Entrepreneurial Business and Economics Review

2013, Vol. 1, No. 4

Investment Decisions in Global Financial Markets: the Experience of Lithuania

Aleksandras Vytautas Rutkauskas, Alina Kvietkauskienė

A B S T R A C T

Objective: The objective of this article is to identify the content of globalization processes in financial markets. The universal method of investment is offered in order to save the interests of investors – to expand the geography of investment, not leaving without attention innovative activities. This method has become global in financial market segment and thus strengthening the financial system's ability to contribute significantly to the globalization, sustainability and cost-effectiveness of education.

Research Design & Methods: It was decided to use adequate investment portfolio model for investment decision making, random fields of stochastic optimization ideas and methods.

Findings: Findings present sustainable return on investment possibilities. The analysed indicator is expected investment value, measured with a certain size of return and composition of reliability maximization.

Implications & Recommendations: There are strategies, which allow taking the positive decisions that ensure the optimal portfolio structure in global financial markets.

Contribution & Value Added: Illustrating the possibilities of their idea, authors provide investment strategies in global foreign exchange and capital markets. The set of results of investment performance, allows the reader to monitor the long-term investment experiment.

Article type: research paper
Keywords: investment; adequate portfolio model; globalization; uncertainty
JEL codes: G11, G17

Published by Centre for Strategic and International Entrepreneurship – Krakow, Poland

Suggested citation:

Rutkauskas, A. V., & Kvietkauskienė, A. (2013). Investment Decisions in Global Financial Markets: the Experience of Lithuania. *Entrepreneurial Business and Economics Review, 1*(4), 21-35.

INTRODUCTION

In recent decades the phenomena of globalization found itself in the centre of academic community and the public media spotlight. Discussions extend on globalization intensity, propulsions, social forms and perspectives, which transform into the subjective evaluations that determine the interests of various social groups and their behaviour. The approach to the consequences of globalization leads to practical action, or even provoke social conflicts. The main focus should be given to innovative policy solutions in the era of globalization. Globalization must be understood not only as a process of extending the interactions between the public and the events, related to sustainability of human existence but also as a cause, which may open the way for uncontrolled conflict.

Many scientists understand and define globalization as a process, taking place in the social environment and covering a variety of public, state and social structures and their environment. It involves the intensification of mutual relationships and movement of global flows .

Beck (2001) put forward the idea that globalization is not a choice of business, countries or organizations. It is therefore necessary to analyze not only the economic effects of globalization, but also political and cultural. If globalization will be compatible with all institutions in each country, then all its results will be unpredictable and unstable, so it is necessary to examine the nature of globalization.

The fact that more areas than social processes are covered (the economy and ecology), does not mean that, on the basis of three mentioned components, sustainable development problems are solved. The pragmatic reason is that solutions of management development depend on a significantly larger set of circumstances (Rutkauskas & Kvietkauskiene, 2012).

One of most urgent questions – what will be the status of globalization sustainability status of the earth, or what is formed sustainability of human existence on development of the process of globalization.

Many scientists (Kilbourn, 2004; Najam *et al*., 2007; Stiglitz, 2002; Sebnem *et al*., 2013) emphasize that globalization is an irreversible process, which often is presented as a huge international market, or the information revolution, universal promotion of human rights, the global industrial culture, polycentric international policy for the influence on daily lives of people. These are the core positive effects of globalization.

However, there are the obvious negative effects of globalization on the lives of people all over the world – global pollution, international cultural conflicts, natural disasters.

Academic literature is trying to reveal the way by which interests intensify globalization. According to Held *et al*. (2002), a chunky capital of financial markets dominate in the interests of all over the world, therefore, the process of globalization takes place on global equity interests. Whereas the passing force of globalization is globalization of financial markets, it is important to know the adequate forms and motives of capital movement in the financial markets. Capital travels accompanied by innovative capital solutions and emerging individual interests. Therefore, it is particularly important to understand the anatomy of the decisions in global capital markets.

The main purpose of the article is to identify investment decision making scheme and methods analysing the following issues:

- Identify and disclose the main globalization processes and assumptions in the key globalization highway – international financial markets.
- To show that global financial markets are effective partners of various businesses in non-global areas searching for optimal portfolio structure in financial markets.

The main research methods include adequate investment portfolio model, stochastic optimization, and utility function. The authors use adequate portfolio model to project investment portfolio decisions in global financial markets.

LITERATURE REVIEW

Dimensions, Causes and Assumptions of Globalization

Globalization is a powerful tool for the new world economic system, and in the formation of international relations. While talking about globalization, many scientists and academics examine the different types of globalization and use the term of globalization for related but different phenomena describing: the economic, social, political and business effects, therefore the measurement of globalization must be complex. There is a need to measure the phenomenon of globalization as a whole, i.e. to establish an integrated set of indicators – globalization index in order to determine the degree of globalization of different countries. The most famous and most cited are two globalization indexes that combine the separate fields of globalization indicators: Kearney (2007) globalization index and Dreher (2006) globalization index. Kearney globalization index comprehensively measures the resolution of globalization processes and covers the most important displacements of globalization components, which include international relations, international trade, financial flows and information flow of people and ideas across national borders (Kearney, 2007). Dreher globalization index, calculated since 1970 is used to assess the extent of globalization. This index includes the evaluation of three main areas of globalization: economic, social and political.

Many works identify globalization as phenomenon which leads to substantial changes in the world and creates a new business environment where a business or economy entities re-evaluate the leading business solutions (Dicken, 2003; Held *et al*., 2002; Bhagwati, 2007).

World economies are increasingly integrated into the global economy. This process is conditioned by the stimulus strength of globalization. It is possible to distinguish the following reasons and assumptions of globalization: the global use of land resources, the convergence of existence quality, globalization challenges for state of the sustainability, the economic efficiency of development, discoveries and technological opportunities, communication improvement, cross-cultural integration, adequate opportunities of education and qualification, fundamental scientific discoveries and technological opportunities (Figure 1). These are the main factors that create the potential for economic activity and its entities for allocation of resources on a global scale.

According to some proponents of globalization (Zedillo, 2008; Scherer & Palazo, 2011) a systematic understanding of the global economy, puts the user of global market in the first place, because in the emerging area of global economy the user becomes the main leverage of globalization. Therefore, it is important that the participants of world economy will be involved in integrated systems of supply and production at the international level.

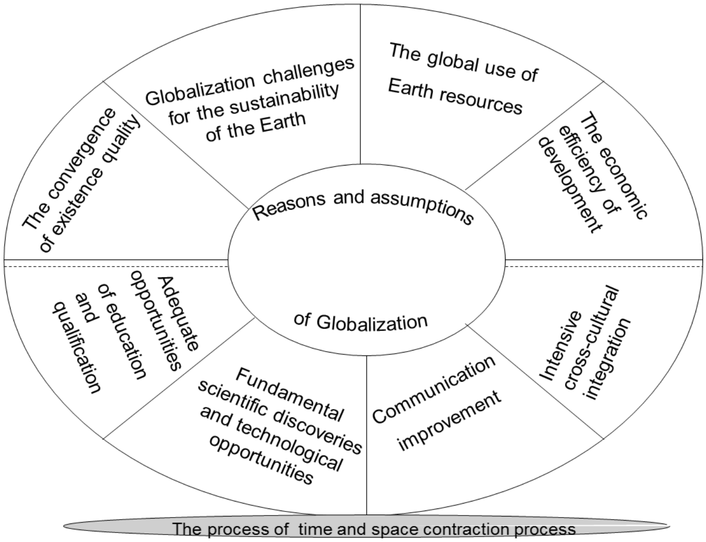

Figure 1. The causes and assumptions of globalization
Source: own elaboration.

The Opportunities and Challenges of Globalization

By some, the phenomenon of globalization is considered highly controversial. A number of authors (Held *et al.*, 2002; Dreher, 2006; Bhagwati, 2004) argue that globalization is generally a positive thing, which opens the closed borders and provides various facilities for societies or states to learn from the experience of other countries and take from them what is the best. Another part of researchers (Guillen, 2000; Naim, 2009; Easterly, 2008; Lucas, 2007) analyze the significant negative dangers of its consequences.

Opportunities of globalization. Proponents of globalization often claim that globalization may be better able to solve many global problems such as poverty and unemployment. In fact, the growth of globalization can reduce unskilled labor wages of developed countries and increase wages for unskilled labor in developing countries, because these two groups enter into close cooperation with each other. Globalization generates resources and promotes the transfer of ideas, which can be used for improvement of relationship between individual and community. Ongoing processes of globalization also provide better management conditions of environment, improved living and food supply conditions. Due to globalization, almost every individual can get a chance to exhibit themselves in the global market (Bauman, 1998; Olsson & Schuller, 2012; McMillian & Rodrick, 2011).

Globalization implies relocation of many companies across the world. People can get access to a range of industries since globalization not only promotes economic growth, but also encourages competition between wholesalers and retailers, thus increasing the demand for goods.

The dangers of globalization. Globalization can influence the spread of infectious diseases and cause a growing number of casualties. This is related to the fact that people can cross international borders and quite easy get into foreign countries. The precedent speed and capacity of people mobility is the most obvious feature of the current globalization era. A number of globalization factors influence the differences between the rich and poor. Many demographers and political scientists highlight the typical migration for the twenty-first century. These migration flows increase the number of patients with infectious diseases. Modern modes of transport opened the way for respiratory tract diseases.

Due to globalization, various cultures of the world have mingled, which sometimes results in weakening of local cultural identities. A person becomes only a small part of the global world. According to A. V. Rutkauskas and A. Kvietkauskienė (2012), globalization may eventually become a new Tower of Babel. Structured delivery of globalization advantages and threats is given in Table 1.

Table 1. The advantages and disadvantages of globalization in the context of economies in transition countries

Advantages of globalization	Disadvantages of globalization
◦ Diffusion of ideas of democracy. ◦ More efficient distribution of resources. ◦ Increased standards of living. ◦ Increased access to information and technology. ◦ Positive effect of increased competitiveness: the prices of goods and services artificially are stable, the ingenuity, creativity and innovations is promoted. ◦ Availability of less expensive products to consumers. ◦ More rapid economic growth, which leads to creation of new jobs. ◦ Reduction of poverty. ◦ The changes of technologies.	◦ In some cases – an unprecedented decline of the sovereign of countries. ◦ Incomes is not always distributed evenly. ◦ The vulnerability of the international markets leads by the overall integration. ◦ A number of environmental problems. ◦ The assimilation and loss of different cultures. ◦ The negative aspects of increased competition and efficiency. ◦ The hegemony of multinational corporations (MNC).

Source: own compilation based on (Ohmae, 2000; Sachs, 1998; Ritzer & Atalay, 2010; Stiglitz, 2002; Wolf, 2001; Zedillo, 2008; Lechner, 2004; Held *et al.*, 2002).

It is important to ask a crucial question: how the process of globalization and its structure is determined by the physical changes of Earth and its environment as well as opportunities of fundamental science and technology discoveries and how these lead to subjective interests. There is no doubt that the exclusion of the changes taking place on planet Earth and in its environment or disregards of science and technology, is particularly dangerous combination for sustainability development.

Talking about the globalization problem of financial markets, it can be discussed about interacting between development opportunities and emerging interest.

Cognition and Use of Globalization Processes

Globalization is an exclusive feature of modern financial markets because the world is experiencing one general investment environment and a rapid development of integration between national markets. Currently, investors are not confined to opportunities of their own country markets. Using the extensive opportunities of information technologies and the development of financial institutions, they can operate effectively within international markets.

Searching for interactions of globalization with the development peculiarities of global, regional and national financial systems, the process of globalization can be structured on the basis of D. Held *et al*. (2002), three main schools of globalization: hiperglobalists, sceptics and transformationalists. The definition of globalization in this paper is defined on the basis of each school approach to:

- concept,
- driving forces,
- socio-economic implications,
- influence for state power and governance,
- historical perspectives.

Of course the influence of globalization is more important to the financial markets of developed countries. Increasing impact of financial globalization can promote the imbalance for all the countries of the financial markets and lead to financial crises.

There is a wide set of indicators employed to determine the extent and consequences of globalized finance. For example, whether a country has reached a particular maturity on the global financial market, is indicated by the behaviour (change) in the national rate. Although the interest rates have become increasingly more similar in many countries, for this day – they are different (the diversity of interest rate is within one country), and these differences persist even when interest rates are expressed in terms of a single common currency. Such differences emerge due to imperfections in financial markets and different economic and business development levels of the countries (Held *et al*., 2002).

According to Held *et al*. (2002) the three schools of globalization interact in the context of globalization. Hiperglobalists and sceptics submit their arguments that global capital markets have leaded the equalization of return on financial assets around the world. Various empirical studies show that in the group of the largest national economies there is a global (real) interest rate with a small and static risk premium for different countries (Held *et al*., 2002). As a result, it can be concluded that long-term interest rates emerge in the developing global capital market, despite the fact that interest rates do not level out. The formation of real global interest rates indicates the global credit demand and supply. This means a relatively high level of world financial centers interfacing and growing financial integration (Walter, 1993).

The main features of hiperglobalists, sceptics and transformationalists are presented in Table 2.

The impact of the globalization process can be inferred more adequately from the circumstances of the formation rate of return for each financial asset similarly to profitability rate in currency exchange and capital markets. Dominated interactions of supply, demand and profitability values are visible at the supply and demand balance (Rutkauskas, 2006). The emergence of profitability values is appropriate to monitor in the context of uncertainty, i.e. after development a distribution possibilities probability rate.

It is thus possible to monitor how financial assets rates of return are formed – the possibilities probability distribution for the specific market. These opportunities in every market and every moment are different, but they follow a given standard, i.e. enough to accurately and reliably approximated by one of the probability distributions (Rutkauskas, 2006).

Table 2. Main features of three schools of globalization

Feature	Hiperglobalists	Sceptics	Transformatio nalists
1. Neutral concept	**Globalization is what is happening today**		
2. Exclusive feature of globalization	Creation of market in absolutely dominating of capital and the domination of prestigious finance	A cross-regional, trans-national communication intensification based on the sustainable development needs and financial integration of the logistical capacity	A stochastic stratification result in approach of architecture, consequences and possibilities, when the effects of uncertainty grow
3. The dominant force	Global capitalism, the finance focused on maximizing the benefits of capital	The synergy of developmental sustainability, the maximum exploitation of financial potential	The laws of global capitalism and sustainable development
4. The power of national countries	Endangered	More universal and determinant	Inconstant but persistent
5. The potential negative consequences	Inevitable cross-regional and global conflicts	Insufficient level of competitiveness, low efficiency of resource utilization	Unacceptably high uncertainty management costs
6. Historical trajectory	Global dictatorship of capital	The pursuit of global performance	The knowledge to live in uncertainty
7. The simplified image	**Globalization – is the preparation of world housing, where will be enough (not enough) places, obviously, for everyone**		

Source: own compilation based on (Held *et al.,* 2002).

Adequate Portfolio as Universal Tool for Solutions Searching

Assumption made about the fact that during intense globalization the behavior of financial markets is converging. It enables to expect the individual investment opportunities in different markets. However, analogous opportunities for investor should ensure the homogenization of market behavior. If an investor wants to invest successfully in different markets or choose a portfolio of investments from different stocks of the market, he or she should be able to use a universal tool for investment decisions. This is the role of an adequate investment portfolio (Rutkauskas, 2006). The idea of this portfolio first was proposed by A. V. Rutkauskas (2000), in the following works he examines the specific features of this theory (Rutkauskas, 2001; 2005a; 2005b; 2006; Rutkauskas *et al.*, 2009). The essence of this theory is assessment of investment portfolio risk, profitability and reliability. This portfolio connects the analytical capabilities of many classical investment portfolios.

The portfolio allows a quantitative assessment of:

– efficiency of opportunities distribution and submitted compositions,
– approximate measures of financial risk,

– any potential opportunities of portfolio return on the basis of their efficiency, reliability and risks.

The formation of investment portfolios are based on modern models: Sharpe, Markowitz, Treynor *et al*. Using historical simulation, Markowitz and many other scientists use the arithmetic average of return in order to determine the expected profitability. However, the average may not reflect the actual expected return on financial instrument due to presence of uncertainty in financial markets and cyclical fluctuations, because, in the opinion of authors, there is not enough approaches for finding a constructive investment decision.

In many situations of the investment it is necessary to assess all possibilities for an investor in order to choose the best, so for the decision making of investment the authors rely on adequate portfolio.

The anatomy of adequate portfolio will be provided with the Markowitz portfolio, because it is a natural extension of the Markowitz portfolio.

If the set of possibilities of Markowitz portfolio (Figure 2 top row) generates an effective line, where the possibilities of optimal solution concentrate and each of them is described as possibilities of average profitability and riskiness, then the bunch of possibilities for adequate portfolio generates the bunch of effective lines (Figure 2 bottom row).

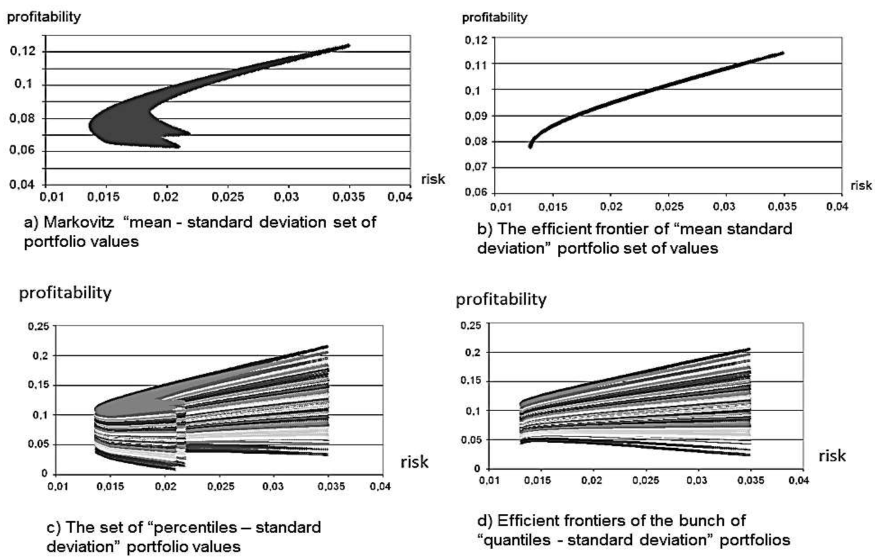

Figure 2. The scheme of formation sets of portfolio efficient values
Source: own elaboration.

As shown below (Figure 3), if the optimal solution in Markowitz portfolio is indicated by tangency of efficiency line and utility curve (bottom row in Figure 3), the optimal solution is found in adequate portfolio by tangency of return surface with the surface utility function.

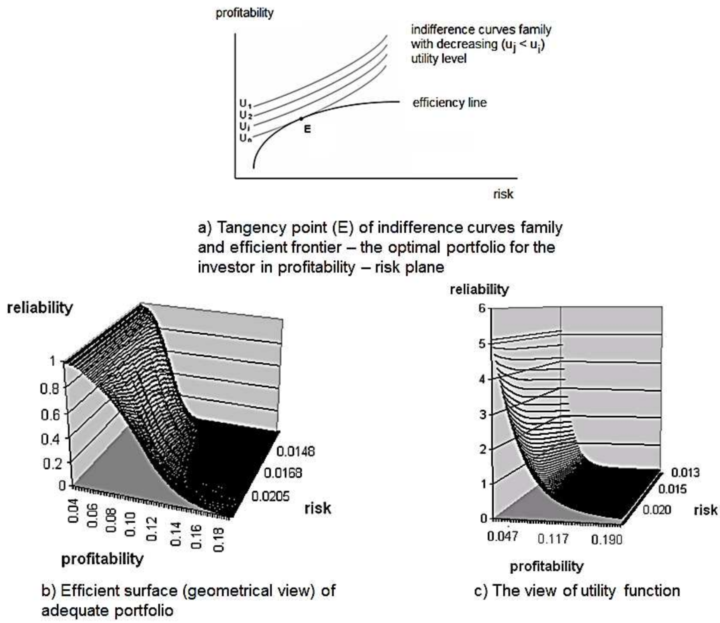

Figure 3. The possibilities' surface of adequate portfolio and investor's utility function
Source: own elaboration.

Thus, in Figure 3 we can see that in case of Markowitz portfolio, the optimal solution is defined by the average of return and riskiness, whereas in adequate portfolio – the size of return, reliability of return and riskiness of return. More precisely – it's a riskiness of return, defined by Markowitz random field as the riskiness of random size (Figure 4).

MATERIAL AND METHODS

The selection of aggregated multi-criteria feature and evaluation of opportunities practical applications are very important problems, which particularly receive strong emphasis in mathematics, mechanics and other "quantitative" science. However, attention should be paid also to social sciences problems, where a large part of the factors can be examined only qualitatively and therefore the direct analysis of multicriteria raises numerous questions (Rutkauskas & Stasytytė, 2011).

In this work in order to explore and identify the opportunities, which the market offers for investors, the impact of globalization to financial markets was taken into account. Based on our previous research, we propose an approach, where the rate of return is based on financial assets and probability distribution. In order to effectively allocate resources in the financial markets, it is important to identify the opportunities offered by the markets, profitability and risk level. By this, markets can be selected, where investors, by taking the appropriate level of risk, will receive the range of utility and reliability.

However, the authors try to step away from the concept that risk is just bearer of disasters and risk management is a desire to avoid them. Instead, the focus is on the idea that risk taking is the searching for success and risk can be conceptualized as bearer of success. We need to understand that the risk is a substance of existence and this phenomenon illustrates its genetic power. In order to achieve successful investment decisions, the evaluation of each market opportunity should focus on the size of possibility and guarantee of this size. This scheme will enable a quicker, than with all other models and methods, review of market opportunities. The choice of useful options for entity is associated with equivalent recovery of utility function.

Whereas the utility is associated with efficiency, reliability and risk, it is possible to invoke the utility function (1):

$$U = \frac{f(e) \cdot f(p)}{f(r)} \tag{1}$$

where:

U – is utility function,
f(e) – efficiency,
f(p) – reliability,
f(r) – riskiness.

Figure 4 illustrates the anatomy of investment portfolio possibilities and techniques, along with how to find the highest efficiency possibilities by formula (1) means.

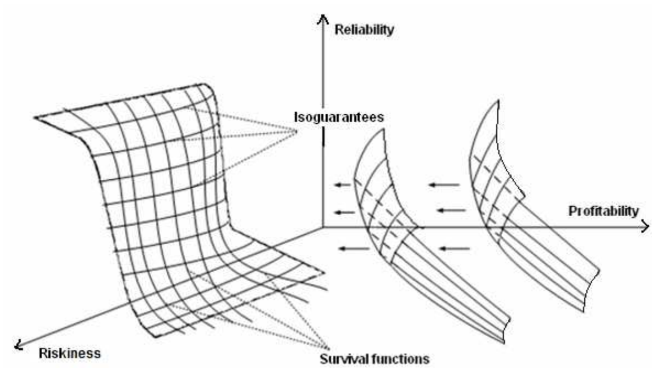

Figure 4. The general view of three-dimensional efficient surface and respective utility functions
Source: (Rutkauskas, 2006, p. 64).

RESULTS AND DISCUSSION

If we look at the investment assets content that are influenced more by the globalization processes, it is easy to recognize the time lines characteristics of previously listed return and extract the intensive nature. Firstly, this is foreign exchange market, the prices of producer's stock markets with high globalization pace.

At the same time, attention is focused on the fact that operates on the time intervals and identifies the probability distributions, used for investment instruments return write. Such parameters as the averages of probability and standard deviations, are accepted as deterministic values. Those mutual dependencies and changes over time usually are described by the deterministic dependencies clearly indexed its own stochastic nature of change. Taking into account, the identification of probability distribution leads to formally simpler and easier identification of the same distributions, and allows constructive shaping of forecasting mechanism of the assets return that we are interested in over time. This is particularly relevant in the market looking for the efficient investment decisions. Such possibilities are fully revealed in the currency markets where returns dynamics can be captured of one day or even shorter periods. Additional opportunities to achieve the adequate description of the assets return are revealed in the currency market, analysing the investment possibilities of one day step.

Now authors do not dispose the irreproachable methods to formally evaluate the mentioned parameters of such distributions by formalized methods, so it is necessary to present an experiment – how probability distributions with random parameters were used to construct the decision making mechanism of portfolio investment in global currency and capital markets. As we mentioned, the expansion of the distributions makes its understandable for situations analysts and managers of decisions.

We have provided a purely academic sample. Supposing that in the financial markets the practices of solution are applied, i.e. when we have only selected assets for investment and volume of capital, which we intend to use in the financial markets. All of the following steps of the investment remain practically identical. Let's say that in this case here are the four assets of capital *a*.

Let's say that the forecasting system informs that for the first step the possibilities of expected return for each of the four assets are described in the following way:

$$N(a_i = N(a_i; \delta_i), \quad \delta_i = N(\delta_i, \delta_i)) \tag{2}$$

where:

α_i – the average of normal random value,

δ_i – standard deviation of normal random value,

$i = 1,2,3,4$.

Here *N* is a normal distribution with the specified average and standard deviation. These values were calculated as random values. In such a prognostic solution (the structure of the portfolio) we choose the solution that maximizes the utility function:

$$U(x, r_x, p_x) = \frac{x \cdot p_x}{r_x} \Rightarrow \max \tag{3}$$

where:

x – the possible opportunity of the portfolio made up of the four named assets,
p_x – the reliability of this possibility,
r_x – the set, which includes the possibility of risk exposure.

For the solution that is described by the existing capital structure, which will give the maximum return by the selected utility function using the solution technique of the adequate portfolio.

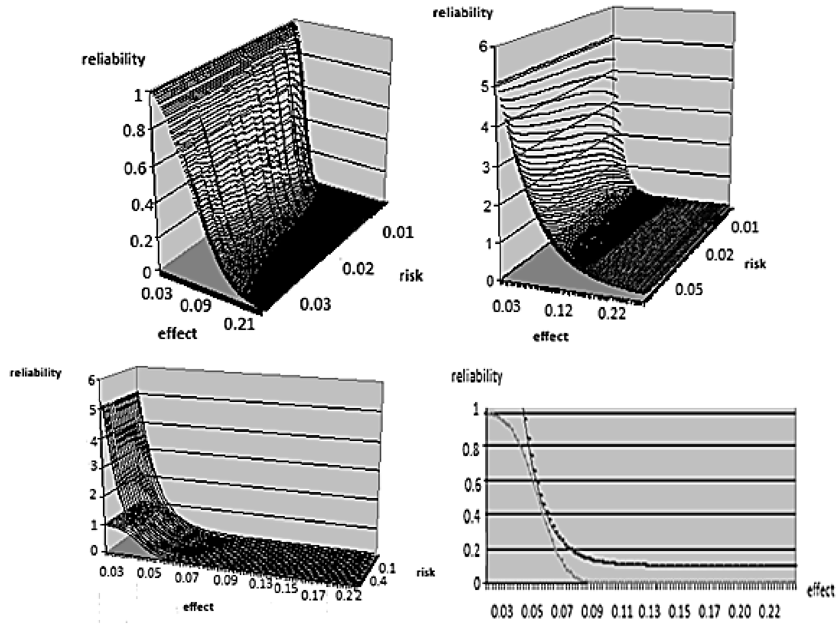

Figure 5. The scheme of the solution

Source: own study.

Table 3. The structure of invetsment and portfolio optimal solution

The investment structure			
ω_1^a – 0.675	ω_2^a – 0.1	ω_3^a – 0.2	ω_4^a – 0.025
Parameters of optimal solution			
The effect	Effect reliability	Risk level of the effect	
0.066	0.536	0.013	

Source: own study.

The scheme of the solution, which is given in figure 5 and the structure of investment (Table 3) is received using the adequate portfolio diagram (Figure 3).

The results of adequate portfolio application in various markets are provided in http://www.investis.lt. These results should confirm the hope of Lithuanian authors to create a unified methodology in global investment markets and to create a universal algorithm that guarantees a sustainable return on investment.

CONCLUSIONS

Globalization – is the whole of changes in entrails of the earth and in the nature, created possibilities of the scientific and technological innovation, differently emerging business groups and countries unions reflecting solutions and activities interaction, which has contributed significantly to reinforcing the creative power of humanity. However, the destructive power of globalization could surpass the humanity fostered aspiration of progress and the potential how to avoid the negative consequence of globalization.

A policy of intelligent activity management for consequences and trends of globalization along with existing resources will enable to make globalization an ally. It will create a sustainable future for the humanity and together form the intellectual potential to perceive more difficult negative possibilities of globalization effects.

Special attention should be given to financial markets, a fairly significant component of integral globalization and which in turn is intersections of a variety reasons and contingencies, which requires the evaluation of fundamental knowledge and skills of the market behavior under uncertainty.

Based on practical experiments in various investment markets authors suggest that adequate structure of portfolio is capable to generate the possible advantage return to the investor. Algorithm of selection with a high probability includes those instruments of investment which are the leaders among the considered fit for the investment assets during the investment period and which are the investment instruments with the progressive activities. For practical selection of above mentioned structures, the article suggests the utility function that maximizes the benefit of investor.

At the time of investment research has revealed that for the description of return on assets in global, and especially becoming global markets, probability distributions are much more flexible, if their conventional readings (deterministic) parameters are taken as stochastic values.

Authors suggest that adequate portfolio model can be applied in Central and Eastern Europe for investment decision-making in global financial markets. In this way, adequate portfolio system would become universal and easy implemented in practice globally.

REFERENCES

Affuso, A., Capello, R., & Fratesi, U. (2011). Globalization and competitive strategies in European vulnerable regions. *Regional Studies, 45*(5), 657-675.

Asongu, S. A. (2012). Globalization, financial crisis and contagion: time-dynamic evidence from financial markets of developing countries. *Journal of Advanced Studies in Finance*, *2*(6), 131-139.

Bauman, Z. (1998). *Globalization: Human Consequences*. Cambridge: Human Press.

Beck, U. (2001). Redefining power in the global age: eight theses. *Dissent, 48*(4), 83-89.

Bhagwati, J. (2004). *In Defense of Globalization*. New York: Oxford University Press.

Camagni, R., & Capello, R. (2013). Regional competitiveness and territorial capital: a conceptual approach and empirical evidence from the European Union. *Regional Studies*, *47*(9), 1383-1402.

Carrieri, F., Chaieb, I., & Errunza, V. (2013). Do implicit barriers matter for globalization?. *Review of Financial Studies, 26*(7), 1694-1739.

Dicken, P. (2003). *Global Shift: Reshaping the Global Economic Map in the 21st Century*. London: SAGE Publications.

Docquier, F., & Rapoport, H. (2012). Globalization, brain drain, and development. *Journal of Economic Literature, 50*(3), 681-730.

Dreher, A. (2006). Does Globalization Affect Growth? Evidence from a new Index of Globalization. *Applied Economics, 38*(10), 1091-1110.

Easterly, W. (2008). Trust the development experts—all 7bn of them. *Financial Times,* May 29. Retrieved on December 15, 2013, from http://www.ft.com/intl/cms/s/0/4ee1a00e-2cb6-11dd-88c6-000077b07658.html#axzz378a1W530

Guillen, M. (2000). Is globalization civilizing, destructive or feeble? A critic of five key debates in the social-science literature. *Annual Review of Sociology*, *27*(5), 235-260.

Held, D., McGrew, A., Goldblatt, D., & Perraton, J. (2002). *Globaliniai pokyčiai: politika, ekonomika ir kultūra*. Vilnius: Margi raštai.

Hitt, M. A., R. Duane I., & Hoskisson, R. E. (2012). *Strategic Management Cases: Competitiveness and Globalization*. Cengage Learning.

International entrepreneurship. (2009). Retrieved on December 6, 2013, from http://www.evta.net/ intent/WP3_unit%20profile_EN_feb2009_final.pdf

Kearney, A.T. (2007). The globalization index. *Foreign Policy Magazine*. Retrieved on December 6, 2013, from http://www.foreignpolicy.com/articles

Kilbourne, E. W. (2004). Globalization and development: an expanded macromarketing view. *Journal of Macromarketing, 24*(2), 122-135.

Lucas, M. S. (2007). Does Globalization Cause Inequity Among Rich and Poor Nations? *Global economics*.

Naim, M. (2009). *Think again: Globalization*. Retrieved on December 2, 2013, from http://www.unc.edu/world/2009Residential/Think%20Again.pdf

Najam, A., Runnalls, D., & Halle, M. (2007). *Environment and Globalization: Five Propositions, International Institute of Sustainable Development*. Retrieved on December 4, 2013, from http://www.iisd.org/pdf/2007/trade_environment_globalization.pdf

Ohmae, K. (2000). *The Invisible Continent: Four Strategic Imperatives of the New Economy*. New York: Harper Business.

Olsson, M., & Schuller, B. J. (2012). Living standard, quality of life, globalization and competitiveness in the EU and the neighbor countries: An empirical analysis. *Acta Scientiarum Polonorum. Oeconomia, 11*(2), 5-21.

Ritzer, G., & Atalay, Z. (2010). *Readings in Globalization – Key Concepts and Major Debates.* Blackwell Publishing.

Rutkauskas, A.V. (2000). Formation of adequate investment portfolio for stochasticity of profit possibilities. *Property Management, 4*(2), 110-115.

Rutkauskas, A. V. (2005a). Portfelio sprendimai valiutų kursų ir kapitalo rinkose. *Verslas: teorija ir praktika*, *6*(2), 107-116.

Rutkauskas, A. V. (2005b). The double-trump decision management model in global exchange. *Ekonomika: mokslo darbai*, *72*, 84-104.

Rutkauskas, A. V. (2006). Adequate investment portfolio anatomy and decisions, applying imitative technologies. *Economics*, *75*, 52-76.

Rutkauskas, A. V., Stasytytė, V., & Borisova, J. (2009). Adequate portfolio as a conceptual model of investment profitability, risk and reliability adjustment to investors interests. *Economics & Management, 14*, 1170-1174.

Rutkauskas, A.V., & Stasytytė, V. (2011). Optimal portfolio search using efficient surface and three-dimensional utility function. *Technological and Economic Development of Economy, 17*(2), 291-312.

Rutkauskas, A. V., & Kvietkauskienė, A. (2012). Successful investment – market behavior and investing intelligence compatibility result. *In the conference proceedings Contemporary issues in business, management and education '2012*, 170-182.

Sachs, J. (1998). Towards an Activist Teacher Professionalism, *paper presented at the AARE Annual Conference Adelaide,* December.

Sebnem, K. O, Papaioannou, E., & Peydró, J. L. (2013). Financial regulation, financial globalization, and the synchronization of economic activity. *The Journal of Finance, 68*(3), 1179-1228.

Scherer, A. G., & Palazzo, G. (2011). The new political role of business in a globalized world: a review of a new perspective on CSR and its Implications for the firm, governance, and democracy. *Journal of Management Studies, 48*(4), 899-931.

Stiglitz, J. (2002). *Globalization and its Discontents*. London: Penguin Books.

Zedillo, E. (2008). *The Future of Globalization: Explosions in Light of Turbulence*. New York: Roughton.

Authors

Aleksandras Vytautas Rutkauskas

Professor in the Department of Finance Engineering at Vilnius Gediminas Technical University (Lithuania). His research interests are: investment portfolio management in capital and exchange markets, risk and uncertainty, sustainable development, integrated value and risk management.

Alina Kvietkauskienė

MSc, Assistant in the Department of Finance Engineering at Vilnius Gediminas Technical University (Lithuania). Her research interests are: investment portfolio management, financial market behaviour, risk management in financial markets, sustainable development.

Correspondence to:

MSc Alina Kvietkauskienė
Vilnius Gediminas Technical University
Faculty of Business Management
Saulėtekio al. 11, LT-10223 Vilnius, Lithuania
alina.kvietkauskiene@vgtu.lt

Published by Centre for Strategic and International Entrepreneurship – Krakow, Poland