



OCTOBER-DECEMBER 2015 VOLUME 25 ISSUE 07

ISSN: 1987 - 6521; E - ISSN: 2346 - 7541; DOI: 10.15357



# BLACK SEA

SCIENTIFIC JOURNAL OF ACADEMIC RESEARCH

MULTIDISCIPLINARY JOURNAL



## AGRICULTURAL, ENVIRONMENTAL & NATURAL SCIENCES

Genetics, Breeding, Seeds and Crop  
Vegetable-growing, Viticulture, Cotton-growing, Sericulture  
Agriculture, Agronomy & Forestry Sciences  
Plant Breeding and Seed Production

## SOCIAL, PEDAGOGY SCIENCES & HUMANITIES

Historical & Humanitarian Sciences  
Historical Sciences – History of Science and Technology  
Demography, Labor Economics, Social Economics and Politics  
Psychology and Sociology Sciences

## MEDICINE, VETERINARY MEDICINE, PHARMACY AND BIOLOGY SCIENCES

Microbiology and Hydrobiology  
Biophysics and Biochemistry  
Molecular Biology and Genetics Production  
Innovations in Medicine  
Pharmaceutical Chemistry and Pharmacology

## TECHNICAL, ENGINEERING & APPLIED SCIENCES

Biogeochemistry and Biotechnology  
History of Science and Technics

## REGIONAL DEVELOPMENT AND INFRASTRUCTURE

Theoretical and methodological foundations of tourism and recreation  
Training and methodological support

## ECONOMIC, MANAGEMENT & MARKETING SCIENCES

Economics and Management of Enterprises  
Economic Science



[www.gulustan-bssjar.com](http://www.gulustan-bssjar.com)



OCTOBER-DECEMBER 2015 VOLUME 25 ISSUE 07

ISSN: 1987 - 6521; E - ISSN: 2346 - 7541; DOI: 10.15357

"An investment in knowledge always pays the best interest." Benjamin Franklin.



# BLACK SEA

SCIENTIFIC JOURNAL OF ACADEMIC RESEARCH  
MULTIDISCIPLINARY JOURNAL

## JOURNAL INDEXING



TBILISI, GEORGIA 2015

## EDITORIAL BOARD

### Honorary Editors

**Agaheydar Seyfulla Isayev**

Azerbaijan State Oil Academy. Doctor of Economical Sciences. Professor.

**Archil Prangishvili**

Georgian Technical University. Doctor of Technical Sciences. Full Professor.

**Avtandil Silagadze**

Correspondent committee-man of National Academy of Georgia. Tbilisi University of International Relationships. Doctor of Economical Sciences. Full Professor.

**David Narmania**

Doctor of Economical Sciences. Full Professor.

**George Malashkhia**

Georgian Technical University. Doctor of Economical Sciences. Full Professor.

**Jacob Meskhia**

Tbilisi State University. Faculty of Economics and Business. Full Professor. Ministry of Regional Development and Infrastructure of Georgia. Chief Specialist.

**Lamara Qoqiauri**

Georgian Technical University. Member of Academy of Economical Sciences. Member of New York. Academy of Sciences. Director of first English school named "Nino". Doctor of Economical Sciences. Full Professor.

**Liana Ptaschenko**

Poltava National Technical University named Yuri Kondratyuk. Doctor of Economical Sciences. Professor

**Maia Kapanadze.**

Georgian Technical University. Doctor of Economical Sciences. Associate Professor.

**Paata Koguashvili**

Georgian Technical University. Doctor of Economical Sciences. Full Professor. Academician. Member of Georgia Academy of Sciences of Agriculture.

**Vagif Arzumanli**

Doctor of Philological Sciences. Professor. Institute of Literature. Director of Literary International Relations section of the Azerbaijan National Academy of Sciences.

**Zurab A. Gasitashvili**

Georgian Technical University. Doctor of Technical Sciences. Full Professor.

### **Editors-in-chief:**

#### **Agricultural, Historical and Natural Sciences**

Lienara Adzhyieva. Crimean Federal University named V.I. Vernadsky. Evpatoria Institute of Social Sciences (filial branch). PhD of History. Associate Professor

#### **Economic, Management & Marketing Sciences**

Enene Menabde-Jobadze. Georgian Technical University. Academic Doctor of Economics.

#### **Medicine, Veterinary Medicine, Pharmacy and Biology Sciences**

Mariam Kharashvili. Tbilisi State Medical University. PhD MD.

#### **Technical and Applied Sciences**

Nikolay Kurguzov. State University of Pavlodar named S. Toraygirova. PhD TS. Professor. Kazakhstan.

#### **Regional Development and Infrastructure**

Jacob Meskhia. Tbilisi State University. Faculty of Economics and Business. Full Professor.

**ISSN: 1987-6521; E-ISSN: 2346 – 7541; DOI: 10. 15357; UDC: 551.46 (051.4) / B-64**

©**Publisher:** Community of Azerbaijanis living in Georgia. Gulustan-bssjar.

**Head and founder of organization:** Namig Isayev. Academic Doctor in Business Administration. PHD. CALG

**Founder of organization:** Ketevan Nanobashvili . Tbilisi Medical Academy. Professor MD. Associate Professor

©**Editorial office:** Isani Samgory area, Varketili 3, III a m/r, building 342, dep. 65, 0163 Georgia, Tbilisi.

Tel: +994 50 226 70 12

+994 55 241 70 12

+995 59 312 89 96

E-mail: engineer\_namik@mail.ru, gulustan\_bssjar@mail.ru, caucasusblacksea@gmail.com

Website: www.gulustan-bssjar.com

©**Typography:** AZCONCO LTD. Industrial, Construction & Consulting

**Registered address:** Isani Samgory area, Varketili 3, III a m/r, building 342, dep. 65, 0163 Georgia, Tbilisi.

Community of Azerbaijanis Living in Georgia was registered by Public register of Georgia, on 11/04/2013, R/C 406090901.

<http://public.reestri.gov.ge>

Reproduction of any publishing of Black Sea Scientific Journal of Academic Research permitted only with the agreement of the publisher. The editorial board does not bear any responsibility for the contents of advertisements and papers. The editorial board's views can differ from the author's opinion. The journal published and issued by Gulustan-bssjar.

## TABLE OF CONTENTS

<b>Петро Дрозд</b> РОЛЬ Є.М. ЛАВРЕНКА В ДІЯЛЬНОСТІ СІЛЬСЬКОГОСПОДАРСЬКОГО НАУКОВОГО КОМІТЕТУ УКРАЇНИ (1918–1927 рр.) .....	04
<b>Sergei Ostroumov, Sergei Kotelevtsev</b> ASSESSING ENVIRONMENTAL HAZARDS OF CHEMICALS: THE EFFICIENT METHOD WITH HIGHER PLANTS .....	08
<b>Sergei Ostroumov</b> NATURE CONSERVATION AND BIODIVERSITY PROTECTION IN AQUATIC HABITATS: DEVELOPING A NEW SYSTEM OF PRINCIPLES .....	12
<b>Myroslava Kushnir</b> LOSS AVERSION AND AN EQUITY RISK PREMIUM IN EMERGING MARKETS .....	17
<b>Тубуханум Касимзаде</b> ФИТОЦЕНОЛОГИЧЕСКАЯ И ЭКОЛОГИЧЕСКАЯ ОЦЕНКА ЛУГОВОЙ РАСТИТЕЛЬНОСТИ ТЕРРИТОРИИ ШИРВАНА .....	23
<b>Шахло Миралимова, Дарья Огай, Хонсулуп Сахибназарова, Гузаль Кутлиева</b> ВЫДЕЛЕНИЕ И СЕЛЕКЦИЯ МОЛОЧНОКИСЛЫХ БАКТЕРИЙ-АНТАГОНИСТОВ ЭНТЕРОКОККОВ .....	31
<b>Николай Сентябрьев, Алексей Камчатников, Анна Матохина, Наталия Коренева</b> МЕХАНИЗМЫ ИЗМЕНЕНИЯ ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ ОРГАНИЗМА ПРИ ВОЗДЕЙСТВИИ ПОЛИМОДАЛЬНЫХ АФФЕРЕНТНЫХ ПОТОКОВ .....	35
<b>Vasyl Fedoryshyn</b> CURRENT ISSUES OF DEVELOPING MUNICIPAL PROPERTY OF TERRITORIAL COMMUNITIES: SOCIAL ASPECTS .....	38
<b>Інна Назаренко</b> СТАН ТА ПРОБЛЕМИ РОЗВИТКУ СІЛЬСЬКОГО ГОСПОДАРСТВА УКРАЇНИ: РЕАЛІЇ СУЧАСНОСТІ .....	43
<b>Олександр Маєвський</b> КАРИКАТУРА ТА ПОЛІТИЧНИЙ ПЛАКАТ У ПЕРІОДИЧНИХ ВИДАННЯХ ПІВДНЯ УКРАЇНИ (1941-1944 рр.) .....	50
<b>Лариса Волченко, Сергій Гарькавець</b> ЕМПІРИЧНЕ ВИВЧЕННЯ УЯВЛЕНЬ СТАРШИХ ШКОЛЯРІВ ПРО ОСОБЛИВОСТІ СОЦІАЛЬНО-НОРМАТИВНОЇ АКТИВНОСТІ ОСОБИСТОСТІ .....	60
<b>Andriy Popovych</b> NON-MARKET METHODS OF AGRICULTURAL LAND VALUATION IN UKRAINE .....	66
<b>Сейяра Ибадуллаева, Гилал Гасымов, Гюльнара Ширалиева, Пеймана Зульфугарова, Сабина Рахим Рафиева, Сеадат Гулиева, Леман Новрузова</b> ДИКОРАСТУЩИЕ РАСТЕНИЯ, ИСПОЛЬЗУЕМЫЕ В НАПИТКАХ, ВО ФЛОРЕ АЗЕРБАЙДЖАНА: ЭТНОБОТАНИЧЕСКИЕ ИССЛЕДОВАНИЯ .....	73

## LOSS AVERSION AND AN EQUITY RISK PREMIUM IN EMERGING MARKETS

Myroslava Kushnir  
NAS Institute of regional researches, PhD Student (Ukraine)  
e-mail: mlipych@ukr.net

### ABSTRACT

In the paper it was provided an explanation to the equity risk premium in emerging and developed markets. The research is based on the Capital asset pricing model under Prospect theory. The gains and losses were present in terms of stock market returns. The model presents the relationship between the loss aversion degree and the equilibrium market price of risk. We applied the model in an empirical data of developed and emerging markets. It was found that the emerging markets have higher loss aversion in the research period. This fact was the reason of the higher equity risk premium in these markets.

**Keywords:** mean-variance asset pricing, Prospect theory; loss aversion; equity risk premium.

### РЕЗЮМЕ

У роботі запропоновано пояснення премії за ризик на розвинутих ринках та ринках, що розвиваються. Дослідження базувалося на принципах моделі оцінки капітальних активів під впливом теорії перспектив. Вигоди та втрати теорії перспектив були представлені як дохідності на фондовому ринку. У моделі досліджено зв'язок між рівнем страху втрат та премією за ризик. Автором було застосовано модель щодо даних премії за ризик на ринках, що розвиваються та розвинених ринках. Було виявлено, що інвестори на ринках, що розвиваються, мають вищий рівень страху втрат, що зумовлює вищу премію за ризик на цих ринках.

**Ключові слова:** моделі ціноутворення дохідності-ризик, теорія перспектив, страх втрат, премія за ризик.

### РЕЗЮМЕ

В работе предложено объяснение премии за риск на развитых рынках и рынках развивающихся стран. Исследование базировалось на принципах модели оценки капитальных активов под влиянием теории перспектив. Выгоды и потери теории перспектив были представлены как доходности на фондовом рынке. В модели исследована связь между уровнем страха потерь и премией за риск. Автором была применена модель по данным премии за риск на развивающихся рынках и развитых рынках. Было обнаружено, что инвесторы на развивающихся рынках, имеют более высокий уровень страха потери, что приводит высшую премию за риск на этих рынках.

**Ключевые слова:** модели ценообразования доходности-риска, теория перспектив, страх потери, премия за риск.

### INTRODUCTION

Mean-variance approach to asset pricing is one of the most robust on the financial theory. Despite theoretical discussions, it is still widely used by academics and practitioners in the developed and emerging markets. The model is usually criticized because of the assumptions of a normal return distribution and the investor's expected utility function maximization. It was find empirically that the return distributions are more peaked and have heavier tails than the normal distribution has [12]. The investors' behavior is better describe with Prospect theory but not expected utility theory [14].

The Prospect theory gives several challenges for mean-variance approach. First of all, investors maximize a value function, which is defined on change on wealth rather than on total wealth. Second, the S-shaped value function has a risk-seeking segment, which is steeper than the risk aversion segment, implying loss aversion. Loss aversion is define as an increased sensitivity to losses relative to gains. This means that people fill more regret losing the sum than enjoy winning the same sum. Third, people employ cumulative decision weights and transformed distribution [14].

Recently Professor H. Levy (2012) has proved that the economic loss of applying the mean-variance rule when normality is reject is negligible. Moreover, when diversification is allowed mean-variance analyze is consistent with Prospect theory. H. Levy has made the supposition that the equilibrium price of risk may be different in different countries and times because of the value function parameters, such as loss aversion and risk attitude [16]. To test this supposition we will study the equity risk premium in emerging and developed markets in different times with Capital asset pricing model under Prospect theory. It is assume that the loss aversion in the emerging markets is higher than in developed markets, so the equity premium should also be higher.

### LITERATURE REVIEW

The equity premium puzzle is widely discussed in the financial literature. Mehra (2003) realized that the historical equity premium in the U.S. was much larger than could be explained as a risk premium on the basis of

standard theory [17]. Fama (1997), Dimson, Marsh and Staunton (2003) proved the robustness of the puzzle to other developed countries [10, 13]. Bernartzi and Thaler (1995) claim that higher equity risk premium is a necessary condition to induce agents to invest into the stock markets [4].

In the emerging markets equity risk premium is even higher than in developed markets. Barry, Peavy and Rodriguez (1997) have shown that investing in emerging markets the one gets higher return on the same variance [3]. These papers give the explanation that investors are compensated for bearing the country risks in terms of higher average returns and a low correlation with developed markets.

To explain the equity risk premium researchers were concentrated on modifications of the neoclassical models with alternative assumptions about preferences, market imperfections and probability distribution (Kocherlakota (1996), Cochrane (1999), Mehra (2003) [9, 15, 17].

Currently the financial scientist focused on adaptation the prospect theory into the asset pricing models. Barberis (2001) investigated the trade volume on the stock market under prospect theory assumption [2]. Berkelaar (2004) analyzed the investment periods for the investors with different loss aversion level [5]. Bernartzi and Thaler (1995) proved that investors with value function review their portfolio annually. These cause underinvesting in stocks despite its high equity premium [4].

The implications of Prospect theory to portfolio theory are developed by H. Levy (2012). The scientist proved that under assumption of normal return distribution the mean-variance approach was still robust for investors with prospect theory preferences. H. Levy constructed the theoretical model relationship between the degree of loss aversion, the concavity/convexity of the value function, and the equilibrium market price of risk. It was realized that loss aversion level explains the equity risk premium in developed markets [16].

In this paper we provide the extension of the researches to realize the influence of the loss aversion level to the equity premium in the emerging markets.

### VALUE FUNCTION PARAMETERS AND THE MARKET PRICE OF RISK

Prospect theory applies that investor under uncertainty maximize the expected value function, which has form:

$$V(x) = \begin{cases} x^\alpha, & \text{if } x \geq 0, \\ -\lambda(-x)^\beta, & \text{if } x < 0 \end{cases} \quad (1)$$

where  $x$  – change in wealth relative to the reference point,  $\lambda$  - loss aversion coefficient,  $\alpha$  i  $\beta$  - concavity/convexity parameters.

D. Kahneman and A. Tverski (1992) experimentally estimated  $\alpha$  i  $\beta$  parameters that were equal to 0,88 [14]. The results of other researches varies from 0,37 to 0,96 because of differences in estimation methods [1, 8]. The crucial role plays the equivalence of the coefficients. H. Levy (2012) has proved that it is the necessary condition for the value function consistency. It is the only case when investor expresses the required aversion to fair symmetric bets [16].

The quantitative estimation of loss aversion also differs upon scientists because of the disagreement in loss aversion definition. In the table 1 it is presented the overview of loss aversion coefficients in different research papers. The estimated values for the loss aversion coefficient are difficult to compare because of the different assumptions and definitions used. Some studies reported median values and the others mean values. For research purposes we will use Abdellaoui, Bleichrodt, and Paraschiv (2007) results because their nonparametric measurement method doesn't need assumptions about the shape of utility or probability weighting [1].

Table 1

Estimates of the Loss Aversion Coefficient

Study	Definition	Domain	Estimates
Tversky and Kahneman (1992) [14]	$-V(-1)/V(1)$	Money	2.25
Bleichrodt et al. (2007) [6]	$-V(-x)/V(x)$	Health	1.53-2.13
Abdellaoui, Bleichrodt, and Paraschiv(2007) [1]	$V'(-x)/V'(x)$	Money	1.72; 2.15*
	$V_1'(0)/V_1'(0)$		1.53; 2.02*
Booij and van de Kuilen (2006) [7]	$V_1'(0)/V_1'(0)$	Money	2.52; 4.99*
			1.79*

\*denotes a mean value. Otherwise it is a median value.

To study the impact of loss aversion on the emerging markets let us consider the equilibrium prices model, that was adapted to the Prospect theory conditions by H. Levy (2012) [16]. The value function was formulated using the experiments with expected amount of money. But in the stock market gains and losses are expressed with returns. So, to implement the value function to the stock market it was proposed to specify the returns as changes in wealth in dollar terms.

Let  $W_0$  denote the initial wealth. Suppose there are two assets in the market: riskless with yield  $r$  and risky



(market portfolio) with excess return  $\tilde{R}$ . The representative point for investor is the wealth invested in riskless asset  $W_0^*(1+r)$ . When a proportion invested in the market portfolio is  $z$ , and the proportion invested in riskless asset is  $(1-z)$ , then the future wealth is given by:

$$\tilde{W}_1 = W_0(1-z)(1+r) + W_0z(1+r+\tilde{R}) \quad (2)$$

So, the change in wealth ( $\tilde{x}$ ) in dollar terms can be expressed with equation:

$$\tilde{x} \equiv \tilde{W}_1 - W_0(1+r) = W_0z\tilde{R} \quad (3)$$

The change in wealth is a function of the initial wealth  $W_0$  in the stock market in contradistinction to the classic prospect theories postulates.

The value function for the stock market with risk and riskless asset will be:

$$V = \begin{cases} (W_0z\tilde{R})^\alpha, & \text{if } \tilde{R} \geq 0, \\ -\lambda(-W_0z\tilde{R})^\beta & \text{if } \tilde{R} < 0 \end{cases} \quad (4)$$

The expected value function with the return distribution  $f(R)$  can be rewritten as:

$$EV = \int_0^\infty (W_0z\tilde{R})^\alpha f(R)dR - \lambda \int_{-\infty}^0 (-W_0z\tilde{R})^\beta f(R)dR. \quad (5)$$

The equality assumption for the parameters  $\alpha = \beta$  simplify the expected value function:

$$EV = z^\alpha W_0^\alpha \left[ \int_0^\infty \tilde{R}^\alpha f(R)dR - \lambda \int_{-\infty}^0 (-\tilde{R})^\alpha f(R)dR \right]. \quad (6)$$

When concavity parameters are equal, the initial wealth does not affect the optimal investment proportion in the risky asset. This conclusion is supported with the empirical results H. Levy (2012) [16].

To maximize the value function investor should invest all the wealth in the risky assets, if the term in the square brackets is positive. If the term is negative, the optimal investment proportion in risky asset is zero. So, the diversification principles with the Prospect theory framework differ a lot from the diversification with the classic Expected Utility postulations. A little change in the return distribution leads to the shift from the total investment in one asset to another. The only point, where the proportion of the risky investments is finite and positive is the crossover point, where the square brackets condition of equation (6) becomes zero. So this is the equilibrium price point:

$$\int_0^\infty \tilde{R}^\alpha f(R)dR - \lambda \int_{-\infty}^0 (-\tilde{R})^\alpha f(R)dR = 0 \quad (7)$$

The process of the equilibrium price formation looks as so. Let the distribution of returns stimulates to invest all the wealth in risky asset. This will lead to the price increasing and the expected returns decreasing to the crossover point, in which investors are not interested any more to shift their wealth from one asset to another. Thus, the market equilibrium is reached only in the crossover point.

If the return distribution can be determined by its mean and standard deviation (the uniform, normal, lognormal and logistic distributions) it is possible to estimate the equilibrium risk-return relation solving the (7) equation.

For the normal distribution assumption the point for equilibrium price is:

$$\frac{1}{\sqrt{2\pi}\sigma} \int_0^\infty e^{-[(\mu-\tilde{R})^2/2\sigma^2]} \tilde{R}^\alpha dR = \lambda \frac{1}{\sqrt{2\pi}\sigma} \int_{-\infty}^0 e^{-[(\mu-\tilde{R})^2/2\sigma^2]} (-\tilde{R})^\alpha dR \quad (8)$$

It is presented the equilibrium relations between the excess return and the standard deviation for the different parameters of the value function (figure 1). This relation was estimated with the uniform distribution assumption using the (7) equation. It was realized that the loss aversion  $\lambda$  parameter has a great impact on the equilibrium price of risk. But the equilibrium price line doesn't change much because of the change in the value function parameter  $\alpha$ . This result is robust for the uniform, normal, lognormal and logistic distributions [16].

For each symmetric distribution the relation between the excess return and standard deviation is linear. The straight line represents the set of all possible market equilibrium. The slope of the equilibrium line determines by the parameters of the investor value function, such as  $\lambda$  i  $\alpha$ . If there are any fundamental changes, the equilibrium point will change only on the same line.

## EMPIRICAL ANALYSIS

To study the equilibrium relations between the excess return and the standard deviation for the developed and emerging markets it is necessary to use the same research period and research method. The complex study of the equity risk premium was presented by Donadelli and Prosperi (2012) [11]. For the research purpose we will apply their estimation data. It was used the Morgan Stanley Capital International (MSCI) Total Return Index. All returns were monthly returns denominated in US dollars. The proxy for risk-free rate was the one-month Treasury Bill rate.

The Morgan Stanley classifies the markets on developed, emerging and frontier with capitalization, liquidity and infrastructure criteria. For the developed markets we restrict our analysis to the G7 members (Canada, France, Germany, United Kingdom, United States, Japan and Italy), as the largest world's economies. The list of emerging markets includes 13 economics (China, Argentina, Egypt, Czech Republic, India, Brazil, Morocco, Poland, Indonesia, Mexico, South Africa, Russia, Ukraine). Despite the equity market data for developed markets are available from

December 1969; the equity data for all emerging countries is open only from January 2000. So, to use the same study period we will analyze the data from January 2000.

In Table 1 it is presented the estimation results of equity risk premium for developed and emerging markets (Jan 2000 – Dec 2010). The results have confirmed that the emerging markets have the higher equity and higher volatility.

Table 1

Monthly Excess Returns for Developed and Emerging Markets (Jan 2000 - Dec 2010)

Country	Observations	Mean excess return	Standard deviation
<b>Developed markets</b>			
Canada	132	0.83%	6.58%
France	132	0.28%	6.50%
Germany	132	0.35%	7.51%
Italy	132	0.19%	6.88%
Japan	132	-0.20%	5.21%
UK	132	0.18%	5.07%
USA	132	-0.02%	4.76%
<b>Emerging markets</b>			
Argentina	132	1.30%	12.29%
Brazil	132	1.83%	10.80%
China	132	0.90%	8.62%
Czech Republic	132	1.91%	8.55%
Egypt	132	1.56%	10.10%
India	132	1.38%	9.31%
Indonesia	132	1.74%	11.02%
Mexico	132	1.19%	7.41%
Morocco	132	0.85%	6.11%
Poland	132	1.05%	10.35%
Russia	132	1.66%	11.19%
South Africa	132	1.26%	8.01%
Ukraine	132	1.54%	12.84%

To find the equilibrium risk premium we use the equation (8), assuming the normal return distribution. If the loss aversion is higher for emerging countries, the slope of the regression line should be also higher. It is also interesting to realize the time differences in the loss aversion for developed markets.

In Figure 1 it is described the equilibrium relationship between the standard deviation and the expected excess return for developed and emerging stock markets in different study periods.

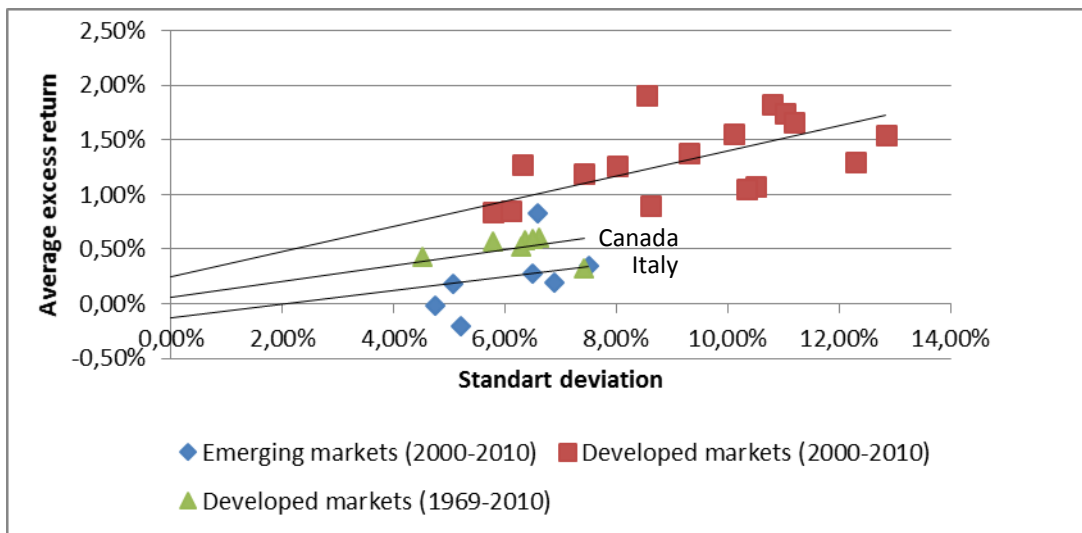


Figure 1. Regression line for the equity risk premiums in developed and emerging markets



The regression line confirm the liner relationship between the expected excess return and the standard deviation for the developed markets (Jan 2000 – Dec 2010) on the 90% significance level ( $R=0.2263$ ) with slope coefficient 0.0626 ( $Pr.=0.0834$ ). The interception line is equal to -0.0013 and is not significantly different from 0 ( $Pr.=0.6455$ ), which is consistent with theoretical expectations. The slope of the regression line for the emerging markets (Jan 2000 – Dec 2010) is higher 0.1156 and statistically significant on the 95% significance level ( $R=0.5898$ ,  $Pr.=0.0003$ ). The interception line is equal to 0.0024 and is not significant ( $Pr.=0.3116$ ). The result confirms that in the emerging markets equilibrium equity premium is higher than in developed markets because of different value function parameters.

The regression line for the developed markets for longer period (Dec1969 – Dec 2010) has a slope, which is higher than in Jan 2000 – Dec 2010, and equal 0.0717 and statistically significant on the 95% significance level ( $R=0.6593$ ,  $Pr.=0.0143$ ). The interception line is equal to 0.0006 and is not significant ( $Pr.=0.6317$ ). So, equilibrium equity premium in the 41-years period (Dec1969 – Dec 2010) was higher than in ten-year period.

The mean-variation relation for Canada (Jan 2000 – Dec 2010) doesn't fit the regression line of the developed markets. For the 41-years period (Dec1969 – Dec 2010). Italy had lower equity premium than proposed by the equilibrium regression line. The deviation from the regression line can be explained by the estimation errors, cross-country difference in loss aversion and the international diversification. We suppose that for the ten-year period the loss aversion of Canadian investors was higher than in other developed countries. For the 41-years period the loss aversion in Italy is assuming to be less than in other developed countries.

To prove that the loss aversion differences define the equilibrium price of risk let us estimate the empirical loss aversion coefficient using the (8) equation. The estimated loss aversion coefficients are presented in the table 2.

Table 2

**Loss aversion coefficients for developed and emerging markets in ten-year period**

Country	a = 0.88	a = 1	a = 1.10
Japan	0.88	0.94	0.97
USA	0.98	0.99	1.00
Italy	1.10	1.05	1.02
UK	1.13	1.06	1.03
France	1.15	1.07	1.04
Germany	1.16	1.08	1.04
Average	1.07	1.03	1.02
Poland	1.32	1.18	1.11
Argentina	1.33	1.18	1.12
China	1.34	1.18	1.11
Ukraine	1.37	1.21	1.13
Canada	1.43	1.22	1.13
Russia	1.47	1.27	1.17
Morocco	1.48	1.25	1.15
India	1.49	1.27	1.17
Egypt	1.50	1.28	1.18
Indonesia	1.51	1.29	1.18
South Africa	1.53	1.29	1.18
Mexico	1.55	1.29	1.18
Brazil	1.55	1.31	1.20
Czech Rep.	1.78	1.43	1.27
Average	1.48	1.26	1.16

The results in table 2 confirm the assumption, that the loss aversion coefficients for emerging markets are higher than for the developed markets. The average loss aversion coefficient for emerging markets is 1.48 and for developed – 1.07, when  $a = 0.88$ . The results do not change much with different concavity/convexity coefficients. The empirical loss aversion coefficients are close to theoretical estimation by Abdellaoui, Bleichrodt, and Paraschiv (2007) [1].

## CONCLUSION

The discovery of prospect theory caused new direction of researches in asset pricing. It was proved that the mean-variance approach is robust under prospect theory postulates. Even more, the equilibrium price model with the mean-variance approach under the prospect theory brings the explanation of the equity premium puzzle. The equilibrium price of risk is defined by the value function parameters, such as loss aversion and risk attitude. The loss aversion plays a key role in equity risk premium explanation.

In the empirical section it was studied the equity risk premiums in 7 developed markets and 16 emerging markets in 10-year and 41-year periods. It was realized that the loss aversion level in emerging markets is higher than in developed markets in 10-year period. The average loss aversion coefficient was 1.26 for emerging markets and 1.03 for developed markets with  $\alpha=1$ . High loss aversion level caused high equity premium in these markets. The average loss aversion coefficient was equal to 1.28 in 41-year period for developed market. The result supports the proposition that the loss aversion vary in time and depends on the economic situation in the country.

#### REFERENCES

1. Abdellaoui, M., Bleichordt, H. and Paraschiv, C. (2007). Loss aversion under prospect theory: a parameter-free measurement. *Mgmt Sci.*, 53, 1659–1674.
2. Barberis, N., Huang, M. and Santos, T. (2001) Prospect theory and asset prices. *Q. J. Econ.*, 116, 1–53.
3. Barry, C., J. Peavy and M. Rodriguez (1997). Emerging stock markets: Risk, return, and performance, The Research Foundation of The Institute of Chartered Financial Analysts.
4. Benartzi, S. and Thaler, R. (1995). Myopic loss aversion and the equity premium puzzle. *Q. J. Econ.*, 110, 73-92.
5. Berkelaar, A., Kouwenberg, R. and Post, T. (2004). Optimal portfolio choice under loss aversion. *Rev. Econ. Statist.*, 86, 973–987.
6. Bleichrodt, H., J. M. Abellan, J. L. Pinto, I. Mendez. (2007). Resolving inconsistencies in utility measurement under risk: Tests of generalizations of expected utility. *Management Science* 53, 469-482.
7. Booij, A. S., G. van de Kuilen. (2006). A parameter-free analysis of the utility of money for the general population under prospect theory. Working Paper, University of Amsterdam.
8. Camerer, C. F. and Ho, T. H. (1994). Violations of the betweenness axiom and nonlinearity in probability. *J. Risk Uncert.*, 8, 167–196
9. Campbell, J. and J. Cochrane. (1999) By force of habit: A consumption-based explanation of aggregate stock market behavior, *Journal of Political Economy*, 107, 205-251.
10. Dimson, E., Marsh, P. and Staunton, M., (2003). Global evidence on the equity risk premium. *J. Appl. Corp. Finance*, 15, 27–38.
11. Donadelli, M. and L. Prosperi (2012). The equity risk premium: Empirical evidence from emerging markets. CASMEF Working Paper.
12. Fama, E. F. (1965) The Behavior of Market Prices. *Journal of Business*.
13. Fase, M. (1997). The risk premium on stocks in the European Union, Research memorandum Dutch Central Bank.
14. Kahneman, D., Tversky, A., (1992). Advances in prospect theory: Cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323.
15. Kocherlakota, N. (1996). The equity premium: It's still a puzzle, *Journal of Economic Literature*, 23, 42-71.
16. Levi H. (2012). *The Capital Asset Pricing Model in the 21st Century. Analytical, Empirical, and Behavioral Perspectives.* Cambridge University Press., NY, 442.
17. Mehra, R. (2003). The equity premium: Why is it a puzzle? *Financial Analysts Journal*, 59, 54–69.

## EDITORIAL BOARD

---

### International Advisory and Editorial Board

#### Australia

**Vikash Ramiah**

UNISA School of Commerce. Associate Professor. PhD in Applied Finance.

---

#### Azerbaijan

**Amir V. Aliyev**

Ministry of Health of Azerbaijan Republic Lung Diseases Department. Guba District Central Hospital Head of Department. PhD of Medicine

**Araz Manucheri-Lalen**

Associated Professor, PhD Department of Psychiatry, Azerbaijan Medical University.

**Beykas Seyfulla Xidirov**

Azerbaijan State Oil Company. Head of department. Doctor of Economical Sciences

**Garib Mamedov**

National Academy of Sciences of Azerbaijan Republic. Academician-secretary of the Department of Agrarian Sciences of ANAS, Academician of ANAS. Doctor of Biological Sciences.

**Elshan Mahmud Hajizade**

Head of department of President Administration of Azerbaijan Republic. Doctor of Economical Sciences. Professor

**Ibrahim Gabibov**

Azerbaijan state Oil Academy. Doctor of Technical Sciences. Professor

**Lala Bekirova**

Azerbaijan State Oil Academy. Azerbaijan National Aviation Academy. PhD.TS

**Leyla I. Djafarova**

Clinic "Medium" Baku. Doctor of Medical Sciences. Professor

**Omar Kerimov**

Azerbaijan State Oil Academy. Doctor of Technical Sciences. Professor

**Rafiq Gurbanov**

Azerbaijan State Oil Academy. Doctor of Technical Sciences. Professor

**Ramiz Gurbanov**

Azerbaijan State Oil Academy. Doctor of Technical Sciences. Professor

**Sadagat V. Ibrahimova**

Azerbaijan State Oil Academy. Academician Doctor of Economical Sciences. PhD

**Sayyara Ibadullayeva**

Institute of Botany. National Academy of Sciences. Professor. PhD in Biological Sciences.

**Tarbiz Nasrulla Aliyev**

Innovation Center of National Academy of Azerbaijan Republic. The deputy of director. Doctor of Economical Sciences. Professor

**Tofiq Ahmadov**

Azerbaijan state Oil Academy. Doctor of Geology and Mineralogy Sciences. Professor

**Tofiq Yusif Baharov**

Azerbaijan State Oil Company. Scientific Research Institute. Head of department. Doctor of Geology and Mineralogy Sciences

**Tofiq Samadov**

Azerbaijan state Oil Academy. Doctor of Technical Sciences. Professor.

**Tubukhanum Gasimzadeh**

National Academy of Sciences of Azerbaijan Republic. Scientific Secretary of the Department of Agrarian Sciences of ANAS. PHD in Biological Sciences, Associate Professor.

---

#### Bahrain

**Osama Al Mahdi**

University of Bahrain, Bahrain Teachers College. Assistant Professor. PhD, Elementary Education and Teaching

---

#### Bangladesh

**Muhammad Mahboob Ali**

Daffodil International University. Department of Business Administration . Professor

---

#### Belarus

**Helena Kallaur**

Polesky State University. MD. Associate Professor

**Tanua Teterinets**

Belarusian State University of Agricultural Technology. Doctor of Economical Sciences. Associate Professor.

**Vladimir Yanchuk**

Belarus State University. Professor. Academy of Postgraduate Education. PhD in Social Psychology.

---

---

## Brazil

**Paulo Cesar Chagas Rodrigues**

Federal Institute of Education, Science and Technology of Sao Paulo. Professor. PhD in Mechanical Engineering.

---

## Bulgaria

**Desislava Stoilova**

South-West University “ Neofit Rilski”. Vice Dean of Faculty of Economics. Associate Professor. PhD in Finance.

**Milena Kirova**

Sofia University “St. Kliment Ohridski”. Professor. PhD in Philology.

---

## Egypt

**Abdelbadeh Salem**

Professor at Faculty of Computer and Information Science, Ain Shams University

---

## France

**Michael Schaefer**

L'Association 1901 SEPIKE International, Président at SEPIKE International. PhD of Economical Sciences

---

## Georgia

**Anzor G. Abralava**

Georgian Technical University. Doctor of Economical Sciences. Full Professor

**Bahman Moghimi**

University of Georgia, Tbilisi, Private Business consultancy. Professor/ Business Adviser. Doctor of Business Administration

**Dali Sologashvili**

State University named Akaki Tsereteli. Doctor of Economical Sciences. Full Professor

**Dali Osepashvili**

Professor of Journalism and Mass Communication TSU (Tbilisi State University), Head MA Program "Media and New Technology"

**Eka Avaliani**

Professor at International Black Sea University. Ivane Javakhishvili Tbilisi State University

**Ekaterine Maghlakelidze**

The University of Georgia, Associated professor, Business, Economics and Management School

**Enene Menabde-Jobadze**

Georgian Technical University. Academical Doctor of Economics

**Evgeni Baratashvili**

Georgian Technical University. Head of Economic and Business Department. Doctor of Economical Sciences. Full Professor

**George Jandieri**

Georgian Technical University; Chief scientist, Institute of Cybernetics of the Georgian Academy. Full Professor

**Ketevan Nanobashvili**

“K&N” Dental Clinic, Tbilisi Medical Academy. Professor PhD MD, Associate Professor

**Larisa Korghanashvili**

Tbilisi State University (TSU) named Ivane Javakhishvili. Full Professor

**Lia Matchavariani**

Tbilisi State University (TSU) named Ivane Javakhishvili. Full Professor, Faculty of Exact & Natural Sciences (Geography Dep.)

**Liana Hovelidze-Solomonova**

Rector of high school of “Georgia”. Doctor of Economical Sciences

**Loid Karchava**

Doctor of Business Administration, Association Professor at the Caucasus International University, Editor-in-Chief of the international Scientific Journal "Akhali Ekonomisti" (The New Economist)

**Maya Kapanadze**

Georgian State University named Javakhishvili. Doctor of Economical Sciences. Associate Professor.

**Mariam Kharashvili**

Tbilisi State Medical University. PhD MD

**Marina Khizanishvili**

Davit Aghmashenebeli University of Georgia. Faculty of Physics. PhD. Professor

**Nana Shoniya**

State University of Kutaisi named Akakhi Tsereteli. Doctor of Economical Sciences. Full professor

**Nelli Sichinava**

Akaki Tsereteli State University . Associate. Professor. PhD

**Omari Omarimu**

Tbilisi State University named Iv. Javakhishvili. Doctor of Chemical Sciences Professor

**Rusudan G. Kutateladze**

Georgian Technical University. Doctor of Economical Sciences. Full Professor

**Simon Nemsadze**

Georgian Technical University . Doctor of Technical Sciences. Full Professor

**Tamar Giorgadze**

Gr. Robakidze University, Department of Medicine. Associate Professor

**Tamara Okropiridze**

University "Geometri" Department of Dentistry, Doctor of Medical Sciences. Full Professor

**Tengiz G. Museliani**

Georgian Technical University. Academic Doctor of Technical Sciences. Associate Professor

**Valerian N. Nanobashvili**

Company "Buneba ltd". Doctor of Veterinary Sciences. Veterinary surgeon

**Vaxtang S. Datashvili**

Georgian technical University. Doctor of Economical Sciences. Associate Professor

**Zaira Gudushauri**

Georgian-Azerbaijan University named G.Aliyev. Associate Professor. PhD. ES

---

**Germany**

**Hans-Juergen Zahorka**

Assessor jur., Senior Lecturer (EU and International Law, Institutions and Economy), Chief Editor of "European Union Foreign Affairs Journal", LIBERTAS - European Institute, Rangendingen

**Ekaterina Kudryavtseva**

Researcher at the Institute of Foreign Languages and Media Technology of the University of Greifswald. PhD Pedagogical Sciences.

---

**Iran**

**Azadeh Asgari**

Asian Economic and Social Society (AESS). Teaching English as a Second Language. PhD

---

**Jordan**

**Ahmad Aljaber**

President at Gulf University. German Jordan University, Founder / Chairman of the Board. Ph.D in Computer Science

**Ahmad Zamil**

Middle East University (MEU). Business Administration Dept. Associate Professor. PhD Marketing

**Sadeq AlHamouz**

Middle East University (MEU). Head Computer Information Systems. PHD. Computer Science.

---

**Kazakhstan**

**Marina Bobireva**

West Kazakhstan State Medical University named Marat Ospanov. PhD

**Niyazbek Kalimov**

Kostanay Agricultural Institution. PhD

**Nuriya Kharissova**

State University of Karaganda. Associate Professor of Biological Science

**Nikolay Kurguzov**

State University of Pavlodar named S. Toraygirova. PhD. Professor

**Anar Mirazagalieva**

Vice-Rector for Teaching and Studies – East Kazakhstan State University named S.Amanzholov

**Anna Troeglazova**

East Kazakhstan State University named Sarsen Amanjolov. PhD

**Gulmira Zhurabekova**

Marat Ospanov West-Kazakhstan State Medical Academy. Department of Human Anatomy. Associate Professor

---

**Latvia**

**Tatiana Tambovceva**

Latvian Council of Science. Riga Technical University. Associate Professor at Riga Technical University

---

**Lithuania**

**Ieva Meidute – Kavaliauskiene**

Vilnius Gediminas Technical University. Vice-dean for Scientific Research

**Vilma (Kovertaite) Musankoviene**

e-Learning Technology Centre. Kaunas University of Technology. PHD

**Loreta (Gedminaitė) Ulvydiene**

Professor of Intercultural Communication and Studies of Translation. Vilnius University. PHD

---

---

**Morocco**

**Mohammed Amine Balambo**

Ibn Tufail University, Aix-Marseille University. Free lance. Consultant and Trainer. PhD in Philosophy. Management Sciences, Specialty Strategy and Logistics.

---

**Poland**

**Jonathan Ψ Britmann**

Ministry of Health of Poland. Polish Society of Clinical Psychology. Ph.D., DMSc., Psychiatry

**Maciej Urbaniak**

University of Lodz. Full Professor. PhD in DSc.

---

**Qatar**

**Mohammed Elgammal**

Qatar University. Assistant Professor in Finance. PhD in Finance

---

**Russia**

**Alexander A. Sazanov**

Leningrad State University named A.S. Pushkin. Doctor of Biological Sciences. Professor

**Alexander N. Shendalev**

State Educational Institution of Higher Education. Omsk State Transport University. Associate Professor

**Andrei Popov**

Director "ProfConsult Group". Nizhniy Novgorod Region. PhD

**Anton Mosalyov**

Russian State University of Tourism and Service. Associate Professor

**Carol Scott Leonard**

Presidential Academy of the National Economy and Public Administration. Vice Rector. PhD, Russian History

**Catrin Kolesnikova**

Samara Architectural and Constructional University. PhD

**Ekaterina Kozina**

Siberia State Transportation University. PhD

**Elena Klemenova**

South Federal University of Russia. Doctor of Pedagogical Sciences. Professor

**Galina Kolesnikova**

Russian Academy of Natural Sciences and International Academy of Natural History. Taganrog Institute of Management and Economics. Philologist, Psychologist, PhD

**Galina Gudimenko**

Orel State Institute of Economy and Trade. Doctor of Economical Sciences. Professor

**Grigory G. Levkin**

Omsk State Transport University. PHD of Veterinary Sciences

**Irina V. Larina**

Federal State Educational Institution of Higher Professional Education. Associate Professor

**Irina Nekipelova**

M.T. Kalashnikov Izhevsk State Technical University. Department of Philosophy. PhD

**Larisa Zinovieva**

North-Caucasus Federal University. PHD. Pedagogical Science. Associate Professor

**Liudmila Denisova**

Department Director at Russian State Geological Prospecting University. Associate Professor

**Lyalya Jusupova**

Bashkir State Pedagogical University named M.Akmully. PHD Pedagogy Science. Associate Professor

**Marina Volkova**

Research Institute of Pedagogy and Psychology. Doctor of Pedagogical Sciences. Professor

**Natalia Litneva**

Orlov State Institute of Economy and Trade. Volga Branch of The Federal State Budget Educational Institution of Higher Professional Education

**Nikolay N. Efremov**

Institute of Humanitarian Research and the Russian Academy of Sciences. Doctor of Philology. Research Associate

**Nikolay N. Sentyabrev**

Volgograd State Academy of Physical Culture. Doctor of Biological Sciences. Professor. Academician

**Olga Ovsyanik**

Plekhanov Russian Economic University, Moscow State Regional University. Doctor in Social Psychology.

**Sergei N. Fedorchenko**

Moscow State Regional University of Political Science and Rights. PhD

**Sergei A. Ostroumov**

Moscow State University. Doctor of Biological Science. Professor



**Svetlana Guzenina**

Tambov State University named G.R. Derzhavin. PhD in Sociology

**Tatiana Kurbatskaya**

Kamsk State Engineering – Economical Academy. PhD

**Victor F. Stukach**

Omsk State Agrarian University. Doctor of Economical Sciences. Professor

**Zhanna Glotova**

Baltic Federal University named Immanuel Kant, Ph.D., Associate Professor

---

**Saudi Arabia**

**Ikhlas (Ibrahim) Altarawneh**

Ibn Rushd College for Management Sciences. PHD Human Resource Development and Management. Associate Professor in Business Administration

**Salim A alghamdi**

Taif University. Head of Accounting and Finance Dept. PhD Accounting

---

**Serbia**

**Aleksandra Buha**

University of Belgrade. Department of toxicology "Akademik Danilo Soldatović", Faculty of Pharmacy

**Jane Paunkovic**

Faculty for Management, Megatrend University. Full Professor. PhD, Medicine

**Jelena Purenovic**

University of Kragujevac . Faculty of Technical Sciences Cacak . Assistant Professor . PhD in Nanotechnologies and microsystems.

---

**Sultanate of Oman**

**Nithya Ramachandran**

Ibra College of Technology. Accounting and Finance Faculty, Department of Business Studies. PhD

---

**Sweden**

**Goran Basic**

Lund University. Department of Sociology. PhD in Sociology. Postdoctoral Researcher in Sociology.

---

**Turkey**

**Yigit Kazancioglu**

Izmir University of Economics. Associate Professor, PhD in Business Administration.

---

**UK**

**Alan Sheldrake**

Imperial College. London University. Electrical Power Engineering Consultant. PhD

**Christopher Vasilopoulos**

Professor of Political Science at Eastern Connecticut State University. Doctor of Philosophy (Ph.D.), Political Science and Government.

**Mohammed Elgammal**

Qatar University. Assistant Professor. PhD in Finance.

---

**Ukraine**

**Alexandra V. Gorbenko**

National Transport University. PhD

**Anna B. Gulyayeva**

Institut of Plant Physiology and Genetics. PhD

**Bogdan Storokha**

Poltava State Pedagogical University. PhD

**Katerina Yagelskaya**

Donetsk National Technical University. PhD

**Lesia Baranovskaya**

National Technical University of Ukraine "Kyiv Polytechnic Institute", PhD, Associate Professor

**Mixail M. Bogdan**

Institute of Plant Physiology and Genetics. PhD

**Liana Ptaschenko**

Poltava National Technical University named Yuri Kondratyuk. Doctor of Economical Sciences. Professor

**Oleksandr Voznyak**

Hospital "Feofaniya". Kyiv. Head of Neurosurgical Centre. Associated Professor

---

**Olga F. Gold**

Ukrainian National University named I.I. Mechnikov. PhD

**Sergei S. Padalka**

Doctor of Historical Sciences, Professor, Senior Researcher at the Department of Contemporary History and Policy at the Institute of History of Ukraine National Academy of Sciences of Ukraine

**Stanislav Goloborodko**

Doctor of Agricultural Sciences, Senior Researcher. Institute of Agricultural Technologies of Irrigated Agriculture of the National Academy of Agrarian Sciences of Ukraine

**Victoriya Lykova**

Zaporizhzhya National University, PhD of History

**Victor P. Mironenko**

Doctor of Architecture, professor of department "Design of architectural environment", Dean of the Faculty of Architecture of Kharkov National University of Construction and Architecture (KNUCA), member of the Ukrainian Academy of Architecture

**Crimea**

**Lienara Adzhyieva**

V.I. Vernadsky Crimean Federal University, Yevpatoriya Institute of Social Sciences (branch). PhD of History. Associate Professor

**Nelya Gluzman**

V.I. Vernadsky Crimean Federal University, Yevpatoriya Institute of Social Sciences (branch). Doctor of Pedagogical Sciences. Full Professor

**Oksana Usatenko**

V.I. Vernadsky Crimean Federal University. Academy of Humanities and Education (branch). PhD of Psychology. Associate Professor.

**Tatiana Scriabina**

V.I. Vernadsky Crimean Federal University, Yevpatoriya Institute of Social Sciences (filial branch). PhD of Pedagogy.

Associate Professor

**Vladyslav Fadiiev**

V.I. Vernadsky Crimean Federal University, Yevpatoriya Institute of Social Sciences (filial branch). PhD of Psychology.

Associate Professor

---

**United Arab Emirates**

**Haitham Hobanee**

College of Business Administration, Abu Dhabi University, PHD.

---

**USA**

**Carol Scott Leonard**

Presidential Academy of the National Economy and Public Administration. National Research University – Higher School of Economics. Russian Federation

**Cynthia Buckley**

Professor of Sociology at University of Illinois. Urbana-Champaign. Sociological Research

**Mikhail Z. Vaynshteyn**

Lecturing in informal associations and the publication of scientific articles on the Internet. Participation in research seminars in the "SLU University" and "Washington University", Saint Louis

**Nicolai Panikov**

Lecturer at Tufts University. Harvard School of Public Health. PhD/DSci, Microbiology

**Yahya Kamalipour**

Dept. of Journalism and Mass Communication North Carolina A&T State University Greensboro, North Ca. Professor and Chair Department of Journalism and Mass Communication North Carolina A&T State University. PhD

---

**Uzbekistan**

**Guzel Kutlieva**

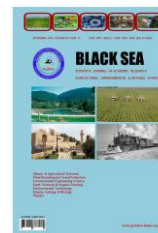
Institute of Microbiology. Senior Researcher. PhD BS.

Black Sea Scientific Journal of Academic Research has ISSN, E-ISSN and UDC numbering:  
ISSN: 1987-6521 (Print), E-ISSN: 2346-7541 (Online), DOI prefix: 10.15357,  
UDC: 551.46 / (051.4)/B-64

Community of Azerbaijanis living in Georgia is publishing scientific papers of scientists on Website and in Referred Journals and Online Journals with subjects which are mentioned below:

### **AGRICULTURAL, ENVIRONMENTAL & NATURAL SCIENCES**

Agriculture, Agronomy & Forestry Sciences  
Earth Sciences & Organic Farming  
Soil Science and Agricultural Chemistry  
Erosion and Irrigation  
Genetics, Breeding, Seeds and Crop Production  
Animal Production and Veterinary  
Agricultural Economics  
Vegetable-growing, Viticulture, Cotton-growing, Sericulture  
History of Agricultural Sciences  
Environmental Engineering Science  
Environmental Science and Technology  
Botany, Zoology & Molecular Biology



### **SOCIAL, PEDAGOGY SCIENCES & HUMANITIES**

Historical Sciences and Humanities  
Psychology and Sociology Sciences  
Philosophy and Philology Sciences  
History of Science and Technology  
Social Science  
Pedagogy Science  
Politology



### **MEDICINE, VETERINARY MEDICINE, PHARMACY AND BIOLOGY SCIENCES**

Clinical Medicine  
Prophylactic Medicine  
Theoretical Medicine  
Stomatology & Dentistry  
Veterinary Medicine and Zoo  
Drug Technology and Organization of Pharmaceutical Business  
Pharmaceutical Chemistry and Pharmacology  
Standardization and Organization of Medicines Production  
History of Pharmacy  
Innovations in Medicine  
Biophysics and Biochemistry  
Radiology and Microbiology  
Molecular Biology and Genetics  
Botany and Virology  
Microbiology and Hydrobiology  
Physiology of Plants, Animals and Humans  
Ecology, Immunology and Biotechnology  
Virology and Immunology  
History of Biology  
Entomology



### **TECHNICAL AND APPLIED SCIENCES**

Applied Geometry, Engineering Drawing, Ergonomics and Safety of Life  
Machines and Mechanical Engineering  
History of Science and Technics  
Electrical engineering, Radio Engineering, Telecommunications, and Electronics  
Information, Computing and Automation



Mining and Geodesy Sciences  
Metallurgy and Energy  
Chemical Technology, Chemistry Sciences  
Technology of Food Products  
Technology of Materials and Products Textile and Light-load industry  
Machinery in Agricultural Production  
History of Art  
Project and Program Management  
Innovative Technologies  
Repair and Reconstruction  
Materials Science and Engineering  
Engineering Physics  
Mathematics & Applied Mathematics

### **REGIONAL DEVELOPMENT AND INFRASTRUCTURE**

History of tourism  
Theoretical and methodological foundations of tourism and recreation  
Tourist market , its current state and development forecasts  
Training and methodological support

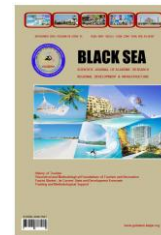
### **ECONOMIC, MANAGEMENT & MARKETING SCIENCES**

Economics and Management of Enterprises  
Economy and Management of a National Economy  
Mathematical Methods, Models and Information Technologies in Economics  
Accounting, Analysis and Auditing  
Money, Finance and Credit  
Demography, Labor Economics  
Management and Marketing  
Economic Science

### **CONFERENCE NEWSLETTER**



### **MULTIDISCIPLINARY JOURNAL**



ISSN: 1987 - 6521, E – ISSN: 2346 - 7541

©Publisher : Community of Azerbaijanis Living in Georgia. Gulustan-bssjar.

©Typography : AZCONCO LLC Industrial, Construction & Consulting.

Registered address: Isani Sangory area, Varketili 3, III a m/r, building 342, dep. 65, 0163 Georgia, Tbilisi.

©Editorial office : Isani Sangory area, Varketili 3, III a m/r, building 342, dep. 65, 0163 Georgia, Tbilisi.

**Questions or comments? E-mail us at [gulustan\\_bssjar@mail.ru](mailto:gulustan_bssjar@mail.ru), [engineer\\_namik@mail.ru](mailto:engineer_namik@mail.ru)**



