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FEATURES OF FORECASTING AND PREVENTION OF CRISIS IN THE WORLD ECONOMY

In the article the approaches to defining the determinants of business cycles are considered, the main problems associated with measurement and identification of business cycles are generalized. The purpose of the article is to define the determinants of business cycles, the main methods for forecasting market fluctuations based on the theory of cyclical development of economic systems, as well as features of prediction and prevention of crisis phenomena in the world economy. Under conditions of instability, an extremely important issue is the assessment of processes within the country as well as finding mechanisms for forecasting the direction of development of the macroeconomic situation. The economic cycle is a set of successive phases of the state of the economy and repeated over the years fluctuations of economic activity indicators. The basis for understanding the mechanisms of the global economy is the definition of the phase of the current economic cycle, within which the domestic economy is developing as well. First of all, this is necessary to understand the causes of the preconditions of the present state, as well as the further opportunities and prospects for the development of not only Ukrainian but also the world economy. In order to define the phases of the economic cycle and forecasting macroeconomic fluctuations along with the tracking of dynamics of the basic values of economic development, specially developed composite indicators are used, the most attention of which is given to outlying indices. The dynamics of long economic waves predetermine shorter cycles, changing them and correlating with each other. If short waves fall into the phase of the rise of the K-cycle, then their own phase of lifting lasts longer, while if the short cycles coincide with the phase of the long wave, then the crises formed and the depressions within these cycles become more striking for the economic system, moreover they last for a longer time. The aggregate of external factors is characterized as external excitements such as: international decline, sharp deterioration in terms of trade; reduction of the gross domestic product; rising unemployment; falling real estate prices; high consumption based on broad borrowing associated with the development of individual mortgage lending, not sufficiently secured by borrower discipline and the protection of creditors' rights. In conducting the forecasting of economic processes, it is expedient to take into account the cyclical development of the economy with the definition of the period between two crisis «waves» at a stage where the development of the economy does not yet indicate the beginning of crisis phenomena, but certain indicators of the crisis are already present.

Keywords: business cycle; economic growth; global economy; forecasting; prevention; crisis; crisis phenomena.

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ОСОБЛИВОСТІ ПРОГНОЗУВАННЯ ТА ПОПЕРЕДЖЕННЯ КРИЗОВИХ ЯВИЩ У СВІТОВІЙ ЕКОНОМІЦІ

У статті визначено змістовні характеристики економічних циклів. Виокремлено різновиди економічних циклів. Розглянуто причини виникнення та розвитку кризових явищ в світовій економіці. Систематизовано базові та допоміжні індикатори для визначення фаз економічного циклу та прогнозування макроекономічних коливань. Узагальнено основні проблеми, пов'язані з вимірюванням та ідентифікацією економічних циклів. Визначено специфічні особливості прогнозування та попередження кризових явищ у світовій економіці.

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Підкреслено роль циклічності економічного розвитку при здійсненні прогнозування кризових явищ у світовій економіці. Визначено напрями ранньої ідентифікації кризових явищ в економіці.
Ключові слова: бізнес-цикл; економічне зростання; світова економіка; прогнозування; попередження; криза; кризові явища.
Літ. 10.

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ОСОБЕННОСТИ ПРОГНОЗИРОВАНИЯ И ПРЕДУПРЕЖДЕНИЯ КРИЗИСНЫХ ЯВЛЕНИЙ В МИРОВОЙ ЭКОНОМИКЕ

В статье определены содержательные характеристики экономических циклов. Выделены разновидности экономических циклов. Рассмотрены причины возникновения и развития кризисных явлений в мировой экономике. Систематизированы базовые и вспомогательные индикаторы для определения фаз экономического цикла и прогнозирования макроэкономических колебаний. Обобщены основные проблемы, связанные с измерением и идентификацией экономических циклов. Определены специфические особенности прогнозирования и предупреждения кризисных явлений в мировой экономике. Подчеркнута роль цикличности экономического развития при осуществлении прогнозирования кризисных явлений в мировой экономике. Определены направления ранней идентификации кризисных явлений в экономике.
Ключевые слова: бизнес-цикл; экономический рост; мировая экономика; прогнозирования; предупреждения; кризис; кризисные явления.

Topicality of the problem. Economic ups and downs in general are inherent in the process of economic development. Finding mechanisms by which you can extend the stage of expansion and restrict or at least mitigate the recession is the focus of economic science for a long time. The fact that the global financial crisis of 2007-2008 has become not only impressive for the economies of many countries of the world, but also quite unexpected for most economic experts, emphasizes the need to identify turning points in the development of the world economic system. In the conditions of instability, which at the time is a decisive feature of the Ukrainian economy, it is also extremely important to assess the processes within the country as well as to find mechanisms for forecasting the direction of development of the macroeconomic situation. In particular, the basis for understanding the mechanisms of the world economy is the definition of the phase of the current economic cycle, within which the Ukrainian economy is now developing. First of all, it is necessary to understand the causes of the preconditions of the present state, as well as the further opportunities and prospects for the development of not only Ukrainian but also the world economy.

Analysis of recent research and publications. To the issues of cyclical economic development, as well as analysis of impacts that cause changes in economic cycles in the world economy and the search for new tools for forecasting and preventing crisis phenomena, the works of world-known scholars are devoted. They are: K. Zhiuhliar, J. Kitchyn, S. Kuznets, M. Kondratiev, J. Keynes, K. Freeman, J. Schumpeter [9] and others.

The aim of the article. The purpose of the article is to define the determinants of business cycles, the main methods for forecasting market fluctuations based on the theory of cyclical development of economic systems, as well as features of prediction and prevention of crisis phenomena in the world economy.

The main material. For the first time the economic cycles were considered and analyzed by the scientists A. Burns and W. Mitchell in the mid-40's of the twentieth century. In their works, the researchers noted that economic cycles is a certain type of fluctuations in the total economic activity of national economies, consisting of fluctuations that occur approximately at the same time in the activities of many economic units. Most contemporary economists in the process of determining the content and causes of the cyclicality of economic development emphasize the existence of the frequency and sequence of emerging and decreasing economic processes. According to V. Bardovskyi, the economic cycle is a periodic fluctuation of economic activity, which includes the expansion and narrowing of the economic system, and is accompanied by fluctuations in macroeconomic indicators [1].

E. Slutskyi, on the basis of statistical data analysis, made the assumption that the cumulative effect of overlaying random variables during the analysis simulates wave-like series, «having a certain cyclicity in the form of harmonic oscillations, which, depending on the circumstances and the analyzed variables, show periodicity» [3].

P. Samuelson in his well-known book «Economics» defines the economic cycle as a common feature of almost all areas of economic life and is inherent in all countries with a market economy. By this very cyclicality, in his opinion, the development of all industrialized countries is characterized. Summarizing the results of theoretical studies of scientists, we can conclude that the economic cycle is a set of successive phases of the state of the economy and repeated over the years fluctuations in economic activity, as most accurately described by T. Kuchinka [2].

Among the reasons for the existence of economic cycles, scientists also did not reach a unanimous agreement, seeing the many mechanisms that influence the formation of the preconditions for cyclical economic fluctuations. Despite the great interest of scientists, which has shown itself in a multitude of studies on the cyclical nature of economic development, there is still no single approach to understanding the causes of this phenomenon.

Modern economists cite many causes of the emergence and development of crisis phenomena in the world economy, and each has examples that confirm them. The basic cause of economic cycles is the discrepancy between aggregate demand and aggregate supply, between aggregate costs and total production. However, the very existence of the cycles can not be doubted because of the impossibility of developing the world economic system in a straight line with a single upward or downward trend. Various reasons predetermine the fluctuations in the state of the economy both upwards and downwards, and because such factors can have their maximum impact both in the short term and for a sufficiently long time, the economic cycles are not equal in length [1, 2, 3, 4, 5, 9, 10].

There are several types of cycles in duration; the most complete system of interaction of economic cycles of different duration was disclosed in the works of J. Schumpeter on the tricyclic economic development as the most suitable for describing many phenomena occurring in the world economy [9]. He called these cycles by the names of prominent scholars (M. Kondratiev, K. Zhiuhliar, and J. Kitchyn) who discovered these cycles. J. Schumpeter believed that in the economic system the relationship and interdependence of all three cycles are manifested. The dynamics of long economic waves predetermine shorter cycles, changing them and correlating

with each other. If short waves fall into the phase of rise of the K-cycle, then their own phase of lifting lasts longer. If, however, short cycles coincide with the phase of a long-wave recession, then crises and depressions formed within these cycles become more striking for the economic system, and, moreover, they extend over a longer time [1, 2, 3, 4, 5, 9, 10].

At the heart of the financial crisis is the integrated nature of the complex interaction of adverse external and internal factors [4]. An aggregate of external factors is characterized by shock from outside, such as: a decline of economics in international scale, a sharp deterioration of trade conditions; reduction of the gross domestic product; rising unemployment; falling real estate prices; high consumption based on broad borrowing associated with the development of individual mortgage lending, not sufficiently secured by borrower discipline and the protection of creditors' rights. Among the basic indicators for the analysis of such changes, in general, one can distinguish the growth rate of the gross domestic product, the level of unemployment, total sales, the general level of prices, the magnitude of investment, etc. The dynamics of the annual growth of the real average gross domestic product demonstrates a clear correspondence with cyclical fluctuations in the global economy at various stages, emphasizing a sharp decrease in the values of several crises at once, in particular [8]:

- the 1973-1974 crisis caused by the oil embargo imposed by the OPEC countries in response to Israel support from Western European and the US in the conflict with Syria and the energy crisis of 1979-1980 as a result of the policy of the US President John Carter to stop oil procurement in Iraq, which affected the economies of not only these two countries, but also of all OPEC-dependent countries;

- the debt crisis of Latin American countries in 1982-1985, caused by the refusal of a number of Latin American countries to pay their debts to foreign commercial banks. The external debt crisis has quickly spread to a large number of states and has evolved from regional to global;

- «dotcom bubble» in 2000, which arose as a result of the take-off of shares of the Internet-based company network, and, in addition, the emergence of a significant number of new Internet platforms and the reorientation of former firms into the Internet business network at the end of the XX century. Many of the economists who predicted the onset of the «new macroeconomy» justified such overpriced prices; in fact, the latest entrepreneurial models became ineffective, while resources spent mainly on advertising led to a series of bankruptcies and the closure of many firms in the industry, a strong fall in the NASDAQ index, and besides the collapse of cost in server computers, etc.;

- the crisis of 2007-2008, which began with the mortgage crisis in the United States, the bankruptcy of a number of large, structurally important banks and the fall in stock prices, that paved the way for the global economic crisis (sometimes equivalent to the «great recession» of 1932-1933 in its impact on the countries' economy of the world) [8].

The development of these crises most closely coincides with the timeframe of the Kuznets cycles; in particular, the crisis of 2007-2008 corresponds to the phase of the recession of this cycle, which was superimposed on the phase of the decline of the fifth Kondratiev cycle predicted by the followers of the researcher. In addition, the reasons for this crisis — the lack of control of the mortgage housing market in the

United States and the delay in adopting an adequate state solution to eliminate the consequences, gives reason to consider the assumption that it was at this time that the Zhiuhliar cycle also was in its downstream phase. An explanation for this can be found in the writings of Kondratiev: for a long cycle, he identified just four empirical correctness, the third of which speaks of an agrarian crisis, preceding the general economic one. Although he did not conduct predictive researches on the determination of the time frame of K-cycles (in the history of economics, the world food crisis of 2007 may serve as evidence of this) [1, 2, 3, 4, 5, 9, 10].

In the paper [6] a model for the development of the world economy based on K-cycles by the Standard & Poor's 500 index (which includes 500 selected US joint stock companies with the highest capitalization) is constructed. As can be seen from the model presented in [6], the cycles in the beginning are not uniform, long-lasting and inconsistent, however, over time they are normalized and more clearly defined, reflecting the rapid formation of a single world economic system with a close relationship between structural elements. In [8], the predicted values of the world's real gross domestic product are given, which is also explained in the cycle of Zhiuhliar, which, after three years of decline, reached the bottom and led the world economy at the beginning of the growth phase, not very fast, because the K-cycle is also in the lowest provisions. Similarly, the analysis of the growth curve for inflation among the G7 countries, as depicted in [8], also provides an analysis of the highest peaks of the crisis of 1973, 1980 and 1990, and also of 2007.

To determine the phases of the economic cycle and forecasting macroeconomic fluctuations along with tracking the dynamics of the basic values of economic development also specially designed composite indicators are used, the most attention being paid to outlying indices. Such a situation is primarily due to the fact that the change in these indicators reflects the tendency to their full manifestation in the economic situation of a particular country. This enables market participants to respond in a timely manner, by buying or selling one or another asset, if we consider the economic system in its structural form. One of such indicators is the combined OECD Composite Leading Indicator (CLI), designed to provide early warning signals for peaks in business cycles that show fluctuations in economic activity around its long-term potential. CLIs show short-term economic changes in qualitative, but not quantitative terms. The series of components in the CLI calculation are selected from a wide range of key short-term economic indicators that reflect different sectors of the economy and provide an assessment of future economic activity. According to the data presented in [8], we can observe the fluctuations of the composite index for the countries of such integration associations as G7 and EU-28, for which the overall deviation is generally the same. Only for certain emerging economies, such as Greece, Estonia, Finland and Slovakia, etc., deviations are typical. In general, the situation can be disclosed by the G7 curve, which clearly indicates the economic crises of 1973, 1982 and 2007-2008. This frequency indicates the period of recessions in the corresponding cycle of Zhiuhliar and the combination of downward phases of the Zhiuhliar cycle and the fifth wave of Kondratiev [1, 2, 3, 4, 5, 9, 10].

On the whole, all of these basic indicators show similar trends with free fluctuations around time intervals between crises, and also reflect the phases of the rise of the economies of the countries according to the main cycles of development.

Conclusion. When it comes to forecasting crisis phenomena in the global economy, it is expedient to take into account the cyclical nature of its development [4], with the definition of the period between two crisis «waves» at a stage where economic development does not yet indicate the beginning of crisis phenomena, but some predicting indicators of the crisis are already present. We considered the approaches to defining the determinants of business cycles, generalized the main problems associated with measurement and identification of such cycles. Peculiarities of prediction and prevention of crisis phenomena in the world economy are considered.

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