

MAKING-DECISION IN THE MANAGEMENT SYSTEM OF DYNAMIC STABILITY OF THE HOLDING

M. Lazareva

Kyiv National University of Construction and Architecture

Povitroflotsky Avenue, 31, Kyiv, 03680, Ukraine, E-mail: mglazareva@gmail.com

In a difficult economic environment, the dynamic stability of modern holding company largely depends on the quality and timeliness of making both tactical and strategic decisions. Decision-making is always attended with risk, because there is a probability to make a wrong decision inadequate to the situation or to make it untimely. Therefore, it is necessary to create a system of decision-making that would minimize such risks and increase the dynamic stability of the holding system correspondingly. The purpose of this article is to develop a system of decision-making in holding companies as the main component of dynamic stability management system for holdings.

For effective functioning of Dynamic Stability Management System, the appropriate decision-making system is required. It's proposed to include the following components in this system: the effective separation of powers and responsibilities for decision-making between owners and top management, between Management Company and companies of the holding; the effectively working coordination center (decision-making center), the system of expert estimates and the internal market of decisions. Such a system is based on a combination of individual and group decisions that greatly increases their accuracy, reliability and allows to make decisions in due time, with a high degree of reliability. The grid for making key decisions on dynamic stability factors is proposed.

Key words: holding, dynamic stability management system, making-decision system, system of expert estimates, internal market of decisions

ПРИЙНЯТТЯ РІШЕНЬ В СИСТЕМІ УПРАВЛІННЯ ДИНАМІЧНОЮ СТІЙКІСТЮ ХОЛДІНГІВ

М. Г. Лазарева

Київський Національний університет будівництва та архітектури

проспект Повітрофлотський, 31, м. Київ, 03680, Україна. E-mail: mglazareva@gmail.com

У складному економічному оточенні динамічна стабільність сучасних холдингових компаній значною мірою залежить від якості та своєчасності прийняття як тактичних, так і стратегічних рішень. Прийняття рішень завжди пов'язане з ризиком, оскільки існує ймовірність ухвалення не коректного, неадекватного ситуації рішення або прийняття його невчасно. Тому необхідно створити таку систему прийняття рішень, яка б зводила до мінімуму подібного роду ризики й відповідно, збільшувала динамічну стійкість системи-холдингу.

Метою статті є розробка системи прийняття рішень в холдингових компаніях як складовий компонент системи управління динамічною стійкістю холдингів.

Щоб система управління динамічною стійкістю функціонувала ефективно, необхідна відповідна система прийняття рішень. Пропонується включати в неї наступні елементи: ефективне розділення повноважень і відповідальності з прийняття рішень між власниками і топ-менеджментом, між керуючою компанією і підприємствами холдингу; ефективно працюючий координаційний центр (центр з підготовки та прийняття рішень), систему експертних оцінок і внутрішній ринок рішень. Така система базується на поєднанні індивідуальних і колективних рішень, що в значній мірі підвищує їх точність, достовірність і дозволяє приймати рішення вчасно з великим ступенем надійності. Запропонована сітка прийняття ключових рішень за факторами динамічної стійкості.

Ключові слова: холдинг, система управління динамічною стійкістю, система прийняття рішень, система експертних оцінок, внутрішній ринок рішень.

PROBLEM STATEMENT. In a difficult economic environment, dynamic stability of modern holding companies largely depends on the quality and timeliness of making both tactical and strategic decisions. For the purposes of our investigation we'll understand under the holding company pey group of companies controlled from the single centre.

Decision-making is always attended with risk, because there is a probability to make a wrong decision inadequate to the situation or to make it untimely. Therefore, it is necessary to create a system of decision-making that would minimize such risks and increase the dynamic stability of the holding system correspondingly. This isn't about the full elimination of risk (that is impossible in practical terms), but about its minimization, because sometimes it is advantageous to take some acceptable risk, when related to risk situations are prevailed. Such a risk can be compensated

for by constructing an effective system of decision-making as a part of the overall system for management of company adaptive mechanisms.

Scientists from different disciplines, such as economics, biology, general systems theory, cybernetics, and others, who use the systematic approach in their fundamentals, are interested in issues on the stability of modern companies. General concept and fundamentals of stability were proposed by A.N. Lyapunov [1], L. Bertalanffy [2], Ya.Takahara [3], M.Mesarovich [3], V.V. Artyukhov [4].

Matters on the stability of economic entities are investigated by many economists: N.V. Alekseenko [5], V.A. Vasilenko [6], A.V. Arefieva [7], and others.

Each author has its own approach how to consider the concept of stability, and the general idea of management methods of this process in modern organizations has not yet formed in the economy.

Mostly, the concept of stability is associated with financial standing management of companies.

Decision-making System as a part of Company Dynamic Stability Management System is not considered by modern scientists fully. Currently, issues on the correct and timely decision-making exercise a significant influence on the level of holding response to disturbances of various kinds of internal and external nature.

The purpose of this article is to develop a system of decision-making in holding companies as the main component of dynamic stability management system for holdings. When building a system of decision-making in the holding, the systematic approach, analytical research methods, methods of group decisions and expert estimates were used.

EXPERIMENTAL PART AND RESULTS OBTAINED. Dynamic Stability Management System shall be understood (by the opinion of author) to mean a set of techniques, methods of influence on holding system, which provide it with maintenance of a given position (equilibrium) or transfer it to a new qualitative state (development). Dynamic stability of the holding includes two components: the stability of the system and its development. These two components are implemented through dynamic stability factors: balanced portfolio of businesses, rapid response mechanism, property relations, business procedures, balanced structure and decision-making system. This means that each of these factors exercise a significant influence on the holding condition at each point of time. They are determining factors - building blocks of the system, on which, eventually, the effectiveness of functioning of holding system depends as a whole.

For effective functioning of Dynamic Stability Management System, the appropriate decision-making system is required. This system should include following components: the effective separation of powers and responsibilities for decision-making between owners and top management, between Management Company and companies of the holding;

the effectively working coordination center (decision-making center), the system of expert estimates and the internal market of decisions (Fig. 1).

Such a system is based on a combination of individual and group decisions that greatly increases their accuracy, reliability and allows to make decisions in due time, with a high degree of reliability.

Group decisions, as shown by numerous studies (for example, [8, 9, 10], etc.) deliver better (more accurate) results than it would have done by the most competent representative of the group (the one that makes these decisions). In J. Surowiecki's opinion, a group that makes decisions shall meet the following four criteria. They are "diversity of opinions (each person should have his own opinion, let this be even the most incredible interpretation of the known facts), independence of members (the opinion of individual members of the group does not depend on the judgment of others), decentralization (people are able to rely on local information) and aggregation (the mechanism for combining of personal opinions to the group decision). If a group has complied with all of the above conditions, its total "judgment" will be accurate with a high degree of probability" [8, p.23].

Compliance with these requirements is necessary for two reasons. Firstly, it eliminates errors arising in the process of decision-making. If people are dependent on each other, there will be a high probability to impact on the final decision. Secondly, if people are independent, then they will actually use dissimilar information from various sources that improves diversity and expands the range of possible alternate solutions, i.e. finding of the correct solution.

The proposed approach is based on mathematical logic: "If you ask enough large group of different, independent on each other people to make a forecast or assess the probability of occurrence of one or another event, and then you find their common "response", errors of members will mutually exclude each other" [8, p.23].

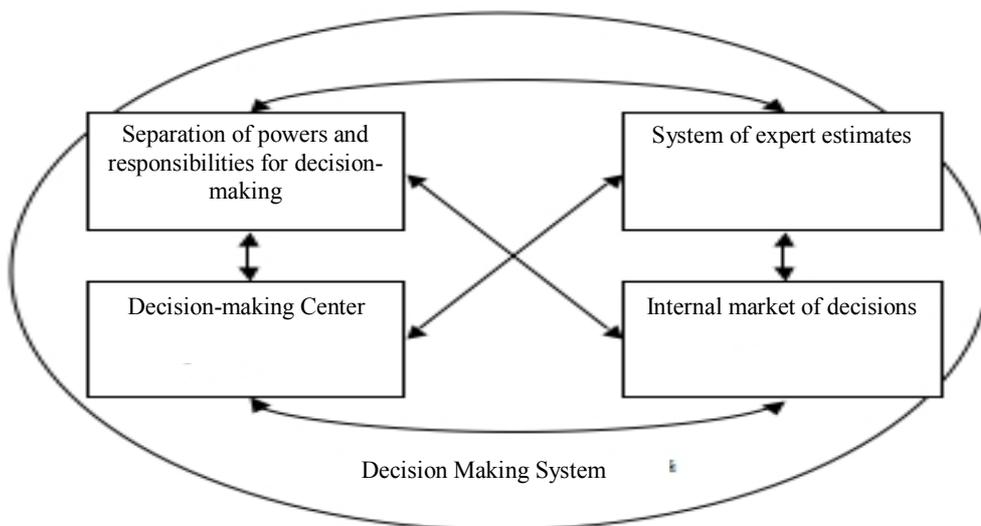


Figure – 1 Schematic diagram of components of Decision Making System in the holding company to ensure its dynamic stability

All system components are interconnected and are in the constant interaction. Let's consider each of the elements of this system.

The first component of the decision-making system to provide dynamic stability of the holding is the correct distribution of powers and responsibilities between levels of decision making management. It is the known fact that the biggest problem of large hierarchical organizations is the low speed of decision making, the level of system response to external disturbances decreases respectively, and the quality of those decisions is often poor. This is due to the fact that such systems interfere with the free exchange of information, and it, passing through all the hierarchical levels of management, is often distorted. The more the power is concentrated, the less reliable information is obtained by hierarchy, the more isolated the person (the group of persons) who makes decisions becomes. This is related to the characteristic features of people standing in the hierarchy. The desire to stay at a certain position and move vertically, receive remuneration, which corresponds to the position, moves people to the opportunistic behavior: they start to tell lies and/or withhold information to keep and increase their own profits. In order to manage dynamic stability in an optimal manner, it's required the decentralized management system, which implies a greater autonomy of business units in decision making.

In decentralized management system (generalized version):

1) Management Company performs four main functions: management of corporate business - portfolio, search of promising businesses, dynamic stability management of the holding, building relationships with external environment.

2) The role of Management Company with regard to the business units, which are in the process of formation (newly purchased businesses or venture business units at the stage of reaching its design capacity) and which are considered as future core business, is transformed from operational management to strategic one, while new businesses are allocated to the individual independent structure. Operational management implies the active involvement of the team of experts of the Management Company to develop a strategy, its current implementation and coordination, to fulfill a detailed analysis of all financial and operational performance indicators. The Management Company is engaged in the issues of involving, motivating and recruiting of personnel, develops organizational and functional structure of the business. Upon completion of establishing the new business as an independent structure with debugged business processes, the role of the Management Company is transformed to decreasing of its participation in this business; a transition to strategic management occurs. Management Company is engaged in the approval of key strategic decisions, monitors the implementation of plans and budgets, monitors key performance indicators of business activity, coordinates the basic principles of financial and personnel policies, makes funding decisions and approves investment plans.

3) Management Company with regard to existing businesses, which are considered as non-core ones, performs functions aimed at the financial control of

business activities through budgeting, careful supervision of generation of profits and cash flows, as well as through the appointment of business heads and the assessment of their activities.

Business units are independent to make decisions in accordance with approved development strategy (which was initiated by businesses themselves), business plans and within the established limits for investment resources. All the decisions are made by top management directly in places of problem origin. Coordination function of the management company is actually reduced to the resolution of conflicts between businesses. Timely response to the conflict (and conflict prevention as a result of the general culture of values,) increases the stability of holding as a whole.

The next component of the decision-making system is the decision-making center. It is the basic component, which also represents a small group. Accordingly, we use the same approach to its formation, which was offered by J. Surowiecki (see above.) for the selection of specialists. Such a center should have powers to make decisions on a number of issues. But the main task of such an organization is to prepare high quality decisions, including coordination, when carrying out the expert examination and working with internal market of decisions.

For this purpose, it is advisable to create a special unit in the Management Company of the holding, which will be charged with functions of preparation to decision-making. Main tasks of such a unit should be the conducting investigations of various kinds, the carrying out calculations to justify and to support the making of decisions: on purchases, sales of businesses, on all types of the reorganization of portfolio and businesses, takeover of companies, liquidation of businesses and production facilities. Another important line of activity of this unit should be innovative activities: monitoring of innovations in management, in industries where there are holding businesses, and searching of new ideas for venture capital financing. This division not only conducts investigations, but also introduces new management technologies, manages the process of continuous improvements in the holding, deals with matters of unforeseen nature and manages the process of support for making of decisions on dynamic stability of the holding, including the process of organizing group decisions and expert estimates. Basic principles for the organization of such a group should be trust, specialization, and familiarity about the abilities of all members.

The next important component of the decision-making system to achieve dynamic stability of the holding is the system of expert estimates. It's proposed to use the method of expert estimates, when assessing the degree of adaptability of the holding. System of expert estimates is also based on the principles of group decisions, which allow for improving the accuracy of estimates. It is recommended to have several options for implementing the system of expert estimates. The first option is to create a special Expert Council, which works on a permanent basis and participates in the estimation of dynamic stability level of the holding at specified intervals. In accordance with above mentioned features to create groups for group decision, it is necessary that specialists of different specialties from

different holding companies of different levels of the hierarchy are included in the Council. This ensures the independence of estimates, diversity of opinions, independence of members and decentralization. Numerical scores, which are described in the corporate standard for conducting expert estimates, are used as a mechanism for aggregation during conducting of estimation. The second option to use the system of expert estimates proposes to use expert estimates for a variety of issues that are non-periodic in nature.

The final component of decision-making system is the internal market of decisions. Professor of economics at George Mason University A. Robin Henson (refer to, for example, [9]) was the first one who has described the opportunities of decision market. In the late 1990s, Hewlett-Packard Company, at the suggestion of economists Charles R. Plott and Kay-Yut Chen [8, p. 210], experimented with artificial markets for forecasting of sales volume of printers. Holdings are in need of decision markets, as they allow for avoiding problems associated with obtaining accurate information in reaching a decision, i.e., they actually negate the information blockade of the head, which is typical for large companies and is caused by the internal political struggle, the servility, and the substitution of knowledge for the employment status. “The anonymity of markets and the fact that they provide a relatively clear decision, of course, while encouraging individuals

to fish for high-quality information and act based on it, means that the potential of these markets is really hard to overestimate” [8, p. 211].

The market of internal decisions shall be understood to mean (for purpose to set the Dynamic Stability Management System of the holding) processes to make the group decisions based on the independence of opinions of their members, the principles of anonymity, using analytic grid methods (AGM) or analytic hierarchy methods (AHM), or other method to find the overall opinion of all members. The field of interest of decision markets in the holding is any cognitive research that requires to use information from different sources for obtaining of estimates (of the probability of potential results, for example) and the forecasts on options for implementation of situations related to a high degree of uncertainty, to create patterns, etc.

It is obvious that all the components of the decision-making system for dynamic stability management system of the holding are interrelated and used in package, depending on the type of decision to be made. Also depending on the type of decision made, almost all the personnel of the holding is involved in the process of decision-making. Grid for making key decisions on dynamic stability management can be represented as follows (see Table 1).

Table 1 – Grid for making key decisions on dynamic stability management of the holding

No.	Factor of dynamic stability	Key business decisions	Management Company				Business units		Market of group decisions	
			Owners	Top Management	Decision-making Center	Ex-perts	Top Management	Ex-perts		
1	2	3	4	5	6	7	8	9	10	
1	Formation of balanced business portfolio	Determination of vision and lines of development	I M	P	P	D	P	D	D	
		Establishing of goal / goals	M	I P	P		I P			
		Assessment of world system risks, business environment risks and industry risks			I M	D			D	P
		Selection of industries to enter	I M	D	P					
		Selection of lines for venture capital investment	I M	D	P					D
		Alternative options to develop the business portfolio - the selection of baseline scenario	M	I	P					
		Acquisition / sale of assets	I M	P	P					
		Determination of synergy effects		M	I P	P			P	
		Determining the degree of protection of the portfolio value		M	I P	P			P	
2	Property relations	Determining the degree of protection of the property relations	I M	P	P	P	P	P		
3	Business procedures	Creation / development		I M	P	D	D	D	D	
		Implementation		I M			P			
		Assessment of operating efficiency.		I M	P	P	P	P	P	
		Execution control		I M	P		P			

The continuation of table 1

1	2	3	4	5	6	7	8	9	10	
4	Balanced structure	Determining the degree of centralization of functions		I M	P		D			
		Establishing levels of transaction costs		I M	P					
		Establishing the “corridors” of stability for synergy effects for each centralized function		I M	P					
5	Rapid response mechanism	Creating patterns of external environment			I M P	P		P	P	
		Creating patterns of the holding company reactions		D	I M P	P	D	P	P	
		Creating a mechanism for response to rumors				I M P	P		D	P
		Creating a map of events of geopolitical positioning of Ukraine				I M P	P		P	P
		Creating a mechanism for response to crises				I M P	P		P	P

Legend:

I – initiates a decision;

M – makes a decision;

D – participates in the discussion of decision;

P – participates in the development (preparation) of decision.

CONCLUSIONS. Decision-making system in holding companies is a key component of the overall Dynamic Stability Management System of the company and allow for great improving the adaptability of the holding system to various kinds of disturbances of external and internal nature.

Construction of decision-making system is based on a combination of individual and group decisions that greatly increases their accuracy, reliability and allows to make decisions in due time, with a high degree of reliability.

Decision-making system consists of following components: the effective separation of powers and responsibilities for decision-making between owners and top management, between Management Company and companies of the holding; the effectively working coordination center (decision-making center), the system of expert estimates and the internal market of decisions. All the components are interrelated and interdependent.

The proposed decision making system has been used in several domestic holdings and may be served as a basis for the construction of such systems in companies of various types (not only for holdings).

REFERENCES

1. Lyapunov, A. (1954), *Sobranie sochineniy* [Works], Vol. 1, AN SSSR, Moscow, Russia.
 2. Bertalanffi, L. (1969), *Obschaya teoriya sistem. Obzor problem i rezultatov* [General Systems Theory – a Review of Problems and Results], Translated by

Yudin, B. G., *Systems Research Yearbook*, Nauka, Moscow, Russia.

3. Mesarovich, M. and Takahara, Ya. (1978), *Obschaya teoriya sistem: matematicheskie osnovyi* [General Systems Theory: Mathematical Foundations], Translated by Nappelbaum E.L., Mir, Moscow, Russia.

4. Artyuhov, V. (2012), *Obschaya teoriya sistem: Samoorganizatsiya, ustoychivost, raznoobrazie, krizisy* [General Systems Theory: Self-Organization, Sustainability, Diversity, Crises], Knizhnyiy dom «LIBROKOM», Moscow, Russia.

5. Alekseenko, N.V. (2008), “Sustainable development of the enterprise as a factor of economic growth in the region”, *Economics and Organization Management*, no 3, pp. 59–65.

6. Vasilenko, V.A. (2005), *Menedzhment ustoychivogo razvitiya predpriyatiy: monografiya* [Management of sustainable development of the enterprise: monograph], Tsentr uchebnoy literaturyi, Kiev, Ukraine.

7. Arefeva, O.V. (2008), “The economic sustainability of the enterprise: the nature, components and measures to ensure it”, *Actualni problemy ekonomiky*, no. 8, pp. 83–90.

8. Surowiecki, J. (2014), *Mudrost tolpy. Pochemu vmeste myi unnee, chem poodinochke, i kak kollektivnyiy razum vliyaet na biznes, ekonomiku, obschestvo i gosudarstvo* [The Wisdom of Crowds. Why the Many Are Smarter Than the Few and How Collective Wisdom Shapes Business, Economies,

Societies and Nations], Translated by Logvinov, V., Mann, Ivanov and Ferber, Moscow, Russia.

9. Hanson, R. (1995), "Could Gambling Save Science? Encouraging an Honest Consensus", *Socialna epistemologiya*, no. 9, pp. 3–33.

10. Saati, T.L. (2008), *Prinyatie resheniy pri zavisimostyah i obratnyih svyazyah. Analiticheskie seti* [Making decisions under dependent and feedback. Analytical networks], Izdatelstvo LKI, Moscow, Russia.

ПРИНЯТИЕ РЕШЕНИЙ В СИСТЕМЕ УПРАВЛЕНИЯ ДИНАМИЧЕСКОЙ УСТОЙЧИВОСТЬЮ ХОЛДИНГОВ

М. Г. Лазарева

Киевский Национальный университет строительства и архитектуры
проспект Воздухофлотский, 31, г. Киев, 03680, Украина. E-mail: mglazareva@gmail.com

В сложном экономическом окружении динамическая устойчивость современных холдинговых компаний в значительной степени зависит от качества и своевременности принятия как тактических, так и стратегических решений. Принятие решений всегда связано с риском, поскольку существует вероятность принятия некорректного, неадекватного ситуации решения или принятия его не вовремя. Поэтому необходимо создать такую систему принятия решений, которая сводила б к минимуму подобного рода риски, соответственно, усиливала динамическую устойчивость системы холдинга.

Целью статьи является разработка системы принятия решений в холдинговых компаниях как составной компоненты управления динамической устойчивостью холдингов.

Чтобы система управления динамической устойчивостью функционировала эффективно, необходима соответствующая система принятия решений. Предлагается включить в нее следующие элементы: эффективное разделение полномочий и ответственности по принятию решений между собственниками и топ-менеджментом, между управляющей компанией и предприятиями холдинга; эффективно работающий координационный центр (центр по подготовке и принятию решений), систему экспертных оценок и внутренний рынок решений. Такая система базируется на сочетании индивидуальных и коллективных решений, что в значительной степени повышает их точность, достоверность и позволяет принимать решения своевременно с большой степенью надежности. Предложена сетка принятия ключевых решений по факторам динамической устойчивости.

Ключевые слова: холдинг, система управления динамической устойчивостью, система принятия решений, система экспертных оценок, внутренний рынок решений.

Стаття надійшла 20.09.2014