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**THE CONTENT OF INVESTMENT ACTIVITY IN THE
CONTEXT OF MACROECONOMIC INSTABILITY**

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ABSTRACT:

The paper considers the main features of investment activity in modern conditions of macroeconomic instability. The prerequisites for the formation of new approaches to the development of investment solutions in the conditions of macroeconomic instability are considered. The essence of macroeconomic instability is determined and conceptual factors of its influence on investment activity are identified. An in-depth analysis of evolutionary-revolutionary models for the development of financial and economic systems is carried out on the basis of which, the author has created an algorithm for the development of these models in modern conditions of macroeconomic instability. It is substantiated that during periods of economic recession and financial and economic crises, the relevance and conceptual need for revising the content of investment activity based on the application of a proactive approach, as a means that allows not only to minimize financial losses, but to prevent them, increases. The key mechanisms of reactive and proactive investment management are considered, their advantages and disadvantages are highlighted, which made it possible to transform them into modern realities, taking into account the maximum time period for a more accurate and reliable analysis.

INTRODUCTION

The relevance of the relationship between order and chaos, as an extreme form of manifestation of instability, has been the object of study of scientists for a long period of time since antiquity, when parallels were drawn between order and stability. Situations that cannot be foreseen, predicted cause chaos and disorder. With the development of Christian teachings, it has been argued that order comes from God, and chaos is created by devilish forces, and therefore disorder and chaos are evil and must be eradicated. Perhaps it was during this period that the attitude to instability and chaos as extremely negative phenomena in society was born and maintained. However, this particular period of time was called “dark times” - stagnation, and in some areas of life - degradation. The Renaissance and Renaissance can be considered: as a transition to a new qualitative level of development of social formations as a result of preliminary accumulation of changes; weakening of church authority; development of science; changes in economic relations; social changes in society. It should be noted that increasing investment activity is the main task of any economy, and not only during periods of recovery, although during periods of crisis, the ability to form the investment resources of companies is significantly reduced (Zakaria, 2007).

In modern socio-economic conditions, the enterprise is required to optimize the decision-making mechanism to overcome the economic crisis and maintain effective functioning. To implement effective measures to neutralize post-crisis phenomena and prevent (mitigate) a new wave of crisis, which could entail serious financial losses, a systematic approach and tactics to form the content of investment activity are necessary (Wurgler, 2000). It should be noted that the synergy of this systematic approach and the developed tactics will ensure the effectiveness of the control impact on the financial and economic indicators of the investment process of the company.

The most common is the classical approach to managing complex systems, including financial and economic ones, which is based on a linear representation of the model of functioning of these systems, taking into account the time and influence of various factors, both internal and external influences. This linear approach is unambiguous, the result of external influence on investment activity, as a rule, will allow to predict the necessary scenarios in management and decision making. It should be noted that the retrospective and modern realities of doing business and building complex financial and economic models and systems indicate that they are all non-linear.

1. The theoretical basis for determining financial and economic instability and its key aspects

Objective trends of integration into global economic processes, complications of domestic and foreign policy relations have significantly

increased the relevance of scientific research in the formation of an effective mechanism for managing the investment process. Achieving strategic development goals involves the full use of effective methods to anticipate negative (destabilizing) phenomena and the use of an active investment model. The use of preventive impact mechanisms objectively requires the modernization of the entire investment management system based on a systematic approach (Beketov, 2009). It is worth noting that it is the use of a systematic approach in management allows you to determine the basic conceptual aspects of the organization of the system in order to ensure the effectiveness of its functioning. The systematic approach in the organization allows you to determine the functional relationships within the control object itself, the study of a large number of opportunities and alternative options for the formation of a mechanism for managing the investment process, analysis of the limitations and consequences of decisions. It is worth noting that the various definitions of financial and economic instability that are found in the works of domestic and foreign authors are primarily focused on the features of cyclical economic development. The cyclical economic activity of business entities, sharp fluctuations in financial markets, the emergence of unemployment, underutilization of production capacities, inflation, the state budget deficit and foreign trade deficit cause financial and economic instability. (Aleksandrov A., 2007).

According to (Melnyk, 2010), financial and economic instability as an uneven economic development of countries is manifested in the form of cyclical indicators of financial markets, economic development, unemployment and inflation. However, the study (Shumpeter, 1982), which under financial and economic instability was a phenomenon that occurs when two conditions are met, deserves special attention. First, there is a change in key macroeconomic variables, especially economic growth and inflation, which demonstrate levels that are unacceptable for a given state. Secondly, an unstable financial and economic environment is being formed in which the state economy cannot be prosperous. According to (Kim S., Kose M., 1999) financial and economic instability is expressed in the deterioration of the state of economic systems under the influence of a number of negative factors that are determinants of macroeconomic instability, including such as atypical inflation dynamics, improper financial and fiscal policies, and instability real exchange rate, lower economic growth. Based on the presented definitions, it should be noted that the main sign of financial and economic instability in the works of domestic authors is the cyclical nature of economic processes, while foreign authors mainly focus only on a system of factors that provoke the emergence of financial and economic instability. According to many economic theories, the cyclical nature is the main factor in modern crisis phenomena, causing continuous fluctuations in the market economy, when the growth of economic activity is replaced by a recession, and the increase in investment and financial activity is its decrease. Therefore, the most accurate one can be recognized as the definition in which four main factors of financial and economic instability are identified: the dynamics of financial markets, economic development, unemployment and inflation (Soumaré I., Tchana F., 2015).

Since the trajectories of processes within socio-economic systems are unstable, it is possible to develop reliable forecasts only at short-term intervals. Accordingly, after a certain period of time, the trajectories of the processes change

and information, as well as forecasts for the development of the socio-economic system, become irrelevant in the process of managing the system. In this regard, some authors express an opinion on the fundamental unpredictability of forecasts regarding the behavior of complex systems, including and socio-economic. According to (Knyazeva E., and Kurdyumov S., 1992) an incomplete, narrow knowledge of processes and phenomena directly complicates, and more often, makes it impossible to forecast the development of systems. At some stages of the development of complex systems, the presence of all signs of randomness and randomness in their dynamics completely excludes the possibility of prediction.

1.1. The methodology of the study of financial and economic instability and its impact on investment activities

The conceptual component of the methodology for studying financial and economic instability and its impact on investment activity is the application of the main aspects of a systematic approach. It is worth noting that the systematic approach is based on a set of general scientific, special-scientific, experimental, statistical, mathematical methods. The theoretical and methodological foundation is the systematic approach and the general theory of systems, as well as research methods involving mathematical logic, mathematical statistics, theory of algorithms, game theory, situation theory, information theory, combinatorics, heuristic programming, simulation and some others. However, the basis is considered to be system-wide theories, system analysis, however, it borrows from them only the most general initial ideas and premises. It should be noted that in the system analysis the elements of science and practice are closely intertwined, therefore the justification of decisions with the help of system analysis is not always associated with the use of strict formalized methods and procedures, and judgments based on personal experience and intuition are also allowed. An important feature of system analysis is the unity of formalized and informalized research tools and methods used in it.

A systematic approach to the formation of the mechanism of investment activity is focused on the analysis of the system properties of the object, revealing its structure and the nature of the relationship. The strengthening of the role of the systematic approach in investment activity is due to the complexity of all financial and economic processes, the need to find adequate forms for displaying complex structures, their analysis, as well as the formation of those models and approaches that will contribute to the optimal solution of current tasks and the implementation of goals.

1.2. Theoretical aspects of macroeconomic instability: essence, scientific approaches and causes

Complex systems, regardless of their nature, develop, subject to their own internal logic. The process of their evolution is not accidental, although not entirely predictable. It dominates the dominant direction, i.e. the likelihood that after any fundamental transformation new conditions and conditions arise

(Oladipo, 2010). An extremely important role in the behavior of complex systems, which, of course, includes the financial and economic system, is played by the probability of chaos, the so-called “invisible hand”, turbulent behavior at the micro level, which leads to the appearance of compensatory processes at the meso and macro levels that combine individual elements of the system and contribute to their overall development. Without such processes, each element of the system seems to concentrate on itself, falling out of the general structure. Nevertheless, purposeful management of a complex system as a whole and its individual elements is required. The combination of development (dynamism) and stability (conservatism) provides the basis for the stability and progressive development of dynamic systems, which include economic systems. If the system is formed mainly of unstable elements, then such a system will come to self-destruction, the harbinger of which is chaos. On the other hand, a system that has no development, sooner or later, one way or another, will come to stagnation and slow fading. Therefore, constant development is necessary, and development involves investing, investing in the future (McFadzean E., Ezingear J., 2007). Most investment plans require substantial investments, but do not always become effective. Numerous companies do not give proper interest to high-quality analysis of the performance of executed projects. But there are several characteristics with which it is possible to establish the performance characteristics of the plan before its implementation (Aleksandrov A., 2007; M Shariff et al., 2020; Muhammad et al., 2019). These include, for example, the payback period, internal measure of profitability, net profit, etc. It is also important to take into account the inconstancy of the economic sphere.

It should be noted that investments also entail significant costs according to the promotion of products on the market in order to increase sales, which leads to an increase in trading profit from the largest amount of work. Investment planning is one of the most difficult goals of enterprise management, especially in modern conditions of macroeconomic instability. In this process, it is important to take into account all the nuances of the financial work of the company, including the environment, the characteristics of the stagnation of the economy, tax obligations, the state and possibilities of market formation, the presence of production capacities, material resources and the strategy for financing the plan. The main task for investors is the appropriate investment of funds in order to extract the greatest profit. Moreover, this task is much more complicated during periods of instability, when the risks accompanying investment activity increase significantly (Kauffman R., McAndrews J., 2000; Munir et al., 2019). In the process of building the model, it is worth considering that various theories form a new vision of the world model, the basis of which is the processes of instability and chaos as factors in the development and evolution of socio-economic systems. The socio-economic system as a complex open environment in its development passes through the alternation of stages of order and instability.

In the scientific world, discussions are conducted mainly in the plane of the form of its manifestation and of providing a controlling influence on its preservation, then regarding the instability the controversy continues regarding only one of the points, namely: to consider instability as a clearly negative phenomenon, or to consider it as a transition state and an opportunity for qualitatively a new leap in the development of social and economic relations in society (Gilpin R., 1981). In this regard, it is appropriate to consider the following approaches to the determination of instability: Instability is a state of the system characterized by the heterogeneity and divergence of each of the ongoing processes and all changes in general. This is a form of observed relationships and causation of all phenomena, the opposite of stable and metastable structures (Mayevskyy V., 1997). According to (Knyazeva E., Kurdyumov S., 1992) instability is a condition in which economic, political and technological development significantly exceeds potential losses and reduces potential benefits for the state under macroeconomic instability (Mendoza E., 1995; Noorllahi et al., 2019) he highlights changes in the volume of national product, employment and incomes caused by ups and downs in many sectors of the national economy.

A group of scientists (Gal-Or E., and Ghose A., 2005; Noreen et al., 2019) underlines macroeconomic instability as a change in the volume of the national product, employment and income caused by ups and downs in many sectors of the national economy. They are irregular and cannot be predicted with a high degree of accuracy. (Melnik M., 2010; Normalini et al., 2019; Ramakrishnan et al., 2020) argues that obtaining objective knowledge about socio-economic systems is difficult due to the fact that all social systems are complex and multifunctional.

However, having studied the mechanism of self-organization of the socio-economic system, one can purposefully carry out the corresponding fluctuation with the help of a controlling influence and thereby direct its movement along the path of social and economic development in accordance with the potential capabilities of the system itself. Thus, there is variability in the choice of a development vector under conditions of instability, but the choice itself is limited by the capabilities of the system and the adequacy of the control action. Some economists consider the uneven technical and technological development as the causes of macroeconomic instability leading to the crisis. These ideas were developed in N. Kondratyev's long-wave concept, in the study of the dynamics of economic development (Shumpeter J., 1982; Shabbir et al., 2019), in the theory of technological structures (Hlazyev S., 1993), in the model of macroeconomic evolution (Mayevskyy V., 1997).

Proponents of the technological concept of cyclicity indicate that economic instability is the result of the emergence of "new goods, new methods of production and transportation, new markets, new forms of organization of management that are created by a capitalist enterprise." Under these conditions, fluctuations in economic dynamics, including negative ones, "must not be

suppressed by evil, but by adaptation to qualitative change” (Khitsenko V., 2001). Thus, the analysis of scientific approaches to determining the nature and causes of macroeconomic instability confirmed the thesis that in the scientific world there is no consensus on this issue. This situation, in our opinion, is due to the following reasons of an objective and subjective nature:

1. The socio-economic organism of any country is an extremely complex, multi-element system with many interconnections and interdependencies. A malfunction in the functioning of an individual element usually causes a chain reaction when the vibrations “capture” neighboring elements and a resonance effect occurs (Donaubauer J., Neumayer E., 2016).

2. Most researchers of macroeconomic instability problems focus mainly on certain separate, selected for analysis, sides of the phenomenon under study: government regulation and its effectiveness, inflation, monetary policy, financial and exchange markets (Caballero R., and Hammour M., 1998).

Of course, these studies are quite valuable: they are necessary and are significant steps that allow you to move further in search of systemic truth, allowing the state to influence the economy with greater efficiency. The complexity of socio-economic systems and the stochasticity of internal interconnections necessitate a comprehensive and systematic approach to studying the nature and essence of macroeconomic instability and its impact on the dynamics of investment processes. But, despite all the accumulated baggage of practical data and theoretical research, there is currently a tendency to “minimize” and focus on certain aspects of the problem, and one of the most important is the problem of ensuring investment activity in conditions of macroeconomic instability (Fischer P, 2000).

2. Indicators of the country's economic development: features and specifics

Economic development indicators - macroeconomic indicators, state reporting and reports of independent enterprises and reflecting the economic situation in the country. These parameters are placed in open sources at specific time intervals and provide the market with information about improving or worsening the economic situation. Below are the main economic indicators.

1) The consumer price index is intended for the dynamic analysis of the volume of goods and services of the consumer basket in value terms.

2) Gold and foreign exchange reserves are assets of a country with high liquidity, the storage of which is carried out by the central bank or international financial organizations. The indicator reflects the volume of stocks of the country, which is designed to pay public debt or use it when there is a lack of budgetary funds, if necessary.

3) Gross domestic product (GDP) is the sum of all goods and services in value terms that were released per year within a country without dividing

production resources into imported and domestic. If there is a stable downward trend in GDP, we can conclude that the government uses too tight monetary instruments that reduce the ability of solvent demand to purchase products.

4) Public debt - the total amount of state loans that were taken from other countries in order to finance the budget deficit. High debt of the state negatively affects the economic situation in the country.

5) The refinancing rate is the percentage that is used by the Central Bank to issue loans to other banking institutions. Using this tool, the Central Bank regulates the rates of the interbank market, as well as credit and deposit rates for the provision of banking services to legal entities and individuals.

6) Balance of payments is the ratio of the money supply in a state that came from abroad and the funds that it spent abroad for a specific period of time. The balance of payments contains payments on foreign trade transactions, services, non-trading operations, as well as settlements on credit interest and in the form of investment income.

7) The unemployment rate characterizes the ratio of the number of employed citizens to the total number of able-bodied people.

The financial and economic system and its components in an unstable state are subject to various changes - fluctuations that the system can control up to a certain moment, maintaining homeostasis for a certain period of time. In this case, the level of development of the financial and economic system can be described by a function of a number of variables x , which determine the nature of the development of the system as a whole:

$$y_0 = f(x_1, x_2, x_3, \dots, x_n) \quad (1)$$

где, f – target function of the country's economic development; x_1, x_2, x_3 – economic indicators of the country's development.

However, when certain threshold values are exceeded, a situation arises when the financial and economic system enters a zone where changes in internal relationships and parameters, the accumulation of quantitative changes leads to an abrupt transition of the system into a qualitatively different state, a new development vector. Moreover, in some cases, these changes mean a transition to a higher stage of development, in others they can lead to the degradation of economic and social relations in society. In this case, the level of development of the financial and economic system in a new, qualitatively different state may include a modified set of variables that determines the nature of the development of the system:

$$y_1 = f(z_1, z_2, z_3, \dots, z_m) \quad (2)$$

где, f – target function of the country's economic development; z_1, z_2, z_3 – modified indicators of the country's development.

2.1. Cyclical development of the economy: the main stages and causes

According to the results of a critical analysis of scientific research in this area, it should be noted that basically all of them are aimed at finding the causes of macroeconomic instability within the economy itself, with particular attention to the features of the functioning of the monetary system (monetary), periods of renewal of fixed capital, fluctuations in the supply of labor and wages, the functioning of financial markets, investment processes. It is worth noting that a change in the ups and downs of development, that is, cyclicity, is inherent in the economic system. The very concept of “cycle” implies a periodic return of the system to its original position, and therefore the economic cycle is a state of the economic system that repeats at certain intervals, characterized by similar macroeconomic parameters. The main phases of any economic cycle are boom and bust (crisis), during which a deviation from the average indicators of economic dynamics occurs. It should be noted that in modern market conditions there is no perfect competition, since this is just an abstract-theoretical model. Most countries of the world are characterized by mixed systems, with a certain share of the state in the economy. So, in particular, the state creates social (public) goods, in the production of which the market system is “not interested”. In addition, national governments are implementing state economic policy, which is mainly aimed at smoothing out fluctuations in the cycles of economic conditions and neutralizing the shortcomings of the market mechanism. The main phases of economic cycles are presented in Fig. 1

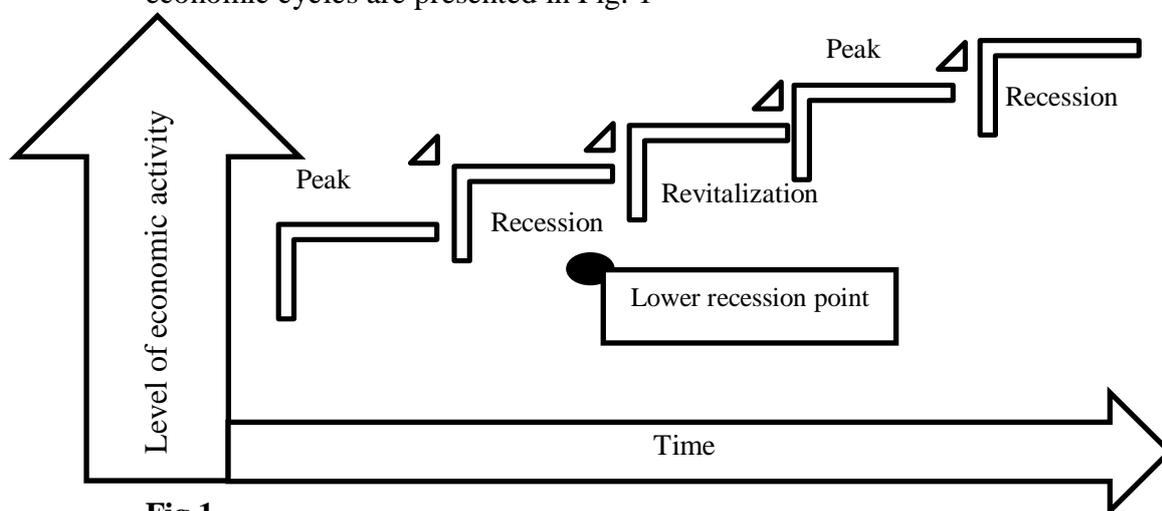


Fig.1.

Key phases of business cycles

2.2. Options for selecting indicators characterizing the economic development of the country

- 1) Expanding the number of variables by including new indicators in the model (isotropic development) (Fig. 2a). An example is the discovery of new resources, technologies, or the expansion of the borders of the state, when additional

parameters are introduced into the model describing the state of the socio-economic system. This option is unlikely, but it has the right to be considered.

2) Formation of a new set of variables that affect the nature of the development of the financial and economic system (Fig. 2 b). This option is even less likely, despite the declaration to destroy the old world to the ground, and then build a new one, since the new system cannot completely abandon everything: accumulated experience, resource potential, national traditions, etc.

3) The merger or partial convergence of old and new parameters that determine the nature of the development of socio-economic systems (Fig. 2 c).

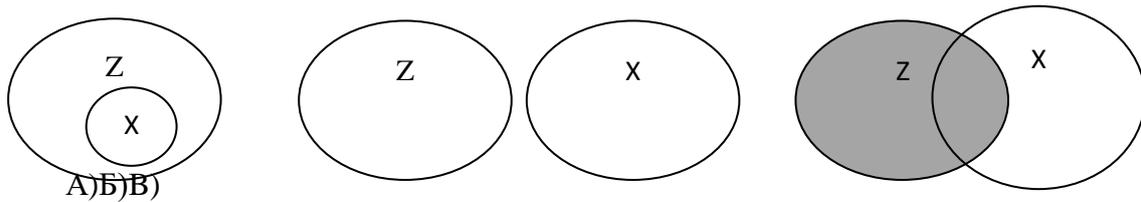
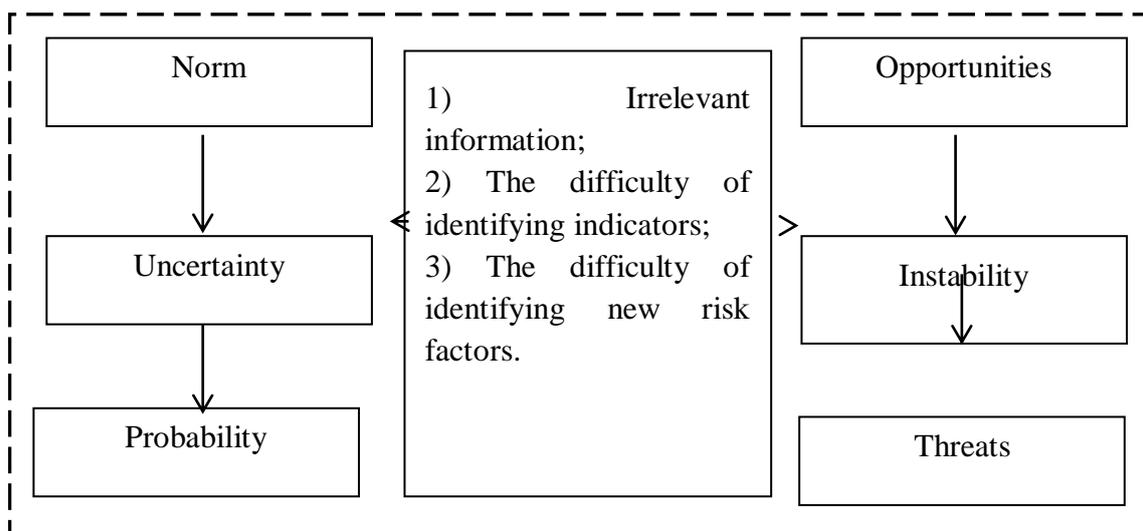


Fig.2

Options for selecting indicators characterizing the level of development of the economic system

The development of financial and economic systems is a process of natural change, the transition from one state to another. The ability to spontaneously nucleate structures and their rapid self-reproduction is the result of the struggle and cooperation of two opposite principles: the emergence of new structures, interconnections and instability, spontaneous decay. The transition of evolutionary development to another level through a leap - revolution is presented at Fig. 3. 2



Model of evolutionary revolutionary development of financial and economic systems

2.3. Algorithm for the development of financial and economic systems in conditions of instability

A feature of the existence of financial and economic formations is that the ratio between the processes of equilibrium and instability changes. The aim of management should be a reasonable balance between order and instability. The financial and economic system is being shaken precisely because people are confident that it must be shaken.

Based on the above approaches, we can formulate the following algorithm for the development of financial and economic systems in conditions of instability, which is presented in Fig. 4.

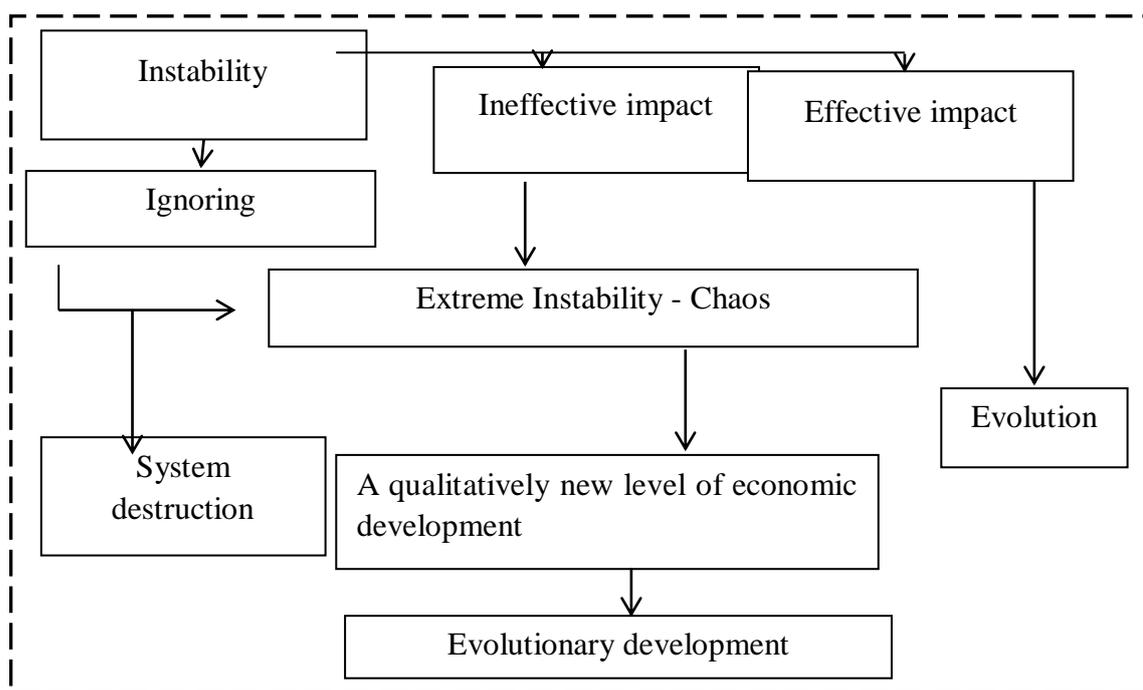


Fig.4. Algorithm for the development of financial and economic systems in conditions of instability

This moment is considered in D. Soros's theory of reflexivity in *Alchemy of Finance*. The basic idea of the theory of reflexivity proceeds from the fact that the opinions of individuals that the system should change lead to changes in the system itself. Thus, the financial and economic system is influenced both by the external environment and by bifurcation processes occurring within the system itself. This highlights the problem of an adequate response from the control system to fluctuations that arise - the managerial impact should be adequate and commensurate with the situation, control the process and direct it in the right direction (Soros, 1996).

Financial and economic systems are dependent and vulnerable, and small changes divert them from equilibrium. However, instability is not only a threat, but opening up opportunities for markets - the possibility of moving to a new higher

level of development, since an increase in entropy is not limited to an increase in disorder, but, as a rule, leads to an increase in the degree of uncertainty. It is necessary to influence the elements of the system in such a way that they evolve in the right direction and at a given speed (Khaken, 1980).

In conditions of significant financial and economic instability, a system of external and internal factors, which in most cases directly depend on the current situation in the financial, investment and foreign exchange markets, has a significant impact on the dynamics of investments, and the influence of these factors in the crisis is mainly negative. Under the influence of fluctuations in supply and demand, the price of capital deviates from its optimal cost basis (Minayev, 2001).

Currently, decision-making regarding investment activities is based primarily on the reactive approach, which is presented in Fig. 5.



Fig.5.

The mechanism of reactive investment management

The scheme of the proactive investment management mechanism is based on the following principle, which is presented in Fig. 6.

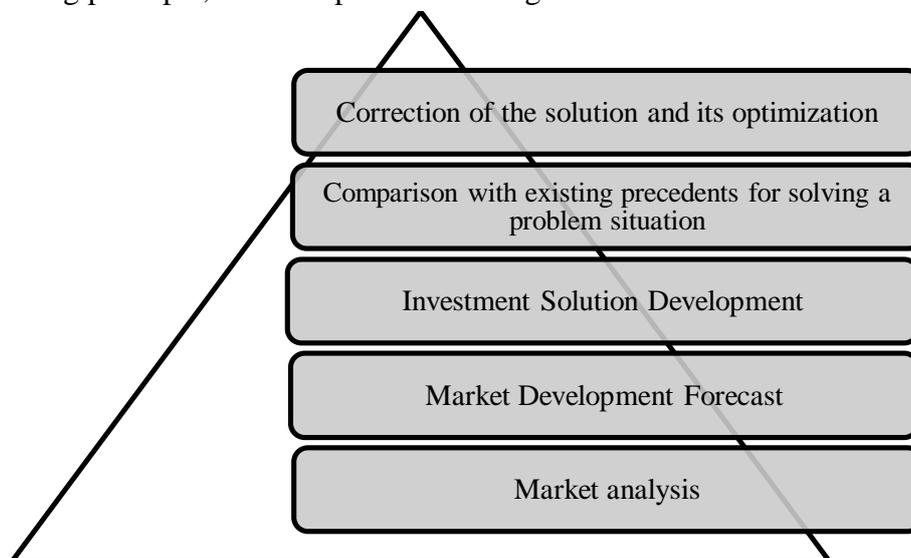


Fig.6.

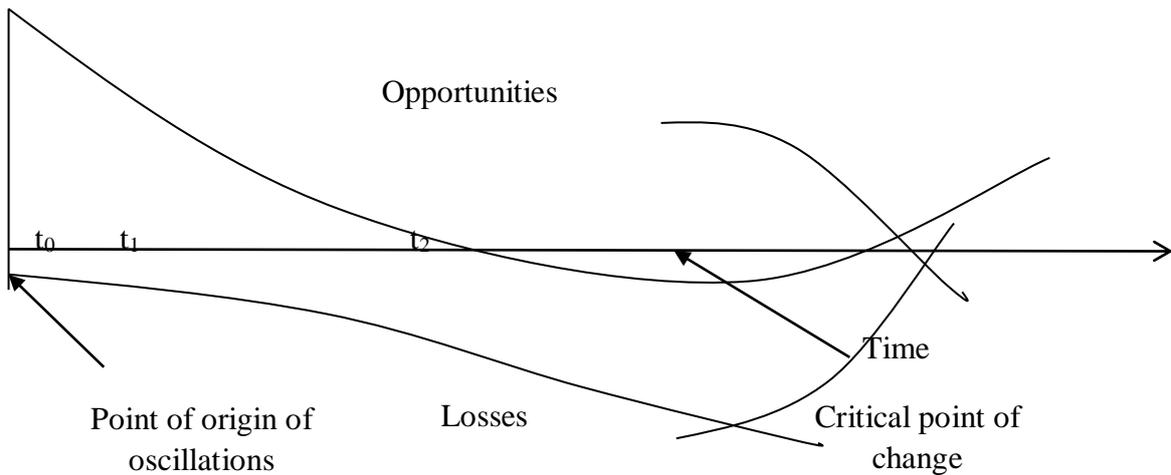
The mechanism of proactive investment management

The main difference in these approaches is the choice of the vector of analysis of the investment process. A reactive approach involves moving from the past to the present, a proactive one - from the probable future to the present).

To implement this approach, the “Z-model” is used, in which the following stages are present (Suyetin, 2011): analysis and forecast of the development of the

market situation; the formation of the target area; development of alternatives for their solution (various investment options); selection of the best investment solution; the formation of a mechanism for its implementation; implementation of the selected investment decision; analysis of the practical implementation of the investment project; optimization of the decision regarding the investment process.

Losses are an integrated indicator of losses from adverse changes in the system and the costs of developing measures to prevent them. In the event of a rapid increase in adverse trends, the decision must be made and implemented before the problem situation goes beyond the capabilities of the control system to resolve it.

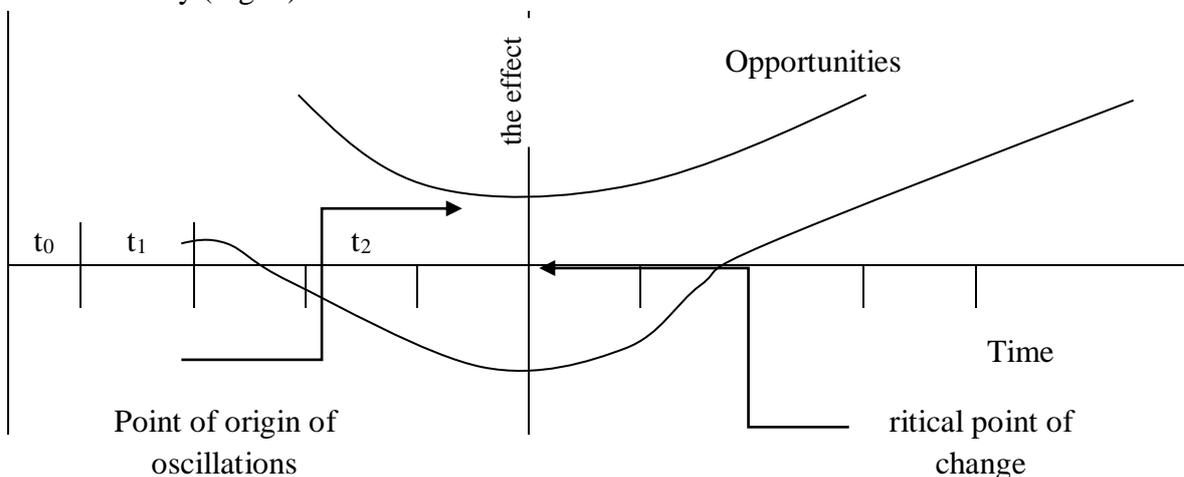


- t_0 -system vibration analysis period
- t_1 -investment decision development period
- t_2 -investment decision implementation period

Fig.7.

Flow chart of reactive investment management

If the changes are favorable, then delaying the decision and its implementation will lead to the loss of new opportunities (Hromyko, 2009). Therefore, the development of an investment solution with proactive management should begin with the appearance of the first signals indicating changes in the facility (Fig. 8).



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