role in setting up reserve funds for insurance companies, such as those in the banking system to prevent possible fraud. We can certainly say that the existence of a private health system does not relieve the state of responsibilities for involvement in financing the health system, on the contrary it can raise a number of legislative and management issues. It can be said that the private health system can also be an additional source of health income. Any way of financing a health system must take into account 6 basic objectives: - posibility to generate the necessary income, -equity, -efficiency,-services quality, sustainability –relevance; The task of any decision maker is that depending on the particularities of society, is to ensure a trade-off between the above objectives.

2. Program for absorbing investments in the health system, integration of the private health system in Romania, advantages and disadvantages

Starting from the definition in the World Health Report of the health system[2], "as all activities whose main purpose is to promote, restore or maintain health", a special emphasis is placed on an assessment of the health of the population, in order to promote, and intersectorial activity, health, so that in each country a relevant figure can be found for the wording "all activities"[3].

The WORLD HEALTH ORGANIZATION[4] has established that each state has a major responsibility through its governments towards its own health systems that coordinate them, invoking the concept of administration through an active commitment to health promotion, setting goals in health systems, elucidating the impact had by the health systems on health. THE OPERATIONAL HEALTH PROGRAM for the period 2021-2027[5], aims to attract European funds by implementing successful programs focused on the health system in

[1] ASF (2021) "Insurance Market Report"; ASF (2020) "Report On The Stability Of Non-Banking Financial Markets"
[2] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, (2020), "A European Data Strategy"
[3] David B Evans, Ajay Tandon, Christopher JL Murray, Jeremy A Lauer (2001) "Comparative efficiency of national health systems"; EC-OECD (2019) "State of Health in the EU-2019 country profile in terms of health"
[4] EC-OECD (2019) "State of Health in the EU-2019 country profile in terms of health"
[5] Ministry of European Fund (2021) "Operational Health Program 2021-2027"

our country, respectively over 4 billion euros. Starting from these particularities, the simple question is asked: ***How can private health insurance save us?***

The shortcomings in the public health system, which have shown their limits in the situation of the SARS COV 19 pandemic, have led to a complementary solution through private health insurance. Through the ASF insurances report, on the entire insurance market in Romania there were on 31.12.2020 of 377,854 private health insurance contracts, out of the total registered on the market in 2020, the gross written premiums on the segment of health policies from the total general insurance were 274 million lei. Calculating at the level of a minimum guaranteed salary of 2300 lei, the employee through his 10% contribution applied to the calculation base, pays 230 lei per month health insurance contribution. If for 1 year a state employee can therefore contribute 2760 lei (12x230 = 2760 lei), implicitly it can benefit from a state insurance but not corresponding to the health needs and therefore it can benefit from a sufficient private insurance, a very good one amounting to 1000 euros. Insurance premiums can be paid according to the preferences of each client, insured, monthly, quarterly, half-yearly or single premium (once), according to the possibilities of each . In order to consolidate in this field, the first investment funds to come were: 3i, Bedminister Capital, Advent, International Finance Corporation, which invested in the private medical sector. Polisano was in the top 10 market that was acquired by the market leader MEDLIFE, a company listed on the Bucharest Stock Exchange, characterized by an organic growth but also in the field of acquisitions. Except (Medicofer, Monza Hospital, Affidea), most investors are Romanian, the Mid Europa investor is the only private equity player that has a majority of investments in this sector, that of medical services. Let's not forget, however, the Farma pharmaceutical market, consolidated in recent years in terms of taxation, pricing policy, underfunding, elements that create tensions between players and authorities. In addition to the policy of the lowest price of medicines, there is strictly a government program and other factors that have implications for the slow updating of the list of reimbursed medicines, the claw-back tax, of budget arrears.

3. Diversification of the private health system

In Romania, if we summarize the level of medical services, the private health insurance market can be noticed by several companies known as Medi Help or Priorimed (BUPA). If at Medi Help International the requests from the insured and the employees can exceed 60% of the total sales, Priorimed stands out with private international health insurances, from BUPA, in Romania for over 10 years, respectively IQMED. BUPA insurances are found in our country, in hospitals and clinics such as:

- Queen Maria, Ponderas, Medsana and Trident Dental. Being recognized in over 190 countries, BUPA is one of the private health insurance providers that does not require a pre-authorization before a treatment, as it has a motivation in streamlining payment processes. Private health insurance can also be provided through a banking system or brokers, so we can say that medical services can be provided individually, through BCR, private health insurance, SigmnalIduna, private health insurance for you and your family, Raiffeisen Insurance Health insurance broker, Groupama individual comprehensive health insurance, NN-health insurance for accident and illness protection, Pro-Allianz Tiriac health insurance, Regromania.ro insurance, Medicover Romania-health insurance for companies and employees, for family protection, access to internationally recognized specialists and clinics. Individual insurance Sara Pro, involves access to specialized consultation, laboratory tests, health investigation in over 1200 clinics in Bucharest and throughout the country. You can pay up to 100,000 lei per year for hospitalization or setting up an insurance depending on medical needs, consulting specialists abroad. A private health insurance through IQMD, the only individual distributor specialized in private health insurance in Romania for over 10

years, with international coverage, which can represent top insurance BUPA, CIGNA ALLIANZ CARE, GENERALLI MEDIHELP, AXA GLOBAL, but also insurers from Romania, ALLIANZ ȚIRIAC, ASIROM, SIGNAL IDUNA, GROUPAMA, OMNIASIG, etc. Lack of health insurance can lead to minor illness, a severe illness that is difficult to treat. For a 33-year-old born on February 25, 1988, an insurance premium offered by Med Help can be calculated as follows: -BLUE- with area in Europe, 886 euros, -AZUR- with area in Europe, 1265 Euro,-COBALT- with global area (except USA), 1455 euros, -ADMIRD-with global area (except USA), 1518 euros; The private health system has on the financial market and dental services, which are mediated by brokers. A chain of dental clinics like Dr. Leahu, expanded in the Romanian dental industry, in over 10 cities in the country (Bucharest, Timisoara, Turda, Constanta, Iasi, Galati, Oradea, Sibiu, etc.), a clinic in London, over 121 of dental offices and even dental laboratories with a complete digitization, with specialized doctors. Starting with 01.07.2021, the “personal contribution” was introduced in the Romanian health system, in the sense that any patient will have the opportunity to go to a private hospital, where he will be presented with an “estimated estimate”, because a part of the money to be borne by CAS. So this health system is based on the principle "money / contribution follows the patient", which is maintained when the patient chooses a private hospital, receives an estimate, which will be presented, how much CAS pays from the fund for the intervention to be borne by the insured patient, as it is charged in addition by the private hospital, by complete detailing on types of expenses, personnel, medicines, medical supplies, exactly as provided by the standard model, within the CAS contract. It should be noted that this quote is valid for 5 working days, so it is an offer that can be accepted or not. If this personal contribution is applicable for hospitalization, it is foreseen that for 2022 a personal contribution will be applicable for specialized outpatient and paraclinical. For 2021, the following insurance trends are forecast:

- consollidation and digitalisation of the insurance market will continue,-insurance and health insurance will increase;

The year 2020, as an atypical year in the insurance market, focused on insurers' strategies to manage their business and digitize their processes, so as to adapt to normalcy, as a result of the coronavirus pandemic. If some of the insurers rebalance their portfolios, others capture even more from the market, which would lead to an even greater concentration in insurance, creativity will be the basis of many products that will take shape next year. A “double digit” growth is expected, with various challenges and technological influences. It is known that the activity of the private pension fund, since 2008, has diversified and consolidated as a result of reforms in the national pension system, through sources of income for pensioners outside the allowance paid by the state: pillar I of the national pension system, pillar II on the administration of the private administrative pension fund which contributes to an optional pension fund, depending on age up to 15% of gross monthly income, pillar III being intended to increase the financial resources available for retirement. In only 11 years it can be said that the private pension system has had positive influences on the assets of the private pension fund:

- increased the average contribution, due to the increase in the number of participants and implicitly an increase in contributions,

- positive returns in the investment and fundraising system.

As a result of changes in the structure of the market, the following optional pensions appear:

- PENSION FUNDS, BRD PRIMO, BRD MEDIO, EOREKO, and STABIL, started operations in 2009,-in 2011 the BRD PRIMO Optional Pension Fund was absorbed by the BRD MEDIO Optional Pension Fund, and the OTP STRATEG Optional Pension Fund was absorbed by the Stable Optional Pension Fund,-The EUREKO CONFORT voluntary pension

fund was absorbed by the AEGON ESSENTIAL voluntary pension fund in 2016; It can be seen that the market has seen an increase in concentration over time, so that:

- NN Pensii Management Company of a privately managed pension fund, holds 34, 18% of the total assets of the private pension system, If we make a ranking of the players, in the first semester of 2021[1], the situation is as follows:

- ALLIANTZ-TIRIAC INSURANCE, market share 27, 05%, -SIGNAL IDUMA INSURANCE, REINSURANCE, market share 26, 95%, -GROUPAMA, market share 16, 94%, - NN LIFE INSURANCE, market share 10, 36%, -OMNIASING VIG, market share 8, 26%;

4. Conclusions, proposals

If the private health system could be supported by the state, subsidized, with programs that can be implemented systematically, with positive effects on the quality of medical services, the coverage area of the insured through this system can be much larger. Fiscal facilities may be unlimited after extensive in-depth studies on the costs of chronic diseases other than the basic package, town and even possibilities for international coverage. The construction of hospitals with specific medical conditions through various partnerships, but with massive expansion in the regions of the country, with specialized medical staff, endowments of medical equipment, would determine the medical performances. Partnerships with drug providers, other medical services in the country and abroad, could break the health system in our country. If Turkey through years of reform has managed to stabilize a strong private health service, the presentation of these hospitals shows that a private health system in which the state has a strong financial influence, determines the existence of superior medical services diversified by specializations, endowed with high-performance medical equipment, specialized medical staff abroad. Portugal also promotes its private system through policies, health insurance partnerships, optional and accessible to each insured. From the presented we can say that Romania can develop its own private health system either through partnerships with other countries or through its own companies, using the capabilities to implement sustainable programs in the medium or long term on private medical services, starting from cause-effect, studies on the medical needs of prevention, diagnosis, treatment and their financial possibilities. The programs must focus in particular on the financial impact of the health insurance market, so that there is a gain on both sides, private health insurance-hospitals, insurance companies. The way a health system is financed determines the amount of money that is available, who can bear the financial burden, who controls the funds, if inflation can control the costs. Each country must mobilize its funds according to per capita income. It can be said that each country has a differentiated health system, depending on the socio-economic development, the sources of funding being different. For the solution through policies, countries in transition as is our country, when funds are distributed unfairly, when coordination between different sources of funding is inefficient, when no attention is paid to costs, we can say that any funding of the health system it has major problems, which can be solved through a legislative framework, levers and tools specific to each state. Carrying out studies to promote the private health system in rural areas as well, so that health promotion and disease prevention become possible objectives, the opening of private offices, mass provision of the urban and rural population.

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ASPECTS OF METHODS OF QUANTIFYING ECONOMIC DEVELOPMENT AND WELL-BEING

Troto (Iacob), Anca Ioana[1]

Abstract

The concept of socio-economic development of a state is most of the time associated with the indicator of gross domestic product. An economic development is considered positive if the totality of the production of goods and services increases compared to the previous referencemoment. In the current context of the globalization, through which business environments and the level of good status of the population become interdependent, aspects of economic growth must be based on sustainability and stability. At the beginning of the '90s, the specialized literature began to analyze the deficiencies of gross domestic product growth as an indicator of the increase in living standards, but this topic remains up to date, given that the research environment has developed in the last two decades a series of alternative evaluation methods.

In this context, we consider it opportune to expose the alternatives for calculating the standard of living, economic growth and human development, considering that this aspect cannot be totally regarded only through the mercantile point of view of the economic and financial indices. Through a comparison of the methods of assessing well-being, we will conclude the relevance of classical macroeconomic indicators versus their alternatives and the opportunities for use, depending on the context of the research.

Keywords*: gross domestic product, well-being indicators, quantifying economic development, macroeconomic indicators*

JEL Classification*: E27, E69, F49*

1. Introduction

Often when we refer to well-being, we associate this concept with income, economic performance and a positive evolution of financial indicators. The mechanisms of the society, starting from the individual to the international policies, aim at the state of well-being, having as main method of quantification the statistics referring to the economic and financial environment. At national level, the accepted classical indicator is gross domestic product (GDP), classifying states and their standard of living according to the performance of GDP.

GDP is indeed a barometer of society, but in such a complex mechanism of globalised and developed society, it becomes limited (Tarlberth and others, 2007). GDP expresses the volume of goods and services produced, but does not reflect the usefulness of consumption. In the methodology for calculating GDP, no distinction is made between expenditures that contribute to wealth and so-called defensive expenditure, and on the other hand this indicator does not estimate the sustainability of long-term economic growth. Last but not least, GDP is limited to reflecting the total value of goods and services, without, however, taking into account the degree of life satisfaction at the level of the individual or the opportunities of society for sustainable development.

For this reason, we believe that an analysis of a society should not be limited to the GDP indicator, if it is desired that the results of the study reflect the aspects of society and from the human and social perspectives. Currently, the number of alternative measures of economic development indicating varying degrees of social development is increasing, but they are still insufficiently accepted in public policies (Ivković, 2016).

Thus, this paper starts from the premise set out in the Report on Global Happiness prepared by the Institute on the Earth of Columbia University in 2012, according to which global happiness can be quantified taking into account six factors: GDP per capita, life expectancy, social aid, the impact of corruption on the individual, the level of empathy of society and freedom of decision-making (Helliwell and others, 2013). Identifying alternative

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methods for quantifying economic development aims to provide the academic environment with diversity in research activity and the opportunity to select the optimal methodology, definingalsothe key parameters necessary to validate statistical procedures (Troto, 2021)

2. Alternatives for quantifying economic development

The system of national accounts (SNC) is an instrument of analysing the economy at the macro level. It analyses the production, distribution, level of consumption and accumulation of goods and services in the context of the interconnection of processes carried out between the business environment, state bodies and households. They relate through exchanges of values, the SNC using the double recording mechanism. By reflecting the value of the transactions, as well as by quantifying the patrimony at a certain moment, the system of national accounts provides economic data to the business environment, describes the interdependencies and allows the development of economic and financial policies at macroeconomic level. The reports resulting from the SNC can be considered data sets that complement the GDP indicator, but with a limited probative value.

The Genuine Progress Indicator (PGI) was designed for a more detailed approximation of sustainable economic development, being a composite index that adapts economic development quantified by GDP with the positive and negative influences associated with it. The PGI takes into account income disparities, non-market benefits that are not included in GDP and negative effects such as environmental crises and environmental degradation, deterioration of human health and waste of leisure time. By using pgi, it is intended to eliminate the deficiencies that the gross domestic product indicator has, namely the lack of connectionbetween consumption and quality of life, the ignoring of defense spending that does not improve well-being, the omission of the importance of sustainability, the elimination of non-commercial benefits and costs and the ignoring of social aspects related to inequality.

The Human Development Index (HDI) was founded with the aim of emphasizing the importance of people's capacities for assessing the development of a country, not just economic growth. The estimates using HDI are based on human potential, arguing the limitations of classical economic indicators by calling into question the situations in which two countries with similar macroeconomic indicators may end up having different results in terms of human development. The purpose of statistics based on the human development indicator is to stimulate debate on government policy priorities. The elements behind the methodology for calculating HDI are life expectancy, the degree of information of adults (quantified by the average of the years of adult schooling) anda decent standard of living (as measured by per capita income).

Sustainability Science was introduced as an academic discipline at the beginning of the XXI century, developing itself as part of environmental science, by aggregating this topic and monetizing it with the help of economic and financial indicators. The concept of sustainability becomes from year to year more complex, encompassing various activities of society, with direct impact on natural ecosystems. Starting from this idea, the Global Happiness Index (The Happy Planet Index (HPI) was introduced in scientific research, as a composite indicator of sustainability that aggregates statistical data on positive qualities, such as life expectancy and human well-being, with negative ones, such as environmental degradation.

Unlike the Human Development Index, which assesses the average achievements of a country in three dimensions of human development (health, knowledge and income), the global happiness index combines subjective measures and objectives of individual well-being, based on the components of life expectancy, experienced well-being and ecological impact. Finally, subjective well-being is assessed by surveys on life satisfaction and experienced impairment. (Radovanović, 2012)

The Gross National Happiness (GNH) is an alternative way of quantifying the well-being of a population. The concept introduced in 1972 in the specialized literature bases its calculation methodology on the introduction into the calculation of subjective aspects, combining objective quantitative indicators with qualitative aspects. Despite the rational principles based on figures, which define scientific research, the calculation methods existing in the specialized literature also accept this method, which considers that the economic paradigm underlying the calculation of gross domestic product, namely that the standard of living is represented exclusively from the level of material wealth, is a theory devoid of sustainability (Thinley and Hartz-Karp, 2019).

Even if the gross national happiness indicator is not widely used, being viewed with skepticism, the academic environment analyzes it and considers it as a pertinent point of view. In this sense, gross domestic product is a limited indicator, based only on growth, whose representativeness addresses economic activity in a competitive market and ignoring other aspects as important for the well-being of the population, such as ecological and social crises. Verma (2019) accuses the fact that approaches centered on the performance of the GDP indicator result in the deepening of economic inequalities and the exaggeration of individualism, and states that assessing through the prism of the principles of GNH, manifested by its multiple meanings, may be a wiser approach. Moreover, it is also used in extensive analyses and adjacent fields, exemplifying through Ngo's work (2021) which proposes the use of GNH as a possible principle in formulating a holistic approach in the resolution of commercial disputes between ASEAN and China, based on the argument of common cultural and social perspectives. Bedford (2021) is studying the principle of the gross national happiness index as part of education for sustainable development, a project supported by UNESCO, and Rosengren (2017) is setting out in her paper a proposal to apply GNH in Sweden's European business model.

Net Economic Welfare (NEW) is another alternative indicator of measuring economic growth, whose calculation methodology quantifies global national production and relates only to consumption and investments that make a direct contribution to economic growth. Through the quantification supported by this indicator, the research environment addresses economic growth through the importance of entrepreneurship, technological and IT development. It is considered complementary to gross domestic product and takes into account the value of leisure time, the informal economy and the costs of environmental damage. Well-being is the result of a convergence of factors, from good human relationships, to greater equality, as well as to a health of the social and natural environment (Wilkinson and Pickett, 2009). In his study of alternatives to the quantification of the economy by GDP, Kubiszewski (2018) concludes that "the future we want is within our reach, but not while we remain within reach of a measure of progress (GDP) that has clearly exceeded its usefulness.", pointing out that most literature uses gross domestic product to measure something we do not really want, the well-being of society and individuals depends on more than the figures shown by gross domestic product.

Cost-Benefit Analysis (CBA) is the analytical calculation method of comparing benefits and costs in order to assess the possibility of a project. This indicator calculates the capacity of a project to be implemented, if feasible, what is the optimal scale and what are the relevant constraints.

This indicator is not a novelty in the specialized literature, but it remains up to date given that economic, financial and investment decisions, regardless of the scale, are taken in the spirit of efficiency and profitability. Although the first concepts of maximizing the benefit over cost appeared in Europe around 1840, the concept of CBA is defined in the 1930s by the government of the United States of America, which introduces this indicator into the legislative framework. In1936, the U.S. government requires engineers that the

sewer systems they design cost less than the value of the benefit they generate through their use. CBA's analysis methods evolved, and innovation in technology and high-volume databases that followed after 1990 provided new research opportunities based on cost-benefit analysis. (Mishan and Quah, 2020). In essence, CBA is based on the calculation of the present value of net future benefits, quantified in monetary terms. From a financial point of view, the cost-benefit analysis calculates the performance of the proposed project, in relation to a reference time interval and has as main purpose the identification of the financial resources necessary to support the project in thelong term, taking into account the performance indicators. This type of supporting analysis involves the formulation and evaluation of an investment project, which includes a financial analysis that substantiates the conditions of financial eligibility that offer the proposed socio-economic benefits.

Cost-benefit analysis is essential in government decision-making actions and is seen as a technique in making decisions based on the use of society's limited resources. In practice, CBA is used in the investment sector, through which several aspects can be quantified through this indicator. A relevant example is considered to be the use of CBA by the European Commission to measure the objectives of the European Union in the sectors related to human resources, innovation, climate, education and well-being or as a fundamental analysis for the management of co-financing major projects included in the Cohesion Fund and in the operational programmes of the European Regional Development Fund.

Environmental aspects are also considered part of the development of a society, which is why a set of environmental performance indices (EPI) were introduced by the United Nations (UN) in 2006 to assess the ecosystem, the environment and the level of public health. The EPI reflects the level of quality of natural elements such as emissions, the greenhouse effect, water and air quality and the level of impact these indicators have on public health. These indicators provide a way to detect problems, set goals, track trends, analyze results and define the best government policies to maximize the profitability of environmental investments. The EPI is an essential policy tool supporting efforts to achieve the UN sustainable development goals and to move society towards a sustainable future.

Fordham's Index of Social Health was first published in 1987 in the United States, becoming a barometer of trends in the level of education and health in families, representing the degree of the human condition at the national level. Based on sixteen factors, the Fordham Index reflects a complex view of the condition of "human well-being", starting from the individual level. (Miringoff and Miringoff, 1999). For children, the index monitors child abuse, infant mortality and poverty levels. In the youth segment, the index looks at the rate of suicides among adolescents, drug use and the school dropout rate. The adult segment is monitored by the level of unemployment, income and health insurance. Older people are reported in terms of poverty and healthcare spending indicators. The Fordham index also takes into account for all age groups the suicide rate, fatal road accidents caused by alcohol consumption, the use of social benefits and the income gap between social classes.

The Better Life Index (BLI) was introduced in the literature in 2011 by the Organization for Economic Co-operation and Development (OECD). The purpose of this indicator is to overcome the limitations imposed by gross domestic product, an index preferred by most for quantifying living standards. It refers to a set of 11 welfare indicators, the concatenation of which is left to the discretion of the data users. BLI aims to assess the well-being of society beyond the financial aspect, answering questions such as: how clean and safe the environment is, how comfortable is the housing, how involved public institutions are or how easy is the access of children and the elderly to health services (Kerényi, 2011). The monitored categories involved in quantifying this index are: housing standards, health, living environment, income levels, the degree of socialization of individuals, life satisfaction, the quality of public management, public safety and employment opportunities. This indicator is

the result of the OECD's promotion over the last ten years of the concept of 'A better life beyond GDP', through these tools putting people's well-being in the spotlight and stimulating political debates towards a balanced society (Durand and Boarini, 2016).

The Legatum Prosperity Index (LPI) is another tool that aims to assess prosperity differently than through the prism of income. Introduced in the literature in 2010, the LPI compares the prosperity and standard of living of one population with that of another country. Introduced by the independent London-based legatum institute, the LPI is based on eight important categories: economy, business and opportunities, government, education, health, security and protection, personal freedom and social capital.

We consider that through this method of calculation the economic and financial factor is not ignored, but improved with other indices that complement the concept of well-being. Wage growth or a positive development in GDP does not guarantee a better livelihood for the population. Thus, the LPI measures the state of society beyond the scope of classical macroeconomic indicators, measuring prosperity holistically. The LPI takes into account nine different areas, which it considers essential in defining the well-being of society: the economic level, the state of the entrepreneurial environment, the quality of public administration, the quality of education, the public health sector, the safety and security of individuals, trust capital, democracy and environmental protection. In the 2018 Report published by the Legatum Institute, the LPI index, GDP per capita and the results of the country-by-country survey of citizens' satisfaction with their well-being are empirically tested by comparison.

In our opinion, the results of this study are as relevant as possible. From this comparative study it results that only 48% of the LPI variation can be caused by GDP and a percentage of 60% can be caused by the life satisfaction index.

In view of the above, in our opinion, the importance of indicators that reflect the quality of the environment and public health becomes a priority, this being confirmed by the changes taking place in the topic of international high-level meetings; if in previous years the G-20 summits had as main objective partnerships related to the economic and financial sectors and military strategies, we note that in recent years the priority topics are related to the social and environmental sector.

In conclusion, we cannot say that there is a method unanimously accepted in the specialized literature or in the statistical practice for the quantification of complex economic and social interactions, the research at this moment opting for the use of the best variants of assessing sustainability through different indicators.

3. Conclusions

With the aim of translating the economic and social reality into empirical analyses, the business and scientific environment has expanded the studies carried out at the macro level beyond the financial figures, coming in addition with human and social factors, with the aim of reflecting as accurately as possible the social interaction and the satisfaction of life.

In our opinion, humanity has reached a level of social, economic and intellectual development in which the primary needs, reflected in income and consumption, are no longer sufficient to conclude on the degree of well-being of society. We consider it essential in the research activity to define precisely what we want to highlight through the analyzed results, so as to use the appropriate research tools and methodology. As we indicated above, classical macroeconomic indicators are not enough to analyze the mechanisms of human society as a whole, and the limitations that an analysis of gross domestic product has requires the parallel use of other quantification alternatives.

Although they have the capacity to send a scientifically based message, alternative indicators of well-being and economic development highlight sustainability and are effective

in making political decisions. However, we must emphasize that economic and financial principles prevail in the current social organization, as a result of which the pragmatic results of the classical macroeconomic indicators are difficult to ignore in favor of alternatives that project in the more distant future.

In conclusion, in our opinion, established macroeconomic indicators, such as gross domestic product, remain, at least for now, the main source of information and decision-making basis in the case of macroeconomic policies. In this context, we recall the above-mentioned report, drawn up at Columbia University in 2012, on global happiness, which places gross domestic product per capita on the first of the six influencing factors of the gross domestic product per capita.

Without ignoring the importance of adjacent factors, we remain faithful to the idea that economic and financial statistical analyses should be based on absolute and objective figures, while studies aimed at the well-being of society as a whole socio-human should also deepen those factors that impact the subjective side of society, with the help of alternative indicators.

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THE ECONOMIC IMPACT OF THE COVID-19 PANDEMIC IN EU COUNTRIES OUTSIDE THE EUROZONE

Iulian Nicolae, Vasiloiu[1]

Abstract

The Covid-19 pandemic has had an impact on the economic and health systems of all EU member states, leading to economic recession and stopping the expansion of the Eurozone. It is for this reason that many of the EU member states outside the Eurozone have set Euro adoption dates far into the future, while some have not set a date at all. Thus, early 2021, the European Parliament has approved the Recovery and Resilience Facility, which entails grants and loans to be granted to EU member states, to support them in limiting the negative effects of the Covid-19 pandemic.

This paper presents the economic situation of the EU member states outside the Eurozone, during the pandemic crisis of 2020. It analyzes the economic indicators of the nominal convergence criteria, the evolution of GDP per capita, as well as the EU measures meant to stop this crisis.

Keywords: *Convergence criteria, GDP per capita, Euro area, Romania*.

JEL Classification: F15, F36, F43.

1. Introduction

On January 1, 1999, once the European Central Bank was created, the Euro was introduced as a virtual currency in 11 EU member states (Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, The Netherlands, Portugal, and Spain) for payment operations, and starting January 1, 2002, as banknotes and coins in the EU states that adopted it as their national currency.

The European Union now has 27 member states, 19 of which have adopted the Euro as their national currency. Apart from Denmark, who took the opt-out clause, the following seven EU member states have taken it upon themselves to adopt the Euro as well: Bulgaria, Czechia, Croatia, Poland, Romania, Sweden, and Hungary.

In order to join the Eurozone, each EU member state must first meet the nominal convergence criteria, which imply keeping certain economic indicators within certain thresholds. These convergence criteria refer to price stability, exchange rate stability, long term interest rate convergence and the sustainability of public finances.

Even though they were not specified within the Maastricht Treaty, like the nominal convergence criteria, the real convergence criteria also play an important part in evaluating the EU member state on their way to adopting the Euro. The most important indicator of real convergence is the level of the Gross Domestic Product (GDP) per capita in purchasing power standards (PPS).

2. Nominal convergence criteria

The nominal convergence criteria provisioned by the Maastricht Treaty refer to the economic indicators being kept within the following thresholds: the annual average inflation rate (HICP – Harmonized Index for Consumer Prices) should not surpass the average of the three highest performing member states by more than 1.5 percentage points, the annual average long term interest rate should not surpass the average of the three highest performing member states, in terms of price stability, by more than 2 percentage points, the budgetary public deficit should not be higher than 3% of the GDP, the public debt should not be higher

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than 60% of GDP and the state should successfully participate in the Exchange Rate Mechanism II (ERM II). ERM II entails maintaining the national currency against the euro exchange rate within a fluctuation band of ±15% compared to a fixed central exchange rate, over minimum two years.

Starting July 10, 2020, Bulgaria and Croatia have been accepted within the Exchange Rate Mechanism II, and on July 13, 2020, the Bulgarian leva and the Croatian kuna have been given fixed central rates of 1.95583 leva/Euro, and 7.53450 kuna/Euro, respectively. According to latest recommendations, all states that solicit participating in ERM II, must also accept participation within the Banking Union. Thus, Bulgaria and Croatia have been accepted both within the Single Supervisory Mechanism and within the Single Resolution Mechanism, which are the current main pillars of the EU Banking Union.

Table 1 shows four out of the five nominal convergence criteria. The exchange rate indicator was excluded from this analysis because five out of seven states are not participating in the ERM II yet, and Bulgaria and Croatia have not yet reached the minimum two-year period of participating in ERM II.

Table 1. Meeting the Maastricht Criteria – Eurozone candidate countries in 2020

Country/Indicators	**Inflation Rate** (%, annual average)	**Long term interest rates** (%, annual average)	**General Budget Deficit/Surplus*** (% in GDP)	**Public Debt*** (% in GDP)
Bulgaria	1.2 criterion: < 1	0.25 criterion: < 2	-3.4 deficit below 3%	25.0 criterion: ≤ 60
Czechia	3.3 criterion: < 1	1.13 criterion: < 2	-6.2 deficit below 3%	38.1 criterion: ≤ 60
Croatia	0.0 criterion: < 1	0.83 criterion: < 2	-7.4 deficit below 3%	88.7 criterion: ≤ 60
Hungary	3.4 criterion: < 1	2.22 criterion: < 2	-8.1 deficit below 3%	80.4 criterion: ≤ 60
Poland	3.7 criterion: < 1	1.50 criterion: < 2	-7.0 deficit below 3%	57.5 criterion: ≤ 60
Romania	2.3 criterion: < 1	3.89 criterion: < 2	-9.2 deficit below 3%	47.3 criterion: ≤ 60
Sweden	0.7 criterion: < 1	-0.44 criterion: < 2	-3.1 deficit below 3%	39.9 criterion: ≤ 60

Note: In 2020, the annual average inflation rate of the 3 highest performing EU member states with regards to price stability (Estonia, Ireland, Slovenia) is -0.5%, and the annual average interest rate in these 3 states is 0.0%.

* ESA2010 methodology

Source: Eurostat

As per the data collected from Eurostat, we can ascertain that at the end of 2020, Sweden was able to best maintain its economic indicators, as its budgetary deficit was only slightly above 3% of GDP. In 2020, the pandemic crisis led to very high budget deficits

throughout the European Union. The highest was in Spain – 11% of GDP. Out of the seven EU member states who are now candidates for the Eurozone, Romania registered the highest budget deficit, as it rose to 9.2% of GDP in 2020. High budget deficits were also registered in Czechia (6.2% of GDP), Poland (7%), Croatia (7.4%) and Hungary (8.1%).

Hungary and Romania have some of the highest annual average long term interest rates in the European Union: 3.89% in Romania and 2.22% in Hungary, at the end of 2020.

Apart from Croatia and Sweden, the average annual inflation rate for 2020, for the other five member states outside the Eurozone, does not fall within the threshold imposed by the Maastricht Treaty. It surpasses the rate of the highest performing three member states by more than 1.5 percentage points. At the end of 2021, even higher inflation rates are predicted for these states, based on the strong increase in prices for gas and energy throughout the European Union.

The public debt of five EU states outside the Eurozone falls within the maximum threshold of 60% of GDP, but the very high budget deficits registered during the pandemic crisis will lead to an increase in public debt. Croatia, who recently joined ERM II, will have a difficult time getting accepted inside the Eurozone if it cannot decrease its public debt from over 88% of GDP to less than 60% of GDP during the next few years.

Regarding Bulgaria, if it succeeds in reducing its budget deficit and its inflation rate, which weren't very high at the end of 2020, it may be accepted in the Eurozone at the end of two successful years within ERM II.

3. Gross Domestic Product Analysis

Except for Sweden, the other six EU member states outside the Eurozone are emerging countries, and therefore their economies have higher growths compared to the developed states within the Eurozone.

In 2019, Poland, Hungary, Romania, and Bulgaria have registered the highest economic growths in the European Union. The real Gross Domestic Product (GDP) increased by 4.7% in Poland, by 4.6% in Hungary, by 4.1% in Romania and by 3.7% in Bulgaria, way over the European Union average of 1.6%, and 1.4% for the Eurozone.

In 2020, the pandemic crisis hurt the economies of many EU member states outside the Eurozone, but less so than the Eurozone states. Croatia's GDP dropped by 8% at the end of 2020, becoming the only one of the seven Eurozone candidate countries to have an economic decrease higher than the -6% EU average (Table 2).

Table 2. Real GDP growth rate (%)

geo/time	2019	2020
Poland	4.7	-2.7
Sweden	2.0	-2.8
Romania	4.1	-3.9
Bulgaria	3.7	-4.2
Hungary	4.6	-5.0
Czechia	3.0	-5.8
Croatia	2.9	-8.0
EU (27 states)	1.6	-6.0
Eurozone	1.4	-6.4

Source: Eurostat

The real convergence of a state is evaluated based on the level of the Gross Domestic Product (GDP) per capita in purchasing power standards (PPS).

Lithuania, the latest state to adopt the Euro on January 1, 2015, registered a GDP per capita in PPS of 76% of EU average (EU27), in 2014. This level can be taken as a benchmark for future states looking to adopt the Euro, but not a decisive one.

Croatia's real convergence indicator lies at 64% of EU average at the end of 2020, i.e., 1 percentage point higher than Latvia's level at the end of 2013, before it entered the Eurozone on January 1, 2014.

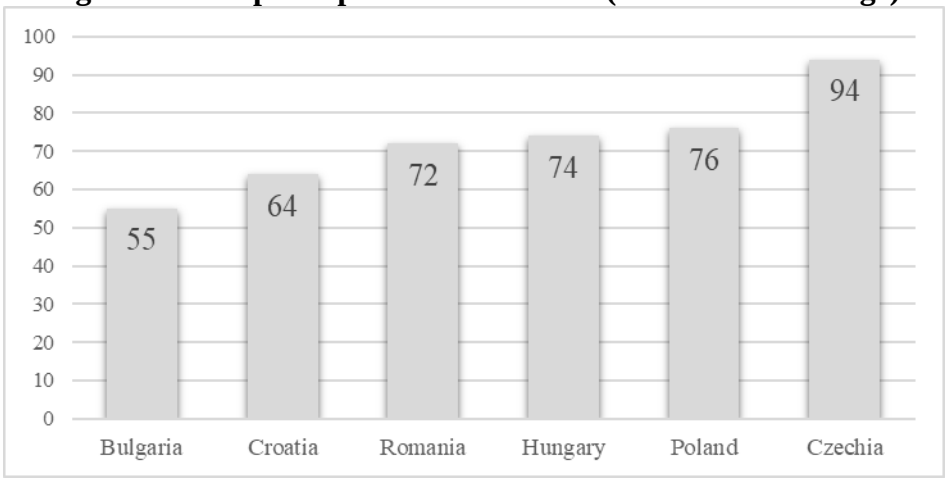
Croatia, who has a low population of only 4 million inhabitants, close to Lithuania's 3 million inhabitants, may consider the 76% GDP per capita in PPS registered by Lithuania before joining the Eurozone.

Poland and Romania, who have large populations compared to Lithuania, should not only try to reach a GDP per capita in PPS as high as possible, but they should also try to reduce the economic disparity between the regions of the country.

From the real convergence standpoint, Czechia seems to be best prepared to join the Eurozone, as it has a 94% of the EU average GDP per capita in PPS, but it does not intend to join very soon (Figure 1).

The Czech Prime Minister said that, even though Czechia is prepared to join the Eurozone, it chooses not to take this step now, as it awaits the implementation of certain EU governance reforms (Prague Morning, 2021).

Figure 1. GDP per capita in PPS in 2020 (% of EU 27 average)



Source: Eurostat

4. European Union economic recovery measures

The negative effects of the pandemic on the European economy have led to the activation of the *general escape clause*, which allows EU member states to depart from the fiscal framework, without them being placed under the excessive deficit procedure. This clause is provisioned in the Stability and Growth Pact (SGP), and it was introduced in 2011 through the "Six-pack". It can be activated only when the economic situation deteriorates following the effect of external factors, out of the state's control.

To stop the Covid-19 pandemic, starting the second half of 2020, the European Commission has signed agreements with vaccine producers, in order to purchase anti-covid-19 vaccine doses to be distributed to each EU member state.

Through the *Emergency Support Instrument*, the European Commission has financed a pharmaceutical company with 70 million Euros to produce and supply the EU with doses of Veklury, also know commercially as Remdesevir, while 2.7 million Euros was an advance payment made to vaccine producers for supplying future vaccines. The *Emergency Support Instrument* of the European Commission has offered financial support to many EU member

states during the pandemic crisis of 2020, and 150 million Euros were allotted for supporting the transportation of medical staff to the most affected states, for the transport of medical equipment, individual protection equipment and of tests within the European Union (European Commission website: *Emergency Support Instrument*).

Starting February 19, 2021, the instrument called Recovery and Resilience Facility – RRF entered into force within the EU, as the central piece of the NextGenerationEU program, which was created to the purpose of allowing the European Commission to collect funds to be shared among the EU member states, to easily get ahead of the economic and medical crisis brought about by the Covid-19 pandemic. The Recovery and Resilience Facility (RRF) has 723.8 billion Euros (in current prices), which will be granted to EU member states as loans and grants, in order to support the national investments and reforms by December 31, 2026 (European Commission website: *Recovery and Resilience Facility*).

RRF's purpose is that the states who access its funds will make sure to largely invest in climate and digital change, as well as make reforms and investments for the creation of new jobs and economic growth.

Funds will be accessed based on *national recovery and resilience plans*, which will entail all the reforms and investments that each EU member state undergoes it will implement by the end of 2026. The first step means presenting the *National recovery and resilience plan* to the European Commission. The Commission will analyze the respective plan for two months, and based on the Commission's proposal, the Council will adopt it within four weeks. Within two months of the adoption of the plan, EU will grant the respective state an advance financing of 13% of the total funds requested and approved through the *National recovery and resilience plan.*

By the end of October 2021, all seven EU member states who are candidates to join the Eurozone have submitted their own national recovery and resilience plans. Bulgaria was the last one to submit, on October 15, 2021.

So far, the European Commission has positively evaluated 22 national recovery and resilience plans, including those of Croatia, Czechia, and Romania.

In July 2021, the European Commission has endorsed the national recovery and resilience plans of Croatia – for 6.3 billion Euros in grants, and of Czechia, for 7 billion Euros, also in grants.

On September 27, 2021, the European Commission has adopted a positive assessment of Romania's recovery and resilience plan, which paves the way for the EU to disburse 14.2 billion Euros in grants and 14.9 billion Euros in loans to Romania. Once the plan is also approved by the Council, within 2 months, Romania will be granted pre-financing of 3.8 billion Euros (European Commission, 2021a).

The evaluation of the Polish and Hungarian plans is still unfolding, as the European Commission is waiting for the 2 states to first apply its recommendations regarding the rule of law.

5. Conclusions

The pandemic crisis of 2020 led to a standstill in the expansion of the Eurozone, as the economic indicators of all European Union member states were affected.

Diminishing the pandemic effects on the population health and on national economies will be obtained only if each member state successfully manages the vaccination process against Sars-Cov-2. In the Eastern-European countries, where the vaccination campaign hasn't yet gained the trust of the citizens, the governments have an obligation to convince the majority of the population that vaccination is the best way to save lives and recover economically.

EU member states outside the Eurozone must urgently implement a series of structural reforms, to reduce the economic gap to the Eurozone average, by reaching a high and

sustainable degree of nominal and real convergence. Beside the EU funds available through the 2021-2027 Financial framework, they should also access the funds within the Recovery and Resilience Facility, which was created for the stimulation of national economies affected by the Covid-19 pandemic.

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MODELING THE DYNAMIC EQUILIBRIUM UNDER THE POLICY OF ADJUSTING THE INTEREST RATE AND TAYLOR'S RULE OF NATIONAL BANK OF MOLDOVA (NBM)

Denis VÎNTU[1]

Abstract

This article describe an IS-LM model in historical Timbergen persepctive. Each graphs tries to answer the main questions regarding the monetary policiry rule in the Republic of Moldova in the last three decades. The main model doesnt include Balance of PAyment and it should be consider a lack in perspecive of assymetric shoks and information assymetry. Also, the model doesn't responde if a Taylor rule is Pareto optimal for actual path of decision-making. In addition it should be consider that the model is partily a time-manner since of Rational Expectations equation is a not a constraint rather to be an inflation targeting, submodel as in the traiectory of the author's research goal. At the end, it could be relevant to describe the model framework in a New Keynesian approach.

The two past a long time of COVID-19 suggestions determined the capitalist showcase economies of the world through repetitive periods of energetic patterns. At the begin of the show decade the development rate of genuine GDP per capita turned negative in all of the three biggest Eastern European Economies: Russia, Ukraine and Romania. We concludes that that various disarrays distinguishing with the course of action of techniques utilized by Money related Arrangement in a particular space of ponder money related factors and parameters can reexamine expected time-arrangement and/or instability in terms of demonstrate blunders.

Keywords: *IS-LM model; dynamic general equilibrium (DGE); Monetary Policy, Policy Design and Consistency; discrete regression; prices; econometric methods*

JEL Classification: C13; E44; E41; E21

1. Introduction

Economic activity today depends crucially on expected economic conditions tomorrow. The other branch of macroeconomic policy besides monetary policy is fiscal policy. From the perspective of macroeconomics, fiscal policy is concerned with the overall levels and broad composition of taxes and government spending and their effects on the aggregate economy. Many important issues in the macroeconomics of fiscal policy involve its short-run impact on the economy and its potential role in stabilization policy. There is considerable agreement that because of the political barriers to timely and sound fiscal policy actions, it is usually best to leave stabilization to monetary policy. But when the shocks hitting the economy are sufficiently long-lasting and, especially, when monetary policy is constrained by the zero lower bound, there is clearly a case for using fiscal policy. As a result, the financial and macroeconomic crisis that began in 2019 led to widespread fiscal actions for stabilization. For example, almost every major advanced country enacted discretionary fiscal stimulus in 2020 and 2021.

The crisis also led to renewed interest among economists in the use of fiscal policy for stabilization. Many questions that are important to monetary policy carry over to fiscal policy as a tool for stabilization. For example, the issue of whether there are substantial benefits to stabilization policy and the possibility that the importance of inflation expectations makes optimal stabilization policy dynamically inconsistent are just as relevant to fiscal policy as to monetary policy. One critical aspect of stabilization policy where fiscal policy clearly must be studied separately from monetary policy is the effects of policy. There has been an explosion of work in this area in recent years, much of it motivated by the financial and macroeconomic crisis. Some of it focuses on aggregate evidence, some examines regional evidence, and some

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considers individual-level evidence. The general consensus is that fiscal policy works in the expected direction: reductions in taxes and increases in government spending raise output in the short run. Moreover, for the most part the magnitudes of the estimated effects are substantial. However, once one turns to narrower questions, such as whether there are important differences in the effects of different types of fiscal policy actions (for example, spending versus taxes or one type of spending versus another), or whether the effects depend strongly on the state of the economy, there is much more uncertainty and room for further research. Another major set of issues in the macroeconomics of fiscal policy concern the overall features of the tax system and their long-run impact on the economy. Examples of important questions here include the long-run effects of the level of taxes on the level or growth rate of aggregate output, and whether the overall composition of taxes among those on labor income, capital income, and consumption has important effects on output and welfare. Because the range of subjects that fall under the macroeconomics of fiscal policy is so broad, and because many of the issues related to fiscal policy as a tool for stabilization are so closely related to ones involving monetary policy, this chapter does not try to be comprehensive. Instead, it takes a narrower focus, largely concentrating on the sources of deficits that is, of the difference between the government's overall spending and its overall revenues. The model's basic idea is that because taxes distort individuals' choices and since those distortions rise more than proportionally with the tax rate, steady moderate tax rates are preferable to alternating periods of high and low tax rates. As we will see, this theory provides an appealing explanation for such phenomena as governments' reliance on deficits to finance wars.

The tax-smoothing model is normatively appealing, but from a positive perspective it has a major limitation: it does not appear to be consistent with large persistent deficits or with the pursuit of fiscal policies that are unlikely to be sustainable. Yet these appear to be common. For example, the U.S. federal government has run large budget deficits almost without interruption since the early 1980s. Furthermore, in the absence of major policy changes, increases in social security and health care spending are likely to lead to exploding levels of the deficit and the stock of debt within a few decades. Many other advanced countries have run persistently large budget deficits in recent decades and face similar long-term budgetary challenges. And in many developing countries, large, persistent deficits have led to hyperinflation, default, or a debt crisis.

This apparent deficit bias is a major reason that economists are particularly interested in the sources of deficits. Much of the analysis is therefore devoted to possible reasons that there could be a systematic tendency for the political process to produce excessive deficits.

2. Literature Review

Understanding the costs of inflation is a significant challenge. In many models, steady inflation just adds an equal amount to the growth rate of all prices and wages and to nominal interest rates on all assets. As a result, it has few easily identifiable costs.

The cost of inflation that is easiest to identify arises from the fact that, since the nominal return on high-powered money is fixed at zero, higher inflation causes people to exert more effort to reduce their holdings of high-powered money. For example, they make smaller and more frequent conversions of interest-bearing assets into currency. Since high-powered money is essentially costless to produce, these efforts have no social benefit, and so they represent a cost of inflation. They could be eliminated if inflation were chosen so that the nominal interest rate and hence the opportunity cost of holding money was zero. Since real interest rates are typically modestly positive, this requires slight deflation.5

A second readily identifiable cost of inflation comes from the fact that individual prices are not adjusted continuously. As a result, even steady inflation causes variations in relative prices as different firms adjust their prices at different times. These relative-price variations

have no counterpart in social costs and benefits, and so cause misallocations. Likewise, the resources that firms devote to changing their prices to keep up with inflation represent costs of inflation. Under natural assumptions about the distribution of relative-price shocks, spurious movements in relative prices and the resources devoted to price adjustment are minimized with zero inflation. The last cost of inflation that can be identified easily is that it distorts the tax system (see, for example, Feldstein, 1997). In most countries, income from capital gains and interest, and deductions for interest expenses and depreciation, are computed in nominal terms. As a result, inflation can have large effects on incentives for investment and saving. In the United States, the net effect of inflation through these various channels is to raise the effective tax rate on capital income substantially. In addition, inflation can significantly alter the relative attractiveness of different kinds of investment.

For example, since the services from owner-occupied housing are generally not taxed and the income generated by ordinary business capital is, even without inflation the tax system encourages investment in owner-occupied housing relative to business capital. The fact that mortgage interest payments are deductible from income causes inflation to exacerbate this distortion.

Unfortunately, none of these costs can explain the strong aversion to inflation among policymakers and the public. The shoe-leather costs associated with more frequent conversions of interest-bearing assets into high-powered money are surely small for almost all inflation rates observed in practice.

Even if the price level is doubling each month, money is losing value only at a rate of a few percent per day. Thus even in this case individuals will not incur extreme costs to reduce their money holdings. Similarly, because the costs of price adjustment and indexation are almost certainly small, both the costs of adjusting prices to keep up with inflation and the direct distortions caused by inflation-induced relative price variability are likely to be small. Moreover, Nakamura, Steinsson, Sun, and Villar (2017) find that relative-price variability that is unrelated to fundamentals appears to have been no larger in the late 1970s, when inflation was close to 10 percent, than it was in the decades after the Volcker disinflation brought inflation down to much lower levels. These results suggest that this potential cost of inflation is not important over the relevant range. Finally, although the costs of inflation through tax distortions may be large, these costs are quite specific and can be overcome through indexation of the tax system. Yet the dislike of inflation seems much deeper.

Economists have therefore devoted considerable effort to investigating whether inflation might have important costs through less straightforward channels. Those costs could arise from steady, anticipated inflation, or from a link between the level of inflation and its variability.

In the case of steady inflation, there are three leading candidates for large costs of inflation. The first involves the inflation-induced relative-price variability described above. Okun (1975) and Carlton (1982) argue informally that although this variability has only small effects in relatively Walrasian markets, it can significantly disrupt markets where buyers and sellers form long-term relationships. For example, it can make it harder for potential customers to decide whether to enter a long-term relationship, or for the parties to a long-term relationship to check the fairness of the price they are trading at by comparing it with other prices. Formal models suggest that inflation can have complicated effects on market structure, long-term relationships, and efficiency (for example, Bénabou, 1992, and Tommasi, 1994). This literature has not reached any consensus about the effects of inflation, but it does suggest some ways that inflation may have substantial costs.

Second, individuals and firms may have trouble accounting for inflation (Modigliani and Cohn, 1979; Hall, 1984). Ten percent annual inflation causes the price level to rise by a factor of 45 in 40 years; even 3 percent inflation causes it to triple over that period. As a result, inflation can cause households and firms, which typically do their financial planning in

nominal terms, to make large errors in saving for their retirement, in assessing the real burdens of mortgages, or in making long-term investments.

Third, steady inflation may be costly not because of any real effects, but simply because people dislike it. People relate to their economic environment in terms of dollar values. They may therefore find large changes in dollar prices and wages disturbing even if the changes have no consequences for their real incomes. In Okun's (1975) analogy, a switch to a policy of reducing the length of the mile by a fixed amount each year might have few effects on real decisions, but might nonetheless cause considerable unhappiness. And indeed, Shiller (1997) reports survey evidence suggesting that people intensely dislike inflation for reasons other than the economic effects catalogued above. Since the ultimate goal of policy is presumably the public's well-being, such effects of inflation represent genuine costs.6

The other possible sources of large costs of inflation stem from its potential impact on inflation variability. Inflation is more variable and less predictable when it is higher (for example, Ball and Cecchetti, 1990). One way this association could arise is through an effect of inflation on policy. When inflation is low, there is a consensus that it should be kept low, and so inflation is steady and predictable. When inflation is moderate or high, however, there is disagreement about the importance of reducing it; indeed, the costs of slightly greater inflation may appear small. As a result, inflation is variable and difficult to predict.

If this argument is correct, the relationship between the mean and the variance of inflation represents a true effect of the mean on the variance. This implies three potentially important additional costs of inflation. First, since many assets are denominated in nominal terms, unanticipated changes in inflation redistribute wealth. Thus greater inflation variability increases uncertainty and lowers welfare. Second, with debts denominated in nominal terms, increased uncertainty about inflation may make firms and individuals reluctant to undertake investment projects, especially long-term ones.7 And finally, highly variable inflation (or even high average inflation alone) can also discourage long-term investment because firms and individuals view it as a

symptom of a government that is functioning badly, and that may therefore resort to confiscatory taxation or other policies that are highly detrimental to capital-holders.

Empirically, there is a negative association between inflation and investment, and between inflation and growth (for example, Bruno and Easterly, 1998). But we know little about whether these relationships are causal, and it is not difficult to think of reasons that the associations might not represent true effects of inflation. As a result, this evidence is of limited value in determining the costs of inflation.

This analysis suggests that stabilization policy has only modest potential benefits. If this is right, episodes like Great Depression and the financial crisis that began in 2007 are counterbalanced by periods of above-normal output with roughly offsetting welfare benefits. Thus, while we surely would have preferred a smoother path of output, the overall costs of departing from that path are small. Although this analysis identifies conditions under which the potential benefits of stabilization policy are small, these conditions are almost certainly not the most relevant ones in practice. There are four main reasons for concern three whose importance is uncertain, and a fourth that appears crucial.

The first two issues involve asymmetries in the welfare effects of recessions and booms. First, individuals might be much more risk-averse than Lucas's calculation assumes. Recall from Section 8.5 that stocks earn much higher average returns than bonds. One candidate explanation is that individuals dislike risk so much that they require a substantial premium to accept the moderate risk of holding stocks (for example, Campbell and Cochrane, 1999). If this is right, the welfare costs of the variability associated with short-run fluctuations could be large.

Second, stabilization policy might have substantial benefits not by stabilizing consumption, but by stabilizing hours of work. Hours are much more cyclically variable than

consumption; and if labor supply is relatively inelastic, utility may be much more sharply curved in hours than in consumption.

Ball and D. Romer (1990) find that as a result, it is possible that the cost of fluctuations through variability of hours is substantial. Intuitively, the utility benefit of the additional leisure during periods of below-normal output may not nearly offset the utility cost of the reduced consumption, whereas the disutility from the additional hours during booms may nearly offset the benefit of the higher consumption.

The third issue has to do with investment and the path of the economy's flexible-price level of output. A common informal view is that macroeconomic stability promotes investment of all types, from conventional physical-capital investment to research and development. If so, stabilization policy could raise income substantially over the long run.9

Finally, and critically, our earlier analysis hinges on the assumption that inflation dynamics are reasonably well captured by the Lucas supply curve, (12.10), or the accelerationist Phillips curve (12.11) (or some combination of the two). But this assumption may be very far off. Theoretically, we have seen numerous models of price-setting and inflation, many of which differ greatly from (12.10) and (12.11). Empirically, periods of below-normal periods of above-normal output. For example, in the Great Depression, inflation returned to positive levels long before output returned to normal. And in

the Great Recession, inflation fell little. Thus in both cases, the behavior of inflation did not leave policymakers in a position to pursue offsetting periods of vastly above-normal output with low inflation.

These arguments suggest there is probably an important role for stabilization policy after all. If successful stabilization policy can prevent a Great Depression or a Great Recession with little cost in terms of lower utility or lower output at other times, its benefits are clearly very large.

3. Assumptions (backgound and settings)

Let to introduce a short history and decision making at National Bank of Moldova (BNM).

The leadership of the NBM, by Leonid Talmaci between 1991-2009, was apostrophized by three major events that changed the economy of the Republic of Moldova, namely:

- Introduction of the Moldovan Leu, in November 1993, when he launched the national currency of the Republic of Moldova;
- The financial crisis in Russia 1998;
- The introduction of the single European currency at continental level in 1999.

3.1 Currency board times (2002-2021)

One solution to the problem of lack of transparency and commitment to the exchange-rate target is the adoption of a currency board, in which the domestic currency is backed 100% by a foreign currency (say, dollars or the euro) and in which the note-issuing authority, whether the central bank or the government, establishes a fixed exchange rate to this foreign currency and stands ready to exchange domestic currency for the foreign currency at this rate whenever the public requests it. A currency board is just a variant of a fixed exchange- rate target in which the commitment to the fixed exchange rate is especially strong because the conduct of monetary policy is in effect put on autopilot, and taken completely out of the hands of the central bank and the government. In contrast, the typical fixed or pegged exchange-rate regime does allow the monetary authorities some discretion in their conduct of monetary policy because they can still adjust interest rates or print money.

A currency board arrangement thus has important advantages over a monetary policy strategy that just uses an exchange-rate target. First, the money supply can expand only when foreign currency is exchanged for domestic currency at the central bank. Thus the increased amount of domestic currency is matched by an equal increase in foreign exchange reserves.

The central bank no longer has the ability to print money and thereby cause inflation. Second, the currency board involves a stronger commitment by the central bank to the fixed exchange rate and may therefore be effective in bringing down inflation quickly and in decreasing the likelihood of a successful speculative attack against the currency.

Although they solve the transparency and commitment problems inherent in an exchange-rate target regime, currency boards suffer from some of the same shortcomings: the loss of an independent monetary policy and increased exposure of the economy to shocks from the anchor country, and the loss of the central bank's ability to create money and act as a lender of last resort. Other means must therefore be used to cope with potential banking crises. Also, if there is a speculative attack on a currency board, the exchange of the domestic currency for foreign currency leads to a sharp contraction of the money supply, which can be highly damaging to the economy.

Currency boards have been established in the territory of Hong Kong (1983) and countries such as Argentina (1991), Estonia (1992), Lithuania (1994), Bulgaria (1997) and Bosnia (1998). Argentina's currency board, which operated from 1991 to 2002 and required the central bank to exchange US dollars for new pesos at a fixed exchange rate of 1 to 1, is one of the most interesting. For more on this subject, see the box 'Argentina's currency board'.

Euro Area and Argentina's currency board

Argentina has had a long history of monetary instability, with inflation rates fluctuating dramatically and sometimes surging to beyond 1,000% per year. To end this cycle of inflationary surges, Argentina decided to adopt a currency board in April 1991. The Argentine currency board worked as follows. Under Argentina's convertibility law, the peso/dollar exchange rate was fixed at one to one, and a member of the public could go to the Argentine central bank and exchange a peso for a dollar, or vice versa, at any time.

The early years of Argentina's currency board looked stunningly successful. Inflation, which had been running at an 800% annual rate in 1990, fell to less than 5% by the end of 1994, and economic growth was rapid, averaging almost 8% per year from 1991 to 1994. In the aftermath of the Mexican peso crisis, however, concern about the health of the Argentine economy resulted in the public pulling money out of the banks (deposits fell by 18%) and exchanging pesos for dollars, thus causing a contraction of the Argentine money supply. The result was a sharp drop in Argentine economic activity, with real GDP shrinking by more than 5% in 1995 and the unemployment rate jumping above 15%. Only in 1996 did the economy begin to recover.

Because the central bank of Argentina had no control over monetary policy under the currency board system, it was relatively helpless to counteract the contractionary monetary policy stemming from the public's behaviour. Furthermore, because the currency board did not allow the central bank to create pesos and lend them to the banks, it had very little capability to act as a lender of last resort. With help from international agencies, such as the IMF, the World Bank and the Inter-American Development Bank, which lent Argentina more than $5 billion in 1995 to help shore up its banking system, the currency board survived.

However, in 1998 Argentina entered another recession, which was both severe and very long- lasting. By the end of 2001, unemployment reached nearly 20%, a level comparable to that experienced in the United States during the Great Depression of the 1930s. The result has been civil unrest and the fall of the elected government, as well as a major banking crisis and a default on nearly $150 billion of government debt. Because the central bank of Argentina had no control over monetary policy under the currency board system, it was unable to use monetary policy to expand the economy and get out of its recession. Furthermore, because the currency board did not allow the central bank to create pesos and lend them to banks, it had very little capability to act as a lender of last resort. In January 2002, the currency board finally collapsed

and the peso depreciated by more than 70%. The result was the full-scale financial crisis described in Chapter 9, with inflation shooting up and an extremely severe depression. Clearly, the Argentine public is not as enamoured of its currency board as it once was.

3.2 Dollarization times (1994-2004)

Another solution to the problems created by a lack of transparency and commitment to the exchange-rate target is dollarization, the adoption of a sound currency, like the US dollar, as a country's money. Indeed, dollarization is just another variant of a fixed exchange-rate target with an even stronger commitment mechanism than a currency board provides. As we have seen in Argentina, a currency board can be abandoned, allowing a change in the value of the currency, but a change of value is impossible with dollarization. A dollar bill is always worth one dollar, whether it is held in the United States or outside of it.

Dollarization has been advocated as a monetary policy strategy for emerging market countries. Panama has been dollarized since its independence in 1904. Dollarization was discussed actively by Argentine officials in the aftermath of the devaluation of the Brazilian real in January 1999 and was adopted by Ecuador in 2000 and El Salvador in 2001. Dollarization's key advantage is that it completely avoids the possibility of a speculative attack on the domestic currency (because there is none). (Such an attack is still a danger even under a currency board arrangement.)

Dollarization is subject to the usual disadvantages of an exchange-rate target (the loss of an independent monetary policy, increased exposure of the economy to shocks from the anchor country, and the inability of the central bank to create money and act as a lender of last resort). Dollarization has one additional disadvantage not characteristic of currency boards or other exchange-rate target regimes. Because a country adopting dollarization no longer has its own currency, it loses the revenue that a government receives by issuing money, which is called seignorage. Because governments (or their central banks) do not have to pay interest on their currency, they earn revenue (seignorage) by using this currency to purchase income-earning assets such as bonds. If an emerging market country dollarizes and gives up its currency, it needs to make up this loss of revenue somewhere, which is not always easy for a poor country.

4. The Model

The particular model we consider is the canonical three-equation Optimal Keynesian model of Clarida, Galí, and Gertler (2000). The price-adjustment condition is the modern Keynesian Phillips curve. This treatment of price adjustment has two primary qualities. The primary is its solid microeconomic establishments: it comes specifically from an presumption of occasional inflation of ostensible costs. The other is its comparative effortlessness: inflation depends as it were on anticipated future inflation and current output, with no part for past inflation or for more complicated flow. The aggregate-demand condition of the model is the new Keynesian IS curve. The ultimate condition portrays financial approach. So distant, since our goal has been to shed light on the essential suggestions of various presumptions concerning price adjustment, we have considered as it were basic ways of the money supply (or total request).

To construct a model that's more valuable for analyzing real macroeconomic fluctuations, however, we have to be expect that the central bank takes after a run the model for the interest rate. In specific, in keeping with the **forward-looking character** of the modern Keynesian Phillips curve and the optimal Keynesian IS curve, we accept the central bank takes after a **forward-looking** interest-rate run the model, altering the interest rate in reaction to changes in anticipated future inflation and output. The other fixing of the model is its fluctuations: it incorporates serially connected unsettling disturbances to all three

conditions. This permits us to analyze unsettling disturbances to private total request, price-setting behavior, and money related approach. At long last, for comfort, all the conditions are direct and the consistent terms are set to zero. Hence the factors ought to be deciphered as flights from their steady-state or slant values. The three core equations are:

$$y_t = E_t[y_{t+1}] - \frac{1}{\theta} r_t + u_t^{IS}, \theta > 0 \quad (1)$$

$$\pi_t = \beta[\pi_{t+1}] + ky_t + u_t^{\pi}, 0 < \beta < 1, k > 0 \quad (2)$$

$$r_t = \varphi_\pi E_t[\pi_{t+1}] + \varphi_y E_t[y_{t+1}] + u_t^{MP}, \varphi_\pi > 0, \varphi_y \geq 0 \quad (3)$$

Equation (1) is the new Keynesian IS curve, (2) is the new Keynesian Phillips curve, and (3) is the forward-looking interest-rate rule. The shocks follow independent AR-1 processes:

$$u_t^{IS} = \rho_{IS} u_{t-1}^{IS} + e_t^{IS}, \ -1 < \rho_{IS} < 1, \quad (4)$$

$$u_t^{\pi} = \rho_\pi u_{t-1}^{\pi} + e_t^{\pi}, \ -1 < \rho_\pi < 1, \quad (5)$$

$$u_t^{MP} = \rho_{MP} u_{t-1}^{MP} + e_t^{MP}, \ -1 < \rho_{MP} < 1, \quad (6)$$

where e^{IS}, e_t^{π} and e_t^{MP} are white-noise disturbances that are uncorrelated with one another.

The model is clearly greatly stylized. To provide few examples, all behavior is forward-looking; the elements of inflation and total request are exceptionally straightforward; and the modern Keynesian Phillips curve is accepted to depict inflation flow in spite of its destitute observational execution. In any case, since its center fixings are so straightforward and have such appealing microeconomic establishments, the model could be a key reference point in present day models of variances. The model and variations of it are as often as possible utilized, and it has been adjusted and expanded in numerous ways. The nearness of the forward-looking components infers that for a few parameter values, the model has sunspot solutions. The to begin with step in fathoming the model is to specific output and inflation in terms of their anticipated future values and the disturbances. Applying straightforward algebra to (1) (2) gives us

$$y_t = -\frac{\varphi_\pi}{\theta} E_t[\pi_{t+1}] + (1 - \frac{\varphi_y}{\theta}) E_t[y_{t+1}] + u_t^{IS} - \frac{1}{\theta} u_t^{MP}, \quad (7)$$

$$\pi_t = -(\beta - \frac{\varphi_\pi k}{\theta} E_t[\pi_{t+1}] + (1 - \frac{\varphi_y}{\theta}) kE_t[y_{t+1}] + ku_t^{IS} + u_t^{\pi} - \frac{k}{\theta} u_t^{MP}, \quad (8)$$

An critical and educator extraordinary case of the model happens when there's no serial relationship within the unsettling disturbances (so $\rho_{IS} = \rho_\pi = \rho_{MP} = 0$. In this case, since of the absence of any backward-looking components and any data about long-term values of the unsettling disturbances, there's no drive causing operators to anticipate the economy to depart from its steady state within the future. That is, the fundamental solution has $E_t[y_{t+1}]$ and $E_t[\pi_{t+1}]$ always equal to zero. To see this, note that with $E_t[y_{t+1}] = E_t[\pi_{t+1}] = 0$, equations (3), (7), and (8) simplify to

$$y_t = u_t^{IS} - \frac{1}{\theta} u_t^{MP}, \quad (9)$$

$$\pi_t = ku_t^{IS} + u_t^{\pi} - \frac{k}{\theta} u_t^{MP}, \quad (10)$$

$$r_t = u_t^{MP}. \quad (11)$$

In case (9) (11) depict the behavior of output, inflation, and the real interest rate, at that point, since we are considering the case where the u's are white noise, the desires of future output and inflation are continuously zero. (9) (11) hence speak to the elemental arrangement to the model in this case. These expressions appear the impacts of the different fluctuations. A contractionary monetary-policy shock raises the real interest rate and brings down output and inflation. A positive shock to private aggregate demand raises output and inflation and has no effect on the real interest rate. And an unfavorable inflation shock raises inflation but has no other impacts. These comes about are to a great extent routine. The IS shock falls flat to influence the real interest rate since financial arrangement is forward-looking, and so does not react to the increases in current output and inflation. The truth that money related arrangement is forward-looking is additionally the reason the inflation shock does not spill over to the other factors. The key message of this case of the model, be that as it may, is that the model, just like the standard real-business-cycle model, has no inside engendering components. Serial relationship in output, inflation, and the real interest rate can come as it were from serial relationship within the driving forms.

A direct way to illuminate the model within the common case is to utilize the strategy of undetermined coefficients. Given the model's direct structure and nonappearance of backward-looking behavior, it is sensible to figure that the endogenous factors are straight capacities of the unsettling disturbances.

5. Taylor Rule and Saint Louis Equation (IS – LM on short time)

To analyze the trade-off between the output gap and the inflation rate volatility, we used a backward-looking model. The data used in the empirical analysis are quarterly and were obtained from the National Institute of Statistics (from 2000: 1 to 2020: 4 for Republic of Moldova). We will analyze the various models of dynamic price adjustment in a com- mon framework. The framework draws heavily on the model of exogenous nominal rigidity and the model of inflation targeting . Time is discrete. Each period, imperfectly competitive firms produce output using labor as their only input. As in, the production function is one-for-one; thus aggregate output and aggregate labor input are equal. The model omits government purchases and international trade, aggregate consumption and aggregate output are equal. Households maximize utility, taking the paths of the real wage and the real interest rate as given. Firms, which are owned by the households, maximize the present discounted value of their profits, subject to constraints on their price-setting (which vary across the models we will consider). Finally, a central bank determines the path of the real interest rate through its conduct of monetary policy.

Besides, as we are going see within the another two examples, the same variables that can cause financial unsettling disturbances to have critical real impacts have imperative results for the impacts of other unsettling disturbances. This discourse recommends that a basic test of pure real-business-cycle models is whether money related unsettling disturbances have significant real impacts. Somewhat for this reason, an gigantic sum of inquire about has been committed to attempting to decide the impacts of financial changes. Since our objective is to test whether money related changes have real impacts, a apparently self-evident put to begin is to fair relapse output on money. Such relapses have a long history. One of the most punctual and most clear was carried out by Leonall Andersen and Jerry Jordan of the Government Save Bank of St. Louis (Andersen and Jordan, 1968).

For that reason, the relapse of output on money is known as the St. Louis condition. Here we consider an illustration of the St. Louis condition. The left-hand-side variable is the alter within the log of real GDP. The most right-hand-side variable is the change within the log of the money stock, as measured by M2; since any impact of money on output may happen with a slack, the contemporaneous and four slacked values are included. The relapse

moreover incorporates a steady and a time slant (to account for patterns in output and money development). The information are quarterly, and the test period is 2000Q1 2020Q4.[1]

The results are:

$$\Delta lnY_t = C + \Delta lnm_t + \Delta lnm_{t-1} + \Delta lnm_{t-2} + \Delta lnm_{t-3} + \Delta lnm_{t-4} - t \quad (12)$$

where the numbers in parentheses are standard errors. The entirety of the coefficients on the current and four lagged values of the money-growth variable is 0.26, with a standard mistake of 0.10. In this way the estimates suggest that a 1 percent increment within the money stock is related with an increment of 1% percent in output over the another year, and the invalid theory of no affiliation is rejected at high levels of significance. Does this regression, at that point, give critical evidence in support of money related over real investments of variances? The answer is no. There are a few essential issues with a regression like this one. To begin with, causation may run from output to money instead of from money to output. A straightforward story, formalized by Lord and Plosser (1984), is that when firms arrange to extend generation, they increment their money property since they will ought to buy more intermediate inputs. Essentially, household agents may increment their money possessions when they arrange to extend their purchases.

Total measures of the money stock, such as M2, are not set specifically by the National Bank of Moldova but are decided by the interaction of the supply of high-powered money with the behavior of the keeping money framework and the public. Hence shifts in money demand stemming from changes in firms' and households' generation plans can lead to changes within the money stock. As a result, we may see changes within the money stock in progress of output movements indeed in the event that the changes in money are not causing the output movements. The moment and indeed more extreme issue with the St. Louis condition involves the determinants of monetary approach. Assume the National Bank of Moldova adjust the money stock to undertake to balanced other components that impact total output.

At that point on the off chance that financial changes have real impacts and the NBM's endeavors to stabilize the economy are fruitful, we are going to observe fluctuations in money without movements in output. In this way, fair as we cannot conclude from the positive relationship between money and output that money causes output, in case we fall flat to watch such a relationship we cannot conclude that money does not cause output. A prosaic difficulty with the St. Louis condition is that there have been huge shifts within the request for money over this period. At slightest a few of the shifts are likely due to money related innovation and deregulation, but their causes are not completely caught on.

Models with sticky costs foresee that in case the NBM does not increase the money supply completely in reaction to these unsettling disturbances, there will be a negative relationship between money and output. A positive money demand shock, for case, will increment the money stock but increment the interest rate and decrease output. And indeed on the off chance that the NBM accommodates the shifts, the fact that they are so huge may cause a number of perceptions to have a unbalanced impact on the results. As a result of the money request shifts, the assessed relationship between money and output is touchy to such things as the test period and the degree of money. For example, if equation (12) is estimating utilizing M1 in place of M2, or in case it is assessed over a somewhat different test period, the comes about alter impressively. Since of these challenges, regressions like (12) are of little value in determination the impacts of money related changes on output.

Based on the Granger causality test, we opted for one of the two equations, which

Even if both models describe the mechanism for adjusting monetary policy with the medium-term economic growth policy of the Republic of Moldova. We mention that the first equation is closer to Taylor's original rule elaborated by Taylor in his work.[1]

[1] The start date is determined by data availability. The end date is chosen to not to omit the enormous financial and monetary changes associated with the COVID 19 Recession.

Univariate model (Taylor's rule). Represent the following equation:

$$i_t = \pi_t + r_t^* + a_\pi(\pi_t - \pi_t^*) + a_y(y_t - \bar{y_t}) \quad (13)$$

where, $i_t -$ base rate; $\pi_t -$ inflation rate; $\pi_t^* -$ the target inflation rate; r_t^*- the real base equilibrium rate; y_t- the natural logarithm of real GDP; $\bar{y_t}$- the natural logarithm of potential GDP. In this equation, the parameters a_π *and* $a_y$must be positive.

6. The natural rate level of output (IS-LM model in the long-run)

So far in our *ISLM* analysis, we have been assuming that the price level is fixed so that nominal values and real values are the same. This is a reasonable assumption for the short run, but in the long run the price level does change. To see what happens in the *ISLM* model in the long run, we make use of the concept of the **natural rate level of output** (denoted by Y_n), which is the rate of output at which the price level has no tendency to rise or fall. When output is above the natural rate level, the booming economy will cause prices to rise; when output is below the natural rate level, the slack in the economy will cause prices to fall.

Because we now want to examine what happens when the price level changes, we can no longer assume that real and nominal values are the same. The spending variables that affect the *IS* curve (consumer expenditure, investment spending, government spending and net exports) describe the demand for goods and services and are *in real terms*; they describe the physical quantities of goods that people want to buy. Because these quantities do not change when the price level changes, a change in the price level has no effect on the *IS* curve, which describes the combinations of the interest rate and aggregate output *in real terms* that satisfy goods market equilibrium.

Figure 1 shows what happens in the *ISLM* model when output rises above the natural rate level, which is marked by a vertical line at Y_n. Suppose that initially the *IS* and *LM* curves intersect at point 1, where output $Y = Y_n$. Panel (a) examines what happens to output and interest rates when there is a rise in the money supply. The rise in the money supply causes the *LM* curve to shift to LM_2, and the equilibrium moves to point 2 (the intersection of IS_1 and LM_2), where the interest rate falls to i_2 and output rises to Y_2. However, as we can see in panel (a), the level of output at Y_2 is greater than the natural rate level Y_n, and so the price level begins to rise.

In contrast to the *IS* curve, which is unaffected by a rise in the price level, the *LM* curve is affected by the price level rise because the liquidity preference theory states that the demand for money *in real terms* depends on real income and interest rates. This makes sense because money is valued in terms of what it can buy. However, the money supply the media reports in euros is not the money supply in real terms; it is a nominal quantity. As the price level rises, the quantity of money *in real terms* falls, and the effect on the *LM* curve is identical to a fall in the nominal money supply with the price level fixed. The lower value of the real money supply creates an excess demand for money, causing the interest rate to rise at any given level of aggregate output, and the *LM* curve shifts back to the left. As long as the level of output exceeds the natural rate level, the price level will continue to rise, shifting the *LM* curve to the left, until finally output is back at the natural rate level Y_n. This occurs

1 **Taylor, John B. 1993.** ‘‘Discretion versus Policy Rules in Practice.’’ *Carnegie-Rochester Conference Series on Public Policy* 39 (December): 195 214.

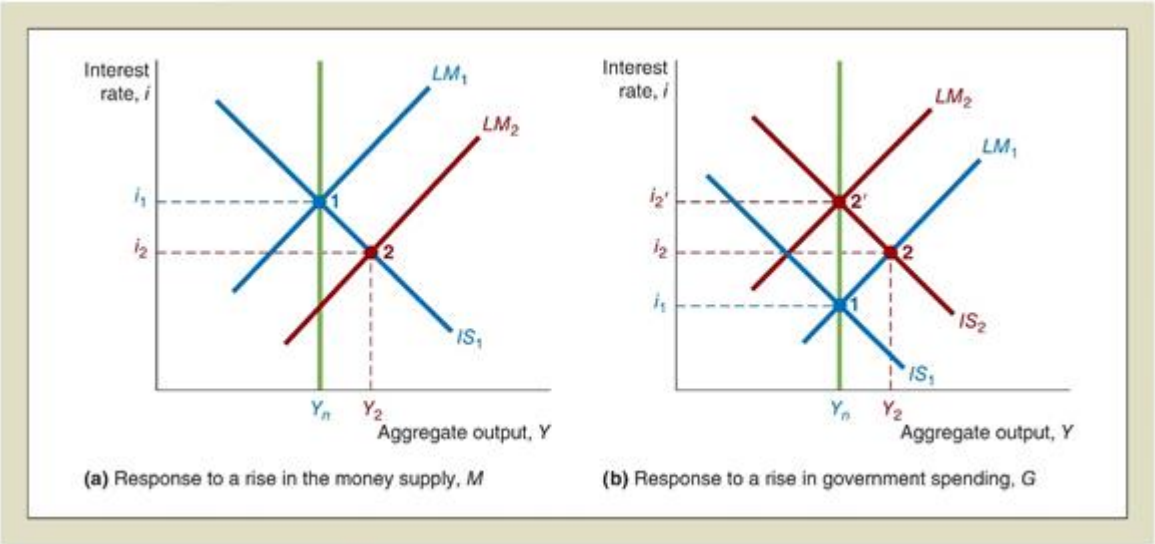

Figure 1 *ISLM* model in the long run

In panel (a), a rise in the money supply causes the *LM* curve to shift rightward to *LM2*, and the equilibrium moves to point 2, where the interest rate falls to *i*2 and output rises to *Y*2. Because output at *Y*2 is above the natural rate level *Yn*, the price level rises, the real money supply falls, and the *LM* curve shifts back to *LM*1; the economy has returned to the original equilibrium at point 1. In panel (b), an increase in government spending shifts the *IS* curve to the right to *IS2*, and the economy moves to point 2, at which the interest rate has risen to *i*2 and output has risen to *Y*2. Because output at *Y*2 is above the natural rate level *Yn*, the price level begins to rise, real money balances *M/P* begin to fall, and the *LM* curve shifts to the left to *LM2*. The long-run equilibrium at point 2 has an even higher interest rate at *i*2, and output has returned to *Yn*.

When the *LM* curve has returned to LM_1, where real money balances *M/P* have returned to the original level and the economy has returned to the original equilibrium at point 1. The result of the expansion in the money supply in the long run is that the economy has the same level of output and interest rates.

The fact that the increase in the money supply has left output and interest rates unchanged in the long run is referred to as **long-run monetary neutrality**. The only result of the increase in the money supply is a higher price level, which has increased proportionally to the increase in the money supply so that real money balances *M/P* are unchanged.

Panel (b) looks at what happens to output and interest rates when there is expansionary fiscal policy such as an increase in government spending. As we saw earlier, the increase in government spending shifts the *IS* curve to the right to IS_2, and in the short run the economy moves to point 2 (the intersection of IS_2 and LM_1), where the interest rate has risen to i_2 and output has risen to Y_2. Because output at Y_2 is above the natural rate level Y_n, the price level begins to rise, real money balances *M/P* begin to fall, and the *LM* curve shifts to the left.

Only when the *LM* curve has shifted to LM_2 and the equilibrium is at point 2, where output is again at the natural rate level Y_n, does the price level stop rising and the LM curve come to rest. The resulting long-run equilibrium at point 2′ has an even higher interest rate at i2 and output has not risen from Yn. Indeed, what has occurred in the long run is complete crowding out: the rise in the price level, which has shifted the LM curve to LM2, has caused the interest rate to rise to i2, causing investment and net exports to fall enough to offset the increased government spending completely. What we have discovered is that even though

complete crowding out does not occur in the short run in the ISLM model (unless the LM curve is vertical), it does occur in the long run. Our conclusion from examining what happens in the ISLM model from an expansionary monetary or fiscal policy is that although monetary and fiscal policy can affect output in the short run, neither affects output in the long run. Clearly, an important issue in deciding on the effectiveness of monetary and fiscal policy to raise output is how soon the long run occurs. This is a topic that we explore in the next chapter.

IS-LM model and the aggregate demand curve

We now examine further what happens in the *ISLM* model when the price level changes. When we conduct the *ISLM* analysis with a changing price level, we find that as the price level falls, the level of aggregate output rises. Thus we obtain a relationship between the price level and quantity of aggregate output for which the goods market and the market for money are in equilibrium, called the **aggregate demand curve**. This aggregate demand curve is a central element in the aggregate supply and demand analysis of Chapter 22, which allows us to explain changes not only in aggregate output but also in the price level.

Deriving the aggregate demand curve

Now that you understand how a change in the price level affects the LM curve, we can analyse what happens in the ISLM diagram when the price level changes. This exercise is carried out in Figure 2. Panel (a) contains an ISLM diagram for a given value of the nominal money supply. Let us first consider a price level of P1. The LM curve at this price level is LM (P1), and its intersection with the IS curve is at point 1, where output is Y1. The equilibrium output level Y1 that occurs when the price level is P_1 is also plotted in panel (b) as point 1. If the price level rises to P_2, then *in real terms* the money supply has fallen. The effect on the *LM* curve is identical to a decline in the nominal money supply when the price level is fixed: The *LM* curve will shift leftward to *LM* (P_2). The new equilibrium level of output has fallen to Y_2, because planned investment and net exports fall when the interest rate rises. Point 2 in panel (b) plots this level of output for price level P_2. A further increase in the price level to P_3 causes a further

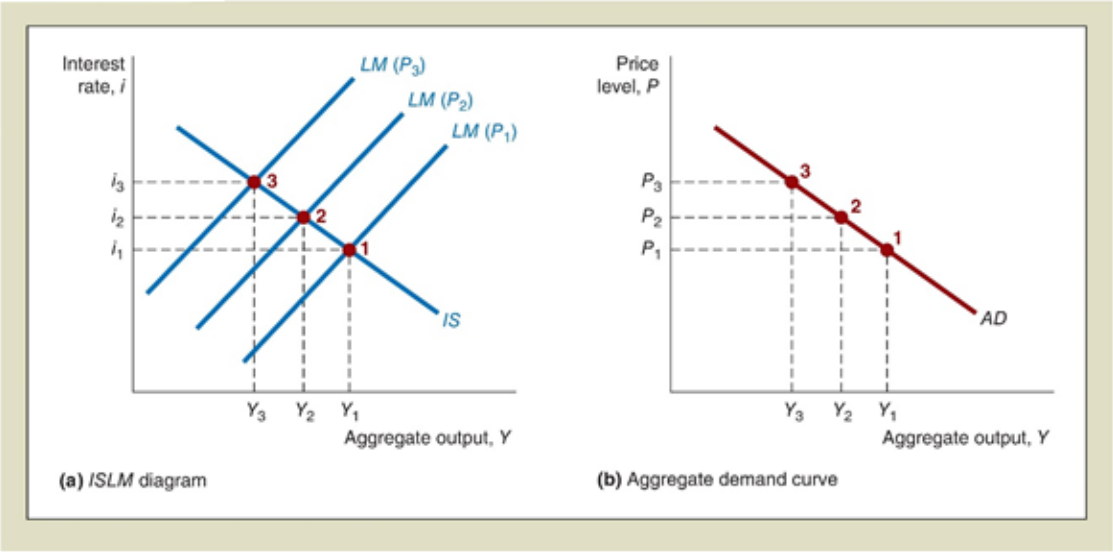

Figure 2. Deriving the aggregate demand curve

Expansionary fiscal policy, a rise in net exports, or more optimistic consumers and firms shift the IS curve to the ISLM diagram in panel (a) shows that with a given nominal money supply as the price level rises from P1 to P2 to P3, the LM curve shifts to the left, and equilibrium output falls. The combinations of the price level and equilibrium output from panel (a) are then plotted in panel (b), and the line connecting them is the aggregate demand curve AD.

Decline in the real money supply, leading to a further increase in the interest rate and a further decline in planned investment and net exports, and output declines to Y_3. Point 3 in panel (b) plots this level of output for price level P_3.

The line that connects the three points in panel (b) is the aggregate demand curve *AD*, and it indicates the level of aggregate output consistent with equilibrium in the goods market and the market for money at any given price level. This aggregate demand curve has the usual downward slope, because a higher price level reduces the money supply in real terms, raises interest rates and lowers the equilibrium level of aggregate output.

Factors that cause the aggregate demand curve to shift

ISLM analysis demonstrates how the equilibrium level of aggregate output changes for a given price level. A change in any factor (except a change in the price level) that causes the *IS* or *LM* curve to shift causes the aggregate demand curve to shift. To see how this works, let's first look at what happens to the aggregate demand curve when the *IS* curve shifts.

Shifts in the IS curve

Five factors cause the *IS* curve to shift: changes in autonomous consumer spending, changes in investment spending related to business confidence, changes in government spending, changes in taxes and autonomous changes in net exports. How changes in these factors lead to a shift in the aggregate demand curve is examined in Figure 3

Suppose that initially the aggregate demand curve is at AD_1 and there is a rise in, for example, government spending. The *ISLM* diagram in panel (b) shows what then happens to equilibrium output, holding the price level constant at P_A. Initially, equilibrium output is at Y_A at the intersection of IS_1 and LM_1. The rise in government spending (holding the price level constant at P_A) shifts the *IS* curve to the right and raises equilibrium output to $Y_{A'}$. In

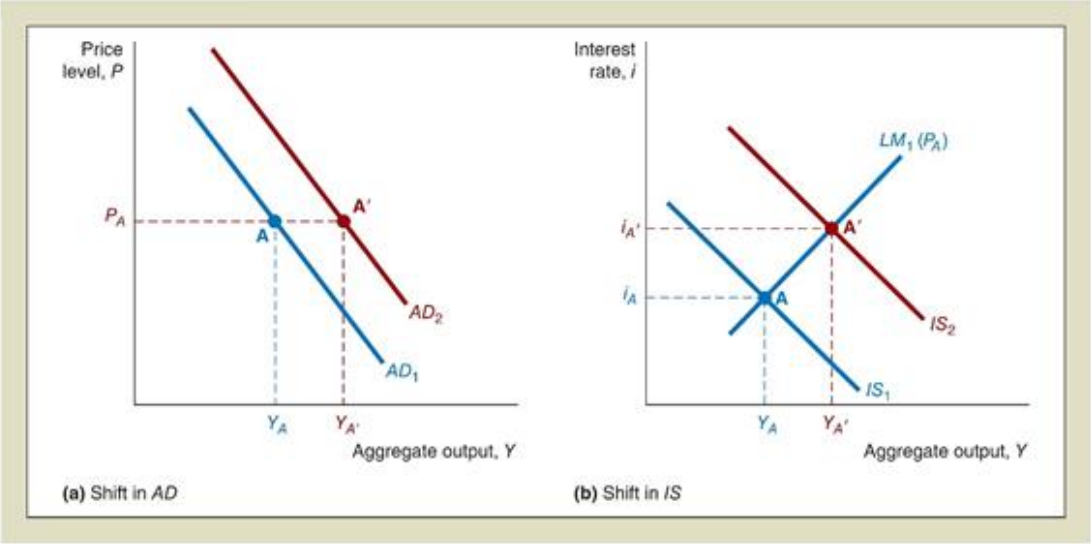

Figure 3 Shift in the aggregate demand curve caused by a shift in the IS curve.

Expansionary fiscal policy, a rise in net exports, or more optimistic consumers and firms shift the IS curve to the right in panel (b), and at a price level of PA, equilibrium output rises from YA to YA_.This change in equilibrium output is shown as a movement from point A to point A in panel (a); hence the aggregate demand curve shifts to the right, from AD1 to AD2.

Panel (a), this rise in equilibrium output is shown as a movement from point A to point A′, and the aggregate demand curve shifts to the right (to AD_2).

The conclusion from Figure is that ***any factor that shifts the IS curve shifts the aggregate demand curve in the same direction***. Therefore, 'animal spirits' that encourage a rise in autonomous consumer spending or planned investment spending, a rise in government spending, a fall in taxes or an autonomous rise in net exports – all of which shift the *IS* curve to the right – will also shift the aggregate demand curve to the right. Conversely, a fall in autonomous consumer spending, a fall in planned investment spending, a fall in government spending, a rise in taxes or a fall in net exports will cause the aggregate demand curve to shift to the left.

Shifts in the LM curve

Shifts in the *LM* curve are caused by either an autonomous change in money demand (not caused by a change in *P*, *Y* or *i*) or a change in the money supply. Figure 4 shows how either of these changes leads to a shift in the aggregate demand curve. Again, we are initially at the AD_1 aggregate demand curve, and we look at what happens to the level of equilibrium output when the price level is held constant at P_A. A rise in the money supply shifts the *LM* curve to the right and raises equilibrium output to Y_A'. This rise in equilibrium output is shown as a movement from point A to point *A′* in panel (a), and the aggregate demand curve shifts to the right.

Our conclusion from Figure 4 is similar to that of Figure 3: ***holding the price level constant, any factor that shifts the LM curve shifts the aggregate demand curve in the same direction***. Therefore, a decline in money demand as well as an increase in the money supply, both of which shift the *LM* curve to the right, also shift the aggregate demand curve to the right. The aggregate demand curve will shift to the left, however, if the money supply declines or money demand rises.

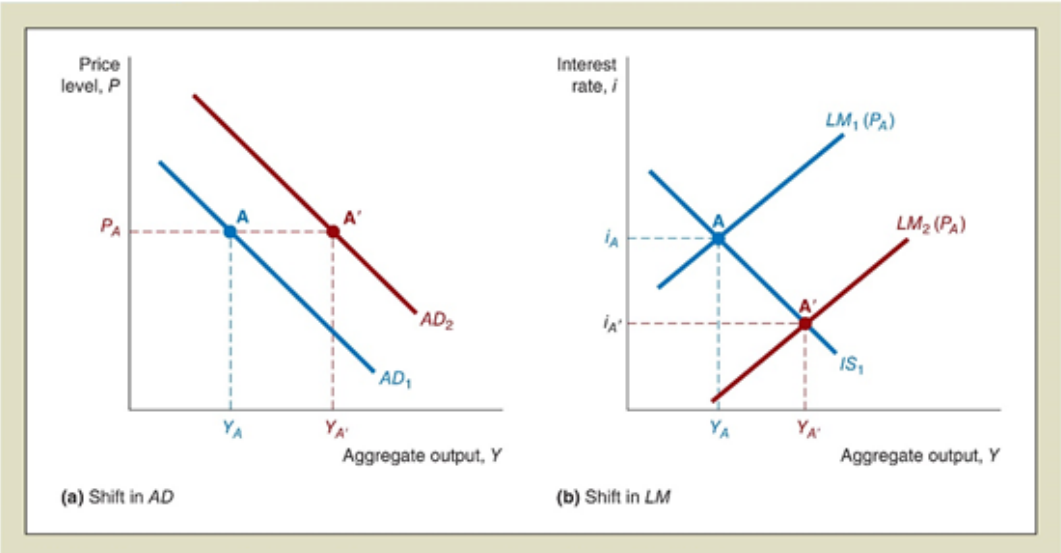

Figure 4 Shift in the aggregate demand curve caused by a shift in the LM curve

A rise in the money supply or a fall in money demand shifts the *LM* curve to the right in panel (b), and at a price level of *PA*, equilibrium output rises from *YA* to *YA_*. This change in equilibrium output is shown as a movement from point A to point A in panel (a); hence the aggregate demand curve shifts to the right, from *AD1* to *AD2*.

7. Government Policy in perspective of EURO accession: ERM II and streighforwarding the free trade (times)

A monetary union is formed when two or more countries abandon their own national currencies for a common currency managed by a common central bank. These countries fix their exchange rates irrevocably and irreversibly towards the common currency. Because of its irrevocability and irreversibility, a monetary union is often viewed as the most extreme variant of exchange-rate targeting. A monetary union differs from dollarization in that dollarized countries like Ecuador and Panama, for example, do not have any influence on the Fed's monetary policy decisions. On the other hand, countries participating in a monetary union take part in monetary decision processes and share governance. Moreover, union members also share the revenues that come from printing money.

There are several existing monetary unions around the world. Probably, the most well known is the Economic and Monetary Union (EMU). Formed on 1 January 1999, the EMU currently (as of 2012) comprises 17 European countries which irrevocably and irreversibly fixed the values of their national currency against the euro, created the European Central Bank (ECB) which conducts monetary policy for the entire euro area. Other examples of monetary unions include the West African Economic and Monetary Union (WAEMU), which engulfs eight West African nations that use the West African CFA franc as their common currency, and the Economic and Monetary Community of Central Africa, which comprises six Central African nations and uses the Central African CFA franc as their legal tender. There are monetary unions yet to be formed: the Gulf Cooperation Council (established in May 1981) aims at full economic and monetary union (see box below).

But why would a certain group of independent countries decide to give up their currencies? More specifically, what are the benefits and the costs of a monetary union?

Benefits of monetary union

The benefits of a monetary union are mostly microeconomic in nature. They include: increased price transparency, reduced transaction costs and reduced exchange rate uncertainty. First, sharing one currency increases price transparency. If consumers see prices in the same unit of account, they are better able to compare them. This increases competition among sellers and thus leads to efficiency gains. To see an example, suppose you live in Austria and want to buy a mountain bike for your next adventure in the Scottish Highlands. You start searching the Internet for possible bikes to buy, and find your preferred model both from an Austrian bike shop for €600 and from a German portal in Munich, but for €400. Because a bicycle can be transported relatively easily and cheaply, you will probably buy the bike in Munich. A monetary union, by easing price comparison, reduces price differentials through higher competition.

Second, a monetary union reduces foreign transaction costs, related to commission charges or margins between the buy and the sell exchange rates charged by banks and currency exchanges. For instance, the European Commission has estimated that the gains of eliminating foreign transaction costs may arrive at 0.3-0.5% of EU GDP each year. Third, with a common currency, the uncertainty associated with future exchange rate movements is eliminated. Of course, exchange rate uncertainty can be reduced through hedging (protecting oneself against future exchange rate movements). But hedging costs money. Both the elimination of the exchange rate risk and the reduction of transaction costs stimulate trade

among the members of a monetary union. For instance, recent empirical studies estimate that EMU boosted eurozone trade by something between 5% and 20%.

Besides these traditional microeconomic benefits, a single currency has also the main macroeconomic advantage of anchoring inflation expectations and reducing inflation uncertainty. If the newly created common central bank is credibly committed to the goal of price stability, the monetary union will help anchor inflationary expectations to low levels also in those countries of the union which in the past had a weak anti-inflationary reputation. Therefore these countries may benefit to a great extent from joining a monetary union. A clear example in this respect is given by Italy, which since joining the EMU has been able to bring down inflation to a considerable extent.

Finally, the creation of a common central bank with a strong anti-inflation reputation may have the additional benefit of making the new common currency increasingly used as reserve currency in international financial transactions. This will stimulate activity for domestic financial markets, creating enhanced investment opportunities for bank and non-bank businesses in the monetary union. In this respect, with the creation of the euro in 1999, many commentators have argued that the supremacy of the US dollar as reserve currency may be subject to a serious challenge (see the Closer look box: 'The euro's challenge to the dollar').

Let us now move to the costs of a monetary union.

Costs of monetary union

The costs of a monetary union, as in the other forms of exchange-rate targeting, derive from the loss of an independent monetary policy to deal with domestic considerations. In particular, union members are no longer able to influence the exchange rate of their currency, and are unable to set their own short-term interest rates or determine the amount of money supply in their country. But how costly is it to lose the monetary instruments to deal with domestic considerations in a monetary union? The answer to this question is at the heart of the theory of Optimal Currency Area (OCA), pioneered by Robert Mundell, the 1999 Nobel Prize winner and economics professor at Columbia University in New York. On the basis of this theory, a geographical region constitutes an optimal currency area when the use of a common currency leads to no loss of welfare related to the loss of the monetary policy instruments. In particular, two main criteria can be identified. First, the optimality of a currency area depends on how important asymmetric shocks in the monetary union really are. Second, if asymmetric shocks are present, the question is whether or not there are adjustment mechanisms that help the economy return to equilibrium. Let us address these two aspects in turn.

An asymmetric shock is a shock that hits only one of the countries in the monetary union. Because a country-specific shock may have a small impact on the economic conditions of the union as a whole, it cannot be addressed by the common central bank. Therefore, the effects of an asymmetric shock have to be dealt with by the country itself. Because of the absence of exchange rate adjustments, dealing with such shocks can be costly. If asymmetric shocks are large and frequent, the cost of losing monetary policy as a tool to manage the economy may be high.

To see an example, let us consider the case in which two countries A, and B, form a monetary union. Therefore, countries A and B share the same currency, which is managed by the new common central bank. Now, let us suppose that countries A and B are hit by an asymmetric demand shock, because for instance there has been a shift of demand from the products of country A to the products of country B. As a result, in country A output declines and unemployment rises, whereas in country B output grows and unemployment falls. Both countries are now in disequilibrium, and need adjustment.

If the two countries had not been in a monetary union and had chosen a flexible exchange rate regime, the adjustment mechanism would have been the following. The central bank of country A would have lowered its interest rate to stimulate aggregate demand, whereas country B would have followed the opposite policy. The resulting depreciation of the currency of country A relative to the currency of country B would have further stimulated the aggregate demand of country A, and reduced that of country B, leading to a return to equilibrium in both countries. On the other hand, if both countries are part of a monetary union, the interest rate and exchange rate instruments cannot be used to address domestic conditions. This simple example shows that one condition for a currency area to be optimal is the absence of asymmetric shocks.13 But are there other adjustment mechanisms that would help the two countries in a monetary union to return to equilibrium?

Alternative adjustment mechanisms helping to restore equilibrium is through wage flexibility and labour mobility. If wages in the two countries are flexible, due to high unemployment in country B workers will reduce their wage claims, making the products of country B cheaper and more competitive. In country A, on the other hand, the excess demand for labour will lead to increased wages and production prices, making products in country A more expensive and less competitive. As a consequence, equilibrium will be restored. Another mechanism that can help restore equilibrium requires labour mobility. If people from country A (where there is excess supply of labour) are ready to move to country B (where there is excess demand for labour), then equilibrium is restored without changes in the wage and price level in the two countries. Wage flexibility and labour mobility are the two key adjustment mechanisms of the original OCA theory. Therefore, the second condition for a currency area to be optimal is the presence of sufficient flexibility of the labour market. Another adjustment mechanism which may help restore equilibrium works through fiscal policy. Suppose that in the monetary union there exists a centralized fiscal authority that can levy taxes and make transfers (e.g. pensions and unemployment benefits) to residents of countries A and B. Under these circumstances, a potential adjustment mechanism may work through automatic transfers from country B to country A. The higher tax revenues deriving from the rise in output of country B, can be for instance automatically transferred to country A in the form of higher unemployment benefits. With such a system of redistribution in place, the problems of the adjustment mechanisms are reduced. If the centralization of the budget is non-existent, national fiscal authorities of countries A and B can still deal with the effects of asymmetric shocks individually. An example of centralized fiscal authority in a monetary union is given by the US, whereas the model of decentralized fiscal authorities is in place in the euro area.

Now that we know the main criteria to judge how optimal a monetary union is, we are ready to tackle two important questions which have kept many economists, policymakers and commentators rather busy over the last few years. That is, is the euro area an optimal currency area? Will the euro area expand in the future? In the next two boxes we will address these two questions in turn.

The Euro's challenge to the dollar

With the creation of the Economic and Monetary Union and the euro in 1999, the US dollar is facing a challenge to its position as the key reserve currency in international financial transactions. Adoption of the euro increases integration of Europe's financial markets, which could rival those in the United States. The resulting increase

in the use of euros in financial markets will make it more likely that international transactions are carried out in the euro. The economic clout of the euro area rivals that of the United States: both have a similar share of world GDP (around 20%) and world exports (around 15%). If the European Central Bank can make sure that inflation remains low so that the euro becomes a sound currency, this should bode well for the euro.

However, for the euro to eat into the dollar's position as a reserve currency, the euro area must function as a cohesive political entity that can exert its influence on the world stage. There are serious doubts on this score, however, with the 'no' votes on the European constitution by France and the Netherlands in 2005 and particularly with the lack of political consensus shown by European leaders to deal with euro debt crisis. Most analysts think it will be a long time before the euro drives out the dollar in international financial transactions.

IS the euro area an optimal currency area?

When evaluating how optimal a currency area is, the presence of adjustment mechanisms to absorb asymmetric shocks hitting the countries in the monetary union is of crucial importance. First, however, we need to see how often such shocks occur. Some early evidence in the 1990s showed that in the pre-EMU period economic shocks hitting the European countries were uncorrelated, and

the business cycles not fully synchronized. The general conclusion from this empirical literature was that a monetary union of all EU members was not optimal. But is it correct to judge the optimality of a currency area before the adoption of the common currency? By joining a monetary union, countries intensify their trade relationships which leads to more business cycle synchronization. Work carried out by two American economists, Jeffrey Frankel and Andy Rose, seems to support this view. They find that the more countries trade with each other, the more correlated their business cycles are. Similar results are also found in more recent empirical studies. This tells us that a currency area may not be optimal ex ante, but it may become so ex post.

The enhanced trade integration and increased business cycle convergence do not imply the absence of asymmetric shocks in EMU. Therefore the question whether adjustment mechanisms are available remains relevant. In terms of flexibility of labour markets, European countries show a relatively poor record. First, European wages are very inflexible, mainly due to labour unions that are relatively much stronger in European countries than in other industrialized countries. Second, the degree of labour mobility across European countries is much lower than within US regions. But why are Europeans so immobile? When considering moving to another country, people consider not only economic incentives (availability of jobs, higher wages, career opportunities in general, social benefits, etc.), but also weigh factors such as cultural differences, language barriers, traditions, and family and friends left behind.

Apparently for Europeans the prospect of better labour

market conditions does not weigh enough against the disadvantages of leaving their country of residence. This will probably change in the future as a result of economic and political integration, but this process is working rather slowly.

If the labour market is not flexible enough, is the adjustment mechanism working through fiscal policy operative in Europe? Currently, the EU centralized budget accounts for a mere 1% of the EU GDP. Thus no significant centralized redistribution system is in place

in Europe. This is in clear contrast with the US, where it is estimated that between 20% and 30% of the effects of asymmetric shocks are compensated by transfers

of the federal government. Moreover, euro members cannot make full use of national fiscal policy. In fact, in order to ensure fiscal discipline of member states, in 1997 European leaders introduced the Stability and Growth Pact (SGP), which imposes constraints on the national fiscal policies of EU countries. More specifically, according to the SGP the budget deficit/GDP ratio should not exceed 3% and government debt/GDP ratio should stay below 60%. As such, the SGP limits the ability to use fiscal policy as a stabilizing tool.

To sum up, we have seen that as for the occurrence of asymmetric shocks and business cycle convergence, the EMU countries are showing gradual improvement. However, on the

basis of the labour and fiscal adjustment mechanisms, the EMU is far from being an OCA. So, why did European leaders introduce the euro? Commentators such as Barry Eichengreen and Martin Feldstein argue that the euro was introduced for political reasons, and view the EMU as the outcome of a bargain between Germany striving for more political integration and

France trying to acquire a say in monetary policy. Other economists, like Charles Wyplosz, give more credit to the economic arguments behind EMU and point to the 'impossible trilogy', the simultaneous existence of free capital mobility, monetary independence and a fixed exchange rate. With full capital mobility, the European countries had no other choice than to move to a union. The alternatives would have been continued German monetary hegemony or a float with long and disruptive swings in the nominal exchange rates.

Will the euro area expand in the future?

As of 2012, 17 of the 27 European Union (EU) member countries were part of the EMU, whereas 10 EU countries had not adopted the euro. The latter are three of the old EU countries (Denmark, Sweden and the UK) and seven of the new EU member states (Bulgaria, the Czech Republic, Hungary, Latvia, Lithuania, Poland and Romania). Will these countries join the euro area in the future? Before answering this question, we need to discuss the convergence criteria of the Maastricht Treaty, which was signed in December 1991 and is the foundation stone of the process towards monetary unification in Europe.

According to the Maastricht Treaty, in order for an EU member to join the eurozone it has to fulfil four main convergence criteria, all of which stress macroeconomic convergence between countries before accession to the eurozone. The first criterion determines that the inflation rate in the acceding country should not exceed the average of the three lowest inflation rates in the EU plus 1.5%. The second criterion states that the long-term interest rate should not be more than 2% higher than the average observed in these three low-inflation countries. According to the budgetary criterion, the budget deficit/GDP ratio should not exceed 3% (if it does, it should be declining continuously and substantially to approach the desired level) and government debt/ GDP ratio should stay below 60% (if it is not currently under this threshold it should have a declining trend and approach the threshold level at a swift enough rate). Finally, the fourth criterion ensures exchange rate stability. In particular, would-be members of the eurozone should join the ERM system and spend at least two years without devaluation prior to joining. The rationale behind the convergence criteria is ensuring macroeconomic convergence with the eurozone members. All the convergence criteria (through different mechanisms) have the goal of avoiding inflation differentials in the eurozone. This is necessary because traditionally low-inflation countries (e.g. Germany) agreed to the adoption of the euro if they received some guarantee that with the new currency, the euro, they will be able to keep low inflation in their economies.

Whereas the seven countries that entered the EU in or after 2004 will have to introduce the euro once they have fulfilled the convergence criteria, the three old EU members (Denmark, Sweden and the UK) decided not to join the EMU. Despite satisfying the convergence criteria, Denmark was given the right to condition its entry on the result of a referendum. Sweden, by refusing to enter ERM, did not join as the exchange-rate criterion was not fulfilled. Finally, the UK obtained an 'opt-out' clause, which gives it the right to decide whether to join or not at its discretion. But will the UK join the euro at some point in the future?

In 1997 the Blair government expressed its will to enter the eurozone conditional on five economic tests being passed. The five economic tests, some of which closely resemble the criteria of an OCA, are as follows. (1) Are business cycles and economic structures compatible so that we and others could live with euro interest rates on a permanent basis? (2)

If problems emerge, is there sufficient flexibility to deal with them? (3) Would joining EMU create better conditions for firms making long-term decisions to invest in Britain? (4) What impact would entry into EMU have on the financial services industry? (5) In summary, will joining EMU promote higher growth, stability and a lasting increase in jobs? The outcome of the evaluation in 1997 was that the UK had not yet passed the first test. In 2003 the Treasury repeated the analysis and reached the same conclusion. In particular, it was concluded that the timing of the UK business cycle was significantly different from that of the rest of the EU. By 2003 significant progress on convergence had been made and business cycles were more convergent with those of the euro area. But the presence of significant structural differences, in particular between the housing market in the UK and in the rest of Europe, led to the conclusion that the UK was not fit to join the euro. Although the establishment of the five economic tests shows that economic arguments are important, as we have seen in the previous Application, adopting the euro is also (if not mostly) a political decision. Many British leaders have regarded the adoption of the euro as a certain loss of political sovereignty. This seems to be the view of the new Liberal–Conservative government, which ruled out entry to the euro at least till the next election.

Over the last few years, due to the dramatic developments of the euro sovereign debt crisis (see Chapter 9) public and political support towards entry has weakened. In fact, as of early 2012, the question is not whether and when the euro area will expand, but it is rather if the EMU will contract or even break up.

For instance, the quick deterioration of the Greek fiscal position opened the possibility of Greece exiting the eurozone.

Financial crisez 2015 and IS-LM model under Drăguțanu governorship (2009-2016)

Since World War II, government policymakers have tried to promote high employment without causing inflation. If the economy experiences a recession such as the one that began with the recent financial crisis, policymakers have two principal sets of tools that they can use to affect aggregate economic activity: monetary policy, the control of interest rates or the money supply, and fiscal policy, the control of government spending and taxes.

The ISLM model can help policymakers predict what will happen to aggregate output and interest rates if they decide to increase the money supply or increase government spending. In this way, ISLM analysis enables us to answer some important questions about the usefulness and effectiveness of monetary and fiscal policy in influencing economic activity. But which is better? When is monetary policy more effective than fiscal policy at controlling the level of aggregate output, and when is it less effective? Will fiscal policy be more effective if it is conducted by changing government spending rather than changing taxes? Should the monetary authorities conduct monetary policy by manipulating the money supply or interest rates? In this chapter, we use the ISLM model to help answer these questions and to learn how the model generates the aggregate demand curve featured prominently in the aggregate demand and supply framework (examined in Chapter 22), which is used to understand changes not only in aggregate output but also in the price level. Our analysis will show why economists focus so much attention on topics such as the stability of the demand for money function and whether the demand for money is strongly influenced by interest rates.

First, however, let's examine the ISLM model in more detail to see how the IS and LM curves developed in Chapter 20 shift and the implications of these shifts. (We continue to assume that the price level is fixed so.

8. Data

The data series used in the empirical analysis have a quarterly frequency and were obtained from the National Bureau of Statistics for the Economy of the Republic of Moldova, as well as from the Area Wide Model (AWM) database (for more details see Fagan et al., 2005 as well as the website - https://eabcn.org/page/area- wide-model). The analysed periods are 2000: 1–2021: 1. Regarding the determination of potential GDP, the HP filter was used to estimate it. As primary references or used two sources mainly as follows: https://www.mathworks.com/help/econ/hpfilter.html but also the article by Robert J, Hodrick and Edward C. Prescott[1] from 1999. Phillips used in its unemployment rate model, however lately, the output gap is being used more and more frequently due to the problems encountered by measuring NAIRU, the natural unemployment rate, this being the reason why we used the production gap. We assumed that there are different models of dynamic Phillips Curve (PC)- price adjustment in a common framework. The system draws intensely on the model of exogenous ostensible inflexibility and the model of inflation targeting. Time is discrete. Each period, incompletely competitive firms deliver output utilizing labour as their as it were input. As within, the production function is one-for-one; in this way total output and total labour input are rise to. The model excludes government purchases and worldwide exchange, total consumption and total output are equal. Households maximize utility, taking the ways of the real wage and the real interest rate as given. Firms, which are claimed by the households, maximize the present discounted value of their profits, subject to constraints on their price-setting (which shift over the models we'll consider). At last, a central bank decides the way of the real interest rate through its conduct of money related arrangement.

9. Conclusions and Discussions

For many, the jury is out on the Taylor rule as it comes with several drawbacks, the most serious being it cannot account for sudden shocks or turns in the economy, such as a stock or housing market crash. In his research and original formulation of the rule, Taylor acknowledged this and pointed out that rigid adherence to a policy rule would not always be appropriate in the face of such shocks. Another shortcoming of the Taylor rule is that it can offer ambiguous advice if inflation and GDP growth move in opposite directions. During periods of stagnant economic growth and high inflation, such as stagflation, the Taylor rule provides little guidance to policy makers, since the terms of the equation then tend to cancel each other out. While several issues with the rule are, as yet, unresolved, many central banks find the Taylor rule a favorable practice and some research indicates that the use of similar rules may improve economic performance.

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[1] Hodrick, Robert J, and Edward C. Prescott. "Postwar U.S. Business Cycles: An Empirical Investigation." Journal of Money, Credit, and Banking. Vol. 29, No. 1, February 1997, pp. 1–16.

[2] *art. 13 para. (1) of the Code on Science and Innovation of the Republic of Moldova, no. 259/2004 (Official Monitor of the Republic of Moldova, 2018, nr.58-66, art.131)*

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