

FINANCIAL INFORMATION AS A FACTOR IN CREATION OF THE VALUE ADDED IN THE INNOVATION MARKET ECONOMY

© 2014 RYAZANOVA N. S.

УДК 336.11

Ryazanova N. S.

Financial Information as a Factor in Creation of the Value Added in the Innovation Market Economy

The objective of the work consists in studying financial information as a factor in creation of the value added in the innovation market economy. The innovation market economy is characteristic of the developed information (postindustrial) society and replaced the classical market economy at the beginning of the 21st century. This transformation gives rise to significant challenges which consist in the need for understanding the forthcoming informational changes, forming corresponding economic paradigms and searching for new efficient economic management mechanisms. Within the context of the innovation market economy, where all processes have a monetary dimension grounded in the pricing mechanism, financial information is of critical importance, which makes it a key component of efficient economic management mechanisms, it becomes a special factor in creation of the value added. Characteristic features of such information were discussed, in particular the processes of its obsolescence, qualitative characteristics, the ability to represent all surrounding phenomena and objects in the contrastive monetary dimension, and a series of other properties. Specific aspects of the process of creating the value added involving financial information were studied, as well as tendencies of this process in the innovation market economy.

Key words: value added, innovation market economy, obsolescence of financial information, factor in creation of the value added, financial information, characteristics features of financial information, price of financial information, quality of financial information

Bibl.: 43.

Ryazanova Nadiya S. – Candidate of Sciences (Economics), Associate Professor, Associate Professor, Department of Financial Markets, Kyiv National Economic University named after V. Getman (pr. Peremogy, 54/1, Kyiv, 03068, Ukraine)

Email: nryazanova@yahoo.com

УДК 336.11

UDC 336.11

Рязанова Н. С. Финансовая информация как фактор создания добавленной стоимости в инновационной рыночной экономике

Целью работы является исследование финансовой информации как фактора создания добавочной стоимости в инновационной рыночной экономике. Инновационная рыночная экономика свойственна развитому информационному (постиндустриальному) обществу и в начале XXI столетия приходит на смену классической рыночной экономике. Такой процесс трансформации рождает мощные вызовы, которые состоят в необходимости осмысления грядущих информационных изменений, формировании соответствующих экономических парадигм и поиска новых эффективных механизмов хозяйствования. Роль финансовой информации в инновационной рыночной экономике, где все процессы осуществляются в денежном измерении на основе ценового механизма, является решающей, поэтому ключевой составляющей эффективных механизмов хозяйствования является именно финансовая информация, она становится особенным фактором создания добавочной стоимости. В работе рассмотрены характерные черты такой информации, в частности, процессы ее старения, качественные характеристики, способность представлять явления и предметы окружающего мира в сопоставимом денежном измерении и ряд других черт. Рассмотрены особенности процесса создания с ее участием добавочной стоимости и тенденции развития этого процесса в инновационной рыночной экономике.

Ключевые слова: добавленная стоимость, инновационная рыночная экономика, качество финансовой информации, старение финансовой информации, фактор создания дополнительной стоимости, финансовая информация, характерные черты финансовой информации, цена финансовой информации

Библ.: 43.

Рязанова Надежда Сергеевна – кандидат экономических наук, доцент, доцент, кафедра финансовых рынков, Киевский национальный экономический университет им. В. Гетьмана (пр. Победы, 54/1, Киев, 03068, Украина)

Email: nryazanova@yahoo.com

Рязанова Н. С. Финансова інформація як фактор створення доданої вартості в інноваційній ринковій економіці

Метою роботи є дослідження фінансової інформації як фактора створення доданої вартості в інноваційній ринковій економіці. Інноваційна ринкова економіка властива розвиненому інформаційному (постіндустриальному) суспільству і на початку XXI століття прийшла на зміну класичній ринковій економіці. Цей процес трансформації породжує потужні виклики, що полягають у необхідності осмислення прийдешніх інформаційних змін, формування відповідних економічних парадигм і пошуку нових ефективних механізмів господарювання. Фінансова інформація в інноваційній ринковій економіці, де всі процеси здійснюються в грошовому вимірі на основі цінового механізму, є вирішальною, тому ключовою складовою ефективних механізмів господарювання є саме фінансова інформація, вона стає особливим фактором створення доданої вартості. В роботі розглянуто характерні риси такої інформації, зокрема процеси її старіння, якісні характеристики, здатність представляти явища та предмети оточуючого світу у співставному грошовому вимірі та ряд інших рис. Досліджено особливості процесу створення доданої вартості за участю фінансової інформації та тенденції цього процесу в інноваційній ринковій економіці.

Ключові слова: додана вартість, інноваційна ринкова економіка, старіння фінансової інформації, фактор створення доданої вартості, фінансова інформація, характерні риси фінансової інформації, ціна фінансової інформації, якість фінансової інформації

Бібл.: 43.

Рязанова Надія Сергіївна – кандидат економічних наук, доцент, доцент, кафедра фінансових ринків, Київський національний економічний університет ім. В. Гетьмана (пр. Перемоги, 54/1, Київ, 03068, Україна)

Email: nryazanova@yahoo.com

By providing economic agents with the required data on trends in the monetary value of the capital and minimizing uncertainty in financial relations and associated risks, financial information becomes a factor in creation of the value added in the innovation market economy

Introduction. The beginning of the 21st century was marked by a dramatic increase in the role of information in the life of society, development of information technology, globalization of information flows and communications mobility, and humanity is currently on the verge of profound changes prompted by the transformation of the classical market economy characteristic of the 20th century to the innovation market economy which is typical for the developed information (post-industrial) society. Such processes give rise to significant challenges which consist in the need for understanding the forthcoming information changes, forming corresponding economic paradigms and search for new efficient economic management mechanisms. The seriousness of such challenges is evidenced by the global economic recession which, having started with a global financial crisis of 2007, tends to demonstrate crucial importance of financial relations in the market economy and significance of the corresponding financial information as a basis for the sustainable development of society and reliable mechanisms of prevention or at least minimization of such economic cataclysms. It becomes obvious that in the information society a key component of such mechanisms is the effective utilization of the information function of finance which is objective and consists in the elimination of uncertainty in financial relations, and that, in turn, requires profound understanding of the role of financial information in reproduction processes of the innovation market economy, in particular, in forming the value added of produced goods.

Within the context of the market economy, whose characteristic feature is that its processes have a monetary dimension grounded in the pricing mechanism, financial information, which is essentially information on the monetary value of the capital (any resources involved in production, distribution, exchange and consumption of the social product), is of critical importance. It embraces a wide range of data on the finance of households, corporate finance, finance of governmental bodies and local authorities, financial market and international finance which are necessary for the development of society, and in each country people tend to pay substantial attention to information concerning any alterations in the taxation and budgetary policy, money market tendencies, capitals and markets in various financial services, using it as a basis for their financial and economic decisions and actions. Financial information is necessary for all economic agents as it informs the processes of analysis, planning, decision making, production, and control at the micro- and macroeconomic levels. It underlies business decisions and minimizes financial and economic risks thus contributing to an increase in the value of the money capital, as well as adding to the value of the products formed as outcomes of these processes. Examples are numerous: securities of a corporation which provides customers with appropriate information about it and whose activities are transparent for society are valued more on the market; investors always intend to invest in businesses with higher reliability, smaller risks and higher profits, and all of these are closely connected with the availability

of financial information about the investment objects and purposes; the more accurate and detailed the information about property is, the more precise its cost and market price will be; simultaneously, distortion of financial information, its incompleteness, misinterpretation and misuse entail losses, business problems, and crises for its users and society.

Being a key component of management of all activities in the innovation market economy, financial information turns to a special factor in creation of the value added, is in demand and acquires the status of a commodity. Appropriate financial information is appreciated, and economic agents, realizing its significance, are willing to pay great sums to obtain it. Oliver Williamson, Professor at the University of California (USA), in his article "The Vertical Integration of Production: Market Failure Considerations" (1971) stresses the importance of not being exceedingly thrifty when collecting required information, even if information costs are not directly associated with the volume of production it is used for [43].

Practice shows that in the innovation market economy financial information tends to become an essential factor in creation of the value added, and efficiency and sustainable development of this process are grounded in profound understanding of its fundamental aspects, whereas their neglect can result in severe economic losses for economic agents and society overall.

Realizing extreme relevance of the information issues in the innovation economy, leaders of countries participating in the Organization of Economic Cooperation and Development (OECD) initiated a series of discussions at the beginning of the 21st century, whose results served as a basis for devising a series of comprehensive analytical materials concerning developmental prospects for society, its scientific, technical and information potential [24; 27; 31; 32; 34]. A conclusion was drawn that not only growing volumes of the information exchange and its becoming global are characteristic of the innovation economy, but also the fact that information, including financial information, being represented, in particular, in scientific knowledge, professional practical skills and developed information infrastructure, tends to become the primary source and key factor in value creation, a necessary precondition for a stable economic growth.

World scientific thought has long been focusing on information and its role in the economy, the connection between information and creation of the value added and economic growth. Being linked to outlook, it is considered in information science, philosophy, economic theory, financial and other sciences, and the modern information paradigm embraces a series of concepts, among them the attributive concept of information, the concept of information as a special resource and commodity; the concept of the cost (price) of information; the concept of connection between the dualisms «time–space» and «energy–information». They study the properties of information as a resource in the information age, specific aspects of setting the price for information and its formation on the basis of the value added.

Anticipating the information age, scientists claimed as early as in the 20th century that creation of the value added involves information and people's knowledge (perceived information – N. R.). For instance, Tom 'Ted' Stonier (1927 – 1999), an English biologist and philosopher, one of the founders of the

information society conception, mentioned in his article «The **Wealth of Information: A Profile of The Post-Industrial Economy**» (1983) that in the information age information becomes the basic economic value, the greatest source of wealth, adding value to not only labor and capital, but itself as well. He provided simple and convincing examples: if one applies information on agricultural methods of cultivating arid lands to a desert, it can give high yields; if one gives information to inefficient workers, their qualifications will improve; if necessary information is applied to the free capital in a timely manner, it becomes a profitable investment [40].

A little later, Taichi Sakaiya, Professor of Economics at Tokyo University (Japan) and an author of a series of works on questions of modern economics, politics, futurology and social relations, indicated in his work «The Knowledge-Value Revolution: Or A History of the Future» (1985) that the most essential change of the innovation economy consists in the fact that traditional factors of production no longer determine the value that users attribute to a certain product. Information becomes a special resource, which, on being comprehended, transforms into knowledge, acquires the status of a commodity and tends to play an increasingly significant role in production, distribution, exchange, and consumption of the goods produced by society, thus increasing the price of other goods and services [17].

The role of information in value creation is also studied thoroughly by Alvin and Heidi Toffler, renowned husband-and-wife futurists from the USA, in their book «**Revolutionary Wealth: How It Will Be Created and How It Will Change Our Lives**» (2006). While acknowledging that information is a category that extends far beyond the boundaries of other known economic categories and emphasizing the unique nature of information and knowledge as an economic resource, they also single out ten properties of the information resource: the possibility of being used simultaneously by millions of people without exhausting it; intangibility and, at the same time, manipulability; non-linearity; relativity; combinability with other information thus generating new information; mobility; the possibility of being reduced to symbols and abstractions; the possibility of being kept on increasingly smaller data storage media; being public and non-public; difficulty of concealing an information resource [42, P. 131 – 150].

When studying the processes of reproduction on an extended scale, science has long strived to comprehend what exactly forms the exchange (monetary) value of products, which resulted in the emergence of several theories over the past two and a half decades, among them the theory of factors of production and marginal utility theory. In our opinion, the role of financial information in creation of the value added can be understood better from the standpoint of the theory of factors of production. It was established by Jean-Baptiste Say (1767-1832), a French economist, who presented his views in the work «A Treatise on Political Economy: or The Production, Distribution, and Consumption of Wealth» (1803) [20]. Subsequently, a significant contribution to the theory was made by the French economist Frederic Bastiat (1801-1850) and English economists James Mill (1773-1836) and John Ramsey McCulloch (1789-1864). In general terms, the theory of factors of production implies that the new value is created not only by living labor, but also embodied labor, there are also a number of factors which form the exchange (monetary) value of the

product in the process of producing goods (providing services), among them labor, capital, land and other natural resources, and entrepreneurship.

Despite the existence of a wide range of studies focusing on the role of the information resource in the modern information society, financial information as a factor in creation of the value added in the innovation market economy has not been studied yet. Since it is a part of financial relations that are of fundamental importance for the market economy, studying it as a factor in creation of the value added in the market economy appears relevant. For this reason, the objective of this work consists in the study of financial information as a factor in creation of the value added in the innovation market economy, which includes a study of characteristic features of such information and specific aspects of its forming the value added in the modern information society.

Main findings. In the innovation market economy, financial information becomes a special resource in forming the value added, which is recognized by both the business environment and scientific community. In particular, David J. Teece, Head of the Haas School of Business at the University of California Berkeley (USA), one of the best known universities training specialists in computer and information technology, economics and physics, emphasizes that today the role of the source of competitive advantage passes on to such an intangible asset as information and knowledge (perceived information – N. R.), and managers, realizing that it is the information asset that forms the foundation for competitive advantage, concentrate on its creation and on how to use it to gain profit [21].

The information resource, including financial information, is used by economic agents consciously and subconsciously to increase the value of their products. Such utilization of financial information is conditioned by the unique properties which distinguish it from other economic resources. These properties should, first of all, include those arising from the qualities of financial information being an information resource, and, summarizing existing research findings in the area [6; 17; 21; 40; 42, P. 131-150], we believe it reasonable to group them into the following ten categories: (1) uniqueness of reproduction and modernization methods, in particular, being non-depreciable for frequent use, combinability with other information, and relativity; (2) non-linearity; (3) intangibility and manipulability; (4) the ability of being accessible and limited for access; (5) impossibility of being permanently concealed; (6) the possibility of being presented in the form of symbols and abstractions (encoded), and therefore of being compacted, mobile, and kept in increasingly large volumes on increasingly smaller data storage media; (7) the ability to preserve the content while changing the form; (8) the ability to be owned by several individuals simultaneously; (9) indeterminacy of qualitative characteristics; (10) rapid obsolescence. Alongside the above properties, there is one unique feature inherent in financial information which distinguishes it from other types of information and economic resources: it alone can present data on the surrounding world in the universal monetary dimension comparable in time and space. We will further discuss each of the properties in more detail in order to develop a better understanding of the aspects of creation of the value added in the innovation market economy in terms of financial information.

We believe that the following properties should be singled out when considering the aspects of reproduction and modernization of financial information:

First, financial information does not depreciate for frequent use; on the contrary – the more intensively it is used, the more new information is produced. This is illustrated by how society utilizes data on the financial market, corporate finance, state finance, household finance and international finance: efficiency of these areas and minimization of associated risks are directly dependent on the number of economic agents having the required information and the amount of new information useful for society they can generate. Unlike machines that become worn out in the process of operation, annual financial reports do not diminish as a result being studied and analyzed by numerous users. It is this property of the information resource that the innovation market economy is based on: millions of economic agents can use the same financial information increasing and improving the value of produced goods rather than exhausting it.

Second, financial information can be combined with other information resulting in varying and useful information combinations, whose increased number, other circumstances being equal, leads to a lower degree of entropy (uncertainty) and therefore risks. While encompassing virtually all aspects of social reality and presenting them in the monetary dimension, financial information is always harmoniously combined with general economic and other descriptive types of information: the outcome is informational complementarity, formation of comprehensive, useful information necessary for users.

Within the context of the financial market, financial information combined with other types of information serves as the basis for determination of the position of investors, issuers and financial intermediaries on the price of securities and money capital; the supply and demand, and therefore the financial market environment, are formed accordingly. Combination of information can be illustrated by technical and fundamental analysis methods applied in the modern stock markets. Technical analysis, which consists in predicting future changes in the price of a financial instrument (security) by analyzing previously observed changes in the price, is based on the study of price time series («charts»); besides, it utilizes data on securities trading volumes and other statistics. Fundamental analysis operates varying data at three levels: (1) for macroeconomic evaluation, macroeconomic data are used, which implies considering various economic indicators, including Gross domestic product (GDP) and Gross national product (GNP) volumes, inflation rate, unemployment, interest rates, export and import volumes, currency exchange rates, government spending and borrowings on the financial market; (2) for evaluation of the supply of and demand for a particular type of goods (services), industry level data are used; (3) the issuer's financial standing and reliability of securities are assessed on the basis of data of the issuing corporation.

Third, financial information is relative, each of its fragments becomes meaningful only as part of a system of fragments forming the context. Considering this, for example, in corporate finance, notes and commentaries on financial reports are obligatory, as they allow users to understand the context of figures presented, that is data on the monetary value of assets, liabilities and equity capital of corporations, their incomes, ex-

penditures, and cash flows. The mandatory status of notes and commentaries on financial reports is formalized, in particular, by the International Financial Reporting Standards (IFRS) which are currently recognized as binding in many countries of the world, including the USA, which is also gradually changing over to the IFRS from the Generally Accepted Accounting Principles (GAAP), a system of national standards that has been applied there for a long time. The volumes of notes and commentaries in annual, semi-annual and other corporate reports are several tens of times greater than those of the financial statements themselves, that is balance sheets, statements of revenues and expenditures (financial results reports in Ukraine), statements of cash receipts and disbursements (cash flow statements in Ukraine), statements of changes in owner's equity.

Economic agents and society can receive immense results owing to individual findings (inventions, discoveries), which is the essence of such property of financial information as non-linearity. For instance, one of the fundamental theses in finance is the concept of the time value of money, or the value of money considering the time factor, as functioning of modern market finance without it is unthinkable. It is a golden rule in business and implies that today the value of money is greater than the value of the same money received in future, and this idea is a foundation for the theory that money capital must bear interests. There is no certainty as to who was first to formulate this thesis; it is only well-known that the medieval mathematician Leonardo Pisano Fibonacci (approx. 1170 – approx. 1250) already mentioned it in his works. He might have learned this from his Arab tutors when studying in Algeria or during his subsequent travels around Egypt, Syria, Byzantium, and Sicily.

Financial information can be manipulated, a remarkable example of which can be manipulating information on the financial market with a view to receiving some benefit. In some situations, market players resort to dissemination of deliberately inaccurate information, and as a result the price, demand for or the trading volume of securities, foreign currency and (or) physical (non-financial) commodity deviate from the level (or are maintained at the level) that is significantly different from the level which would otherwise have formed. Such deviations in prices, demand for or volumes of goods can be taken advantage of for the benefit of such market players. However, manipulation of information entails violation of the principles of the free market, interferes with fair price formation, prevents fair investors from making efficient decisions – all of which harms and undermines the market economy. Manipulation of financial information, its distortion or inaccurate disclosure for users inevitably cause losses for both individual economic agents and society in general, which can be evidenced by the latest global economic crisis: in particular, it has also proven the crucial importance of proper disclosure and corresponding utilization of financial information by mortgage market participants in both the USA and the world as well.

Since manipulation of financial information can cause enormous damage to participants in the financial market and economy in general, special legislation aimed at its prevention has been developed and approved in many countries, with steps taken to ensure its due enforcement. For example, in Ukraine the agency that regulates the stock market, the Securities and Stock Market State Commission (SSMSC), has introduced

a special Procedure of Prevention of Price Manipulation during Securities Transactions on the Stock Market (2011) [14].

Based on its accessibility, financial information can be non-public (limited for access) and public (accessible). Its accessibility is ensured through systematic publishing in official printed sources, dissemination through mass media or by providing it directly to any person concerned. The issue of accessibility of financial information is extremely relevant for modern stock markets, which is stressed by the Technical Committee of the International Organization of Securities Commissions (IOSCO) [4]. As far as non-public information is concerned, its existence is prompted by national security considerations or protection of legal rights of economic agents, and it includes confidential, insider, and classified information. Disclosure of such information is forbidden by the data owner, and access to it is granted to a restricted number of individuals.

While emphasizing the key role of the information asset in the modern economy, the World Bank (WB) also highlights the importance of accessibility and openness of information for society yet also acknowledging that protection of information and parties concerned is a priority as well. Implementation of this approach is based on a corresponding appropriate classification of information [23]. For example, the Law of Ukraine "On Information" (1992) contains a list of information types that cannot be regarded as non-public as they are important for social security. Such information includes data on the environmental condition, quality of food products, household items, emergencies, disasters, hazardous natural phenomena, the health status of the population, its standard of living, sociodemographic parameters, the state of legal order, education and culture, facts of violation of human and civil rights and freedoms, illegal actions of governmental bodies and local authorities, as well as other information access to which cannot be restricted under Ukrainian laws and international agreements. As for confidential information, the Law determines it as information about an individual as well as information access to which is restricted by an individual or a legal entity, except public bodies or officers. As for classified and insider information, the Law indicates that access to such data is regulated in each specific case by applicable legislation [16].

When discussing the aspect of accessibility (openness) and non-accessibility of financial information, it is important to realize that availability of more detailed information to economic agents is a precondition for minimization of uncertainty in financial relations and lessening associated risks. First attempts to analyze the connection between information and risk were made by the American economist Frank Hyneman Knight (1885–1972) in his monograph on corporate behavior strategies «Risk, Uncertainty, and Profit» (1921) where information was defined as a concept which is the opposite of uncertainty, inversely proportional to risk. Simultaneously, risk is an estimated probability of an event, whereas uncertainty refers to something that cannot be estimated [33]. Thus, risk means incomplete information that allows predicting a certain event with a certain degree of reliability, with more information resulting in a lower degree of risk. This means that disclosure of financial information, its being public and accessible is a way of lessening uncertainty and correspondingly risk in the value (money) relations of society. A risk-free financial instrument is valued higher, investors strive to invest in less risky projects. If

risks are inescapable, then issuers of securities, when attracting money capital, offer extra interest to investors – they have to pay for risks, the money attracted by them proves more expensive to use, and – other circumstances being equal – the value added of their product appears smaller.

The primary function of information is lessening or complete elimination of uncertainty (unpredictability), whereas the measure of uncertainty is represented by informational entropy being essentially a minimum of information which is required to overcome uncertainty of a random value. The notion of informational entropy was first introduced by Claude Elwood Shannon (1916-2001), an American applied mathematician, and Warren Weaver (1894-1978), a scientist and mathematician, in their work «The Mathematical Theory of Communication» (1949) [36]. Generalizing the ideas devised by Ralph Vinton Lyon Hartley (1888-1970), an American electronics researcher, in his work «Transmission of Information» (1928) [28] where the logarithmic measure of information was introduced that is now known as the «Hartley quantity of information», Shannon and Weaver formulated the quantitative concept of information by proposing the idea of informational entropy as a measure of uncertainty of information. Within the financial risk management framework, this means that society must construct a system of access to information which will decrease the informational entropy in finance – and lessen uncertainty in all aspects of financial relations, including state and local finance, corporate finance, financial market and international finance. This is achieved through appropriate disclosure of financial information and unimpeded and free access to it.

Currently, the greatest progress in terms of disclosing financial information and ensuring unimpeded access to it has been achieved in sphere of financial markets and corporate finance, as evidenced by the following: at the end of the 20th century, the IOSCO endorsed International Disclosure Standards for equity securities (IDS98) [35]; in 2001 – 2004 the European Union countries adopted a series of directives on disclosure of information on financial markets [25; 26]; the time frame of 2004-2014 witnessed endorsement and further refinement of the International Financial Reporting Standard regulating disclosure of information on financial instruments (IFRS 7 «Financial Instruments: Disclosures») [29]. Today, information is fundamental for investors across the globe and must be disclosed in a timely manner and on a continual basis (regularly or periodically), be available in the form and manner that are consistent with the financial reporting standards, regulations, listing rules or legislative acts, as well as the principles of fair representation of information. This is a way to minimize financial risks, ensure a trend towards increase in the value of money capital, which makes it a component of forming the value added by society.

During the information age, the focus on disclosure of information in the sphere of state and local finance tends to become more pronounced, which appears reasonable, since in the innovation economy where information and associated processes become the primary sources and key factors in value creation and sustainable development, information on state and local finance encompassing at least one-third of the Gross domestic product (GDP) produced in the world becomes extremely important. Democratic processes that are currently observed in numerous countries also concern the question of

disclosure of information by governmental bodies and local authorities. In relation to this, George Soros writes that it is free information flow that is the most powerful force in the struggle for democracy, as it makes people more protected against the possibility of being disinformed by the state [38].

Over the last decades, progressive politicians have tended to pay increasingly significant attention to the transparency of operations of governmental bodies and local authorities promising to ensure accessibility of information. For example, in one of the addresses preceding his being elected Prime Minister of Great Britain (early 2010), David Cameron (1966-) spoke about the beginning of a new era with less money and power for the state and more power for society due to employment of information technology. Having mentioned that businesses had been using the opportunities provided by the information and the «dot.com» revolution for a long time, he also noted that governmental bodies and local authorities were only taking their first steps in this direction and stressed the necessity of reconsidering the three basic properties of the civil society – transparency, a wider range of choices, and accountability. Promising to use the achievements of the information revolution for transformation of political strategies, government decisions and the social services system, David Cameron also mentioned that complete transparency would have a significant effect, resulting in improved growth of well-being of the country [41]. Transparency of operations of governmental bodies and local authorities, their accountability to the civil society, and the possibility of a wider range of choices for the latter are all grounded in accessibility of information concerning these public authorities, with the official State of Missouri website serving as a remarkable example of such accessibility and transparency [10]. Any person can use this portal to trace each dollar spent by the state's government, analyze its expenditures and check the budget results.

Modern financial science states that at the turn of the 21st century, after several decades of pursuing the deficit financing policy and a series of reforms implemented in the state sector, governments of the leading countries of the world adopted a state finance management ideology similar to the business scale of values which is regarded as a reference standard for rationality of decisions. For example, in terms of budgetary resources management, it is proposed to adopt an approach that implies a greater degree of budget transparency [2, p. 6, 8]. Therefore, accessibility of information appears as an essential component of the progressive modern ideology in state and local finance. In Ukraine, the government is also taking its first steps on the way towards transparency of its information; besides, it is also prescribed by the Law of Ukraine on Access to Public Information that any such information must be accessible except as otherwise required by applicable law, and no restrictions can be imposed on the right to receive such information [15].

Disclosure of financial information and its loss of the confidential status influences also the process of forming its price, which is different from that of other goods. Whereas for regular goods the price is set on the basis of their comparison and formation of corresponding supply and demand, the process is different for information: information cannot be disseminated without losing its exclusiveness which serves as the basis for its price. For example, a corporation intends to purchase

secret information, and while determining its price, attempts to establish its content; yet, as soon as it succeeds, such information is no longer exclusive, and it is sure to become at least slightly cheaper. While studying the question of information disclosure and price formation, Alvin and Heidi Toffler arrive at a conclusion that there is a lack of certainty in the concept of value (price) of information, and society must address this question within the political economics framework with due attention. Moreover, since the logic that determines production and exchange of regular goods in the modern economy cannot be applied to information goods, with information now playing a key rather than secondary role in the economy functioning this becomes a priority issue for society [42, p. 150 – 154].

It is typical for financial information to, as it were, «leak out» and spread rapidly, concealing it permanently is an unattainable mission, so it is bound to become known to a third party or the general public at some point. Within the innovation economy, this feature tends to gain in relevance, as alongside the development of information technology, cellular communications, the Internet and the World Wide Web, there emerge highly qualified IT specialists – hackers, who become computer trespassers and have no difficulty in obtaining any concealed information. For example, legislation of most countries includes some regulations designed to prevent the use of insider information on the stock market. Such information includes data on possible changes in the corporate management and corporate strategies, probability of a new product release, implementation of new technology, results of negotiations on company mergers, buying a major share of stock, possible financial difficulties and other essential insider information which is kept secret, as its disclosure can affect the market value of securities of the corporation. Despite legal prohibition, such information sometimes leaks out to the market and becomes known to third parties who take advantage of it.

Financial information can be presented in the form of symbols and abstractions, that is encoded, which allows its compaction. Currently, information is encoded (presented) by using the simplest numeric code system (binary code) operating the digits of one «1» and zero «0»; each sign or symbol in this numeric system contains one bit of information, with the volume of symbolic information measured in bytes: 1 byte equals 8 bits, which corresponds to eight digits of a binary value. The term «BIT» (abbreviated from «BInary digiT»), which is regarded as one of landmark notions of the 20th century, was proposed by John Wilder Tukey (1915-2000), an American statistician researcher, to denote one binary digit which can take the value of 0 or 1.

Being encodable, financial information is an extremely mobile resource and can be instantaneously and simultaneously transmitted in enormous amounts to tens of millions and more users, whereas transmission costs are constantly decreasing due to technology development and tend to zero. There is a perspective that equates information to the idea of motion. At the same time, the ability of information to be encoded and re-encoded without any loss in content allows its users to switch, for example, from the formal representation of the trajectory to the graphical one and further on to the visual and mental representation of such information [6, p. 62]. The mobility of financial information corresponds to the requirements and characteristics of financial relations: for example, the financial

market whose societal designation consists in ensuring the flow of money capital in the economy according to supply of and demand for it, can only operate effectively provided that such market involves as many economic agents forming the supply of and demand for the money capital as possible. In the early 21st century, the financial market is characterized by growing involvement of innovative information technology solutions, carrying out operations via the Internet and the World Wide Web, which results in rapidly increasing rates of money capital turnover, involvement of an increasingly large number of participants, and simultaneous reduction in their transaction costs.

The ability of information to be compacted and encoded determines its ability to be kept on increasingly small data storage media, which entails growing volumes of stored information with simultaneous reduction in associated costs. As of today, there already exist research projects which will soon enable mankind to store information at the nanoscale, which means that the size of data carriers will be measured in billionths of a meter or less.

Thus, the ability of financial information to be encoded without any loss in content also determines the following characteristics of its participation in creation of the value added: reduction in costs associated with storage and transmission of information potentially approaching the zero rate; growing rates, volumes and amounts of information transactions.

Extremely instrumental is the ability of financial information to preserve its content while changing forms. Financial information can take the form of a regular text, can be presented graphically, encoded in symbols, or stored in human memory without any loss in content. The only problem can be posed by human error or malfunction of equipment as they can damage the information, distort it in the process of use or creation of one product or another.

Since in case of sale (dissemination) of financial information its owner does not in fact dispose of it but rather disseminates it, it can be owned by more than one individual simultaneously, unlike any other economic resource. Legal right to information is significantly more difficult to prove and protect than in cases concerning other kinds of economic resources. In the innovation market economy, the ease of dissemination of financial information causes numerous problems related to establishment of title to it, and in the production of goods there is a probability of using financial information owned by another individual or legal entity.

Despite the scientific breakthrough in quantitative estimation of information, practice has shown insufficiency of this approach for the study of financial information. Although qualitative characteristics are fundamental to utility, value, and customer value of financial information, society currently has no perfect criteria to assess its qualitative characteristics – as of today, there is still a degree of uncertainty in their determination, which makes them relative.

When discussing the quality of financial information, it appears reasonable to consider its practical significance and value as well, yet such characteristics are subjective and depend on the objectives pursued by economic agents. For example, if the goal set by the user has already been achieved, the information that was required previously, loses its importance for this particular agent. This means that depending on the context,

the same information can be regarded (estimated by economic agents) as valuable, having zero value, or even having negative value. Vladimir I. Vernadsky (1863 – 1945), the founder and first president of the National Academy of Science of Ukraine, stated in his book «Scientific Thought as a Planetary Phenomenon» (1936 – 1938) that the pragmatic value of information in economic systems is extremely high. He understood value of information as a degree of extension and development of the-saurus¹ achieved by the addressee on receiving and interpreting a message [5].

Although society has no clear criteria for estimating the utility of information, considering the extreme importance of financial information for the purposes of efficient and persistent economic management, a series of characteristics were formulated that financial reporting information must adhere to. In order to further elaborate them, the International Accounting Standards Board (IASB) developed a document entitled «Framework for the Preparation and Presentation of Financial Statements» which does not belong to the international financial reporting standards, yet plays a significant role in the process of development of such standards and harmonization of approaches to forming financial statements in the modern economy. According to the IFRS Conceptual Framework, qualitative characteristics of financial information include its understandability, relevance, faithful representation, and comparability [30]. However, notwithstanding compliance with the proposed criteria, utility of the same financial information for various users can vary as well, there can also be a difference in conclusions drawn from the same information – which depends on the goals and objectives pursued by the users, or their readiness to perceive such information [19, P. 210].

According to the IFRS, understandability is the quality of information which enables users to comprehend its meaning. Information presented in financial statements must be understandable and allow unequivocal interpretation by users who are expected to have a reasonable knowledge and be interested in perceiving the information. Information is relevant if it can influence users' decision-making and assist them in evaluation of the past, current, and future events. Information is material if its omission or misstatement can influence the economic decisions, moreover, inclusion of immaterial information on the statement impairs its understandability. Faithfully presented information is free from error and prejudice. Reliability of such information is determined by its completeness, neutrality, discretion, prevalence of substance over form, as well as accurate representation of the financial standing and operational results. Comparability of information implies its usability for forecasting – financial reporting information must reflect the results of past operations and be instrumental in forecasting future events (for example, predicting profits, dividends, and other payments).

Financial information does not depreciate but becomes obsolete; this process takes place continuously, and it accelerates with the development of the innovation economy. Simultaneously, it is not time passing that makes information outdated, but emergence of new, more relevant information which elaborates, extends, or dismisses previously existing data completely

¹ In the information theory, the term «thesaurus» refers to the aggregate of all information about an object

or partially. Being essentially data on the monetary value trends in the process of production, distribution, exchange, and consumption of the social product, financial information is time-spaced and provides information on time-related changes in the value of the money capital. Financial information and exchange of information between economic agents tend to develop over time along with the development of society in general, thus forming the foundation for further development of its economy and other spheres of activities. Obsolescence of information is accompanied by a decrease in its value (price).

All economic agents perceive financial information and participate in the exchange of information within the framework of the market economy, time being one of its parameters. For this reason, one of the fundamental theses of modern finance is the concept of the time value of money without which financial relations of the market economy are unthinkable. Modern society utilizes a set of instruments to estimate the value of the money capital (money) in time, which is a part of the content of financial information. Among such instruments are notions and formulas for estimation of the present and future value (PV and FV correspondingly), net present value (NPV), and cash flow discounting. In order to compare future monetary value tendencies with the present monetary value tendencies, the former are, as it were, «adjusted» against the latter using the appropriate discounting coefficient. These coefficients are calculated on the basis of corresponding market interest rates (the market value of the money capital influenced by its profitability norms and various risks of this capital) and duration of the time period covered by such adjustment. Today, corporate finance management and investment management are impossible without these instruments: relying on the concept of the time value of the money capital, economic agents estimate and compare the future and present values, using this analysis to make investment decisions.

The question of connection between information and time is not only of practical significance, it is also profoundly studied in philosophy, theoretical physics, information science and other sciences seemingly unconnected with finance. Information and time are discussed within the context of their connection with such fundamental phenomena as space and energy: in particular, there is the concept of indivisibility of the dualisms «time-space» and «energy-information» as they determine all forms of existence of matter. There is a belief that space, time, information, and energy, all of them existing in an inseparable unity, represent all surrounding phenomena in the corresponding dimensions which, in turn, also exist simultaneously and interpenetrate each other [11]. Certainly, financial information, as well as financial relations carrying it, exist not as individual entities, but within a certain system of interdependencies between space, time, energy, and information which has not been fully explored yet. It is essentially a multivariate coordinate system, and studying it is a way towards profound understanding of cause-and-effect relations that exist in finance and the economy in general. Researchers of the modern information age can enjoy the privilege of being able to explore the areas which seem to have little connection with finance, and yet they broaden perspectives and help understand the connections between financial information and other fundamental phenomena. It is highly probable that new areas of this kind will become available to mankind in the near future;

however, this challenge will be faced in due time. In the information age, humanity rapidly comes into possession of various data and increases its knowledge, with the most groundbreaking ideas emerging «at the intersection» of disciplines. We will further try to look at financial information from the perspectives of how modern philosophy, theoretical physics and other sciences view the issues of space, time, information, and energy; the acquired knowledge may initially seem incredible, but in the course of time it will be assimilated and find practical application in theory and practice of finance. Such fundamental questions require an individual and profound study falling beyond the scope of this work, but we find it reasonable to get at least a glimpse of this knowledge area which, hopefully, will encourage further investigations focusing on the problems of theory and practice of finance in the information age.

The concept of interconnection of space, time, information, and energy is further extended in the concept acknowledging the existence of a single energoinformational field of the Universe, and the number of proponents of this idea in the established science is constantly growing. Back in the early 20th century, V. Vernadsky supported the idea of a cosmic intelligence existing in the surrounding environment [5, p. 355 – 384]; impressed by the lectures he delivered in Sorbonne University (Paris), the Professor of Mathematics at this university Édouard Louis Emmanuel Julien Le Roy (1870 – 1954) together with Pierre Teilhard de Chardin (1881 – 1955), a prominent geologist, paleontologist and Catholic philosopher, elaborated this concept and proposed the idea of the «noosphere» – a sphere of thought formed by human consciousness – which is now widely known [18, p. 911]. At the beginning of the second half of the 20th century, the concept of the Universe as a universal cosmic hologram any point of which contains information on everything that exists in the world, was formulated by David Joseph Bohm (1917 – 1992), a theoretical physicist, philosopher and neuropsychologist [3] and Karl H. Pribram (1919), a German neurophysiologist [9]. Physics currently acknowledges not only the existence of information exchange, but also the fact that information can be instantaneously transmitted across any distances [11, p. 89 – 92]. The concept according to which the Universe is formed by information was proposed by Jacob David Bekenstein (1947)², an Israeli theoretical physicist and winner of the Wolf Prize in Physics (which has the reputation of a precursor to the Nobel Prize)³. In his opinion, the beginning of the 21st century was marked by a growing tendency towards regarding the physical world as a result of creation of information per se (substance of information implied as well). This approach serves as the foundation, in particular, for digital physics. Since everything in the world is describable by information, everything is computable. Thus, the Universe can be viewed as either computer program output or an enormous digital computing device [22]. As to modern philosophers, the idea of existence of torsion fields (spin fields) being carriers of information in the Universe is developed, in particular, by Tatyana G. Leshkevich (1953), Doctor of Philosophy and a Professor at Rostov

² J. D. Bekenstein was the first to formulate the idea of applying thermodynamics to description of black holes and is renowned for studying the connections between information and gravitation.

³ 16 winners of his award were subsequently awarded the Nobel Prize in Physics.

State University. Modern philosophy acknowledges that recognition of the principle of single energoinformational exchange in the Universe entails also recognition of the intelligence of the Universal Space, which is consistent with the First Hermetic principle [8, p. 257 – 258]. The first of the Seven Hermetic Principles is the principle of mentalism: the ALL is Mind; the Universe is mental [12, p. 26 – 27]. In literature this principle is formulated as follows: «All is mind», «in Mind we live, move and have our being».

In our opinion, the concept of single information space is of interest for studying finance of the information society in the sense that modern society, its social and economic spheres are formed by information, in particular financial information, and the latter can always be digitalized representing the value of all surrounding phenomena in the monetary dimension. Simultaneously, financial information can be transferred to other carriers, processed and subjected to mathematical treatment multiple times, compared in time and space, computed, or analyzed while preserving its information value to the full extent.

Modern society organizes collection and handling of financial information on a continual, periodical, and regular basis utilizing, for example, the notions of a financial year (it can coincide with the calendar year or deviate from it for historical or other reasons) and financial reference period, which economic agents use to plan and manage their finances and economic activities in general. In state finance, annual budgets are developed and approved; in corporate finance, corporations have to provide reports on their operations on a yearly basis by filing annual (in some cases semi-annual) financial statements that have undergone appropriate audit. However, despite regularity of filing financial information, it is constantly becoming outdated, and we believe that this process is becoming increasingly rapid in the innovation market economy, which is conditioned by a series of objective processes, among them:

First, the monetary value of any capital is a variable, and financial information being essentially derived from the monetary value of the capital is also extremely flexible and nonconstant.

Second, with the development of the innovation market economy and emergence of more refined and user-friendly information technologies, the moment of emergence of information will be increasingly coincidental with the moment of its being perceived by users; for this reason financial information will be updated – and therefore become obsolete – faster, and the process is inevitable.

Third, continuous progress in science and technology characteristic of the information society, emergence of more refined information technologies, the development of the Internet, the World Wide Web and mobile communications result in still more rapid emergence of financial information.

Fourth, the level of literacy in society tends to increase, and new aspects of financial relations appear as the focus areas for in-depth investigations, which also entails emergence of new information.

As mentioned above, information is also considered in modern science in terms of its energy aspect. In our opinion, the projection (prototype) of energy in the economy is the monetary value, with financial relations containing information on its trends. Transfer of the monetary value of the capital, its distribution, exchange, storage, accumulation are identical to the processes characteristic of energy, as it is also in constant

motion, being transferred, distributed, accumulated and stored. Besides, society uses the notion of the monetary value to estimate the amount of energy allocated for the instruments and objects of labor, contained in the workforce, embodied in such production output as products, goods, and services. The notion of «energy of the capital» is used, for example, by Oleksandr Paskhaver, a well-known Ukrainian economist and president of the Center for Economic Development, in his book «Who We Should Be» (2014) for discussion of money capital flow in modern society and in Ukraine in particular [13].

The products (goods, services) created by economic agents in the process of their business operations contain a share of the value which was created due to involvement of financial information among other factors. Such information comprises data on the value of the capital, social product, natural resources, any objects and phenomena surrounding people and even on an a human being per se⁴ expressed in the universal contrastive monetary dimension. Economic agents use financial information at the micro- and macroeconomic levels to organize production, distribution, exchange, and consumption of various products, to effectively increase the value of the money capital, to minimize risks and achieve sustainable development. At the same time, the energy of information on financial relations (energy of financial information) is, as it were, transferred to the created product thus adding to its value. Moreover, since one of the features inherent in financial information is its ability to preserve the content despite changing forms and carriers, it can be transferred to the created product through human knowledge about finance, an efficiently designed financial plan, effective financial control, a financial service and other forms and carriers. All these aspects interpenetrate each other: for example, a product – information service (hypothetically, financial analyst's advice) includes the information component and a service provided by a specific consultant (human capital asset) orally and taking the form of a specific financial plan. Other circumstances being equal, relevant financial information and financial literacy (knowledge about finance, perceived information) of its providers and users serve as the basis for creation of a greater value added: better quality of financial information and economic agents with more extensive experience in working with finance carry more energy of the innovation market economy and create a greater value added in it.

It appears logical to move from the findings provided by the study of characteristic features of financial information to discussion of specific aspects of its participation in the process of forming the value added of a product that is created with utilization of this information, which is directly connected with the question of the price for financial information. In the innovation economy, such information becomes a commodity and has its price. At the same time, the notion of «the price of financial information» should be distinguished from such notions as «the price of money capital» and «the price of financial information services». Moreover, though the price of information is characterized by complexity of assessment unlike regu-

⁴ As to the value of a human being per se, as of today there are such concepts in society as, for example, «price of human labor» (which takes the form of compensation for work), «value of human capital assets», and, though it is an unpleasant truth, even human body and its organs (in case of, for example, donorship) can be estimated in monetary terms

lar goods, we consider it reasonable to rely on such properties of «regular» commodities as customer value (determined by the aggregate of its useful properties meeting the requirements of users) and exchange value (based on the customer value and formed in the course of supply of and demand for the commodity) when considering the questions of the price of the financial information commodity.

Since working with information requires spending of time, human and material resources, there is a perspective that information always has certain cost (cost of production). This can be illustrated by the fact that recording, storing, processing and disseminating information, including financial information, requires certain carriers (paper, electronic media, etc.) and energy (for example, to put these media into operation) [1, p. 63 – 64]. The user of information who incurs such costs, should ascertain before collecting, transmitting and processing information if spending on these processes is satisfactory and commensurable with the results obtained from use of the purchased information. However, within the context of the innovation market economy, such costs per information unit with further development of information technology and communications systems will be decreasing tending to zero, and utility of information will become the dominant factor in forming its price. We believe that utility of financial information consists in its ability to meet the needs of economic agents in the process of their analysis of economic and financial processes, making appropriate decisions and their implementation, which, in turn, depends on the quality of such information and its other characteristic features discussed above. For example, in management utility of financial information is determined by its weight in the process of making the right decision, which in fact determines the supply of and demand for the financial information commodity. More detailed financial information lessens risks, entails greater benefits, which is reflected in the proverb «he who controls information controls the world».

Determination of the price (value) of information is the focus of a series of fundamental investigations of Western economists. In particular, George Joseph Stigler (1911 – 1991), an American economist and winner of the 1982 Nobel Prize in Economics, studied information using advertisement as an example; he indicated in his article «The Economics of Information» (1961) [39] that information is a valuable resource, and it gives the economy a new meaning when the latter is viewed from the perspective of the need for information; however, establishment of the market price of information poses a challenge, with significant discrepancies conditioned by information obsolescence. He considered the notion of the price of information in terms of its correlation with reduction of estimated costs incurred by the buyer of such information and its quality. While proposing to determine the price (value) of information by the amount of reduction in estimated costs that the use of information entails for the buyer, G. Stigler notes that for most users comprehending information is no simple and pleasant task, and for this reason they agree to pay more for information presented in a simplified form; discrepancies in prices for the goods and uncertainty of the buyer as to the prices are unprofitable for the producer, as the costs of potential buyers associated with search for the goods are in fact buying costs, which results in decreased demand for the goods. Similar difficulties arise when an investor searches for profitable

investment options, when a company analyzes the market and sources of supply, when one selects a bank whose services one intends to use, or when employees analyze information on the potential sphere of employment, corporation and occupation while seeking employment. Stressing the importance of setting the price for the information goods in accordance with its quality, G. Stigler also acknowledges that estimating the latter appears an extremely challenging task, as there is no appropriate definition of quality of information in economics.

While focusing on questions of the theory of firm, the winner of the 1978 Nobel Prize in Economics Herbert A. Simon (1916 – 2001) in his article «Theories of Decision-Making in Economics and Behavioral Science» also studied the questions of the price of information, its optimum search volume, relative advantages of the alternative patterns of search for and estimation of information [37]. Relying on the theses of the price theory, he also notes that information should be collected until marginal costs associated with collection of an additional portion of information become equal to marginal profit resulting from owning such extra information.

Financial information belongs to intangible assets referred to in the domestic accounting and corporate finance practice as «non-material assets». There exists a pattern: whereas production growth causes an increase in material costs, in case of intangible assets a decrease is observed. This means that using financial information results in an increase in the rate of return from its use, in other words there is an effect of reduction in marginal costs, or costs arising from production of one additional unit of output [7, p. 32]. For example, a corporation providing consultancy services has purchased necessary financial information concerning the market situation at a certain price and included these expenses into the cost of its services. It continues to sell its consultancy services at the market price using previously purchased financial information, and its marginal costs associated with spending on such financial information for each subsequent consultation will amount to zero.

Conclusions: Summarizing the discussion of characteristic features of financial information and its role in creation of the value added of products within the context of the innovation market economy, we believe that the following two tendencies will be observed in this process: with further development of the information society the market price of financial information will be decreasing gradually tending to zero; simultaneously, the value added of the product with regard to financial information will be increasing. The former is the consequence of the rapid global development of information technology and communications systems as well as a manifestation of a series of properties of financial information described above. The latter will be taking place due to growing significance of financial information for production, distribution, exchange, and consumption of the social product in the innovation market economy.

REFERENCES

1. Антонюк А. О. Теоретичні основи моделювання та аналізу систем захисту інформації : монографія / А. О. Антонюк, В. В. Жора ; Держ. податк. адмін. України, Нац. ун-т держ. податк. служби України. – Ірпінь : НУДПС України, 2010. – 309 с.

2. Бабич Т. С. Макрофінансове бюджетування / Т. С. Бабич, Т. В. Жибер; [за наук. ред. д-ра екон. наук, проф. В. М. Федосова]. – К. : КНЕУ, 2011. – 311 с.
3. Бом Д. Специальная теория относительности / Д. Бом; [пер. с англ. Н. В. Мицкевича]. – М. : Мир, 1967. – 285 с.
4. Бюлетень Технічного комітету Міжнародної організації комісій з цінних паперів (IOSCO), жовтень 2002 р. [Електронний ресурс]. – Режим доступу : http://www.finrep.kiev.ua/download/ioscopd132_ua.pdf
5. Вернадський В. І. Наукова думка як планетарне явище // Філософія : хрестоматія : у 2 т. – Т. 2. Теоретична та практична філософія : навч. посібник для бакалаврів фіз.-мат. і природнич. спеціальностей / О. В. Комар, А. А. Кравчук, О. В. Руденко та ін.; [за ред. І. С. Добронравової]. – К. : ВПЦ «Київський університет», 2010. – 431 с. – С. 355 – 384.
6. Демин А. И. Информационная теория экономики: макромоделль / А. И. Демин. – М. : Палев, 1996. – 347 с.
7. Денисова Д. Время продавать знания : интервью с Дэвидом Тисом / Д. Денисова // Эксперт. – 2004. – № 24. – С. 32.
8. Лешкевич Т. Г. Философия. Вводный курс / Т. Г. Лешкевич. – 2-е изд., доп. – М. : Контур, 1998. – 464 с.
9. Миллер Д. Планы и структура поведения / Д. Миллер, Ю. Галантер, К. Прибрам. – М. : Прогресс, 1965. – 239 с.
10. Офіційний сайт штату Міссурі (США). Прозорість та підзвітність [Електронний ресурс]. – Режим доступу : <http://www.mo.gov/government/transparency-and-accountability/>
11. Павлова С. Н. Ажиотаж пропал, а проблема осталась [Електронний ресурс]. – Режим доступу : http://naturalworld.ru/kniga_ajiotaj-propal-a-problema-ostalas.htm
12. Павлова С. Н. Полевой гиперболоид Земли и тайны древних цивилизаций / С. Н. Павлова. – М. : Амрита-Русь, 2009. – 528 с.
13. Пасхавер А. И. Кем быть / А. И. Пасхавер; [предисл. П. Порошенко]. – К. : Фонд Порошенко, 2014. – 112 с.
14. Про затвердження Порядку запобігання маніпулюванню цінами під час здійснення операцій з цінними паперами на фондовій біржі : Рішення НКЦПФР від 04.06.2011 р. № 716 // Офіційний сайт Верховної Ради України [Електронний ресурс]. – Режим доступу : <http://zakon4.rada.gov.ua/laws/show/z1045-11>
15. Про доступ до публічної інформації : Закон України від 13.01.2011 р. // Офіційний сайт Верховної Ради України [Електронний ресурс]. – Режим доступу : <http://zakon2.rada.gov.ua/laws/show/2939-17/ed20150426>
16. Про інформацію : Закон України від 02.10.1992 р. № 2657-XII. – Ст. 21 // Офіційний сайт Верховної Ради України [Електронний ресурс]. – Режим доступу : <http://zakon4.rada.gov.ua/laws/show/2657-12>
17. Сакайя Т. Стоимость, создаваемая знанием, или история будущего / Т. Сакайя // Новая постиндустриальная волна на Западе : антология; [под ред. В. Л. Иноземцева]. – М. : 1999. – 468 с.
18. Советский энциклопедический словарь / Гл. ред. А. М. Прохоров. – 4-е изд. – М. : Советская энциклопедия, 1989. – 1632 с.
19. Стоун Д. Бухгалтерский учет и финансовый анализ: подготовительный курс / Д. Стоун, К. Хитчинг, К. Хитчинг. – М. : Сирин, 1998. – 302 с.
20. Сэй Ж.-Б. Трактат по политической экономии. Экономические софизмы. Экономические гармонии / Ж.-Б. Сэй, Ф. Бастиа; [сост., вступ. ст. и коммент. М. К. Бункиной и А. М. Семенова]. – М. : Дело, 2000. – 232 с.
21. Тиис Д. Получение экономической выгоды от знаний как активы: новая экономика, рынки ноу-хау и нематериальные активы / Д. Тиис // Российский журнал менеджмента. – 2004. – Т. 2, № 1. – С. 95 – 120 [Електронний ресурс]. – Режим доступу : <http://ecsocman.hse.ru/text/16087245/>
22. Bekenstein J. D. Information in the Holographic Universe / J. D. Bekenstein // Scientific American. – August 2003. – Vol. 289, No 2. – P. 61.
23. Classification Handbook for Restricted Information. World Bank Group. June 2010, 48 p.
24. Creating Value from Intellectual Assets, Policy Brief. – February, 2007, OECD.
25. Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC // Official Journal of the European Union [Електронний ресурс]. – Режим доступу : http://www.esma.europa.eu/system/files/ProspectusDir_2003_71.pdf
26. Directive 2004/109/EC of the European Parliament and the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC // Official Journal of the European Union [Електронний ресурс]. – Режим доступу : http://www.iaasa.eu/legislation/Transparency_Directive.pdf
27. Going for Growth. – 2007, OECD.
28. Hartley R. V. L. Transmission of Information / R. V. L. Hartley // Bell System Technical Journal. – July 1928. – Vol. 7, No 3. – P. 535 – 563.
29. IFRS 7. Financial Instruments: Disclosure [Електронний ресурс]. – Режим доступу : <http://www.iasplus.com/en/standards/ifrs/ifrs7>
30. International Financial Reporting Standards (IFRSs) 2006. IASCF Publications Department, London. 2387 p., P. 29 – 54.
31. Innovation and Growth. – 2007, OECD.
32. Innovation in Energy Technology: Comparing National Innovation. – 2006, OECD.
33. Knight F. H. Risk, Uncertainty, and Profit. Boston, MA: Hart, Schaffner & Marx; Houghton Mifflin Co. – 2000, 375 p.
34. Main Science and Technology Indicators (MSTI) – 2006, OECD.
35. Principles for Ongoing Disclosure and Material Development Reporting by Listed Entities. – A Statement of the Technical Committee of the International Organization of Securities Commissions. – October 2002. – 13 p.
36. Shannon C. E., Weaver W. The Mathematical Theory of Communication. Univ. of Illinois Press, 1964, 125 p.
37. Simon H. A. Theories of Decision-Making in Economics and Behavioral Science. – «Microeconomics: Selected Readings», Edited by E. Mansfield, New York, 1971.
38. Soros G. The Crisis of Global Capitalism : Open Society Endangered. – Public Affairs, New York, 1998, 241 p.
39. Stigler G. J. The Economics of Information. «Journal of Political Economy», 1961, Vol. 69, No 3, June.
40. Stonier T. The Wealf of Information: A Profile of the Post-Industrial Economy. Thames Methuen: London, 1983, 224 p.
41. TED. Дэвид Камерон: Наступающая эра государственного управления [Електронний ресурс]. – Режим доступу : http://www.ted.com/talks/david_cameron?language=ru
42. Toffler A., Toffler H. Revolutionary Wealth. How it will be Created and How it will change our Lives. – Clutis Brown Ltd., 2006, 576 p.
43. Williamson O. E. The Vertical Integration of Production: Market Failure Consideration – «American Economic Review», 1971, Vol. 61, No 1.

REFERENCES

- Antoniuk, A. O., and Zhora, V. V. Teoretychni osnovy modelivannia ta analizu system zakhystu informatsii [Theoretical Foundations of modeling and analysis of information security]. Irpin: NUDPS Ukrainy, 2010.
- Babych, T. S., and Zhyber, T. V. Makrofinansove biud-zhettvannia [Macro-financial budgeting]. Kyiv: KNEU, 2011.
- Bom, D. Spetsialnaia teoriia otноситelnosti [The special theory of relativity]. Moscow: Mir, 1967.
- "Biuletен Tekhnichnoho komitetu Mizhnarodnoi orhaniazatsii komisii z tsinnykh paperiv (IOSCO)" [Bulletin of the Technical Committee of the International Organization of Securities Commissions (IOSCO)]. http://www.finrep.kiev.ua/download/ioscopd132_ua.pdf
- Bekenstein, J. D. "Information in the Holographic Universe" *Scientific American* vol. 289, no. 2 (2003): 61-.
- Classification Handbook for Restricted Information: World Bank Group, 2010.
- "Creating Value from Intellectual Assets" Policy Brief, 2007.
- Demin, A. I. Informatsionnaia teoriia ekonomiki: makromodel [Information theory of economy macro model]. Moscow: Palev, 1996.
- Denisova, D. "Vremia prodavat znaniia : intervju s Devidom Tisom" [Time to sell knowledge: an interview with David tees]. *Ekspert*, no. 24 (2004): 32-.
- "Directive 2003/71/EC of the European Parliament and of the Council of 4 November 2003 on the prospectus to be published when securities are offered to the public or admitted to trading and amending Directive 2001/34/EC" *Official Journal of the European Union*. http://www.esma.europa.eu/system/files/ProspectusDir_2003_71.pdf
- "Directive 2004/109/EC of the European Parliament and the Council of 15 December 2004 on the harmonisation of transparency requirements in relation to information about issuers whose securities are admitted to trading on a regulated market and amending Directive 2001/34/EC" *Official Journal of the European Union*. http://www.iaasa.eu/legislation/Transparency_Directive.pdf
- "Going for Growth" OECD, 2007.
- Hartley, R. V. L. "Transmission of Information" *Bell System Technical Journal* vol. 7, no. 3 (1928): 535-563.
- "IFRS 7. Financial Instruments: Disclosure" <http://www.ias-plus.com/en/standards/ifrs/ifrs7>
- International Financial Reporting Standards (IFRSs) London: IASCF Publications Department, 2006.
- "Innovation and Growth" OECD, 2007.
- "Innovation in Energy Technology: Comparing National Innovation" OECD, 2006.
- Knight, F. H. *Risk, Uncertainty, and Profit* Boston, MA: Hart, Schaffner & Marx; Houghton Mifflin Co, 2000.
- Leshkevich, T. G. *Filosofia. Vvodnyy kurs* [Philosophy. Introductory course]. Moscow: Kontur, 1998.
- [Legal Act of Ukraine] (2011). Ofitsiinyi sait Verkhovnoi Rady Ukrainy. <http://zakon4.rada.gov.ua/laws/show/z1045-11>
- [Legal Act of Ukraine] (2011). Ofitsiinyi sait Verkhovnoi Rady Ukrainy. <http://zakon2.rada.gov.ua/laws/show/2939-17/ed20150426>
- [Legal Act of Ukraine] (1992). Ofitsiinyi sait Verkhovnoi Rady Ukrainy. <http://zakon4.rada.gov.ua/laws/show/2657-12>
- Miller, D., Galanter, Yu., and Pribram, K. *Plany i struktura povedeniia* [Plans and the Structure of Behavior]. Moscow: Progress, 1965.
- "Main Science and Technology Indicators (MSTI)" OECD, 2006.
- "Ofitsiinyi sait shtatu Missuri (SShA). Prozorist ta pidzvitnist" [Official website of Missouri (USA). Transparency and accountability]. <http://www.mo.gov/government/transparency-and-accountability/>
- Pavlova, S. N. "Azhiotazh propal, a problema ostalas" [Excitement was gone, but the problem remained]. http://naturalworld.ru/kniga_ajiotaj-propal-a-problema-ostalas.htm
- Pavlova, S. N. *Polevoy giperboloid Zemli i tayny drevnikh tsivilizatsiy* [Field hyperboloid Earth and the secrets of ancient civilizations]. Moscow: Amrita-Rus, 2009.
- Paskhaver, A. I. *Kem byt* [Who to be]. Kyiv: Fond Poroshenko, 2014.
- "Principles for Ongoing Disclosure and Material Development Reporting by Listed Entities" A Statement of the Technical Committee of the International Organization of Securities Commissions, 2002.
- Sakayia, T. "Stoimost, sozdavaemaia znaniem, ili istoriia budushchego" [The value created by knowledge, or history of the future]. In *Novaia postindustrialnaia volna na Zapade* Moscow, 1999.
- Sovetskiy entsiklopedicheskiy slovar* [Soviet Encyclopedic Dictionary]. Moscow: Sovetskaia entsiklopediia, 1989.
- Stoun, D., Khitching, K., and Khitching, K. *Bukhgalterskiy uchet i finansovyy analiz: podgotovitelnyy kurs* [Accounting and Financial Analysis: preparatory course]. Moscow: Sirin, 1998.
- Sey, Zh. -B., and Bastia, F. *Traktat po politicheskoy ekonomii. Ekonomicheskie sofizmy. Ekonomicheskie garmonii* [A treatise on political economy. Economic sophistry. Economic harmony]. Moscow: Delo, 2000.
- Shannon, C. E., and Weaver, W. *The Mathematical Theory of Communication*: Univ. of Illinois Press, 1964.
- Simon, H. A. "Theories of Decision-Making in Economics and Behavioral Science" In *Microeconomics: Selected Readings*. New York, 1971.
- Soros, G. *The Crisis of Global Capitalism : Open Society Endangered*. New York: Public Affairs, 1998.
- Stigler, G. J. "The Economics of Information" *Journal of Political Economy* vol. 69, no. 3 (1961).
- Stonier, T. *The Wealf of Information: A Profile of the Post-Industrial Economy*. London: Thames Methuen, 1983.
- Tiis, D. "Poluchenie ekonomicheskoy vygody ot znaniy kak aktivov: novaia ekonomika, rynki nou-khau i nematerialnye aktivy" [Economic benefits from the knowledge as assets: the new economy, markets know-how and intangible assets]. <http://ecsocman.hse.ru/text/16087245/>
- "TED. Devid Kameron: Nastupaiushchaia era gosudarstvennogo upravleniia" [TED. David Cameron: the era of governance]. http://www.ted.com/talks/david_cameron?language=ru
- Toffler, A., and Toffler, H. *Revolutionary Wealth. How it will be Created and How it will change our Lives*: Clutis Brown Ltd., 2006.
- Vernadskiy, V. I. "Naukova dumka iak planetarne iavyshche" [Scientific thought as a planetary phenomenon]. In *Filosofia*, 355-384. Kyiv: Kyivskiy universytet, 2010.
- Welliamson, O. E. "The Vertical Integration of Production: Market Failure Consideration". *American Economic Review* vol. 61, no. 1 (1971).