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TABLE OF CONTENTS

HOW CULTURE CAN MAKE A DIFFERENCE, APPLYING HOFSTEDE'S DIMENSIONS TO MANAGEMENT IN EX-COMMUNIST AND ASIAN COUNTRIES

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Abstract:
This article aims to define and to describe Geert Hofstede's Cultural Dimensions in a comparative manner in order to understand better the interrelationship between those six pillars and the rankings in the Global Competitiveness Report from 2016-2017. The following paper will give the reader a framework at how to look at differences in Slavic and eastern Asian cultures. It will also elaborate upon some comparative management concepts of eastern European and Asian individuals and then go on to make some correlations between the foundation of Cultural Management and the most problematic factors of doing business in each country. The final purpose of this paper is to diagnose some of the worse-case-scenarios that may arise when trying to expand a company to the extent of exploiting new market opportunities.

Keywords: Cultural Dimensions, Masculinity, Collectivism, Uncertainty Avoidance, Power Distance

1. INTRODUCTION

Culture is defined by Geert Hofstede (1980) as being, *"the collective programming of the mind distinguishing the members of one group or category of people from others"*. The inkling of culture is one that varies amongst variant scales. Imprisoned to the overview of Geert Hofstede's Cultural Dimensions Theory, cultures were researched and displayed to vary on a cosmopolitan scale. Even hence, cultures vary widely within national borders, and are shown to continuously change over time depending on many factors.

The importance of this paper lays in empowering tomorrow's global managers with the detailed knowledge that they need to succeed. They must know how to make the products more efficiently, where the raw materials, the labor force and their capital come from. Moreover, they need to understand the behaviors of the economically matured countries and how they will affect the outcomes of their decisions on a macroeconomic level.

From the groups of countries that I am comparing, I have chosen as representatives Ukraine and Poland for the slavic, excommunist group, Japan and China dor the asian one. First of all, I will mention some highlights from the Global Gender Gap Report 2017 because I strongly consider that equality between sexes is necessary in pursuance of common wealth.

Chinas progress towards gender parity has slowed. It has fully closed its gender gap in proffesional and technical roles and women tertiary enrollment, while recording a sma;l decrease in wage equality for similar work the past year.

Japan has also experienced a trend near-parity in enrolment in tertiary educatin, which will resukt in the country closing its Educational Attainment gender gap for the first time.

With an average remaining gender gap of 29.4% the Eastern Europe entered in the upper middle of the range of the Global Gender Gap Index overtaking the Latin America.

Power Distance

Is on what degree people accept the distribution of inequality in power. At 80 China sits in the higher rankings of PDI – i.e. a society that believes that inequalities amongst people are acceptable. The relationship between subordinates and superiors tends to be abusive from the top to the bottom of the hierarchical pyramid. Individuals should know their place and it is forbidden to aspire beyond their rank. This can be explained due to the Confucianism belief is undisputedly the most influential thought, which forms the foundation of the Chinese cultural tradition and still provides the basis for the norms of Chinese interpersonal behavior (Pye, 1972). In Confucianism, five basic human relations are defined, which are referred to as Wu Lun (master and follower, father and son, husband and wife, elder and younger brother, friend and friend).

At the medium score of 54, Japan is a borderline hierarchical society. Japanese are very self-conscious of their position in any social setting and act according to it. But they are doing better than most of the other Asian cultures. Some foreigners have difficulties understanding the Japanese slow decision-making process: all the decisions must be confirmed by each hierarchical layer and finally by the top management. This mechanism explains that the majority is important and every opinion is worth hearing. The meritocratic nature of the Nippon society might be a reason as well, in school they are thought about equality and empowerment through hard work. As in China's case we have this relationship defined but in a more approachable way. E.g: „oyabun-kobun" relationship with the higher managers (like mother and son)

Scoring 68%, Poland is a hierarchical society as well. Meaning that people accept a hierarchical order in which everybody has a place with no needs of further justification. Hierarchy in an organization is seen as a measurement for qualification, and subordinates always expect to be told what to do.

At the score of 92, Ukraine, is a country where power holders are known to be very distant in society. Born as a part of the Soviet Union, Ukraine developed as a very centralized country. Behavior has to reflect and represent the status roles in all areas of interactions: be it visits, negotiations or cooperation; the approach should be top-down and provide clear mandates for any task. Western visitors noticed that Ukrainian public workers lacked smile, straight face being their custom „setting".

Individualism

This dimension represents how people's needs and goals are prioritized. China accumulated 20% being perceived as a highly collectivist country where people act in the interests of the group and not necessarily of themselves as individuals. Due to this matter jobs and promotions are more likely to be transmitted in families' preferential treatment being something regular. Personal life and relationships surpass the professional life and company's objectives.

At the score of 46 Japan is collectivistic society, once again it is not as collectivistic as most of her neighbors. The most popular explanation for this is that Japanese society has a very strong ethic and they usually don't have extended family support system such as more collectivistic societies (China). Because of their loyalty to the company they work at (in contrast with China), Japanese individuals are not that inclined to the family life. As a result of being a paternalistic society, the children had to leave home and make their own living. Japanese group behavior is situational, they tend to be devoted to extended groups, such as the local community. Nowadays one of the country's biggest problems is the suicide rate amongst elders. After retirement, they found themselves alone and idly, becoming more and more depressed. You could say that the Japanese in-group is situational. Japanese are rated as collectivistic by the Western standards and as Individualist by Asian standards. They used to have „keiretsu" which are groups of enterprises with interlocking business relationships who dominated Japanese economy.

Poland, with a score of 60 is quite an Individualist society, meaning there is a high preference for a loose social background in which individuals are expected to take care of themselves and their families only. In their society formal relationships are based on mutual benefits, hiring and promotion decisions have to be based on abilieties and merit only.

A very interesting phenomenon for the Polish culture is high score on Power Distance and high score on Individualism as well. That's why the manager's job is to make everyone feel important even if they are not equal.

When Ukrainians plan to go out with their friends they say "We with friends" instead of "I and my friends". Family, friends and suroundings are important to get along with daily life's challenges. They use contacts to obtain information or successful negotiations.

Masculinity

Is represented by the differentiation of rules for men and women.

At 66% China is a Masculine society –success oriented and driven. Many Chinese will sacrifice family and hobbies priorities to work. Services people will work overtime until very late at night so they will finish. Chinese students do care very much about their marks as this is the main criteria to achieve success.

At 95, Japan is one of the most Masculine societies in the world. There is a severe competition between groups. Children learn to compete on sports for their team. The expression of Masculinity in Japan is the drive for perfection in their material production (monodukuri) and in material services (hotels and restaurants) and presentation (gift wrapping and food presentation) in every aspect of life. Japanese workaholism is another expression of their Masculinity. Poland scores 64 on this dimension and is thus a Masculine society.0

In Masculine countries people "live in order to work", managers are expected to be decisive and assertive, the emphasis is on equity, competition and performance and conflicts are resolved by fighting them out.

Ukraine's relatively low score of 25 may surprise with regard to its preference for status symbols, but these are in Ukraine related to the high Power Distance. At second glance, Ukrainians at workplace as well as when meeting a stranger rather understate their personal achievements, contributions or capacities. They talk modestly about themselves and scientists, researchers or doctors are most often expected to live on a very modest standard of living. Dominant behavior might be accepted.

Uncertainty Avoidance

China has a low score on this dimension. They are pretty flexible to suit the actual situation, adaptable. entrepreneurial and pragmatism is a must. Comfortable with ambiguity; (language is full of ambiguous meanings that can be difficult to understand). Nowadays the majority (70% -80%) of Chinese businesses tend to be small to medium sized and family owned.

constantly threatened by natural disasters scoring 92 Japan is one of the most uncertainty avoiding societies on earth. People adapted to these circumstances knowing how to prepare themselves for any uncertain situation. Most of the Japanese people are reluctant regarding doing new things. Their destinies follow the same path paved with ceremonies and celebrations organized in a certain way. Going back to what was previously stated, a lot of time and effort is put into the decision-making process.

Poland has a very high preference for avoiding uncertainty and it scores 93 on this dimension. A high value in Uncertainty Avoidance results in rigid codes of ethics and behavior and are intolerant of unorthodox behavior.

95% Ukrainians feel very much threatened by spontaneous situations. Speeches that are not prepared, e.g. not extremely detailed and well thought out. Ukrainians prefer to have context and background information. As long as they interact with people considered to be strangers they appear very formal and distant as a sign of respect.

Indulgence

Allowing gratification related to drives, enjoying life versus living under strict social norms.

Societies with a low score in this dimension have a tendency to cynicism and pessimism opposite from the Indulgent societies, they do not put much emphasis on free time and control the fulfillment of their desires. People with this orientation have the perception that their actions are restrained by social norms and feel that indulging themselves is somewhat wrong.

2. PERSONAL RESEARCH

The correlation between the percentage of indulgence and the corruption score

The cultural dimensions chosen for further research are the indulgence and corruption. The reason behind this comparison is the need to find out if there is any link between those two and the desire to acknowledge the current state for China and Japan.

	Japan	China	Poland	Ukraine
Indulgence	42	24	29	18
Power Distance	54	80	68	92
Individualism	46	20	60	25
Masculinity	95	66	64	27
Uncertainity	92	30	93	35
Long term	88	87	38	55
Corruption	0	7.9	1.5	14

In the previous table the date was extracted from two different sources namely, Geert Hofstede's Analysis on Cultural Management; Corruption from World's Competiveness Report 2017.

$$c_{y/x}=\frac{n\sum xy-(\sum x)(\sum y)}{\sqrt{[n\sum x^2-(\sum x)^2]^{\circ}[n\sum y^2-(\sum y^2)]}}$$

n = the number of the elements/index/variable,

x and y= elements/indexes/variables to be considered

Interpretation remarks

$c_{y/x}$ =-0.8943 (Indulgence)

$c_{y/x}$ =-0.891260344 (UA)

$c_{y/x}$ =-0.891596768 (M)

$c_{y/x}$ =-0.795054631 (Individualism)

$c_{y/x}$ =0.963073572 (PD)

if, Cy/x is positive and tends to 1, there is a strong direct connection between variables, Cy/x is close to zero, may it come from 1 or -1, then the connection between variables is weak

Cy/x is negative and tends to -1 there is a strong inverted connection between variables.

In this case, the values of the correlation index are negative and tend to -1 meaning a strong inverted connection between variables. Despite the trendline of inverted correlations, Power distance is highly connected with Corruption meaning that if the gap between management and operatives is big, individuals tend to break the law.

Applying statistic concepts its reported that there's a reverse proportionally interconnection, reelevating that if a country is more restrained (its inhabitants think that they are controlled by social or ethical norms) they tend to get higher scores on corruption reaffirming once again the forbidden fruit's principle.

The correlation between the percentage of Masculinity and the Competitiveness score

To see if there's any dependence the comparison between the rank in the report and masculinity was chosen. This idea seemed very interesting at first.

	Japan	China	Poland	Ukraine
Masculinity	66	95	64	27
Competitiveness	8	28	36	85

In the previous table the data used was from two different sources namely, masculinity percent from Geert Hofstede's Analysis on Cultural Management; Rank on Competitiveness from World's Competiveness Report 2017.

$c_{y/x}$=0.18384123

Interpretation remarks

Cy/x is close to zero, may it comes from 1 or -1, than the connection between variables is weak.

Implying that even if everybody thinks masculinity has something to do with productivity it is not influencing it at all.

3. WHY IS POLAND DOING BETTER THAN UKRAINE?

Poland and Ukraine are neighboring countries and close allies. However, Poland formed a stable democracy and transitioned to a market economy, ultimately becoming a member of NATO and the European Union, whereas its neighbor Ukraine, a former member of the Soviet Union and a member of the CIS until recently, has not enrolled on any determined policy of reform and it remains part of the post-Soviet area (Szeptycki, 2010).

Poland has actively pursuing a policy of economic liberalization since 1989, due to this advantage, Poland has attracted major foreign direct investment since the latter half of the 1990s when they made the great choice to maintain a majority of Polish owners in each public company they privatise. Also its economy was the only one in the European Union to avoid the Great Recession during the 2008–2009 economic downturn.

4. CONCLUSION

As previously stated, the culture has a big impact on the national performance. Generally speaking, in the countries where power distance is small, of course the individualism predominates and avoiding uncertainty is low, competitiveness is intense compared to countries where power distance is high, collectivism dominates, uncertainty avoidance exceeds spontaneity and corruption is one of the most problematic factors when doing business.

According to CORREL index the present study has demonstrated that there is a strong opposite relationship between the corruption rate and Indulgence meaning that due to pessimism, restrained individuals are more likely to use unethical practices like bribery to get what they want. In adition to this, in contrast with the popular belief there is no dependency between the masculinity percentage and how good a country is doing in the World's Economic Forum ranking.

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SUSTAINABLE DEVELOPMENT OF ROMANIAN AGRIBUSINESS IN THE CONTEXT OF GLOBALISATION

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Abstract:
The paper aims to emphasize the need to improve the efficiency of all elements, especially natural ones, which contribute to providing a favorable environment for practicing agriculture in the context of maximizing its effects on the environment, taking into account the specific activities for the sustainable development of the sector agriculture in Romania. The paper highlights the concept of sustainable development with its main defining elements and its effects, as well as illustrating the current situation of the agricultural sector in Romania and the necessary priorities to be pursued in agriculture with a view to its sustainable development, focus on organic farming and economy based on knowledge transfer.

The defining element of considerable improvement and modernization of Romanian agriculture is the adaptation to a new model, widely encountered worldwide, that of sustainable development by passing to the model of value added generating development stimulated by the interest for knowledge and innovation, oriented towards the continuous improvement of the quality of people's lives and relationships in harmony with the natural environment.

Keywords: sustainable development, organic farming, innovatios, footprint carbon

1. THEORETICAL ASPECTS ABOUT SUSTAINABLE DEVELOPMENT

The concept of sustainable development has grown over several decades in the context of deep international scientific debates and has gained political valency in the context of globalization. In recent history, the first sign of the fact that the economic and social evolutions of the states of the world and of mankind as a whole can no longer be separated from the consequences of human activity on the natural environment was made at the conference of the United Nations Conference on the Human Environment (1972) when the nations present expresses concern about how human activity influences the environment. The problems of pollution, the destruction of resources, the deterioration of the environment, the danger of the disappearance of some species and the need to increase the standard of living of the people are underlined and the indissoluble link between the quality of life and the quality of the environment for present and future generations is accepted. the evolution of five factors (population growth, impact of industrialization, pollution effects, food production and natural resource depletion trends), suggesting that the development model practiced at that time can not be sustained in the long run.[1]

At the United Nations Conference on Environment and Development from Rio de Janeiro (1992) it was highlighted that sustainable development is a new way of development that supports human progress for the entire planet and for a long-term future.[2]

Sustainable development encompasses all the elements of the socio-economic environment and the environment and focuses on socio-economic progress without implications for the balance of the natural environment as well as is determined by operation beyond optimal natural resources and environmental

[1] http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.48/14/REV.1
[2] http://www.un.org/geninfo/bp/enviro.html

degradation, so this is meant to protect the quality and policy features of the environment, to ensure a high quality of living, both the current generation and the future generations, assuring the satisfaction of present needs without compromising the resources of the generations to come.

1.2. Sustainable Development Goals

In 2015, the United Nations adopted Agenda 2030 for Sustainable Development, which includes 17 clear and concise objectives on sustainable global development. Out of the 17 objectives, 2 objectives obviously include agriculture and the nutrition of the population and have specific actions to improve them long-term, as soon as possible.

„Zero hunger" is an objective that provides to eliminate hunger, ensure food security, improve nutrition and promote sustainable agriculture. If we want a healthier society, we need to reach sustainable agriculture. By 2030, the sustainable development of agriculture aims to double the agricultural productivity and income of small farmers, especially women, farmers and fishermen, including through safe and equal access to land, other resources and production factors, knowledge, services financial markets and opportunities to create value added. It also wants to ensure sustainable food production systems and the implementation of resilient farming practices that increase productivity and production, contribute to the maintenance of ecosystems, strengthen adaptability to climate change, extreme weather, drought, floods and other disasters, and which progressively improve the quality of land and soil. The objective is also to maintain, before 2020, the genetic diversity of seeds, cultivated plants and animals, including through well-managed seed and plant banks, as well as promoting fair and equitable sharing of benefits resulting from the use of genetic resources, and traditional associated knowledge. An important action to achieve the objective is to take the necessary measures for the proper functioning of the markets for agri-food products and to facilitate timely access to the market.3

„Responsible consumption and production" result in more conscious behavior, including more efficient production, sustainable waste management and activities consistent with environmental protection principles. By 2030, the goal is to halve per capita food waste by achieving the ecological management of chemicals and all wastes during their life cycle and significantly reducing their emissions into air, water and soil and the footprint carbon in order to minimize their adverse effects on human health and the environment. Encouraging developing countries to improve their scientific and technological capacity to move towards more sustainable consumption and production patterns is needed to deliver a knowledge transfer, through research and development, as efficiently as possible.4

1.3 The impact of globalization on the sustainable development of agriculture

It can be assumed that globalization has increased the standardization of food and agriculture. From this perspective, as food and agriculture control is conceived in the hands of several transnational corporations and distribution chains are becoming more and more global, the food and practices they produce are becoming more and more standardized.5 Another perspective is that globalization has brought food diversity and new ways of producing food, but at the same time has destroyed cultural and biological diversity. From this point of view, one of the effects of globalization would be the public concern for food security and quality and ethical issues about how to produce food. Quality becomes a central component of economic competition in the global agri-food field. Although price competition remains important,

[3] https://sustainabledevelopment.un.org/sdg2
[4] https://sustainabledevelopment.un.org/sdg12
[5] Mormont M., „Globalisations et écologisations des campagnes", *Études rurales* 2009/1, No 183, pp. 143-160

distributors have started to focus more and more on non-price competition. An effect of these changes is the shift from economy to quantity to a quality economy.

Globalization has had a consequence in increasing the value and number of food products at international level, but has also led to an increase in the variety of foods produced, sold and consumed locally. This has led to the differentiation of food through private labels, special services, and distributors have begun to impose a number of private standards on suppliers. With the change in consumer thinking about food sustainability, a new awareness of hazards emerged as a secondary outcome of efforts to rationalize food production. In the European Union, the common market has created the emergence of new food that has increased the distance between the producer and the consumer and has brought about the problem of food identification. Consumers have become increasingly distant from the physical and social origin of food through food systems that privilege quantity and efficiency in the short term, to the detriment of taste, sustainability, quality and environmental protection.[6]

2. CURRENT SITUATION OF AGRICULTURE IN ROMANIA

In Romania, agriculture is a basic branch of the national economy, with an average of 5% of gross domestic product, also is the main economic activity in rural areas and according to statistical data, agriculture accounts for 30% of the active population occupied. Also, from the point of view of international commerce with agricultural products, Romania is one of the major exporters of cereals, agriculture contributes to important commercial relations and to economic development.

The modest performances that the Romanian agricultural sector has recorded in recent years are due to the following situations:

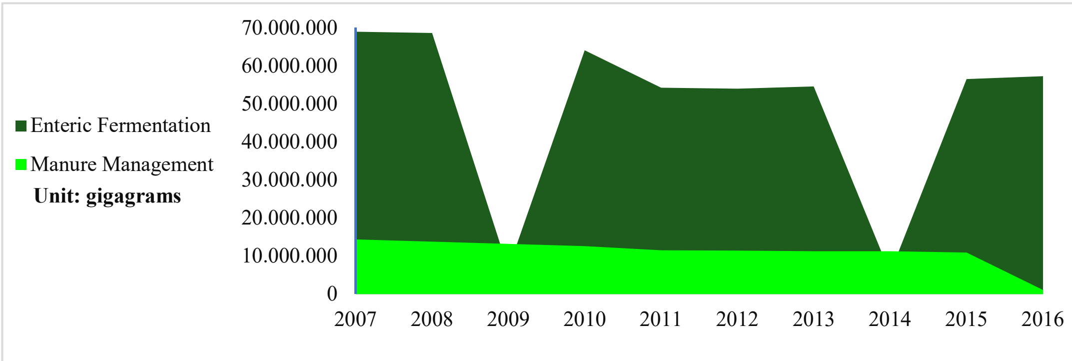
- the high share of small-scale agricultural holdings, mostly subsistence and semi-subsistence, with an average size of 3,65 hectares in 2016;
- reduced use of inputs that generate low yields;
- low productivity of work, caused by the precarious use of agricultural machinery, modern equipment and technology;
- soil degradation and polluation;
- lack of irrigation systems, especially in the southern and south-eastern parts of the country, which are vulnerable to the process of aridization and desertification.

In Romania there is an imbalance in the food consumption of the population and agro-food production, as well as qualitative deficiencies in the production and trade of agri-food products. At the same time, although the agricultural sector has very favorable natural conditions to coverage the needs of domestic consumption, it does not ensure the access of the entire population to a rational alimentation.

The agricultural sector contributes a substantial amount of greenhouse gases, methane being one of the most important greenhouse gases (mainly derived from the use of ruminant livestock manure and manure storage). In European Union, for period 2007-2016, the average of methane gases emissions from enteric fermentation were 160.395,71 gigagrams, meanwile in Romania registred 49.039,85 gigagrams and the average of emissions of methane from manure management were 41.834,96 gigagrams in European Union and 11.153,65 gigagrams in Romania. In the figure number 1 are represented the emissions of dioxide de carbon equivalent from CH4 (methane) which were generated by agricultural activities from Romania.

[6] Blay-Palmer A., „Food fears. From industrial to sustainable food systems", Ashgate Publishing Limited, Hampshire, 2008, p. 4

Fig. 1 The emissions of CO2 equivalent from CH4 from Romania agriculture

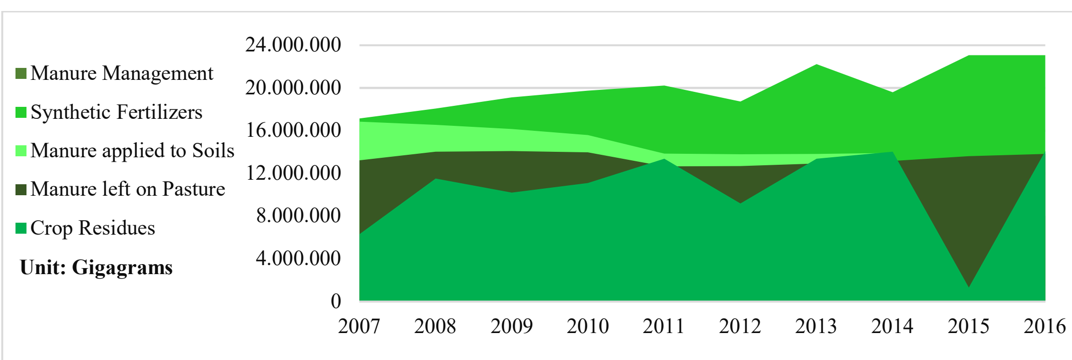


Source: http://www.fao.org/faostat/en/#data/GT

Modern food production depends on fertilizers, but excessive or inadequate use of nutrients causes environmental problems in some regions, while nutrient deficiencies and insufficient fertilizer availability prevents productivity growth in other regions. Such imbalances should be addressed in defining strategies for nutrient management.

Nitrous oxide (gas released into the atmosphere by the application of organic fertilizers and nitrogenous mineral fertilizers on agricultural land) is the largest represented half by the total greenhouse gases emanating from agriculture activities. In 2007-2016 in European Union, the average of nitrous oxide emissions from manure management was 22,835.82 gigagrams while Romania registred a value three hundred times higher as well as the average quantity of emission of synthetic fertilizers and of manure applied to soils, in Romania were triple compared to European Union. In terms of nitrous oxide coming from manure left on pasture and crop residues, they were four times, respectively five times higher in Romania than in European Union. Below is illustrated, in the figure number 2, the emissions of CO2 equivalent from N2O that come from Romania agriculture.

Fig. 2 The emissions of CO2 equivalent from N2O from Romania agriculture



Source: http://www.fao.org/faostat/en/#data/GT

Increasing the sustainability of agricultural development will require a limit on access to fertilizers for greater efficiency in the use of nutrients. There are significant opportunities to increase the efficiency of nutrient use and hence to reduce greenhouse gases emissions through full life cycle approaches in the context of integrated use of organic and inorganic fertilizers.

Agriculture is the most affected sector of climate change, as it depends, primarily, by climatic factors, and their effects are visible on the yield of production but also on the food security offered by agri-food products. In Romania, the main problem is caused by extreme climatic changes manifested through periods where the amount of rainfall is abundant and with hail or periods when it is drought, both situations destroying even the entire culture. In these situations, it is necessary to ensure the culture as well as the installation of anti-hail and irrigation systems, but these involve too high financial costs that farmers can not afford.

As regards the protection of the environment, all activities specific to agriculture should take into account the reduction of greenhouse gas emissions and implicitly the reduction of the carbon footprint of agriculture and specific actions to resist to the effects of climate change.

3. SPECIFIC MEASURES FOR THE SUSTAINABLE DEVELOPMENT OF AGRICULTURE IN ROMANIA

Annually, the population grows and consumption increases, while agriculture undergoes many changes, such as land degradation, negative changes caused by the effects of climate change, but agriculture faces many challenges, finally feeding the population. The need for sustainable development of agriculture lies in its power to provide the amount of food needed to meet all the needs of the population, thus reducing hunger and malnutrition, as well as food security, improving and supporting on a long-term basis natural factors and the whole agricultural system.

Agriculture is closely linked to the environment, with most of its components indispensable for the agricultural sector, with sustainable development being essential to maintaining agriculture in the right and optimal conditions to ensure long-term food security and safety. Sustainable development of agriculture must create synergy between natural ecosystems and their efficient use to reduce the losses resulting from inefficient use of resources, land, water and natural resources to ensure the safety and security of the entire population.

Globally, climate change due to anormal temperature changes and extreme temperature severity, rising sea and ocean levels, ocean acidification, high rainfall, and the opposite, drought are elements that cause, short term, increased variability in food supply, and long term, all these effects have adverse consequences on the agricultural sector. Considerable and immediate investment is needed in adaptation and mitigation actions addressing the impacts of climate change on all dimensions of food security.

Improving sustainable agriculture is one of the objectives of Romania's Rural Development Strategy and is an objective of the Common Agricultural Policy that emphasizes the sustainable development of agriculture in terms of economic, social and environmental protection.

3.1 Cultivation in protected areas

Cultivation in vegetables greenhouses and solariums are appropriate to offset the effects of climate change because it is based on environmental factors that influence culture, such as temperature, humidity, light and daylight, wind power and carbon dioxide .

Vegetable crops in Romania are mainly made by small producers, both in greenhouses (mostly covered with plastic) and in low tunnels. The vast majority of greenhouses are still unheated or just occasionally. Cultivated production in the greenhouse, which benefits from biological control and integrated pest management, is considered as a means of enhancing sustainable crops, which leads to water efficiency and better control of the quality and safety of products.

3.2 Using agricultural innovations

Precision agriculture is the most advanced form of agriculture and a farming practice specific to agricultural land management, based on natural factors management, using innovations such as information technology, remote sensing and various sensors to determine and control the situation of the quality of natural resources, as well as their impact.

Precision agriculture aims to optimize the use of water resources, soil and chemical inputs to achieve high and quality production, optimize production structure, high environmental protection by reducing carbon footprint, while offering sustainability of natural factors.

The use of information technology allows direct and real-time monitoring, as well the collection of data directly from the specific ecosystems of agriculture. Based on these data, the current status and eventual changes in percent of the system are assessed. Thus, knowing the veracity of the situation facing the agricultural holding, it is possible to outline the most appropriate action plans for the qualitative improvement of the natural resources but also the value of the agricultural holdings from the economic point of view.

By collecting the data that influence the state of the agricultural structures and of the natural natural factors of the agriculture, their analysis is carried out in order to know their influence in detail, finally providing the most efficient solutions and recommendations regarding the optimization of the components of the agricultural production structure with the purpose their efficiency.

An innovation specific to precision farming is the contact sensor. Phytochemical sensors accumulate hourly data on weather conditions (air temperature, air humidity, rainfall, wind speed and direction) and pedoclimatic details (soil temperature, soil humidity). Soil monitoring sensors determine the physicochemical properties (structure, ph) and biological soil components (micronutrients). These sensors are important because they accurately determine the characteristics of the farm and provide tailor-made solutions tailored to each individual situation in a context where agricultural holdings are different and unique.

One way to mitigate greenhouse gas emissions from the agricultural sector is to increase the productivity of agricultural land already in use. The use of technological factors, such as drip irrigation, helps to improve the efficiency of water use in agriculture, also supporting a high quantitative productivity gain.

By combining technological innovation with knowledge transfer, it is possible to monitor and adjust the production process as quickly as possible in order to adjust potential problems in order to obtain the best possible performance of the highest quality.

3.3 Organic Farming

Organic farming provides benefits for the natural environment by ensuring biodiversity protection, reducing pollution and carbon dioxide emissions, ensuring animal welfare conditions and developing local economic activities. Organic farming, through organic agri-food products, also ensures food safety. Broadly speaking, organic farming can be characterized as the basic standard for ensuring sustainable food and sustainable agriculture development.

On agricultural holdings undergoing conversion to the organic farming system and those certified organic. They are prohibited the use of pesticides, growth hormones, antibiotics and genetically modified organisms, such as soil pollution zero. In terms of obtaining organic products, economic operators (producers, processors, traders) must undergo a certification process including a conversion period for agricultural land

and inspection inspections on all stages of the agro-food, ecological animals: cultivation or animal breeding, raw material processing, storage, distribution and trade of organic agri-food products.

The greening of agricultural land and, implicitly, agricultural and animal production in our country has been gradually producing since 2000 when Romania benefited from funds for organic farming through the SAPARD (Special Accesssion Programme for Agriculture and Rural Development) program, in the context of Romania's pre-accession to the European Union, when organic farming has been legally founded and has become an objective in the development of agriculture, with financial support from the European Union. The support provided by the European Union has been elemental in the development of organic farming and the organic agro-food market in our country, and it is still indispensable for their positive evolution.

Regulations on the organic farming sector at national level are given by the Ministry of Agriculture and Rural Development, while the European Commission issues regulations at Community level. With regard to the European Union legislative framework regulating the organic farming and organic production sector, it wants to provide optimal support for the sustainable development of agriculture through organic farming, guaranteeing consumers confidence in this type of agriculture and products offered, efficient market functioning.

Consuming organic products on a regular basis is not just a lifestyle, it is the evolution of the consumer who wants quality to the detriment of quantity. The eco consumer has an affinity for products that have health benefits, both human and environmental, and wants to be convinced of the quality of the products consumed. Demand for organic agri-food in our country is growing due to the awareness of the population about the benefits offered by this product category. Analyzing the demand of consumers choosing organic products at the expense of conventional products, it is found that it is mainly focused on developed economies, and this can be explained by two factors: price and education. High prices of organic food compared to other conventional products are closely related to the purchasing power of eco- consumers in economically developed regions. The level of education and information on the benefits of the consumption of organic products (food safety, heatlh, environmental protection and sustainable development of agriculture) is a factor influencing consumer's choice of food.

3.3.1 Statistical data on organic farming

The global context for organic agri-food products is a good reason for developing organic farming, despite the fact that this market is a dynamic and continuous growth process, both supply and especially in demand, in 2016 the world of organic agriculture reached a value of 80 billion euros and a total of 2.7 million organic operators and a green area of 57.8 million hectares total. According to the Research Institute of Organic Agriculture (FIBL), in European Union are 12.1 million hectares certified and under conversion to organic farming, accounting for 6.7 percent of all land, Spain (2 million hectares), Italy (1.8 million hectares) and France (1.5 million hectares) with the highest surface area. The organic market amounts to 30.7 billion euros, on the top three places being Germany (9.5 billion euros), France (6.7 billion euros) and Italy (2.6 billion euros). In Romania, in 2016 there were 226,309 hectares of organic agricultural land, of which the highest share is cereals (75,198 hectares) belonging to 10,083 operators and the organic retail sales value being of 80 million euros (19th place). Also, Romania had 150 processors of organic raw-materials and 5 importers and 5 exporters of organic agri-food products.

3.3.2 Organic farming in Romania. Present and future.

Romania is a relatively small organic producer in terms of the percentage of agricultural land subject to the conversion process, according the National Statistical Institute in Romania only 2 percent is organic land, and in terms of the share of sales of organic agri-food products in total retail sales. Lack of processing facilities and processing Romanian forces organic producers find export markets in order to pursue their entire production, the main products exported the form of raw material are oilseeds, grains and berries. Imports have an important factor in increasing the organic farming market , with domestic output declining over the last four years. Processing, packaging and marketing are the main weaknesses of the organic food sector in Romania, with few farmers having the resources to invest in industrial processing and packaging equipment that complies with organic farming standards. Thus, with greater exposure abroad, most of Romania's organic raw materials were exported to Europe.

The elements that provide good support for the organic agri-food market are:

- superior organoleptic and nutritional characteristics compared to conventional products;
- large preserved arable land areas available;
- the strong economic impact of organic products;
- practicing organic farming supports the sustainable development of agriculture, guaranteeing food security;
- financial support for the creation of organic certified holdings;
- demand that is on an upward trend.

Challenges in ecological agriculture in Romania that hinders accelerated development it is the following:

- the lack of advanced processing facilities for ecologically certified raw materials, Romania exporting a considerable amount of raw materials and importing finished products;
- lack of public awareness of the benefits of organic products, consumer reticence in the authenticity of organic products. There is little consumer knowledge about environmental quality and they are rarely willing to pay more for certified organic products;
- the small size of the market, the range of organic products being one low consumer accessibility and low accessibility resulting from high production costs and implicitly, final prices;
- low assortment range compared to conventional agri-food products;
- low economic power of Romanian consumers.

The growth of the organic agri-food market in our country can be achieved through financial instruments provided by the competent authorities, both for the establishment of ecologically certified holdings as well as the market, by creating market support levers that will guarantee the expansion of the supply of organic products and the education of consumers on the benefits of organic products for both human and environmental health surrounding.

3.4 Transfer of knowledge in agriculture

The development of the agricultural sector through the knowledge transfer economy, notably through research, development and innovation, is fundamental to the important contributions made by agriculture, combining scientific research with innovation, represented by agriculture-specific technologies, resulting in the development of quantitative and qualitative point of view of the agricultural holdings and the productions obtained. In agriculture, innovation is a determinant of its environmental and economic and social progress, development involves the creation of new products, the realization and implementation of specific projects, the consolidation of relations, and scientific research provides the necessary theory to lay the foundations for agricultural innovation.

3.4.1 Consultancy

An essential element of the transfer of knowledge in the agricultural field is the consultancy, which is a generating vector of added value for the Romanian agricultural sector. Given the current characteristics of Romanian agriculture dominated by fragmented and poor productivity, the need for information and agricultural advisory services is obvious. Today, a large number of farmers lack the necessary knowledge, experience and skills and are necessary for the sustainable development of agriculture. Agricultural consultancy has specialized technical, economic, managerial or legal assistance in order to make its activity more efficient. In Romania, agricultural consultancy is publicly represented by state institutions and subordinated ministries and specialized academy, and privately by consultancy firms, input suppliers and agricultural organizations.

3.4.2 Agricultural cooperative

The establishment of agricultural producers in associative forms can open new opportunities for economic development through the use of collective power in order to increase the prosperity of their members, their farms and the communities they belong to. A cooperative may consist of a minimum of 5 members, with the aim of promoting the economic, social and cultural interests of its members. Agricultural cooperatives are pursuing:

- to ensure the necessary conditions for obtaining the economic advantages of all cooperating members;
- to meet the requirements of the cooperating members in supplying the necessary means for agricultural production;
- obtaining agricultural goods of vegetal, animal and fish origin according to market standards; creating conditions for the processing of agricultural products of vegetal, animal and fish origin and obtaining of finished food products to the quality of the market and consumption standards;
- value the production achieved;
- economic and social development of rural space.

Although the advantages of associative forms are undeniable throughout the world, Romanian farmers hesitate when it comes to joining an agricultural cooperative. At present, under 1% of Romanian farmers are part of an associative form, compared to the European Union, where the average is 34%. The reason may be that in our country the term "cooperative" is usually viewed with suspicion, since the establishment of those "cooperatives" in communism has made the peasants separate, and instead of cultivating the spirit of association and trust. Our country has some of the most favorable prospects for the development of productive agricultural associations, but they are not being capitalized enough to become a true pillar in supporting the local economy.

Through association, farmers will strengthen their bargaining power, buy agricultural equipment, technologies and other agricultural inputs at convenient prices, get easier access to credit, and introduce new management and innovation ideas.

4. CONCLUSIONS

Sustainable development of agriculture is necessary in our country and consists in minimizing the degradation of the environment while taking place:

- guaranteeing food security by maximizing production so as to ensure the needs of the resident population, but also to have production for export;
- ensuring food security by ensuring sustainability of the ecological balance of the natural environment in rural areas;
- sustainable management of natural resources by rationalizing their excessive use;
- the modernization of vegetable and zoological farms by using technologies that make the use of natural resources more efficient;
- intelligent and sustainable recovery of agricultural land, labor and capital.

Organic farming in Romania is in a process of development, which is beneficial for both consumers with a high level of food safety and for the environment, this type of agriculture reducing the harmful effects on the environment and animals in within the framework of practicing conventional agriculture, providing protection necessary for sustainable development.

Supportive measures like tax breaks for members and easier access to European funds are needed for Romanian farmers to associate, to produce and sell together. It will surely be the one that will bring prosperity to the Romanian farmers and the village, but the sense of ownership is greater than that of the cooperative.

Agreements in the agri-food sector are needed to better carry out all the activities in this sector and to develop it sustainably and it is necessary to implement programs to stimulate the technical and technological innovation and to increase the competitiveness, as they represent the future of the development in a smart and sustainable way.

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THE RELEVANCE OF FINANCIAL INFORMATION ON THE STOCK MARKET UNDER THE INFLUENCE OF CRYPTOCURRENCY BITCOIN

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Abstract:
Within the investment process, current and potential investors are interested in finding the most effective solutions that will enable them to obtain quick profits. In the current economic context, characterized by the emergence of new financial instruments, we intend to study the influence that the cryptocoin market has on the listed companies on the Bucharest Stock Exchange. The empirical study is structured in two parts: the first part is represented by the review of the specialized literature on the concept of relevance of the financial information, but also of the cryptocoin market, and the second part of the paper presents the analysis of the influence of the main indicators profitability of the listed companies by applying econometric models to determine the influence of the virtual Bitcoin currency price. The results of the empirical study have revealed the existence of a reverse correlation between the price of shares and the price of the Bitcoin cryptocoin, highlighting a different behavior of investors characterized by a high interest in long-term investments, who observe the stock price at the time of publication of the annual financial statements, while the Bitcoin virtual currency represents an alternative investment vehicle to investors.

Keywords: Criptocurrency, Bitcoin, Financial market, Bucharest Stock Exchange, Value relevance

1. INTRODUCTION

In the current economic context, mostly characterized by uncertainty, there is the question of the existence of an effective means of communication between listed companies and current and potential investors. The annual financial statements are represented by a set of documents that must accurately present the performance and position of the company and tend to be a predominant means of communication, due to their presentation in an objective manner, as a highly regulated instrument (IASB, 2015). The relevance of such information has been a subject approached in the literature by many researchers, the relevance concept having been defined as the impact that financial information may have within the decision-making process (Barth, 2001).
Cryptocoins are financial instruments that are used by investors to diversify their investment portfolio, and this concept is growing with the insertion of Bitcoin cryptocoin. Following the success of Bitcoin, other virtual coins also appeared, known as *altcoins* in the specialized language, expanding the area in terms of investment opportunities (Krafft et al., 2018). However, many researchers have drawn attention to the fact that Bitcoin is a financial instrument not regulated by any financial institution, making it possible for the speculative bubble to emerge. Therefore, the current study aims to analyze the impact of the virtual Bitcoin currency on companies listed on Bucharest Stock Exchange, the companies being selected on the basis of the availability of exchange rate data and published annual financial statements. Starting from Basu (1997), we will analyze the relevance of financial information through positive or negative news. The quoted market price of the listed companies will be calculated as a ratio between $P_{31.12}$ și $P_{01.01}$ and analyzed based on a multiple linear regression with the specific rate of return variables. Thus, the standardization of the first relationship will make it possible to analyze the correlations between the virtual Bitcoin stock exchange price and the stock price of firms influenced by financial information.
The current survey is structured in three sections: the first part is the review of the literature on the concept of relevance of financial-accounting information, the concept of speculative bubble and the definition of the Bitcoin cryptocoin; the second section presents the research methodology used to obtain the results, showing the significant models for analyzing the relevance, the Bitcoin cryptocoin evaluation model, as well as the model used to study the correlation between the price of the shares and the price of Bitcoin

cryptocoin. The paper also ends by presenting the results of the empirical model as well as the conclusions regarding the obtained results.

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

In the current section, we will define the concept of relevance of the financial-accounting information together with an example of how to measure it. Also, the cryptocoin market seen as an emerging market will be explained in terms of its evolution, and in the last part we will formulate the research assumptions that will be used to test the correlation between the stock market and the cryptocoin market.

2.1 Relevance of financial information on the stock market

Financial information represents, for the modern investor, a necessary resource for the investment process, for its processing and decision-making regarding the maintenance, supplementation or, as the case may be, the decrease of the participations in a particular company. Companies report their financial position to current and potential investors through both annual and quarterly financial statements. The financial statements are intended to provide relevant information on financial position, financial performance, and the cash flow situation for large categories of users (Toma, 2018), but their preparation requires certain qualitative and fundamental characteristics and compliance with certain accounting principles. A financial information is relevant if it is able to influence the decisions of its user (Jianu et al., 2018). The relevance of financial information can be analyzed through the correlation between the capital market and the financial information published by companies (Barth, 2001). Relevance of information has been a widely discussed topic for the academic environment, starting with Miller & Modigliani (1966); the first scientific paper in which the term of relevance of information was published for the first time by Amir *et al*. (1993).

The framework of the IASB (2015) concept displays the two fundamental qualitative characteristics that the annual financial statements must meet, respectively: relevance and accurate representation. The relevance of financial information refers to the impact it may have on decision-making through the projected value of the company's financial position and future performance (IASB, 2015). Exact representation or credibility (IASB, 2015) can be defined as a true representation of the position and financial performance of a company, based on the principle of prudence. This principle, which, on one hand, considers avoiding the overvaluation of assets as well as the underevaluation of the debt elements and, on the other hand, takes into account the possible write-downs of an asset, write-downs evidenced by the adjustments accounts for the items of temporarily impaired assets and depreciation in the case of irreversibly depreciated assets and the rise in debt items (Toma, 2018). According to the literature, the prudence principle forbids the overvaluation of the patrimonial elements and proposes a pessimistic attitude towards the future of society, with a focus on the patrimony of society (Toma, 2018). The principle of prudence implies an economic approach according to which: at the close of the financial year, only profits earned in that financial year are taken into consideration, account shall be taken of all foreseeable and potential liabilities occurring in the current and also previous years and shall be taken into account of all value adjustments regardless of whether the result of the exercise is profit or loss (Toma, 2018). Toma & Robu (2014) describes the involvement of the prudence principle in financial reporting, as an increase in depreciation, loss, and a decrease in the value of assets and economic benefits generated. Lev & Zarowin (1999), by studying the relationship between equity and the stock price, concluded that firms that have intangible assets that have a high share in the firm's structure can see differences between the times of recognizing the costs and revenues of these assets. The IASB concept (2015) defines the intangible asset as a non-monetary, identifiable but non-physical resource. Moreover, Srivastava (2014) has shown that with the changes in the economy, the number of companies focused on activities involving the use of intangible assets has increased. Barth (2017) by analyzing the stock price and financial information based on the CART estimates an increase in relevance to data on the intangible assets situation.

The relationship between financial information and the stock price could be explained through the effective market term. An efficient market describes how financial instruments react when a positive or negative news is published, and there is a direct correlation between the two. Basu (1997) analyzed the impact of the prudence principle on the results of an enterprise. In his assessment, he analyzed the financial news and classified them as: positive news ($P_{31.12} > P_{01.01}$) or negative news ($P_{31.12} < P_{01.01}$) on the market. His analysis of the influence of the prudence principle on the results of a company concluded that negative events had an impact of two to six times greater than in the case of positive events. Thus, given the implications that news may have on stock market prices, investors will be more reticent in investing in a company providing negative news.

Moreover, Robu & Toma (2014) analyzed Basu's (1997) relationship with the impact of the prudence principle on the stock price of companies listed on Bucharest Stock Exchange. The variables used in the model are: total assets, total liabilities, equity, net result and exchange share price. On the basis of the results obtained, the study determined the significant influence that the total assets variables and total debts have on the stock price. Therefore, investors will be interested in the publication of financial statements and increases or decreases in the structure of assets and liabilities, based on which specific profitability rates are calculated, such as the rate of financial return, the rate of economic profitability and the financial leverage. Filip & Raffournier (2010) analyzed the relevance of financial information according to the two categories of companies listed on the Bucharest Stock Exchange. Thus, the link between financial information and the stock price variation is explained at a rate of 40% under a transition economy. After adjusting the data, the stock price variation according to financial information is explained in a proportion of 19.9%. Moreover, the analysis presented the investment behavior at the time of publication of the financial statements. Investors at the time of publication of positive results have a negative attitude, while negative changes can positively influence their behavior, this result being a consequence of the relatively inefficient market (Filip & Raffournier, 2010). Jaba *et. al* (2016) have studied relevance of the companies' financial statements on the monthly growth of the stock price. The variables built based on the financial statemets were represented by the rate of financial return, the rate of economic profitability and financial leverage. Using the valuation models of Easton and Haris (1991) and Ohlson (1995), the paper has concluded that investors are using the reported information after the auditing procedures. The information, which is used to calculate ROA indicator is relevant for the investors when the intermediate financial statements are published, while the information about financial leverage become relevant for investors after the second half of the financial year. Moreover, the utility of these information are helping the investor to determine if the companies earnings are coming from the operating activity or foreign resources.

2.2 Cryptocoins and their evolution on the financial market

Cryptocoin market has registered an increase in investor interest over the last few years due to the high returns these financial instruments provide, but also to the potential they display. Venter (2016) presents the difference between the term of *electronic money* used in commercial bank transactions and the term of *cryptocoin*. Thus, electronic money gives us the equivalent of money in physical form and expressed in a particular currency (eg USD) placed in a bank account. On the other hand, the term cryptocoin does not refer to any form of physical money, but only a form of transactions that take place in the digital environment. The most used example is Bitcoin, which will be analyzed within this study.

2.2.1. Concept of Bitcoin cryptocoin

Officially introduced in 2009, Bitcoin digital currency (BTC) has enjoyed real success in the financial markets, gaining value that has brought tremendous returns to investors, many of them being convinced that Bitcoin is the currency that will bring a new perspective on what concerns the term "money". F.M. Ametrano (2016) said that Bitcoin created a competitive environment between digital coins and money circulating on the fiduciary principle, or money that runs on a trustworthy basis, which puts virtual Bitcoin money in the position of the future internationally accepted payment means. Although, Bitcoin is currently rated as the most traded virtual currency with a market capitalization of 216 billion US dollars at the end of 2017 (www.coinmarketcap.com, accessed on February 25, 2018), its main objective remains the electronic commerce. Malhora (2014) asserted the fact that Satoshi Nakamoto, the creator of Bitcoin, conceived this coin as an autonomous monetary system, simultaneously fulfilling the function of money and the means of online payment, the novelty element being related to the parties involved in the transaction accomplishment, because e-commerce is traditionally done through an intermediary, but with the emergence of Blockchain technology, transactions are made between partners without the intervention of an intermediary (*peer-to-peer*).

The value of a financial asset can be measured by various methods, but fundamentally, a financial asset (shares, bonds, etc.) can also be expressed by a fundamental value, this being the market value of a supported asset based on credible information that supports price dynamics. Such information may be generated in the case of shares, mainly by the financial statements of that company, including semestrial and treasury financial statements. In case of bitcoin, it is made up of nothing more than bits (Alstyne, 2014). Alstyne (2014) provides an answer related to the reason why Bitcoin has market value, as long as it is not backed by any support, such as sovereign bonds that are covered by treasury certificates issued by to the US Treasury. First of all, even if Bitcoin has no fundamental value (Cheah et al., 2015), Bitcoin still has a technical value represented by the problem-solving algorithm, each virtual coin having a public key that can record a transaction highlighting the three components (buyer, seller, and quantity), the amount of bitcoin not being able to be copied with the software key that does not allow the use of coins but that of their owner. The initial purpose of this e-commerce support coin allowed the use of bitcoin at a zero transaction cost, which led to an increase in its use especially by low-activity traders with a profit of around 5% -10% of the transaction.

Since its launch in 2009, the virtual currency price has seen significant increases overtaking the yields of companies' shares and national indices. Since the beginning of 2013, the virtual currency has seen massive increases, with the end of the year characterized by a fall in the stock market price. Thus, we can divide the price dynamics during 2013 into four moments, which have had an impact on the future developments of Bitcoin. In March 2013, Cyprus decided to increase bank deposit taxes, which created a panic at European level, many European citizens looking for a solution to protect themselves against the fall of the Euro. Thus, they decided to convert the Euro into the virtual Bitcoin currency (Warner, 2013). The United States' financial debt limitation was an investment issue, a global financial problem, the moment when the attention of many turned to the decentralized monetary system, making the virtual Bitcoin currency a possible candidate, so the demand for this currency is rising (Fontevecchia, 2013). In November of the same year, the interest shown by the Chinese in Bitcoin, as well as rising demand, was a determinant of Bitcoin growth (Hill, 2014).

The rapid rise in the virtual currency drew the attention of the Chinese government that decided to suspend transactions and accept it as a means of payment in December 2013, which led to a 50% fall in the stock price from $ 1,132 to $ 542 (Hill, 2014). Bitcoin is traded at roughly $ 7,000, the historic maximum being set on December 17, 2017, when the value of a Bitcoin reached $ 20,089.

Growing interest from investors looking for new financial instruments to diversify their investment portfolio as well as accepting Bitcoin as the means of payment has attracted the attention of financial authorities. The first step towards regulation in the area of cryptocoin was represented by the legislative framework drawn up by the Belarusian authorities (Lubomir Tassev, 2018). Thus, the virtual currency could be accounted for its destination as a financial asset acquired for the purpose of maintaining the long-term or short-term income that generates income for the person holding it or as a good that can be sold further. Venter (2016) presented the need to develop a new legal framework in the IASB for the presentation and accounting of virtual coins. Currently, the Company's approach to accounting for Bitcoin's assets, the following standards are used: IAS 7, „Cash Flow Statement”, IAS 39, „Financial Instruments: Recognition and Measurement”, IAS 2, „Inventories”, and IAS 38, „Intangible Assets”.

2.2.2. Bitcoin's evolution in the context of speculative bubbles

The speculative bubble represents a financial cycle characterized by a price increase determined by the interest of the participants who trade the asset and generate an imbalance between the fundamental value and the value at the actual moment, giving rise to the speculative bubble. After the rising trend of growth, there is a period of decline, a drop that creates a shock on the world's big financial markets. Rosser (1997) classifies the term „speculative bubble” into two broad categories: rational bubbles, at which time investors know of its existence and can make a decision in this regard and irrational bubbles, when investors are driven by the market feeling, feeling not correlated to the fundamental value of that asset. Cheung (2013) exemplifies the causes through which these financial imbalances can arise, among which are listed cases that refer to regulatory elements such as: inadequate market infrastructure in terms of information flow (Taipalus, 2012), inadequate regulation (Sornette, 2003), overestimation of some information or growth prospects (Shiller, 2000) and over-selling of that element (Vogel, 2010). The largest speculative bubbles that have remained in history were: the Tulipmania crisis (Holland, 1637-1638), the Mississippi bubble and the South Sea Company bubble. In the first case, investors bought and sold tulip bulbs, considered at the time a symbol, this "asset" being an element that was speculated until 1637, when the speculative bubble burst, many traders who purchased significant quantities of tulips having suffered significant losses. The other two bubbles were characterized by investment of large amounts of cash in the capital of some monopolistic companies that led to the increase in the value of that company until the public discovery that the companies were overvalued, their value being higher than the fundamental value that led to the collapse in 1720. Cheah & Fry (2015) studied the virtual Bitcoin currency price between July 2010 and December 2012 and November 2012 to November 2013, respectively, and concluded that the Bitcoin price is overvalued, which determines the presence of a speculative bubble, more important being Cheah & Fry's (2015) discovery of the emergence of a speculative bubble at the beginning of 2013. In order to analyze the hypothesis that Bitcoin is a speculative vehicle, Baek & Elbeck (2015) used an econometric regression model in which the price fluctuation at Bitcoin was the dependent variable, while the main macroeconomic indicators as well as the spread between the maximum price and the minimum of the day of the virtual currency were the independent variables, the significant element of the regression being the maximum and minimum price of the Bitcoin, from which we conclude that the profitability of the Bitcoin market is driven by investors, with the other indicators not having a significant influence. The most recent recent speculative bubble was recorded on February 2, 2018, when the DJIA index fell by 666 points, a phenomenon due to higher yields on the bond market, many investors wondering whether this increase in returns provided by bonds, and wage increases can also trigger inflation. As for Bitcoin, we can identify similar factors that could determine that the virtual currency is in a speculative bubble like: inadequate regulation, overselling, and overestimation of growth prospects. As mentioned in section 2.1.1. Bitcoin has no fundamental value, but buy-in buyers rely on the computer algorithm as indestructible, with a limitation in the number of virtual coins and operating on an unregulated market.

2.3. The development of research hypothesis

For the modern investor, diversification of the investments portfolio represents a way of reducing the risk associated with depreciation of the component assets. Bitcoin, viewed from the position of a financial

instrument represents another asset used in the investment process. Also, along with the literature which has been presented above, the present paper wants to test the following hypothesis:
H1: The crypto currencies are reverse correlated with the evolution of the companies' stock prices listed on Bucharest Stock Exchange, at the time of publication of the financial statements.

3. RESEARCH METHODOLOGY

The present paper proposes to study correlation between the companies, which are listed on Bucharest Stock Exchange and the cryptocurrency market represented by the digital currency Bitcoin, in the context in which investors present a high investment tendency for the cryptocurrencies field. Hence, the paper has an empirical character through the factors that are analyzed: return on investments, stock prices and Bitcoin price.

3.1. The estimation of the financial information influence over the market

To many researchers, the influence of the financial information has represented a starting point in terms of providing an answer about the position and performance of a particular company or about an index which is available for trading purposes. Therefore, among the most representative models for value relevance measures is the Olhson model (1995).
Olhson model (1995) represents a valution model for the relevance of financial information, which is disclosed in relation number 1.

$$P_t = \beta_0 + \beta_1 ANCPS_t + \beta_2 EPS_t + \varepsilon_t \qquad (1)$$

The variable presented in the model are:
$P_t -$ the stock price at the half of the fiscal year t+1;
$ANCPS_t -$ book value per share at the end of the year t;
$EPS_t -$ earning per share at the end of the fiscal year t;
$\beta_{0;1;2;} -$ regression coefficients;
$\varepsilon_t -$ error, random variable;

The relevance is measured by using R square (R^2), where elements such as net result and book value per share are measured in order to explain the changes in the stock price.
Basu (1997) has analyzed the relation between positive and negative results of a company and their stock prices; results concluded that the persistence of the negative changes in the structure of results is more pronounced than in the case of the positive changes that occur in the structure of results. The equation is presented in relation number 2.

$$\frac{X_{it}}{P_{it-1}} = \gamma_0 + \gamma_1 DR_{it} + \gamma_0 R_{it} + \gamma_1 R_{it} * DR_{it} \qquad (2)$$

The variables presented in the model are:
$\frac{X_{it}}{P_{it-1}} -$ earning per share during the fiscal year T and the share price at the beginning of the fiscal year;
DR_{it} – dummy type variable which sets out the condition of $R_{it} < 0$, whose value is 1, failing this, its value is 0;
R_{it} represents the profitability of the firm.
The same way as the Ohlson model, the relevance is measured by using R square (R^2), in order to explain the variation of the stock prices through the earnings per share element and those two dummy variables.

3.2. Testing the influence of Bitcoin over the market

Bitcoin as an international financial instrument came to the attention of academic sector in 2013, at the moment when Bitcoin has exceeded the returns provided by other financial intruments such as: bonds, stocks, options and others. The first country which reacted in this context was China, which in December 2013 decided suspending Bitcoin transactions, which caused a drop in the price of the virtual currency of approximately 50%. Thus, the academic sector decided to analyze the international consequences that this unregulated asset could have after this violent drop at an international level.
Baek & Elbeck (2014) analyzed the cryptocurrency price between July 2010-February 2014, by examining data regarding the main macroeconomic indexes. The equation is presented in relation no.3.

$$R_t = \beta_0 + \beta_1 \Delta cpi + \beta_2 \Delta ip_t + \beta_3 \Delta rpce_t + \beta_4 \Delta sp500_t + \beta_5 \Delta TN_t + \beta_6 \Delta euro_t + \beta_7 \Delta unemployment_t + \beta_8 \Delta spread_t + \varepsilon_t \quad (3)$$

Where:
R_t represents the monthly changes in the Bitcoin price;
Δcpi represents the monthly changes of the consumer price index;
Δip_t represents the monthly changes of industrial production;
$\Delta rpce_t$ represents the monthly changes of the real personal consumption expenditures;
$\Delta sp500_t$ represents the monthly changes of Standard & Poor's 500 index;
ΔTN_t represents the monthly variation in the 10-year Treasury notes;
$\Delta euro_t$ represents the monthly changes of the euro exchange rate;
$\Delta unemployment_t$ represents the monthly changes in national average unemployment rate;
$\Delta spread_t$ represents the monthly changes in the spread between daily high and low Bitcoin prices;

In order to confirm the analyzed hypothesis, R square has been used, the result of the econometric regression presented that the monthly changes variation regarding difference between daily maximum and minimum Bitcoin prices, as a significant element at an alfa risk of 0.01. Therefore, the study has concluded that Bitcoin price is not influenced by the external factors represented by macroeconomics indexes, on the contrary Bitcoin price is influenced by the participants involved in the virtual currency selling-buying process.

3.3. Population, sample and data source

The current section wants to present the total population of data, as well as the criteria used in the selection of the sample from the total population of BET companies. The variables used in the empirical analyze will be presented, as well as the source of data.

3.3.1.Data about sample

The population studied in the present paper is represented by the companies listed on the Bucharest Stock Exchange, component companies of the national Bucharest Stock Exchange index (BET Index). From the total of 12 companies operating in different areas of activity such as: banking sector, oil sector, medical sector and so on, which constitute the BET index, a number of 6 companies has been extracted, the availability of the financial statements and stock prices being the selection criteria. The financial data which have been processed and used in the empirical analyze have been taken over from the financial statements of the companies during the period 2012-2016. The elements from the financial statements which are of interest for the study have been: Operating Result, Total Assets, Total Debts, Owner's Equity and Net Result. The elements previously mentioned have allowed calculation of the three of the most important returns on investment. The prices of Bitcoin and firms which constitute the sample, have been taken over from www.investing.com, the prices which were used in the model being the daily open prices. The data and econometric models have been processed using SPSS 20.0.

3.3.2. The econometric models used in the research

The variables used to develop the econometric models are represented, on one hand, by the companies' stock prices and the Bitcoin price, both being expressed in logarithmic scale and, on the other hand, by the return on equities, return on assets and financial leverage. The empirical models used in the present paper are represented by two multiple regression models, through which we are going to analyze, as a first step, the influence of the return on investments on companies stock price.

$$\text{Price\_Firms} = \beta_0 + \beta_1 ROE + \beta_2 ROA + \beta_3 FL + \varepsilon \quad (4)$$

where:

Price_Firms = $\ln\left(\frac{P_1 - P_0}{P_0}\right)$;
P_1 – represents the stock price on 31.12.N;
P_0 – represents the stock price on 01.01.N;
$(P_1 - P_0)$ – represents the diference between the stock price on 31.12.N and the stock price on 01.01.N;
ROE – return on equity;
ROA – return on assets;
FL – financial leverage;
βi, $i = \overline{1,3}$ - represents the regression coefficients;
ε = error random variable;

The next step of the empirical approach is represented by the standardization of equation number 4 and analyzing the relation with the Bitcoin price. The equation is presented in relation number 5.

$$\text{Standard\_Companies} = \beta_0 + \beta_1 \text{Bitcoin\_Price} + \varepsilon \quad (5)$$

Where:
Standard_Companies – represents the standardized equation of the econometric model presented in relation number 4.
Bitcoin Price – $\ln(P_1/P_0)$
$\ln(P_1/P_0)$ – represents the logarithmic changes in the Bitcoin price;
βi - represents the regression coefficients;
ε = residual component;

4. RESULTS AND DISCUSSIONS

Starting from the proposed objectives, we tested the influence of profitability rates on Companies stock prices, and then the standardization of the first econometric relationship to allow us to study the influence that Bitcoin's virtual currency has on the investors' investment behavior. The equations used are shown in figure no. 4, respectively relationship no 5.

4.1. Descriptive statistics

The results of the descriptive statistics are presented in Table no. 2, bellow and indicate a total population (N) of 30 observations, where are presented the averages of the rates in profitability, calculated on the basis of the items included in the financial statements. The mean of the analyzed variables are positive, ROE presenting that companies which compute the sample, in terms of net result and owner's equity are positive which have a positive impact over the stock price. The use of assets effiency' value being 0,0795 lei is reflecting the operating income and total assets as being positive in the analyzed period. The financial leverage has the highest value comparing to other variables, because the companies present in their financial statements a value of total debts higher than owner's equity. Moreover, the companies' stock price present a positive value, which can represent that companies based on the financial statements have recorded a positive trend on the market.

Tabel no.1. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROE	30	-0,0747	0,1850	0,0734	0,0650
ROA	30	-0,0429	0,6232	0,0795	0,1130
FL	30	0,0000	8,1200	1,5513	2,7030
Price_Firms	30	-0,3410	0,6180	0,0494	0,2356
Valid N	30				

Source: Custom processing in the program SPSS 22.0

The results of the descriptive statistics are presented in table no.3 and indicate a total population (N) of 30 observations, where are presented the company's stock prices and the Bitcoin averages. Moreover, the mean of standardized equation of companies' stock prices are positive, while the mean of Bitcoin price is negative. Based on these results, the diffence between the positive sign of stock prices and the negative sign of Bitcoin price could present the backward correlation in the analyzed period.

Tabel no.2. Descriptive statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Standard_ Companies	30	-0,2045	0,3664	0,0494	0,1247
Bitcoin_Price	30	-0,0090	0,003	-0,0018	0,0046
Valid N (listwise)	30				

Source: Custom processing in the program SPSS 22.0

4.2. Results on the impact of financial statements on the market

Table no. 3 presents the correlation and determinacy ratio calculated on the basis of the econometric equation No.4, where we can see the direct average intensity link between the company's stock price and the company's profitability ratios, calculated on the basis of the elements taken from the financial statements of the company. The relationship between the two types of variables demonstrates the relevance of financial data provided by the companies, with positive and negative events being found in the stock price of the shares. By analyzing the determination ratio (R square), we can present the fact that the shown items, on profitability rates basis, explains the variation of the stock price fluctuation for approximately 28% .

Tabel no.3. Statistics regarding model no.4

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,529[a]	0,280	0,197	0,2111

a. Predictors: (Constant), FL, ROA, ROE
b. (*Custom processing in the program SPSS 22.0)*

Taking into account the data presented in Table 3, the parameters of the econometric model are presented in Table no. 4, where each parameter is explained by its relation to the quoted market price of the listed companies. The positive sign of the parameters of the analyzed model indicate the direct link with the stock price, but significant for the analyzed model is the financial and economic profitability ratio, as the financial leverage has no significant influence on the model. Depending on their influence on the dependent variable, we can say that the rate of financial return has the greatest influence on the price, because the investors are interested, on the one hand, of the net result of the company, viewed as an indicator of performance, but also as an opportunity of increase of the own financial sources by dividends collecting, and on the other hand the size of the own equities may influence the decision-taking process on the number of shares issued by the Company. Thus, a company that has issued a large number of shares can influence the net earnings per share in a negative sense, investors being interested in a bigger gain. Tracking the time, the company distributes dividends may be another opportunity that investors can exploit to diversify their investment portfolio by engaging in short selling operations that will allow the coverage of the stock price decrease, when dividends are distributed. The operating result, component of the economic profitability rate, influences the stock price by measuring the efficiency of the use of financial resources in the exploitation activity.

Tabel no.4. Parameters assessment of model no.4

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-0,134	0,077		-1,731	0,095
	ROE	1,443	0,692	0,398	2,084	0,047*
	ROA	0,658	0,367	0,315	1,791	0,085*
	FL	0,016	0,016	0,186	1,001	0,326

a. Dependent Variable: Price_Firms (Custom processing in the program SPSS 22.0)

b. *) significant at a risk of 0.05, respectively 0.1

The correlations of the analyzed model are presented in table no. 5, where we can see the significant link between the stock price and the financial ratios. However, we can observe the positive correlations between the rate of financial return and the rate of economic profitability, which can explain the efficiency of the activity valued by the operating result, whose value is 0.658, explaining the increase in the net result, on the basis of which the shareholders are remunerated. Also, the financial leverage has a positive correlation with the rate of financial return, which is explained through the own equities, its size being the one that determines the maximum level of debt that companies can achieve without putting their exploitation activity at risk. The specialist literature recommends that the total debts should not exceed twice the amount of the Company's equity. The debt contracting attracts the increase of the borrowing cost, through interest, penalties and commissions, which will then be reflected in the net result of the company.

Tabel no.5. The correlations between the variables included in model no.4

		Price_Firms	ROE	ROA	FL
Person Correlation	Price_Firms	1,000	0,415	0,399	-0,059
	ROE	0,415	1,000	0,314	-0,438
	ROA	0,399	0,314	1,000	-0,223
	FL	-0,059	-0,438	-0,223	1,000
Sig. (1-tailed)	Price_Firms	0.00	0,011*	0,015*	0,379
	ROE	0,011*	0.00	0,046*	0,008*
	ROA	0,015*	0,046*	0.00	0,118
	FL	0,379	0,008*	0,118	0.00
N	Price_Firms	30	30	30	30

ROE	30	30	30	30
ROA	30	30	30	30
FL	30	30	30	30

a. *) significant at a risk of 0.01, respectively 0.05
b. (Custom processing in the program SPSS 22.0)

4.3. Results on Bitcoin's influence on the standardized stock price of listed companies

Table no. 5 shows the direct link of weak intensity between the Bitcoin stock price and the stock price that includes the influence of the main rates of pofitability. Moreover, we can see that the exchange rate fluctuation of listed companies only influences the change of the Bitcoin in the proportion of 5.6%. The securities quoted on the Bucharest Stock Exchange are characterized by a low level of volatility, unlike Bitcoin, which is characterized by a high level of volatility. Investors, in order to better manage their risks, are tempted to diversify their investment portfolio by adding uncorrelated or inversely correlated financial instruments that will allow them, in the event of a write down of a security, to cover the loss of other securities, which are part of the investment portfolio.

Tabel no.6. Statistics regarding model no.5

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,237[a]	0,056	0,022	0,123

a. Predictors: (Constant), Bitcoin Price
b. (Custom processing in the program SPSS 22.0)

Table no. 7 shows the correlations between the stock price of listed companies and the Bitcoin exchange rate. On the basis of the results obtained, we can sustain that the investors, depending on the capital they hold, will be tempted, during the publication of the favorable financial statements, to invest their funds in the shares of the listed companies, otherwise they will be interested in investing the capital in Bitcoin. Moreover, the investors are interested, on the one hand, in the long-term investment, but also from earning some income from speculation on the Bitcoin currency. Hence, hiring a long-term position to buy securities and diversifying the portfolio through short-term sell-purchase operations could be key to a meaningful investment portfolio. Therefore, the result obtained in Table 7 validates the hypothesis formulated at the beginning of the study on the reverse correlation between the companies stock price and the Bitcoin exchange rate.

Tabel nr.7. The corelations between the variables of model no.5

		Standard_ Companies	Bitcoin Price
Person Correlation	Standard_ Companies	1,000	-0,237
	Bitcoin Price	-0,237	1,000
Sig. (1-tailed)	Standard_ Companies	0.00	0,104*
	Bitcoin Price	,104*	0.00

N	Standard_ Companies	30	30
	Bitcoin Price	30	30

a. *) significant at an associated risk of 0.11
b. (Custom processing in the program SPSS 22.0)

From the above presented hrough tables no. 6 and 7, we can also add the negative sign of the coefficient β1, indicating the inverse relation between the two variables and the investment behavior at the time of publishing the financial statements. The Bitcoin price is significant, so at an increase of one unit of the company's stock price, the Bitcoin price tends to depreciate by 6.41 lei.

Tabel no.8. The estimations of model no. 5 parameters

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0,038	0,024		1,564	0,129
	Bitcoin Price	-6,408	4,967	-0,237	-1,290	0,208*

a. Dependent Variable: Standard_Companies
b. (Custom processing in the program SPSS 22.0)
c. *) significant at an associated risk of 0.21

If we are looking at the obtained results, we can observe that Bitcoin could be used by investors through speculation. These quick earnings that the virtual currency registers has contributed to the increase in the number of transactions, the market value becoming higher sooner than the fundamental value. Thus, the fundamental value being 0 (Cheah et al., 2015), and the Bitcoin price being influenced by the sale-purchase transactions (Baek & Elbeck 2014), without the presence of a legal framework, may lead to the emergence of speculative bubbles. This investor interest towards the virtual currency could be likened to the Dutch tulip crisis (Shiller, 2018). Therefore, to hedge the risk of a possible speculative bubble, investors could mitigate this risk through hedging operations, which involve investing capital in a wide range of low-risk assets (bonds, treasury bills, etc.). Scaramucci (2015) showed the impact of the 2008-2009 financial crisis on hedging funds, these registering the lowest loss on the market, with and average of 21.37%, while the S&P 500 Total Return index registered decreases of approximately 36.99%, the investment portfolio being based on the investment profile and the risk tolerance of the investor.

5. CONCLUSIONS

With the purpose of diversifying the investment portfolio, the investors are interested in finding the best solutions that can guarantee the increase of the invested capital both in the short and the long term. Cheung (2013) drew attention to the fact that the price of the Bitcoin virtual currency is overvalued, the objective of this study being to study the correlation between the stock market price of the companies and the Bitcoin exchange rate as published in the annual financial statements. Return rates used as variables of the empirical model demonstrated the influence of financial statements on the stock market price of the companies, the direct correlation between the independent variables and the dependent variable explaining the fluctuation of the stock price. The results of the empirical study validated the initial formulated hypothesis regarding the backward correlation between the stock price of quoted companies and the Bitcoin price. Moreover, this correlation between the two instruments also highlights the emergence of speculative bubbles, which can occur due to massive investments in an asset whose underlying value is lower than the traded price. Basu (1997) concluded that negative events have an impact of two to six times greater than positive events on the stock market price of the companies, the investor being interested in the financial instruments offering the highest returns. Thus, negative market news influences investment behavior, which leads to a high interest of investors when negative news is published. The limits of this study were represented by the relatively low sample of only 6 listed companies that were selected based on the availability of annual financial statements and daily stock prices. Baek & Elbeck (2014) concluded that the investors directly influence the price of the virtual currency through sale-purchase operations, the core value of the Bitcoin being zero (Cheah et al, 2015), so we propose that in future we investigate through time series, the price of the Bitcoin virtual currency, in order to determine the existence or the absence of speculative bubbles.

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BEHAVIORAL ECONOMIC DEVIATIONS IN A MULTIFACETED FREE MARKET

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Abstract:

In celebration of free markets, invoking the compelling idea of consumer sovereignty may be the major aspect people could benefit from. Economic theory has long considered that human beings act rationally according to their own values and needs. However, the possibility of consumers to have perfect access to information available on free markets, so that these would work best to the consumer's advantage, is still impracticable. Moreover, when it comes to consumers making financial decisions in a free market abounding of temptations, keeping a rational and balanced conduct is still difficult to achieve. This is the reason why the Nobel Laureates in Economics, George Akerlof and Robert Shiller, consider the concept of "Homo economicus" as unrealistic, exemplifying several market equilibrium situations where one part is being lured, or "phished", while the other part is gaining financial benefits from subversively using deception.

This paper involves a critical analysis of the book ‚Phishing for Phools: The Economics of Manipulation and Deception" written by George Akerlof of Berkeley University and Robert Shiller of Yale University, along with a further research on the debate whether government regulation is the ultimate solution to deceptive and misleading conduct of businesses. The aim of this paper is to give evidence that a certain degree of trickery and disinformation, which is invariably present in any market, may be detrimental not only to an individual extent but rather, to the worldwide population, be it investors, traders or consumers.

This has been done by describing the notion of „phishing" and the „phishing equilibrum"concept, following an outline of severe life complications that people were forced to handle as a result of a diverse series of irrational financial decisions. Upon examination of these events, it becomes clear that information asymmetries, bounded rationality, legal loopholes, and suboptimal behavior patterns are key points in consumer's exploitation. Through showing that a pervasive government intervation is improper to a free market concept, this research highlights the importance of transparency requirements and of a cultural consensus in favor of instilling solid, financial values so as to overcome compulsive self-indulgence.

Keywords: free markets, behavioral economics, information asymmetries, deception, transparency

1. INTRODUCTION

The distinguished group of scholars known as behavioral economists has raised plenty of doubts regarding consciously decision making, with the aim to show an emphasis on human fallibility. Similarly, behavioral findings about human misjudgment have put a lot of pressure on the presumption that individuals act rationally and according to their real needs. People's overconfidence, their lack of financial education, along with their dependency on impulses may often lead them into dealing defectively with risks, especially when it comes to neglecting long-term present human cognitive biases.

In the absence of regulation, the authors explain, someone will always be trying to gain financial benefits from exploiting people's subconscious tendencies or vulnerabilities, leading to a "phishing equilibrium" in which individuals are harmed. This inevitably implies that companies will always try to search for new information asymmetries, bounded rationality, legal loopholes, and suboptimal behavior patterns to exploit. Simply put, an economic equilibrium based on phishing is attributed to the fact that those businesses which fail to exploit people will lose out to those who do. With respect to the economic equilibrium based on phishing, the authors address the problem of inequality revenue distribution and savings instability as a result of economic behavioral deviations caused by misleading stimuli.

Given that a certain degree of trickery and misleading conduct is always invariably present in any market, the authors explore further in their work how oversight and regulation should be applied in a more rigorous way to free markets so as to prevent excesses of deception and manipulation. The authors' rather cynical perspective on humans in market economies tends to fall into two classes: unscrupulous business people (phishers) and helpless consumers or uninformed investors (phools).

> *"The rule of what can and cannot be published in economics leaves holes. There are some perfectly valid and important things to say, but there's no way to say them that would be acceptable in any journal. For example, quite a few economists thought that financial derivatives would lead to the current crisis. But economists could not figure out a way to express those views in the form of a paper. I believe that "Phishing for Phools" happens to be one of those holes in economics, because although we all know it, it cannot be published. And because it cannot be published in journal form, it gets ignored. And because it was ignored, we had the financial crisis, the central economic event in the history of our times."*
> (Akerlof, 2015)

2. NOTIONS OF "PHISHING" AND "PHOOLS" EXPLAINED

According to Oxford English Dictionary, the word "phish" appeared in 1996, after the web creation and it is defined as committing a fraud on the Internet, as trying to access individual's personal data by acting as a reputable company. However, Akerlof and Shiller only take this word as a metaphor, while their view on its meaning is a bit different and broader. In their book, "phish" describes the act of subtly determining people to do things in favor of the "phisherman", but rather detrimental to themselves.

"Phishermen", seen in economic terms, represent that kind of businesses wanting to benefit from exploiting people's desires, weaknesses or attention deficit, as well as from escaping state regulations. On the other hand, "phools" (consumers) are seen as fish swimming around artificial baits, making attention errors, and eventually getting caught by ingenious fishermen. According to probability laws, there is a high likelihood that sooner or later, everyone will be caught in the traps set by these fishermen, no matter how precautious we are, given the wide variety of artificial baits they can create and juggle with.

2.1. Typology of "phools"

According to Akerlof and Shiller, there are two types of phools: psychological phools and informational phools. Given the fact that as long as it is hard for us to find out what it is that we really want, as well as all our other weaknesses can be generated and amplified profitably, businesses will try their best to exploit those weaknesses, and reach to those people that Akerlof and Shiller call "psychological phools".

According to Robert Cialdini, an expert in social psychology and marketing, there are some astonishing proofs of psychological biases that influence individuals' behavior in the field of economics. As an illustration, these biases include: one's willingness to return gifts and favors, one's willingness to appear nice to someone they appreciate, one's fear of rioting against authorities, individuals' tending to copy others' behaviors (some sort of Veblen effect) and individuals' aversion to loss of a product in favor of someone else getting it. In line with Cialdini's theory, to each and every bias of the above are corresponding different strategies and tricks best known and used by traders.

Apart from that, the cause of majority of deceived people is rooted in the fact that more and more individuals are receiving flawed and misleading information about a product, service, or even a company. Thus, phishermen will bet on what clients think will receive. Again, poor research about companies and lack of awareness regarding ways of being deceived in economics will unfortunately determine people to be "phished for phools". In Akerlof and Shiller's work, it is given a presentation of several methods that devious traders use in a "market equilibrium based on phishing", so that they are able to gain financial benefits.

One of them is to sell products whose cost of production is certainly less, while their value is overstated by clients on markets. This is where informational phishing occurs, giving people the false impression that a product is really worth that amount of money, although, in reality, it should cost less. As a consequence, optimistic people who think that complicated financial trade has always something to do with a generous distribution of profits and risks are the first ones to easily become informational phools. A self-explanatory bad situation that is described in the book makes reference to the introduction of Commodity Futures Modernization Act, in the US, in 2000, as a method of financial markets surveillance, which unfortunately made it possible for some extremely complicated financial products to be sold, all being based on the assumption that financial markets would supervise each other accurately.

3. AUTHORS' CLASSIFICATION OF HUMAN PREFERENCES

The book presents the case study undertaken by the economist Keith Chen and psychologists Venkat Lakshminarayanan and Laurie Santos regarding the learning process of capuchin monkeys to use actual money as a means exchanging goods. Moreover, a thought-provoking observation that Akerlof and Shiller require their readers to make is to go beyond the actual experiment and speculate the act of engaging capuchin moneys in exchanging goods for money with humans. This way, it is outlined the possibility of studied monkeys to own a substantial income while becoming clients of large businesses, run by people who take an interest in obtaining profits, in the absence of concrete and protective state regulations.

As a result, Akerlof and Shiller's assertion refers to an economic equilibrium established by a free market system that might allow businesses (in their quest of gaining financial benefits) to deliver numerous kinds of goods to the capuchin monkeys, regardless of their actual needs. This horn of plenty, once formed, may satisfy the monkeys' present and future preferences; however, when purchasing, the crucial discrepancy (that business are willing to benefit from) will arise between their whims and real needs. In other words, the horn of plenty raised by the interaction of businesses with society may make it difficult for people to become conscious of what is truly beneficial to them and what lies more in the advantage of companies.

It is widely known that monkeys' capability to resist temptations is quite weak and hence, their mentality state will degrade, becoming more and more anxious, tired, underfed, quarrelsome, and vicious. Without a doubt, these manifestations are fairly similar to humans. Therefore, as regards to behavioral economics, Akerlof and Shiller outline in their work the main two types of preferences that humans possess and the astounding difference between them. The first kind of preferences is expressed when individuals have prioritized their actual needs, having previously researched about the businesses they interact with, as well as when they have taken costs into consideration, eventually making the best decisions for themselves.

On the other hand, the second type of preferences, more frequently expressed, is entirely opposite to the first one. Undoubtedly, people are more intelligent creatures than monkeys; however, our behavior might be seen slightly from the same perspective, when it comes to these preferences. Even though the first kind of needs describes what is really good for us, this doesn't stand most of the times at the base (the mental frame) of our decisions. The problem that mostly arises in our today's society, as stated by the authors, is that the prevalence of superficial, short-term preferences subconsciously dictates people's choices and behavior, especially in the field of economics, resulting in utterly unwanted situations, such as financial insecurity, prolonged debts and a deficient way of living.

"Unlimited competition utilizing the modern means of publicity incessantly launches new products and tries to attract the consumer, while earlier industrial installations which are still capable of functioning become useless. While very large areas of the population are unable to satisfy their primary needs, superfluous needs are ingeniously created. It can thus rightly be asked if, in spite of all his conquests, man is not turning back against himself the results of his activity. Having rationally endeavored to control nature, is he not now becoming the slave of the objects which he makes?"

"The technological community's emphasis upon the concept of growth as the embodiment of progress and its stress on efficiency for its own sake results in an impulsive reaction to the immediate and merely superficial needs of society. The understanding of progress as development is thwarted; and any effective anticipation and meeting of long-range, deeply-rooted needs is ultimately lost."

(Papal Writings, 1971)

4. THE "PHISHING EQUILIBRIUM"

The fundamental idea of economic theory is based on the concept of market equilibrium. In 1776, Adam Smith, the father of economics, wrote in his work "Wealth of nations" that the existence of an unobservable force ("the invisible hand", that is, each and every individual aiming for their own interest) could help the demand and supply of goods in a free market to reach equilibrium automatically, without the intervention of government policies.

To put it simply, this may be associated with waiting lines at cash registers in supermarkets. When people arrive in front of several waiting lines, it may be quite a difficult decision to be made, considering that waiting lines have approximately the same seize. The way the equilibrium is formed is dependent on the natural reason that individuals who arrive at waiting lines always choose the shortest one. This method is also applied in economics, regarding business people choosing their activity domain, or projects to invest in, as well as choosing other activity domains flourishing enough in order for them to expand their investments. Similar to opting for the shortest line, they will always select the best opportunities for their businesses.

In contrast, the negative part of this principle, as stated by Akerlof and Shiller, is that unusually high profits are quickly taken off the table, which leads to a situation when such satisfying opportunities become harder to find. In addition, the equilibrium concept could as well be applied to phishing for phools. In theory, it is, indeed, admitted the fact that the existence of several negative factors could damage such a functional equilibrium on free markets. Among these factors, economic activities of a person that harm (prejudice) another person (i.e. "externalities") and inequitable income distributions are the most frequently identified. Equally important to be mentioned are also the large companies which could prevent markets from being totally competitive.

Statements of various thinkers, from Sigmund Freud to Daniel Kahneman, as well as Akerlof and Shiller, refer to those cases when it is highly likely for people to be phished for phools owing to the fact that, not paying attention to their real needs, they frequently make decisions that don't serve their interests to the fullest. The major problem to which people are exposed is the existence of the kind of businesses that are always trying to find methods of exploiting their immediate needs, vulnerabilities or attention deficits so that to gain higher profits than usual. Among all business people hypothetically arriving at the waiting lines (competitive markets), searching where to invest their money in a profitable way, many of them will tend to look for methods of phishing consumers (applying diverse methods of gaining financial benefits that otherwise unused would have been applied by someone else).

There is no wonder that so many pastries, cosmetic, or clothing stores are not randomly placed in airports, a place where people spend, in fact, plenty of time per day waiting for delayed planes, or in popular city squares, streets, subways, and malls; all of these representing crowded locations with high potential for businesses to apply their marketing strategies.

Cinnabon Inc. the chain of baked goods with 750 stores and kiosks operating in 30 countries, is a good example, being well-known for attracting people to buy their cinnamon rolls thanks to their irresistible cinnamon smell, along with their (rather superficial) motto "Life needs frosting". Since the Cinnabon's growth, Rich and Greg Komen's marketing strategies were repeatedly applied in business, yet what many people still don't (bother to) recognize is how the presence of this kind of businesses is targeted without a doubt to one's subconscious vulnerabilities.

Fitness clubs are the second example Akerlof and Shiller examine, where "phishing equilibrium" occurs. When coming for the first time at the fitness club, people would usually overrate their plans to do physical exercises and thus, would sign contracts that were forcing them to pay exaggerated amounts of money. However, the subtlety of the situation lies in the fact that 80% of clients would have spent less, if they had chosen to pay by session, instead of the annual contract. Besides the fact that the loss of money caused by these unwise decisions was significantly high, what was more insidious was that fitness clubs were putting obstacles against clients' cancellation attempts. As the authors state, out of 83 fitness clubs which were offering automatic exertion of monthly subscription, none of them would accept the cancellation unless the client was present in person at the fitness club, while only 7 of them would accept the phone cancellation. Additionally, only 54 out of 83 clubs would accept letter cancellation; however, 25 of them were also requiring that the letter was firstly registered by a notary.

As a result, since clients were unconsciously willing to sign contracts that were more profitable than the session pay for the fitness company, it was to be expected for these kinds of businesses to act quickly (and without hesitation) accordingly to the concept of an "equilibrium based on phishing". The authors' view is that otherwise, a tempting opportunity of gaining profits would have been left available (in the hypothetical waiting line/ competitive markets) for other business people to catch.

Standard theory has made abstraction of the difference between one's real needs and one's immediate and superficial preferences, based on the economists' assumption that people do know what they really want. Unfortunately, this approach is entirely ignoring a crucial aspect regarding individuals' way of acting on markets, and that is the psychology behind every action. In the last forty years, even though behavioral economists have been studying the relationship between psychology and economics along with the disadvantages brought by individual's frivolous caprices, interpretations of results in the context of invisible hand are hardly to find nowadays. Therefore, while the intervention of the invisible hand keeps the Pareto Efficiency optimal, there is also a possibility that people could serve others' interests against their own real needs.

> *"That means that once such an economy is in equilibrium, it's impossible to improve the economic welfare of everyone. Any interference would make someone worse off."*
> (Akerlof, 2015)

5. IRRATIONAL FINANCIAL DECISIONS THAT LEAD TO SEVERE LIFE COMPLICATIONS

The authors' depiction of human beings as "phools" might indeed sound to many people as inaccurate and impossibly condescending. Their response in this case is that individuals are making a lot of detrimental decisions leading to outcomes that no one could possibly want. A lot of people have to handle severe health risks from overeating, alcohol, or tobacco, annually resulting in hundreds of thousands of premature deaths in the United States alone. Akerlof and Shiller affirm on this matter that believing that these deaths are a product of rational decisions is rather preposterous. Many people worldwide are dealing with debilitating financial insecurity, largely as a result of their own mistaken decisions, triggered by phishermen. Bad government is another product of phishing, considering that, as the authors specify, "we are prone to vote for the person who makes us the most comfortable, that politician who seems more one-of-the-folks," even when that person's decisions are effectively influenced by special interests.

The invisible hand, as the authors contend, might guarantee "rip-offs," which are "fertile ground to find phishing for phools". With reference to the closings of home sales, there is a baffling array of transaction costs that people have to face. Usually, real estate brokers' fees run to 6%, although they are often higher. Still, these and other costs are imposed after most buyers have made their decisions and are in no position to bargain. Another situation that Akerlof and Shiller refer to is credit cards. Their use turns out for many customers in the United States to be a genuine problem, not least because they end up spending significant amounts on late fees and interest on unpaid balances. As it revealed, credit cards are "a major cause of personal bankruptcy," determining Akerlof and Shiller to conclude "if credit cards are not phishing for phools, the companies who purvey them should tell it to the judge."

Akerlof and Shiller's perspective on politicians is that they are sold essentially in the same way, as "modern statistical techniques now tell marketers and advertisers, both private and political, when and how to phish, just as modern techniques in geology tell the oil and gas companies where and how to drill." Election campaigns nowadays are making use of statistical testing "as a new art form." In their view, campaigns now know how to target "voters individual-by-individual" with the aid of modern mass-media and statistical techniques.

With respect to the latter, they raise a concern about clever electoral strategies commonly used to hook guileless voters and endorse policies that "appeal to the typical voter on issues that are salient to them, and where they are expected be informed, while also adopting a stance that appeals to financial donors on issues on which the typical voter is uninformed. Owing to the fact that the system of corporate donations could easily intervene in electoral campaigns, lobbyists are able to enjoy spectacular returns, in the hope of extracting votes, or favors, on high-stakes matters (such as regulation of savings and loan companies or highly technical tax inquiries) that are too complex to attract the attention of most electors.

Another subject presented the book "Phishing for Phools" explores is the examination of Michael Milken's ways of advertising junk bonds by having made a strong reference to an earlier volume by W. Braddock Hickman, *Corporate Bond Quality and Investor Experience* (1958), exposing how risky bonds had outperformed safer ones in the course of one market period (1900 - 1943). The reason for Milken's ascending into Wall Street was the fact that he inappropriately analogized the research of that book about the unbelievable profitability of junk bonds to his current times with the intention to sell junk bonds. Akerlof and Shiller's dissection of Milken's false analogies, who assumed that the performances of one kind of junk bond from a past era were the same as those he acclaimed in the 1970s is a compelling insight into possible human fallacies when it comes accepting financial risks. In fact, the reason for the profitability of the earlier bonds was that they were issued by major companies, such as the Pennsylvania Railroad, rather than Milken's bonds created by corporate raiders, malicious and devouring takeovers and leveraged buyouts.

If our propensity to make choices according to multiple cognitive and psychological biases makes us easy targets for the phishermen, mainstream economists say that it is entirely our own business. Given that, according to standard theory, we act rationally, according to our values and tastes, outsiders, and especially those who work for the government, do not have the right to intervene. Unquestionably, there is a different situation if someone is inflicting destruction on third parties such as a company emitting air pollution, a case when the government can legitimately respond. Mainstream economists believe that people should fend for themselves. Contrary to this view, Akerlof and Shiller's main message is that theoretical construct of "Homo oeconomicus" (i.e. the idealized, calculating, profit-maximizing, always-rational human) is highly impractical and hence, it needs to be raised awareness concerning economic behavior deviations along with modern methods to minimize deception on free markets.

"We are what we make of what people want to turn us into.'
(Jean-Paul Sartre)

"The book introduces a new variable into economics, which is the stories that people are telling themselves when they make their decisions — a new variable that changes both how we think about economics and economic policy. This gives us a transparent characterization of the motivation that allows us to understand how most phishing for phools happens. Furthermore, it makes natural the idea that people make decisions that can be quite far from maximizing their own welfare, and that these stories are quite manipulable. Just change people's focus and one can change the decisions they make. A great deal of economic policy is about the stories that we're telling ourselves."
(Akerlof, 2015)

6. DECEPTION AMONG FINANCIAL MARKETS

The book contains useful insights into several types of financial market participants. "Mining reputation" thread involved the reputation of a variety of financial institutions and, amongst them, the subversion of the credit rating system of fixed income securities. Over a century of receivables assessment has passed in order for the reputation of the major rating agencies in the United States to be built. The public used these ratings as an indicator of the likelihood of bond failure. In the late 1990s and early 2000s, rating agencies undertook a new task: not only assessing receivables, but also rating of complex derivatives.

> *"A derivative is a financial security with a value that is reliant upon or derived from an underlying asset or group of assets. The derivative itself is a contract between two or more parties based upon the asset or assets. Its price is determined by fluctuations in the underlying asset. The most common underlying assets include stocks, bonds, commodities, currencies, interest rates and market indexes. Derivatives can either be traded over-the-counter (OTC) or on an exchange. OTC derivatives constitute the greater proportion of derivatives in existence and are unregulated, whereas derivatives traded on exchanges are standardized. OTC derivatives generally have greater risk for the counterparty than do standardized derivatives."* (Investopedia)

Since these securities were new and complex, it was difficult for investors to find out if their ratings were correct. But given that rating agencies have proved to be trustworthy in the past in evaluating old simple financial instruments, buyers haven't seen any reason not to trust them further in the ratings of new complex securities. The negative part was that if people could not distinguish between good and non-valuable securities, then the issuers of the new financial instruments were less stimulated to continue selling valuable ones, since they knew they could sell receivables with great chances of not being received at the same price or even cheaper. Soon after, the new financial instruments were aimed to be sent to credit rating agencies, where they were given AAA rates; however, thanks to their trustworthy reputation, buyers at that time could not be aware that recent ratings were in fact deceiving. On this matter, Akerlof and Shiller affirm that financial instruments buyers have failed to understand the phishing-based equilibrium.

6.1 Why it was essential to former financial institutions to maintain their reputation

Financial institutions that issue securities in the United States and in the world economy have changed between 1970 and 2005. The authors often use the Goldman Sachs investment bank as an example, whose capital rose from $50 million in 1970 to over $28 billion in 2005 (with assets totaling more than $700 billion). In the 70s, investment banks had strong interests to see that the value ratings were correct. At that time, the role of banks was to advise their companies. But as the authors state, Goldman's representative was aware of Wall Street methods and his job was to inform his clients about real-life financial facts by providing intelligent advice on important issues such as concealment of accounting records to get rid of tax burdens or to evade regulations. As a reward, he expected to be called a guarantor for initiating stock options. However, by the late 1970s, John Whitehead, a co-senior partner, had a premonition that during its growth, Goldman Sachs' trusted counselor's ethics would be lost. He outlined 14 principles of partnership, intended to be a future ethics guide. Principle 1 began as follows: "The interests of our customers will always be a priority", because he believed that if the bank serves its clients well, then its success would soon follow.

Otherwise, to an investment bank of that period, reputation was not only important for attracting investments, but it also played a major role in dealing with other investment banks. Such cooperation was necessary because the main banks needed the commercial networks of the other members of the trade union (the rules governing union participation resembled those specific to a sibling rather than the rules of a business where the payment is based on the performance criterion). In this regard, the authors argue that it was the era of "relational banking activities," in which trust was essential in order to avoid regulations.

The way such banks worked reveals opening deposits to large investors such as commercial banks, money market funds, hedge funds, insurance companies or other large corporations that had huge liquidity and were looking for a safe place for depositing it, while the bank's commitment was to be able to return their money even the very next day. This repurchase agreement requires that in the event of a bankruptcy, banks must guarantee by collaterals whose assets value is approximately equal to value of the deposit. In this case, the history of Goldman Sachs, having been an intersection point of financial transactions in the US and soon after, worldwide, is again illustrative. By the late 1970s, big profits had just begun to be discovered, which could be made by borrowing money to trade under its own name. The Wall Street whirlpool gave it an advantage: it was not only automatically collecting information more or less accessible to the public, but it could also interpret and manipulate what that data meant.

6.2. The unscrupulous pressure investment banks put on credit rating agencies

Gus Levy, who soon became a senior partner at Goldman, realized that he could gain substantial profits by acting as an intermediary in trading large stocks among institutional investors. As a banking advisor to many of them, Goldman could identify a potential bidder of a large stock, and by using his links, it could then hunt another institution to trade in the opposite direction. Temporarily, it would hold large assets in anticipation of a subsequent resale, trading this way under its own name. Nevertheless, in 2000, the "customer interest priority" ethics could not be easily believed.

This change in perception has also affected rating agencies. Beginning not only to take into consideration the scrupulous options in which they could have benefited the most from their relationship with customers, they agreed to enter a vicious circle. Since clients of investment banks valued trustworthy securities, these banks needed higher and higher ratings. On this matter, investment banks, although not always offering the best products, were able to put pressure on rating agencies in order to receive their desired ratings, in exchange for an interest. Thus, rating agencies had to face of a devastating and unscrupulous fact: they knew that in case they had given low ratings, they would have had no contracts. Successively, if investment banks had had low-rated products, customers would have moved their businesses elsewhere.

This misleading and deceptive conduct of investment banks contributed inevitably to the rise of the financial crisis in 2007. Modern finances have found that benefits with varying degrees of risk could be fragmented in many parts, which might be useful in separating benefits between those who were looking for a low risk and those who were willing (as shareholders) to take bigger risks. But this fragmentation could also be abused, since it was designed to confuse investors. The way this situation is explained in Akerlof and Shiller's work refers to the takeover of a large amount of non-valuable assets and its complicated packaging done by investment banks, so that rating agencies would give most of them a high rating, erroneously. Then these inalienable assets would be overlooked, even transformed into gold, while the scammer's equipment was always the packaging.

Such phenomenon has happened with no hesitation in the subprime credit market. Previously, mortgages were mainly issued by banks. Thanks to local experts who could best evaluate them, once the loans were granted, the mortgages were to remain in their own asset portfolio. But it has then been discovered that the risks of keeping loans in only one region could become mitigated. Thus, mortgages have been merged into large packages, so that share-parcels in a package could be easily sold. In this way, risks would have become dispersed on a larger scale.

But financial gains from risk dissipation were only the beginning of profits that could be obtained from such large mortgages. If the package could be wrapped so elegantly that rating agencies did not notice, then even giving a mortgage to a NINJA homeowner (No Income, No Job or Assets) would have been profitable. The scam banks used was the act of diversion of rating agencies' attention to toxic credits. By complicatedly and subtly fragmenting mortgage packages in many parts, buying those parts would have returned the benefits more securely. For example, such a package part was made up of the interest payments on the mortgage package, while another tranche that was put on sale included the repayment of the initial capital. The major problem was the more scattered and different these parts of mortgage packages became, the more difficult it was so examine them on the whole.

These complications have given rating agencies the excuse not to have an adequate examination of the underlying mortgages. In reality, the series of statistical data used to estimate the default risk of the mortgage covered only previous periods when house prices had risen, so that the prescription of mortgages was a rarity and the illusion of low prescription chances was then strongly created. In fact, it was no longer in the interest of rating agencies to issue the correct ratings because the false ones were already a major factor in rising real estate prices as they contributed significantly to house demand. An example in this case is Moody's Rating Agency which awarded the maximum triple A rating to about approximately 45,000 mortgage creators throughout the period of 2000-2007.This is in contrast with only six US companies that have received a triple A at the end of 2010. After the financial crisis, Moody's employees' greed was severely judged and the company was declared incompetent in loan assessment.

6.3. Information asymmetry and people's errant assumptions

The main cause of this series of unfortunate events is based on the vulnerability of the financial system as well as its inability to detect non-valuable financial instruments. It was vulnerable before the crisis, especially as the trillion-dollar investment banks were literally refinancing an important amount of these assets every day. Investment banks' problem was that if their assets had fallen below the amount of their debts, then their funding would have faced a huge deficit, so they would have been removed from the market. At the same time, investment banks could not claim bankruptcy because their method funding was different; it relied on "overnight" debt, as authors call it.

These overnight agreements implied collaterals. If the bank was no longer able to pay its debts, its creditors would take their collateral and leave with it, causing the bank to disappear from the market. This tells us why the new financial system, so dependent on short-term loans, was on the verge of collapsing when it was discovered that much of its non-valuable financial instruments received too high ratings. When it was detected that debt claims were largely secured by subprime loans but with a high chance of cessation of payments, along with the fact that their value was lower than previously thought, investment banks disappeared. The authors' view on this matter is that people have an inclination to be aware of what is in their interest and an inclination to ignore what is contrary to that interest. Excited, people around the world had no reason to be suspicious. They knew nothing about the methods of phishing for phools and their consequences.

> *"As long as a significant part of the bond-buying public was willing to swallow the myth whole, the investment bankers had an incentive to produce those rotten avocados, and to extract from the agencies the high ratings that would be the cover-up. When the risk materialized, the whole system fell apart."*

7. A CONTRADICTORY VIEW TO AKERLOF AND SHILLER'S PERSPECTIVE ON STATE INTERVENTION

With reference to the changes that emerged after the Great Depression and World War II, the authors contend that sound government regulation has protected people from fraud in the past ("government could be a useful counterweight to the excesses of free markets"). In contrast, the authors' tendency toward a more government intervention and control seems a rather idealistic view of a benignly paternalistic government.

At the base of their prevalent presumption is the act of overestimating humans working for government, which seem cut from a purer ethical clot, while humans in the marketplace are either phishers or phools.

Perhaps, a similar foolish belief held by unsuspecting human beings is the conviction that governments are gifted with superior virtue, wisdom, and understanding of individuals' standard of living. Nonetheless, Akerlof and Shiller reject the skepticism carried in the remark that “government is the problem”. But, owing to the fact that imperfect human beings are the problem, it obviously follows that humans who wield too much power may cause the most tremendous problems (e.g. war being the most profitable business).

This is yet another case where standard theories (political sciences) are hard to act in accordance with reality, due to the fact that governments were often found to have disconcerted economies, whether via bureaucratic malfeasance or by intruding into formerly private areas of people’s lives (education, wages, health care, retirement, etc.) resulting in significant national indebtedness, rapidly escalating prices, lack of savings, the utter institutionalization of poverty, artificially induced economic growth, and other undesirable consequences (Romania’s current situation is linked to these concepts, unfortunately). Contrary to the authors' ideal perspective, the US and other leading economies worldwide are not in any sense based on a true free market principle, lacking government intervention. To name just a few interventions, the US economy is impaired with high and distorted taxes, plentiful and often hidden subsidies, price controls, and multiple, often overlapping regulatory organizations. Much of the US economy is saturated by government-granted monopolies, while long-term government-created pervasive moral hazards distort people's decision making. Thus, the current US economy may be quite unstable because of the turmoil of interventions that are subject to change. Also, the U.S. interventionist state apparatus did not just recently emerge, there is a long history of intervention; including irregular wars cycles, inflations, tax reforms, public enterprises and monopolies, to mention just a few. Therefore, the current economy is not only a product of modern conditions; it is also influenced by a history of interventions.

While securities regulations and campaign finance reforms may be the key to minimizing scams, pervasive government regulations are not associated with the free market principles, and it is a kind of story that does not capture reality. In the Declaration of Independence, the Founding Fathers visualized a government that protected the right to life, liberty, and the pursuit of happiness. Regulation is inadequate both for consumers and small businesses. Even though it is argued that regulation is needed to protect consumers, in reality, it tends more to be an approach of protectionism, and it tends to benefit regulated industries at the expense of consumers.

Moreover, it is not an uncommon thing nowadays that large, politically-connected companies often make use of government to escape certain taxes, or laws, or even to drive the smaller businesses out of the market. Susan Dudley, Director of the Regulatory Studies Center at George Washington University, states: "It’s ridiculously expensive. The cost of complying with regulation in the United States is $1.8 trillion each year, according to a recent report from the Competitive Enterprise Institute. Regulatory compliance represents a hidden tax on U.S businesses, and it is passed along to consumers in the form of higher prices". This way, in case businesses didn’t have to pay out so much to comply with government regulation, then they would afford hiring more employees.

Another reason why state regulations are only a short-term solution, with further reference to the Romanian economy, is the fact that it fuels the growth of government in a free market economy. "The use of money in market economies for lobbying in order to obtain special treatment with regard to taxes, licenses, and exemptions is well-known historically and internationally. Oligarchic support for favored political parties or entities is also not unique to ex-communist countries. What troubles a lot of observers of transition is that oligarchs in ex-communist countries go far beyond the usual rent-seeking activities and use their influence to determine the general philosophical direction of government, reform policies, and geostrategic decisions." (Oleh Havrylyshyn, X. Meng and Marian L. Tupy from Cato Institute)

Ex-communist countries have moved a long way from centrally planned socialist regimes towards market-based capitalist systems, which produced a divide between those who advocated rapid, or “big-bang” reforms (Estonia, for example), and those who advocated a gradual approach (Romania). Even though, all of them started from a point very far from a market economy, by the mid-1990s the differences among them were huge and kept growing. Different dimensions of economic, political, and social life, consistently point in the same direction: while the gradualists (Romania) moved less quickly, the gap grew because countries that led from the start continued to move resolutely forward.

The 2016 research study undertaken by the economists Oleh Havrylyshyn, X. Meng and Marian L. Tupy at Cato Institute [7] gives evidence that early and rapid reformers outperformed by far gradual reformers, both on economic measures (GDP per capita) and on social indicators (United Nations Human Development Index). A key reason for gradualism was that too-rapid reforms would be the cause of great social pain. In reality, rapid reformers experienced diminished recessions and had a much earlier recovery than gradual reformers. Among all post-communist countries, institutional development lagged considerably behind economic reforms and the postponement of reform proved to have an extreme consequence: an opening for rent-seeking and the rise of oligarchs. In spite of their frequent protestations that going slowly was necessary to allow time to build proper market institutions, as the above-mentioned researchers state, nothing of this sort has happened though:

> *"Reforms may be delayed or be gradual for different reasons, but in most cases delays or gradualism happened because the preceding communist ruling class remained in power and sought to become the new capitalist class. To achieve that aim, the former communists needed time. With private ownership allowed, but market liberalization delayed or partial, arbitrage and rent-seeking opportunities were created that were most favorable to insiders. As the new capitalists developed and gradually became rich enough to acquire oligarch power, they continued to prefer a partially reformed economy, nontransparency, a privileged insider position, a monopoly-like status, and protection against new entrants based on onerous regulations for small- and medium-sized businesses. This process was also abetted by the retention of government subsidies, poor rule of law, and other institutional deficiencies. Also, EU membership requirements run exactly counter to the interests of the new oligarchy. The EU insists on competitive markets, transparency, the rule of law, and so on."*

The researchers' findings state that reforms worked better because of the political economy in some ex-communist countries (Estonia, Czech Republic, Poland, for example). On the other hand, the former communist elites in gradualist countries generally accepted that a new capitalist regime was inevitable, but they wanted to retain their privileged or ruling status. "Soon, they enriched themselves through corrupt privatization schemes." Their perspective is that the gradualist model was too easily abused. "Nontransparent means to influence policy and the act of a state protecting its monopoly-like status impeded a truly open and competitive market economy."

If policymakers paid serious attention and consideration to the economy growth, they would support policies that reduce deadweight loss, attract foreign investments, endeavoring to enhance human living standard. Romania is currently situated somewhere in the middle: in order for the state to fully and truly protect its people against harsh “economic equilibrium based on phishing” situations such as stated in Akerlof and Shiller’s work, institutional quality in our country thus, still needs to be improved. Transparency of privatization and avoidance of insider privileges may be, at least in principle, a step forward.

[7] https://www.cato.org/publications/policy-analysis/25-years-reforms-ex-communist-countries-fast-extensive-reforms-led#cite-21

8. TRANSPARENCY IN THE INFORMATION AGE

Transparency in business demands business people to remain open and informative regarding key points of information, including their business's goals, history, performance and operations. And it is a goal whose significance has risen and continues to do so. Not to mention that since we are living in the Information Age, consumers have grown to expect instantly available data among all their interactions, hence, across all industries, transparency has never been more important to a successful business model.

It is no longer a viable option to withhold or cleverly reshape information in this new era of consumers who (unlike Akerlof and Shiller's binary perspective) are savvier than any generation before them and for whom skepticism seems to be a default setting. In order to build brand loyalty, companies need to first build trust. Instead of neglecting it, businesses should embrace transparency as a way to increase customer loyalty and improve their service. Plus, being able to see "every move", consumers would obviously be more thoughtful and precise in the financial decisions they make.

Moreover, this is not only applied to consumer's experience. It is widely known that employees put a high premium on transparency when it comes to their interactions with different levels of management, going as far as granting it the top factor in determining their satisfaction and content in the workplace. Not knowing what the company stands for and what its long-term plans are as well as not being able to access trustworthy accounting and statistical data of a company, increases distrust among workers and consumers.

What has also led to increased demand for transparency is the prevalence of online ratings and reviews. Nowadays, accessing a site like Consultants 500 or browsing Amazon Product Reviews can be really effective in informing potential consumers in regard to a company's operations, products and overall customer experiences. In the age of the industrial internet, technological breakthroughs help consumers acquire awareness via peer review and open data. Airbnb, Uber, Booking.com or TripAdvisor's highly-valued business model is based on the ability of consumers to rate the services they have utilized. In a world in which every service is rated by people worldwide, moral hazard and asymmetric information are considerably diminished. It is clear that when business are faced to deal with consumers or internal practices with employees, there is an acute need for businesses to meet the expectation of transparency in a real way, and not just as an afterthought or in the manner of marketing tactic.

With that being said, it seems unlikely that transparency will fade from consumers' priority list any time soon, since consumers' transparency demands will only increase as we become more closely connected and aware of possible latent threats that markets enclose. Information supremacy will make the difference between those people who own it and those who don't.

9. CONCLUSION

Although the possibility of companies trying to take advantage of investors or consumers is true, perhaps with downright lies, perhaps with subtler methods of deception, perhaps by manipulating their subconscious vulnerabilities, according to standard economic thinking, the first way of defense is competition itself. Companies that lie, deceive, and manipulate people aren't supposed to last long. The second way of people's defense is the law. If there is evidence that a company has engaged in fraud or craftiness, government regulators might well involve, and customers should have a right to compensation. What this paper highlighted though, is that state regulations might be only a superficial solution, as our country's institutional quality still needs to be improved.

Taking the above mentioned examples into account, Akerlof and Shiller offer a broader concept, which is that phishing occurs due to "manipulation of focus". Similar to pickpockets, or magicians, phishermen possess the ability of taking advantage of an individual's errant focus. For an individual investor, the old Latin saying retains its relevance: "caveat emptor". Investment professionals hence ought to take into account the importance of alerting clients to market pitfalls. But the blind spot of both state regulations and standard economic theory is that while there is still demand of superfluous, non-valuable, deceiving products, the respective supply will always exist. Trying to cure the cause lying beyond the authors' notion of "phishing", which is the people's framing effect, may then have reasonable outcomes.

That being said, while fallible human beings will continue to make unfortunate, irrationally-conceived, short-sighted, and occasionally self-destructive choices, what is needed, however, is not a hyper-regulatory government that tries to insulate people from their own (rather natural) shallowness (especially since the political class is all too skilled at siphoning wealth and freedom from the rest of us). The cure for "phoolishness" may lie beyond the scope of government. It may depend upon a cultural consensus in favor of instilling solid values, financial education and transparency among businesses and states. In attempt to become rational consumers, it is thus a priority to apply such principles of development of self-respect, and of a mature character that has risen above compulsive self-indulgence.

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THE DIGITALIZATION ERA IN THE ROMANIAN BANKING SYSTEM

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Abstract:
Technological progress is a common concept, that can be found in daily activities. In the context of the banking system, the communication between clients and banks is no longer limited to office meetings. Nowadays, this relationship can be maintained by phone calls, notifications via written messages and over the internet.

In the following article I have analysed the general situation of Romania, highlighting the level of digitalization in the banking system. This article attempts to present the products and services that can be found in the portfolios of the active banks in Romania.

The results of the research were put together in a SWOT analysis in order to clearly show the potential of the banking system in Romania. Considering the information revealed, a successful balance can be identified between resources and capabilities to environmental requirements.

Keywords: Romanian banking system, digitalization, online banking, e-commerce

1. INTRODUCTION

The market economy is considered to be the successor of the exchange economy. It can be defined as a coordinating system that organizes the general economy. It may be regarded as certain that the concept of private property is brought to the fore by referring to self-employed and business entities with positive results. The interdependence between supply and demand is the key to establish the level of the price. [8]

Similarly, in Romania, the market economy and the link between supply and demand is recognized in all economic sectors. As far as the banking system is concerned, each bank has the right to act independently, within the limits of legal regulations. The demand-supply ratio is harmonious in the banking system, giving the proper solutions for all the requirements of the public. In terms of digitalization, people of all ages are gradually accommodating with the advancements of the moment. The customers expect the banks to give them the opportunity to communicate with the bank from the comfort of their own home. In fact, the technological progress is recognized in the banking entities as all of them have managed to create an online platform and some mobile applications.

The digitalization of the banking system can be defined as the process of improving the internal activities, products and services offered to the customers. Of course, the technological progress and the change in the customers preferences have led to the development of alternative channels for banking transactions. In Romania, it must be taken into consideration that not all the people have good knowledge in using the computer. Therefore, banks must know if their platforms are user-friendly enough to be accessible to everyone.

According to these general information, I conducted a research in the banking system in Romania, investigating the potential of the market and the perspectives of the future. The results are organized in a SWOT analysis.

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[8] Popescu, D., 2007, Suport curs Microeconomie, Universitatea ,,Lucian Blaga” Sibiu, Facultatea de Stiinte Economice, Centrul de doctorat in economie, p. 12

2. ROMANIA IN THE CONTEXT OF DIGITIZING THE BANKING SYSTEM

Over the last decade, a considerable number of banking operations have begun to take place in the online environment. Especially young people start to use their devices, preferring them instead of other means of communication. More than that, banks have witnessed a progressive step together with the technological evolution.

Our actual Romanian community is governed by technology, speed and efficiency. Certainly, the banking system has a duty to align with reality and to be receptive to its customers. The future of the banks is only addressed to dynamic players on this market, easily adaptable and innovative. Customers, on the other hand, will be more and more informed, with less free time, involved in personal activities.[9] Thus, transactions that can be made by mobile phone or by computer have increased considerably. Customers can be motivated by the speed of response to its requests and by the possibility of doing transactions unlimited by time or space.

The first step towards accessing the digital single market in the Europe is marked by the elaboration of the EU Regulation 910/2014, eIDAS Regulation. This regulation is a set of standards for electronic identification and trust services for electronic transactions. The Trust Services that provide electronic signature are presented in detail, making the law more clear to the banks that operate on the internet.

Before this Regulation began its applicability, Romania has no regulation regarding the online banking system. With the launch of this system of laws, Romania enjoy positive effects regarding the development of services in the electronic environment.

There are certain conditions for this type of activity to reach the heights of success, including the existence of a safe environment that allows customers to access and store personal information. An important fact is the possibility to sign contracts from distance, in an authentic form. This condition can be easily achievable, as there are reliable providers for these services, such as Adobe or DocuSign, internationally recognized.

Despite these regulations, in Romania, in general, the online operations are authorized by the code generated by token. These codes are unique and are only valid for a few minutes. A token is used to login on internet banking platforms, but also to authorize transactions. However, the problem is that not all the users have token or the digital application of the token, in fact they cannot make online transactions.

Therefore, for the customers who do not own a token, but also for those who own it but do not want to use it, they may also be required to make transactions via voice calls. A large number of Romanian clients, who are not used to digital means of communication with the bank, they can use the call center. By calling there, the account balance can be checked, but also transactions can be ordered.

3. THE PORTFOLIO OF DIGITAL PRODUCTS AND SERVICES FOUND IN THE ROMANIAN BANKING SYSTEM

Banking online systems refer to those systems that allow customers to access their accounts, to purchase new products or to be given general information of services and products, simply by accessing the web platform of the bank or downloading and configuring the dedicated application for the mobile. Therefore, it is an electronic banking interface and an important channel for the distribution of banking information.

The digital bank is the latest in the series of technological wonders of the past decades. Internet banking, mobile banking, home banking, phone banking, debit and credit cards, ATMs and POSs have emerged as

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[9] Nuțiu, A., 2017, Vom continua să inovăm în zona de digitalizare a bankingului, Piața Financiară nr.6 (259)/iunie 2017

alternatives of the traditional banking products. Banks are aware that the internet and, more specifically, online communication, opens new horizons, making their products and services available worldwide. [10]

The generic name of "smart card" is attributed to an electronic device for authorization, authentication, encryption, decryption and storage of information. ISO 7816, the International Smart Card Standard, presents it under the name of ICC, abbreviation for Integrated Circuit Card.[11] The most popular uses for this device is phone cards and bank cards. In the Romanian banking system, smart cards are the tangible objects attached to the current accounts, and these are issued, in general, by Mastercard or Visa. Nowadays, banks are aiming to increase the number of smart cards issued and, especially, to increase the number of active smart cards. Thus, the smart card issuing fees are not expensive or even nonexistent.

The "home banking" concept describes the method in which banking transactions can be handled from home. It is based on a software installed at the customer's home, either on an individual workstation or on the network. Today, home banking is not as popular as in the past, but it is still used by a relevant number of costumers. Most often, it occurs in the case of a company, which can make salary payments through such digital platforms.

Internet banking is the successor of home banking and it is an online banking system. Internet banking generates lower operational and transactional costs than traditional transactions and the main advantage is that customers are not limited to a geographic location. In the country of Romania, online banking transactions are not as well developed as in other European countries. Transfers from one current account to another, foreign exchange, opening and closing of current accounts or opening a bank deposit are the most relevant transactions that can be done online. However, there are only few banks who operates in Romania that can provide an online credit.

Mobile banking requires the use of a smartphone, tablet or a PDA, with the condition of having access to the internet and being compatible with JavaScript. [12] Before the year of 2010, mobile banking meant communication with the customers through text messages. Afterwards, mobile banking applications appeared and are available for free to the customers. In Romania, banks are usually launching updates for their mobile banking applications in order to always meet the desire of the customers. In general, the use of application is offered for free, the condition is that the client should have an active current account. Everybody have the possibility to download the mobile application, but only the clients are given the unique codes to activate the application.

Although not very popular in Romania, the phone banking exists and it is provided by many banks operating in the country. Phone banking is the banking service by which clients can perform transactions through phone calls. The call is free, confidential and can be given at any time of the day and night. Banks also offer the possibility to be called from any national and international phone network. This is addressed to those who are not frequent users of modern devices. Moreover, the phone banking can be used without an internet connection.

4. THE SWOT ANALYSIS FOR THE ROMANIAN DIGITAL BANKING SYSTEM

SWOT analysis is the most commonly known method to identify and to analyse the strategic position of a business and its environment. The main purpose is to identify strategies that aligns resources and capabilities to environmental requirements. Therefore, the SWOT analysis contributes to the evaluation of the internal potential, opportunities and threats of the external environment.

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[10] Mavri M., Ioannau G., 2006, *Customer's Perspectives on Online Banking Services*, International Journal of Customer Studies, Vol. 33, No.6, pp. 553-560

[11] International Organization for Standardization, 2005, ISO/IEC 7816-12:2005, available at: https://www.iso.org/standard/40604.html, [accessed: 12 august 2018]

[12] Georgescu-Goloșiu, L., 2003, Mijloace, modalități și instrumente de plată, Edituara ASE, București, p. 3

In fact, the SWOT analysis stays for strengths, weaknesses, opportunities and threats. In the following, I will present a SWOT analysis regarding the digital banking system in Romania. This analysis is based on personal research and experience, being an employee of the Commercial Bank of Romania. At the same time, I have tested applications and online platforms of rival banks. Online articles and studies which reveal the level of digitalization were also helpful in the process of observing the actual market. The conclusion can be found below, through the SWOT analysis.

Table 1. SWOT Analysis

Strengths	***Weaknesses***
- availability at any time of the day and night - reduced costs of use; - the absence of costs applicable to transactions made through digital platforms; - possibility to create charts regarding the income and expenses in real time; - the existence of video instruction for the use of home banking, internet banking and mobile banking; - possibility to create an username alias to make it easier for the customers to log in; - possibility to generate an account statement for free, similar to the one offered in the bank.	- impossibility to contract a credit online; - the lack of marketing to home banking, internet banking, mobile banking and phone banking; - frequent maintenance works; - certain banks do not allow customers to make international transactions through mobile banking.
Opportunities	***Threats***
- increasing demand for digital services by customers due to the increasing number of cashless banks; - increasing number of transactions that can be made in the online environment; - the trend to develop banking education of the population; - simplifying business processes.	- cyber-attacks becoming more common; - continuous updates for the digital platforms that generates high costs for the banks; - increasing costs with employees; - the existence of strict bank regulations; - increased risks of using the online environment; - increased risks of fraud inside or outside the bank; - changes in customer preferences; - the requirement for IT specialists, in order to hire; - the existence of the competition in the banking system, regarding digital services.

Source: Author's personal research and experience

In my opinion, analyzing the internal and external factors of the Romanian banking system regarding digital evolution, a real potential can be seen regarding the development in the online environment. Although, the financial education of the population does not reach the highest level, the employees of the banks should explain to the customers how the digital platform works. Also, it is required to explain how home banking, internet banking, mobile banking and phone banking work, in order to properly understand the differences between the concepts. It is indicated to make the first login in the presence of a bank employee and also to give to customers a user manual. These facts are important because the customers are very important in the process of developing the digital banking system. Thus, customers will gradually become accustomed to the digital banking system, easily accepting what is about to launch on the market.

5. CONCLUSIONS

The digitalization of the banking system in Romania is in progress. The banks are targeting the first places. Thus, it is a competition where every single bank wants to satisfy the market's wishes. Banks try to surprise the audience with something new, something rethought or something improved.

In Romania and in Europe, in general, the Regulation no. 910/2014 on electronic identification and trust services for electronic transactions in the internal market, named eIDAS Regulation, was the most important element, with positive effect on digital evolution. Banks have become more and more confident regarding the digitalization of their processes. Banks have focused on promoting the internet banking, mobile banking, home banking and phone banking, but continued the improvements in the digital platforms.

Regarding the digitalization, a good example is Pepper the robot, the one who was launched by MasterCard and became a waiter. The robot had a tablet integrated, where customers can view the detailed menu and choose the plates they want to order. Payment can also be made through this robot, as it connects to MasterPass and transactions are completed by accessing the e-wallet of the customer. Pepper never gets angry. Pepper is always respectful and answers to all the questions of the customers. Since Pepper was adopted by restaurants where interaction with customers is the key-component, I think Pepper is able to be integrated in the banking system as well. Of course, it is difficult to accept that some jobs will disappear, but others will appear. In fact, these are the effects of the banking system development. Probably, a robot like this will welcome customers when going to a bank and will give them the required information of the products and services offered by the bank. However, it is a long-term plan.

At the moment, clients need to be encouraged to develop financial education skills in order to be able to use properly the digital platforms of the banks. Investing in the promotion of digital transactions is important because everybody is influenced by advertisements, sometimes without even realizing it. And yet, the best recommendation comes from satisfied customers.

My recommendation for the digitalization of the Romanian banking system is to promote the financial education not only for the customers, but also for the employees of the banks. Employees with good knowledge will properly advise the customers. Even a customer with a traditional thinking can be convinced to change the cash payment of the bills with online transactions. The key is the advice given. Employees can show patiently the alternative options, which will bring them benefits.

In conclusion, the future belongs to the banks that will come to market with products and services which perfectly match the requirements of the customers. The digitalization of the banks will go hand in hand with the digitalization of other economic sectors. And also this evolution will improve the standard of living of the clients of the banks.

Regarding the above-mentioned subject, it is advisable to make a much more detailed international research in order to discover the portfolio of foreign banks. It is also a must to discuss the subject of digitalization in the Romanian banking system with specialists. Additionally, it is required to always be informed about the new trends in digitalization, as long as this field is continuously changing.

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THE IMPACT OF GEOPOLITICS ON EUROPEAN UNION-RUSSIA RELATION

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Abstract:
The European Union and Russia signed a Partnership and Cooperation Agreement on trade relations in 1994. Is it well known that the European Union and Russia have a tense relation, especially since Crimea was annexed by Russia, in 2014. From that moment on, an atmosphere similar with the Cold War Era has dominated the relations between the EU and Russia. Also, is it well known that both, European Union and Russia are very different in terms of political system and economy. In this paper, we want to illustrate the complementarity between the European Union and Russian economies and how their proximity influences their cooperation. In the first part of the paper, we describe how they had begun to collaborate and developed each other. In the second part, we will describe the economic situation, focusing on the complementarity of both, Russia and European Union. In the final part of the paper we conclude and describe the main role that Russia plays in relation with the European Union.

Keywords: European Union, international relations, Russia

7. INTRODUCTION

The relation between the European Union and Russia is a very common and interesting subject nowadays. The proximity makes both of them very tense in international relations, because the spheres of influence cannot be clearly defined. This is the main problem that will be debate in this paper. The geopolitical influence makes them both, European Union and Russia, dependent on one another at the political and economic level.

If we take a look back in history, we will see that from the beginning, the European Union wanted to be an economic and political power above the European continent. The main reason that the European Union was created was to stop the wars between countries and to make them collaborate. So, in 1950, the European countries began to create an union called, the European Coal and Steel Community. The founding countries were Belgium, France, Germany, Italy, Luxembourg and the Netherlands. These countries created this union to collaborate on politically and economically and to ensure peace. In 1957, the European Economic Community was founded based on Treaty of Rome, known as common market.

The common market meant the beginning of economic growth in EEC countries, whereas they eliminated customs duty and trade intensified. In 1970, the European Union started to expand and Denmark, Ireland and the United Kingdom joined. In 1973, EEC countries suffered due to the oil crisis and started to focus on environmental issues. They thus began to regulate this aspect, aiming for sustainable development and environmental protection.

With the fall of communism in Central and Eastern Europe, European countries began to explore the free movement of labour force, goods, services and capital. In 1995, the EU expanded by accepting three more member states: Austria, Finland and Sweden.

Also, in 1995, based on the Maastricht Treaty, the European Union currency, the euro, was introduced and shortly afterwards, many countries started to use it. In 2004 the biggest expansion wave was recorded when ten countries, followed by Bulgaria and Romania in 2007, joined the EU. In 2008, the world economy was hit by a financial crisis, which determined EU institutions to rethink the strategy and create a bank union so as, to ensure a safe financial system. In 2009, all EU countries signed the Lisbon Treaty, which provided that the European Union is the supreme force through its institutions and has a legal personality status. In 2013, Croatia joined the EU, being the 28th member state.

8. THE BEGINNING OF THE EU-RUSSIA RELATIONSHIP

The European Commission decided to implement the Strategic Partnership with Russia through the "European Neighbourhood and Partnership Instrument". It includes the "Nuclear Safety Instrument, the Democracy and Human Rights Toolkit, the Instrument for Stability" and a series of cooperation programs.

The collaboration with Russia started with the TACIS programme (Technical Assistance to the Commonwealth of Independence States) implemented by the European Commission. This programme helped Russia move on to the market economy, most of TACIS projects being run within the economic sector. These projects improved sectors like: energy (through the modernization of the oil and natural gas transmission networks, as well as through the promotion of technological innovations), environmental issues (promotion of alternative energy sources and adoption of international environmental standards) or infrastructure (modernization of roads, bridges and ports). TACIS has also carried out a number of projects in the field of tourism, banking or social insurance. The programme was also aimed to support the development of civil society, a culture based on democracy and respect for Human Rights. A number of Research & Development projects have been promoted, including initiatives from the TEMPUS or Erasmus programmes. Most of the funds allocated to Russia through TACIS were used in the period 2000-2006.

Taking into account the positive results of the implementation of the European Neighbourhood Policy in its early years, the European Commission has come to the conclusion that new measures need to be adopted in order for this policy to be implemented more deeply. What has been noted was the European Union's ability to develop a foreign policy complementary to the enlargement process, aimed at promoting reforms. The "European Neighbourhood Policy" received a new way of implementation for the 2007-2013 period, namely the "European Neighbourhood and Partnership Instrument".

Regarding the relationship with Russia, the Country Strategy and Reports is based on the premise that the 4 Common Spaces, the concept of "European Neighbourhood Policy" and the European Security Strategy are strengthened by the permanent collaboration between the two parties. The European Commission considers that these "can lead to a more concrete and stronger approach with Russia".

The Country Strategy Paper, together with the "European Neighbourhood and Partnership Instrument", attempts to describe the areas and the way in which the EU-Russia Strategic Partnership will be implemented, including the EU's financial support for implementing programmes (this is the Instrument for Democracy and Human Rights, the Nuclear Safety Instrument and various thematic programmes).

In the economic field, the intention is to diversify the Russian economy to make it more attractive to European investors. Last but not least, it is very important that Russia's economy rely on innovation and technological breakthrough so that products integrate more easily into the European market, contributing to the intensification of trade relations with the EU.

As the energy sector is an essential component of Russia's economy, it primarily seeks to respect the common interests of both parties (mainly related to price stability and energy security). By achieving energy cooperation, Russia can provide its resources to the European market, and the EU can provide it with capital and new technologies. Also in relation to energy security, the problem of nuclear energy can not be neglected either. The European Union is keen to insist on continuing the nuclear dialogue, trying to reach an agreement with Russia on nuclear trade.

The EU-Russia cooperation in the area of Freedom, Security and Justice is based on the "Permanent Partnership Council for Justice and Home Affairs", which set the following priorities for the future: "terrorism, Internet criminality, judicial cooperation, border issues and drug trafficking ". These will be analyzed in the framework of the "Joint Action Plan to Combat Organized Crime", EUROPOL, EUROJUST, as well as in the collaboration between FRONTEX and the Federal Border Security Service in Russia.

9. THE EU – RUSSIA INTERDEPENDENCY

The European Union and Russia are in an interdependency relation in many spheres, being the biggest geopolitical entities on the European continent. They are important partners in trade, energy, and security. Even if they do not have a positive perception of each other, they are developing intense economic and political relations because of the proximity and complementarity of their systems.

The two concepts are of particular relevance in understanding the nature of interaction between the two actors: the European Union and Russia have common borders (proximity) and the structure of their transactions is complementary (the EU ensures a high proportion of its energy necessity with imports from Russia which, in turn, has as a main source of income in its GDP the energy exports to the European Union).

The proximity factor is an advantage and a disadvantage at the same time. States should collaborate in the sight of their proximity and facilitate the interaction but at the same time numerous conflicts may occur as a consequence of expansion tendencies. For example, in the case of EU's gas imports, proximity to Russia is an opportunity to reduce costs of transmissions but if a conflict appears, it is very difficult to replace the Federation as its main supplier, given the huge costs that new transport and pipelines infrastructure would imply.

On the other hand, the European Union's desire to expand creates a tension with Russia because, sooner or later, territorial disputes or cultural differences that will make both of them more aware in their partnership will occur. For example, Ukraine is the main border between European Union and Russia which raises many conflicts in the sight of geopolitics and spheres of influence.

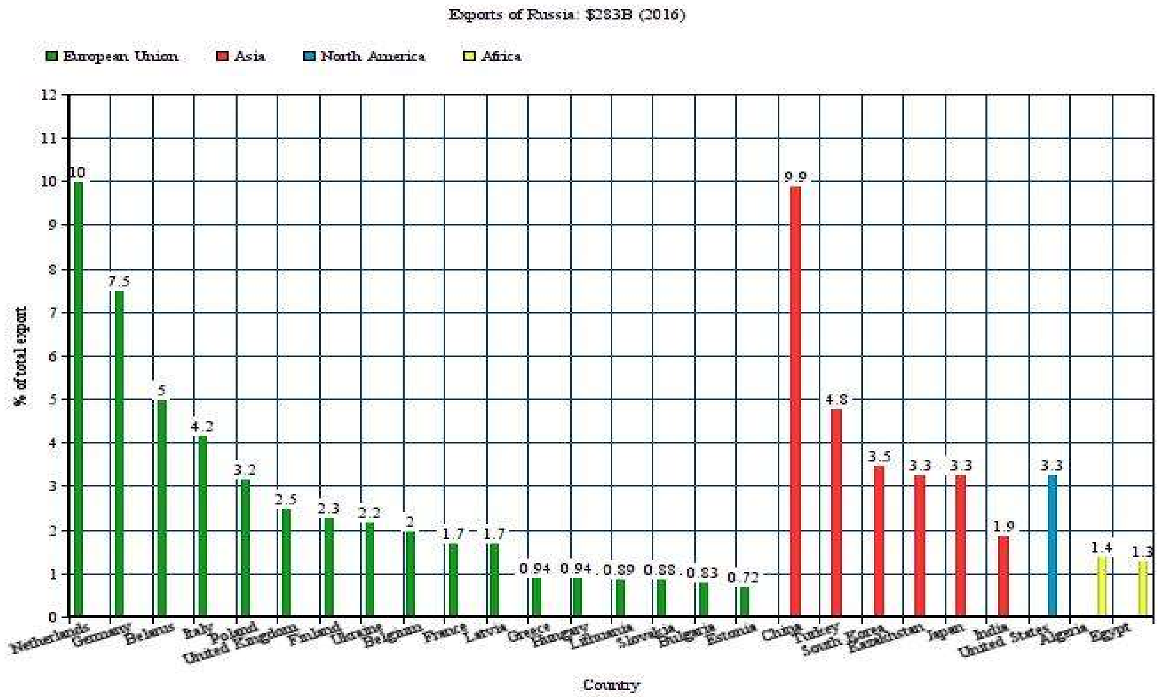
Regarding their complementarity, it is a natural effect of interdependency, Russia being the main energy supplier to Europe and one of the top suppliers of raw materials used by Europe's industries; meanwhile, the European Union is the main investor in Russian economy and a major supplier of technology and know-how.

In the next part, we will illustrate the trade relation between the European Union and Russia. From the main products that the EU and Russia export and import from and to each other we can point out the complementarity of these two economies.

In Graphic 1, we can observe Russia's main export partners and the amount it exports. We can deduce that Europe is Russia's most important partner, with $157 billion export value (approx. 55% of total exports). Russia's top export destinations are the Netherlands ($29.3B), China ($28B), Germany ($21.3B), Belarus ($14.1B) and Turkey ($13.7B).

We can see that Russia has partners all over the world but especially within the European Union and Asia due to geographical position. Russia holds a key position between Europe and Asia, being the most important partner that the European Union can have in order to establish an alliance with the Eurasian Economic Union.

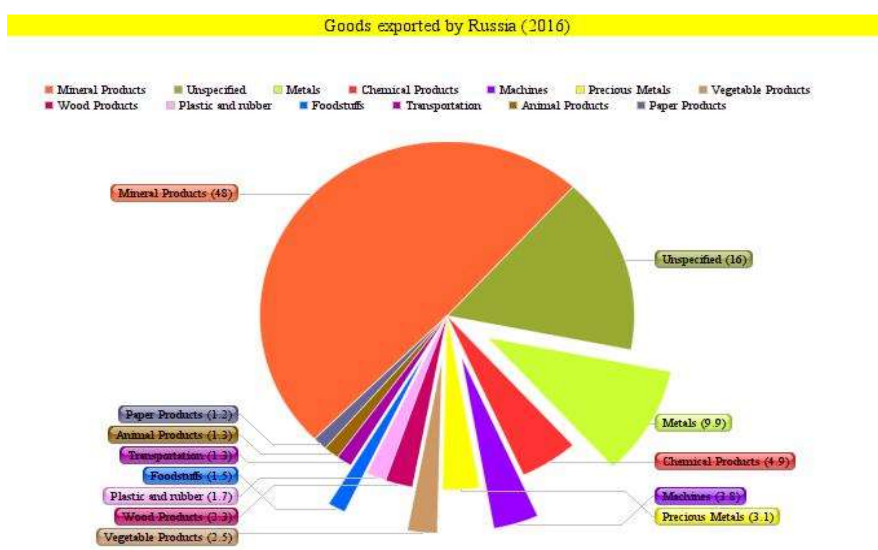
Graphic 1. Russia's export destinations (2016)



Source: Observatory of Economic Complexity, https://atlas.media.mit.edu/en/

In the next figure, we will illustrate, the goods that Russia exports to its main trade partners. We can observe why the European Union is energetically dependent on Russia, almost 50% of its resources being based on mineral products and exported to EU countries. In 2016 Russia's exports reached $283 billion, thus turning into the 16th largest exporter in the world. The most recent exports are led by Crude Petroleum which represents 26.1% of Russia's total exports.

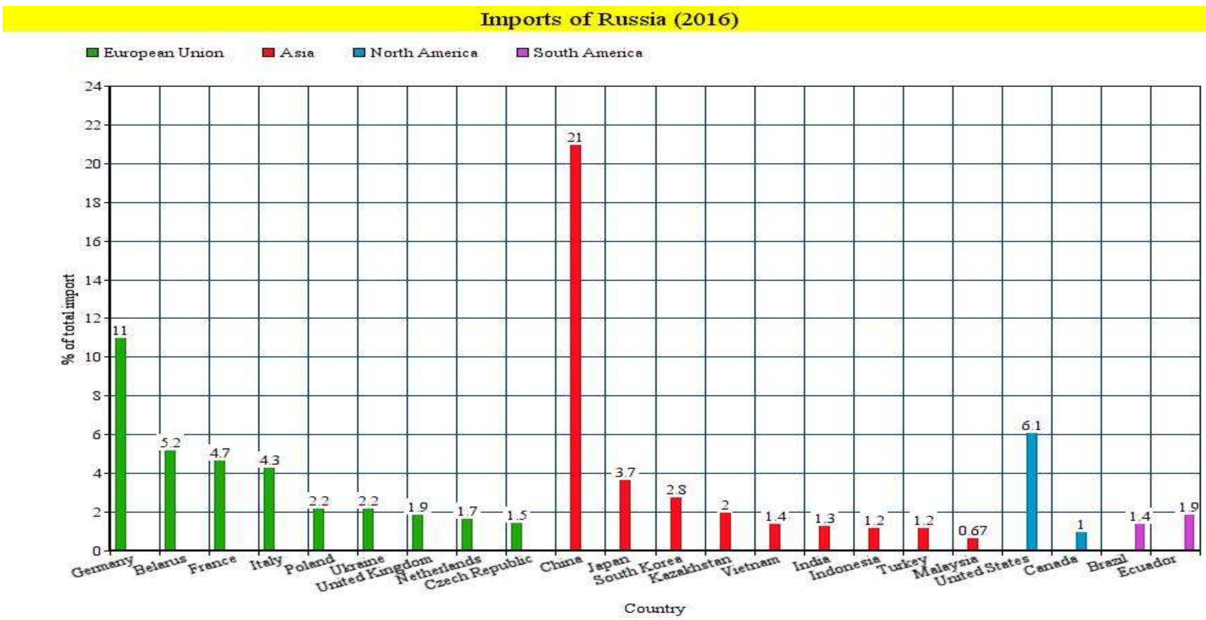
Figure 1. What does Russia exports? (2016)



Source: Observatory of Economic Complexity, https://atlas.media.mit.edu/en/

Russia's main import partners are illustrated in Graphic 2. It is important to establish that European countries are valuable partners in the trade relation with Russia, almost 50% of Russian imports are from European countries, followed by Asian countries with 40%. The top import origins are China ($37.3B), Germany ($23.6B), Belarus ($10.9B), Italy ($7.44B) and the United States ($5.79B).

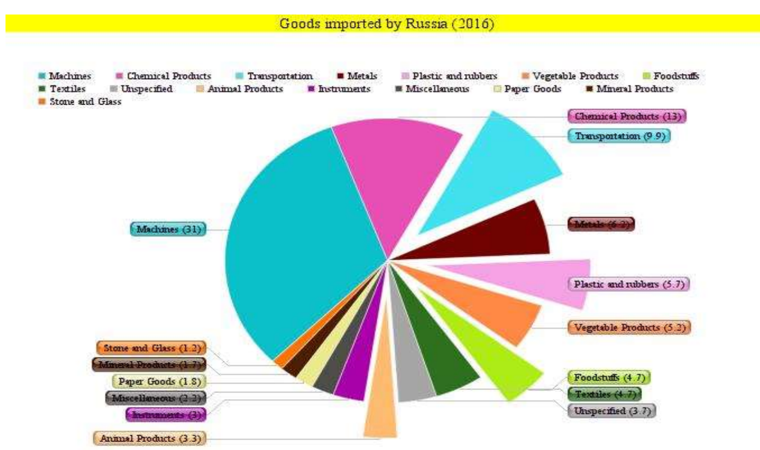
Graphic 2. Countries from where Russia imports



Source: Observatory of Economic Complexity, https://atlas.media.mit.edu/en/

In Figure 2, the goods imported by Russia from its trade partners are illustrated. We can see that Russia mostly imports finished products, i.e machines, chemical products and vehicle parts. In 2016 Russia imported $180 billion, making it the 22nd largest importer in the world.

Figure 2. Products that Russia imports



Source: Observatory of Economic Complexity, https://atlas.media.mit.edu/en/

10. CONCLUSION

Nevertheless, the last events in the world politics and economy, shows that proximity and complementarity are not enough to keep a good partnership, but in the European Union- Russia case, it is the only way to set out collaboration. The economic field is very important now, because the European Union can not stand on its own regarding energetic independence.

The interdependency of both is undeniable and the fact that European Union will wish to expand beyond Russia is worrying, because Russia will not accept anything more than a partnership with European Union. Russia keeps tensions up, just to make the European Union aware that if it takes a wrong step in its sphere of influence, Russia has the possibilities to start an economic war that will serious affect the European Union's economy. If the European Union's economy fails, it will start a new "gold rush" which will fundamentally change the world economic situation.

In spite of the fact that tensions exist between the European Union and Russia, they should continue to collaborate because they provide each other with opportunities to develop their economies and make the European continent powerful in international relations with the other strong economies of the world.

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