c) repurchase of the share by the company or information on operations with the company shares in exchange or over–the–counter by the shareholders having significant share;

d) disclosing financial statement indicating financial position of the company within 20 days from the end of each quarter with 7 days in advance notice;

e) Disclosing the decisions of the general meeting of the shareholders, supervisory board and management board within 1 day, latest.

As this kind of decisions and information immediately affects the market price of the securities, it is important to make sure that investors get this information in under fair time and conditions. This is very important to ensure the transparency in the market.

Authorities of the State Committee for Securities of the Republic of Azerbaijan (SCS) are being expanded: According to the existing legislation only the management positions at the National Depository Center, which has been established by the SCS, were appointed and dismissed by the SCS, whereas according to the new law management positions at the investment firm, exchange, clearing organization, depositary of the investment fund and central depository will be approved by the shareholders after being agreed with the SCS. Moreover, in cases defined in the law, members of the executive board of the investment firm, exchange, clearing organization, depositary of the investment fund and central depository can be prematurely dismissed. Besides, the SCS will also participate in the management of the investors compensation fund. The SCS will be allowed to appoint and dismiss the members of the supervisory board of the fund.

In general, it is understandable for Azerbaijan to increasing control over the capital market and to provid additional authorities to the supervisory authority taking into account the increasing control over the capital market and limiting its activities in a global level after it caused the global financial crises. Significantly increasing the scope of authority of the supervisory authority can negatively affect the developing capital market. It is necessary to identify optimal level of authorities for the supervisory authority taking into consideration the depth, development level and working mechanism of the market.

References

1. Aslanli R. Perspektivli bazar. «Baku–Post» qez., 2013, 06 aprel.
2. QKDK–nin 30.06.2014–cu il tarixli 7N–li qerarin redaksiyasinda.
3 .Canbas S. Finansal bazarlar. Istanbul. – 1997.
4. Investisiya fondlari haqqinda Azerbaycan Respublikasinin Qanunu. Baki–2010.
5. Investisiya qiymetli kagizlarin emissiyasi Qaydalari. Baki–2012.
6. «2011–2020–ci illerde Azerbaycan Respublikasinda qiymetli kagizlar bazarinin inkisafi» Dovlet Proqrami. Baki–2011.
7. http://ec.europa.eu/internal_market/securities/isd/index_en.htm
8. http://www.yatirimyapiyorum.gov.tr/dokuemanlar/kredili–menkul–k%C4%B1ymet–i%C5%9Flemleri.aspx
9. http://www.scs.gov.az/new/?sec=mdata&mid=61&sid=102,176&lang=1

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Біхевіористична теорія на страховому ринку

У статті розглянуто основні положення теорії біхевіоризму, які характеризують поведінку індивідів на страховому ринку. Актуальність дослідження підтверджують результати емпіричних досліджень науковців західної економічної думки, зокрема праці нобелівських лауреатів Д. Канемана і А. Тверскі. Практична цінність дослідження полягає в поясненні окремих процесів прийняття рішень та мотивації учасників страхового ринку.

Ключові слова: *теорія біхевіоризму, прийняття рішення, раціональність, індивід, страхове покриття, страховий платіж.*

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Бихевиористическая теория на страховом рынке

В статье рассмотрены основные положения теории бихевиоризма, характеризующие поведение индивидов на страховом рынке. Актуальность исследования подтверждают результаты эмпирических исследований ученых западной экономической мысли, в частности работы нобелевских лауреатов Д. Канемана и А. Тверски. Практическая ценность исследования заключается в объяснении отдельных процессов принятия решений и мотивации участников страхового рынка.

Ключевые слова: *теория бихевиоризма, принятие решения, рациональность, индивид, страховое покрытие, страховой платеж.*

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Behavioral theory on the insurance market

The article discusses the basic terms of the behavioral theory that characterize the decisions of individuals in the insurance market. The relevance of the study confirms the results of empirical research of sciences of Western economic thought, including the work of Nobel laureates D. Kahneman and A. Tversky. The practical value of the study is to explain certain decision–making processes and motivation of the participants in the insurance market.

Keywords: *behavioral theory, decision–making, rationality, individuals, insurance coverage, insurance payment.*

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Introduction. Insurance industry is always characterized by high level of uncertainty. This uncertainty is based on insurance risks, which are sharing by insurance contracts, on the deviation of individual's demand, which also could differ from the expectation, etc. It means that uncertainty could be as objective as subjective. In addition, if in the case of objective uncertainty on the insurance market could be used classic normative theory for the explanation, subjective uncertainty produced by human factors. Each person has his or her own model of decision making under the risk and its display on his or her choice of insurance coverage. Background research also confirms the foundation of common conference on «Behavioral Insurance» between the Center for the Economic Analysis of Risk at Georgia State University and the Munich Risk and Insurance Center in 2011.

Among the main researchers of the behavioral insurance, it is necessary to aknowledge Bernoulli D., Friedman M., Leonard J. Savage, Kunreuther H., Pauly M., Richter A., Schiller J., Schlesinger H. Some of the most famous research in this area was made by D. Kahneman and A. Tversky. They had a Nobel Prize for approving the hypothesis of human irrational decisions. In Ukrainian science, the question of the behavioral economy was discovered just from the side of economic theory, as a modern wave. However, there were limited interdisciplinary research papers on the theme of behavioral insurance. We would like to admit the paper of L. Shirinian and A. Shirinian, which analyzed the main factors of demand on insurance policies among poor people in Ukraine [1, p. 80–86]. They have modulated optimal price of insurance cover, which would be effective and adequate for the financial abilities of people with minimum income.

The main goal of the paper is to describe the connection between the key thesis of behavioral theory and insurance market. We try to look at this problem from the point of social and psychological sciences. The paper observes the explanation of some deviations on the insurance market.

Main part. European science has worked out some reasons for which it is important to research behavioral insurance:

– the insurance contracts characterized by aleatory (unequal transfer between insured and insurer, insured can pay premiums for many years without sustaining a covered loss) [2, p. 63] and «uberrimae fidei» («utmost good faith») – it is imperative that the policyholder acts in good faith by fully disclosing all information that affects the insurance company's level of risk [3];

– insurable damages are oftentimes less than fully transparent;

– the difference in decision behavior regarding insurance choice vs other risky choices. Even more, risk attitudes of individuals could differ between different insurance policies [4].

Daniel Bernoulli made the first significant contribution to the foundation of behavioral aspects of decision making in the uncertainty in 1738. His paper «Exposition of the New Theory on the Measurement of Risk explains that the consequences always depend on individual behavior – moral expectation is equal to expected utility [5, p. 26]. He tried to develop the theory about motivation in a situation of risk, which is called The St. Petersburg paradox.

As behavioral models become more integrated into economics and finance, many of their effects are illustrated quite well within insurance markets. Milton Friedman and Leonard J. Savage made the first interdisciplinary view on the question of behavior in insurance. They proposed utility function, which is concave for the low and high level of ownership, and relief for the middle [6]. Based on the utility function, we can provide that poor people will prefer either confident or risky situations in which they can gain a lot, although this is unlikely.

Harry Markowitz observed that the utility function could be completed by a reference point – some customary wealth, which is the status quo, interpreted as ownership at the time [7, p. 156]. This could explain changes in attitudes towards risk, based on the different shape of the utility function for performance above and below the status quo. D. Kahneman and A. Tversky, who proposed Prospect theory, developed the idea of H. Markowitz in psychology. According to this theory, people show aversion to risk only in case of positive results. However, in the case of negative results for which the utility function is convex, a tendency to risky choices was observed. The coding results in terms of profit and loss determine the reference point [8, p. 300 – 303]. The results above the reference point are the profits, and the losses below. Because people differently perceive gains and losses, the point of reference effects preferences.

On the insurance market, there are the following groups of participants, characterized by behavioral feature:

– policyholder and insured persons;

– insurance companies;

– insurance intermediaries (brokers and agents).

In our opinion, authorities of insurance supervision cannot be characterized through the prism of behavioral theories. All their activities are within certain laws, regulations and cannot resist the psychological foundations. Although it should be emphasized that in the modern market formation of separate regulations or rules governing the relationship between the insured and the insurer is a response to deviations in the market. It means that the preventive supervision function is not realized in the classical sense. Supervisors in the insurance market make decisions about setting some limits to stop any conscious or unconscious, incorrect or illegal actions on the part of the client, the insurer or the other party. That is the primary in practice is the appearance of precedent (negative), and then is formed the idea of legal restrictions.

The process of formulation and adoption of appropriate regulations can be viewed from the perspective of behaviorism. First, it happens in the insurance market, where there is always a conflict of interest. On the one hand, insurance companies are united in a self–regulatory organization to support corporate interests (lobbyism) or individually through the courts to appeal the decision of supervisory authorities. Most restrictions for commercial structures on the insurance market cause information and legal resistance. On the other hand, customers of insurance companies are also a party of interests that government has to take into account. This is especially illustrated by the Francs loans in Poland, which solved the problem of payment credits which were denominated in francs [9]. It was one of the pre–election points with a party candidate.

Howard Kunreuther and Mark Pauly offer 3 theses, which argument public intervention to the process of risk sharing (for instance, in health care) [10, p. 11]:

– behavior that involves under–purchase rather than over–purchase of insurance or protection;

– behavior that causes large harm to a populations' wellbeing that is of concern to others;

– settings where individuals have difficulty taking steps to reduce their risk.

Thus, the indirect influence behavioral component on the formation of the regulatory environment on the insurance market can be contended.

On the part of the insurance company processes can also be divided on such that are determined exclusively by mathematical and statistical methods (e.g. actuarial – determining insurance rates) or those where in addition to the use of mathematical models, the decision is made based on behavioral factors. Insurance rate should be calculated in a way to comply with the following rules:

– the balance of payments and benefits – the need to ensure a balance between the collected insurance premiums (insurance fund) and the amount of money paid to policyholders;

– proportionality of payments and benefits – maintaining the ratio between payment and the expected insurance benefit. The higher the insurance amount, the higher should be the insurance premium;

– payments and benefits equivalent (fair rate) – ensuring the appropriate relation between a financial burden on participants of the insurance protection and the amount of risk that everyone brings to the management of the insurance company. The higher risk insurance cover, the higher should be the insurance rate. The absence of such a model in the formation of customer base can cause the phenomenon of negative selection in the insurance company. Hence, for some events like natural disasters, terrorism or catastrophic health–related expenses, not only customers but also insurers and regulators often do not behave in accordance with normative rules of insurance theory but follow their intuitions [10, p. 4].

Worth noting that more and more insurance companies in foreign markets practice individual approach to each client, creating an insurance offer that takes into account personal factors. So, on the American and European markets widely spread vehicle insurance policies are based on Usage Based Insurance (UBI). The Usage–Based Insurance market has continued to grow rapidly since 2013 and is now estimated at 12 million drivers globally. The essence of this insurance protection is that the insurance company receives all information about the driver from the black box, which is located in the vehicle. It is assumed that the share of such policies in the motor insurance structure in Europe will be about 14% in 5 years. [11, p. 14]

Individual's risk–taking decisions can be highly complex and highly dependent on the specific situation of each decision maker. «Rational decisions» made according to the contextual model of expected utility theory (EUT) are often interpreted as «normative.» Although EUT has some predictive power, it also seems to have many contradictions to predicted outcomes. Behavioral models attempt to add various cognitive factors into the process. Some of these might be simplifications; some might be awareness of a social context; and some might be recognition of one's own emotions, hopes, and fears [12, p. 86].

Potential customer (e.g. individual or household) of the insurance company seeking insurance protection against the risk receives information about the size of the insurance rate determined for the relevant risk. The individual should decide whether the price (insurance payment) he has to pay is adequate to the value of the insurance subject, that is, whether at this price it is profitable to transfer all the risk to the insurance company. Unlike insurance companies, a potential customer does not use mathematical and statistical models and does not have access to data that would allow analyzing insurance product and making a decision. The only information that can be guided by the individual when making decisions is the cost of the insurance subject, subjective assessment of the likelihood of damage, or frequency and size of losses in the past. This situation of uncertainty raises the question of what motives guided an individual to accepting the size of the proposed insurance payment.

Insurance company calculates the insurance rate so that the net rate provides enough funds to cover expenses in case of implementation of risk (i.e. income at the approximate cost of expected benefits). Besides the insurance rate, the acquisition costs sufficient for the planned profits, funds for doing business, should be taken into account. The individual making the decision must accept the price of insurance, which can exceed the cost of probable losses.

In terms of Prospect Theory (A. Tversky and D. Kahneman), the individual chooses from two possible perspectives: the conclusion of the insurance contract, in this case, there is accurate information on the cost of insurance protection. The second perspective – the refusal of insurance, personal incurring of losses related to the implementation of risk. The cost of damage expected in the second case should be less than a number of payments because it does not include acquisition surcharges of the insurance company. According to the theory of A. Tversky and D. Kahneman, most people choose the higher costs with a lower probability of occurrence (not lower cost with higher probability) [13, p. 287–289]. According to this theory, individuals should ignore commercial insurance, as insurance payments include funds that will not be used for payment of insurance. For example, the observation in Colombia shows us the next relations: low–income households invest 2,1% of their income in insurance and 2,1% on lotteries. Some households with higher income spend less in lotteries (1,1%) and more in insurance (3%) [14].

Taking into account that a customer has very limited information on the risks, the decision on insurance that an individual makes is based on a subjective judgment about the probability of the event. The classic theory considers that the individual makes rational decisions based on mathematical and statistical calculations. This individual corresponds to the image of «Homo economicus» and aimed at maximizing its own welfare [15, p. 44]. This approach that explains the decision–making by individuals is doubted by H. Simon [16], D. Kahneman and A. Tversky [17]. They argue that an individual is characterized by limited rationality due to time limitations and the complexity of information perception. People intuitively assess reality, not applying a formula for analyzing and forecasting the probability. It leads to making decisions based on:

– the information from memory. Worth noting that human memories characterized by mnemonic process that give the opportunity to select memories;

– conclusions from similar cases, associations;

– information about the primary value of some occasion (accident), which was proposed to approach the estimation to the real price.

Significant importance also has individual errors in assessing the likelihood of events; it is a subjective vision of reality. For example, the assessment of randomness in the «short» samples, so–called «gambler's fallacy» is a perception among independent cases as dependent [18, p. 107]. This is the result of a false perception of the law of large numbers because individuals use them also for short series accepting that small sample represents the entire population [15, p. 57–59].

On the supply side, insurance companies face the risk of experiencing large claims payments, only part of which can be spread or diversified away through the law of large numbers if losses are highly correlated. Decision makers in the insurance industry and those who regulate, litigate, and legislate about insurance are also likely to make mistakes for the same reasons that consumers do – they rely primarily on their intuition rather than undertaking deliberative thinking because they have limited information from past experience on which to base their decisions [10, p. 3]

In case the event is accepted with a probability of 80%, the individual subjectively perceives it as a case that will almost certainly take place. If the probability is 20% – a case is considered as one that can certainly not take place [19, p. 555]. When making the decision about voluntary insurance, the individual has no way of verification the likelihood of cases (and as a result, loss) for the entire population, and can only be guided by his own experience. For example, the absence of cases during the previous 5 years does not mean that the probability of the event in the sixth year equals zero. Instead, it is believed that individuals underestimate the probability of major events and overestimate the probability of small cases.

Conclusions

Behavioral insurance theory begins its development from the ideas of behavioral economics. It was made to explain some deviations on the insurance market, which could not be explained by the normative theory. The main purpose of the behavioral insurance consists of the hypothesis of human motivations under the uncertainty. It seems each person tries to make a choice, which would maximize their utilities. But behavioral theory approved that the level of utility for the individuals changes under different conditions. Even so, there are some regularities between human decisions and interpretation of the risky situation. The individuals approved that the same situation could be interpreted in different ways. The main ideas of behavioral insurance could also explain some deviation on the insurance markets, particularly from the sides:

– of state legislation decisions (how could one deviate the process of insurance law making);

– of demand on insurance coverage (how individuals make their choice in conditions of uncertainty and their motivations);

– of supply of the insurance coverage (how the insurers model the price of insurance coverage and implement personal approach).

Future research will be aimed to look at the questions of individuals decision–making in risk sharing in countries with are on the way on social–economic transformation to the market system (particularly East European countries).

Bibliography

1. Шірінян Л.В. Мікрострахування в Україні: бути чи не бути?: монографія / Л.В. Шірінян, А.С. Шірінян. – Черкаси: видавництво Чабаненко Ю.А., 2012. – 208 с.

2. Salama A. Explanation of The Aleatory Aspect of The Insurance Contract with Reference To Risk Theory / A. Salama // Journal of Insurance Issues and Practices. – 1979. – Vol. 3. – №1. – P. 61–76.

3. Uberrimae Fidiei and Adverse Selection: the equitable legal judgment of Insurance Contracts [Електрон. ресурс] / J.D. Strauss // MPRA Paper. – №10874. – 2008. – Режим доступу: https://mpra.ub.uni–muenchen.de/10874/

4. Berseghuan L. The nature of risk preferences: Evidence from insurance choices / L. Berseghuan, F. Molinari, T. O'Donoghue, J. Teitelbaum // American Economic Review. – 2013. – №103 (6) – P. 2499–2529.

5. Bernoulli D. Exposition of a New Theory on the Measurement of Risk / D. Bernoulli // Econometrica. – 1954. – Vol. 22. – P. 23–36.

6. Friedman M. The Utility Analysis of Choices Involving Risk / Milton Friedman and Leonard J. Savage // Journal of Political Economy. – 1948. – №56 (4). – P. 279–304.

7. Markowitz H. The utility of wealth / H. Markowitz // Journal of Political Economy. – 1952. – №60 (2). – P. 151–158.

8. Tversky A. Advances in prospect theory: Cumulative representation of uncertainty / A. Tversky, D. Kahneman // Journal of Risk and Uncertainty. – 1992. – №5. – P. 297–323.

9. Frankowicze przebieraja nogami, banki traca. PiS wryci z ustawa frankowa? [Електрон. ресурс]. – 2015. – Режим доступу: http://tvn24bis.pl/z–kraju,74/pis–i–ustawa–frankowa,589430.html

10. Kunreuther H. Behavioral Economics and Insurance: Principles and Solutions [Електрон. ресурс] / H. Kunreuther, M. Pauly. – Working Paper. – Risk Management and Decision Processes Center, 2014. – Режим доступу: http://opim.wharton.upenn.edu/risk/library/WP201401_HK–MP_Behavioral–Econ–and–Ins.pdf

11. Usage–based insurance, Global Study, The reference report on telematics insurance. – Ptolemus Consulting Group, 2016. – 135 p.

12. Richter A. Behavioral insurance: Theory and experiments / A. Richter, J. Schiller, H. Schlesinger // Journal of Risk Uncertainty. – 2004. – №48. – P. 85–96.

13. Tversky A. Prospect theory: An analysis of decision under risk / A. Tversky, D. Kahneman // Econometrica. – 1979. – №47. – P. 263–292.

14. Martinez–Correa J. Behavioral Insurance: An Introduction [Електрон. ресурс], 7th International Microinsurance Conference. – Center for the Economic Analysis of Risk. – 2011. – Режим доступу: http://www.munichre–foundation.org/dms/MRS/Documents/ Microinsurance/2011_IMC/AcademicTrack_MIC2011_Presentation_Mart–nezCorrea/AcademicTrack_MIC2011_Presentation_Mart%C3% ADnezCorrea.pdf

15. Cieslak A. Behawioralna ekonomia finansowa. Modyfakacja paradygmatow funkcjonujacych w nowoczesnej teorii finansow / A. Cieslak. – Materialy i Studia – Narodowy Bank Polski. – 2003. – 172 p.

16. Herbert A. Simon. Models of Man: Social and Rational / Simon A. Herbert // New York: John Wiley and Sons Inc., 1957. – 279 p.

17. Tversky A. Judgement under uncertainty: Heuristics and biases / A. Tversky, D. Kahneman // Science. – 1974. – №185. – P. 1124–1131.

18. Tversky A. Belief in the Law of Small Numbers / A. Tversky, D. Kahneman // Psychological Bulletin. – 1971. – №76 (2). – P. 105–110.

19. Fischhoff B., Knowing with certainty: the appropriateness of extreme confidence / B. Fischhoff, P. Slovic, S. Lichtenstein // Journal of Experimental Psychology: Human Perception and Performance. – 1977. – №3. – P. 552–564.