Stabilization of financial relations as the basis for national economic security

Abstract. The stability of financial relations is one of the conditions for sustainable economic development and creation of conditions for the growth of material production, non-production sphere development and increase of employment, improving social and economic conditions of the population. The need to develop practical recommendations for improving the efficiency of existing financial relations in Ukraine and their coordination with the processes that occur in the real sector of the economy determine the relevance of the study.

Purpose of the article is determining the basic principles and refinement of indicators to measure the stability of financial relations and, on this basis, assessment of the stability of financial relations in Ukraine.

The study is focused on the formation of practical recommendations to improve the effectiveness of existing financial relations in Ukraine, and their coordination with the processes that occur in the real sector of the economy. It has been proved that the stabilization of financial relations is formulated as the process of achieving the state of balance and equilibrium in financial resources market at high (enough) level of demand and supply. Methodological, theoretical, normative and generalized approaches to determining the stability of financial relations have been outlined. Evaluation of factors influencing the stability of financial relations has been made at the stage of actual GDP formation (as the basis of financial relations), the formation of primary incomes and formation of gross disposable income of institutional sectors relative to GDP. Potential risks of destabilizing financial relations in Ukraine have been identified. System parameters of early warning of instability based on the definition of key macro shocks to the stability of financial relations has been outlined.

One of the biggest factors promoting economic development is the stabilization of financial relations — a set of parameters, factors and measures to achieve an optimal equilibrium in financial resources. Further research will study ways to stabilize financial relations in Ukraine.

Keywords: financial stability, economic stability, financial relations, economic security, the assessment of financial stability.

JEL Classification E01, G00, H56

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СТАБІЛІЗАЦІЯ ФІНАНСОВИХ ВІДНОСИН ЯК ОСНОВА НАЦІОНАЛЬНОЇ ЕКОНОМІЧНОЇ БЕЗПЕКИ

Анотація. Стабільність фінансових відносин є однією з умов сталого економічного розвитку та створення умов для зростання матеріального виробництва, розвитку невиробничої сфери та підвищення зайнятості, поліпшення соціально-економічних умов населення. Доцільність розроблення практичних рекомендацій щодо підвищення ефективності наявних фінансових відносин в Україні та їх узгодження з процесами, що відбиваються в реальному секторі економіки, визначає актуальності дослідження.

Метою статті є визначення основних принципів та уточнення показників для вимірювання стабільності фінансових відносин і на цій основі оцінки стабільності фінансових відносин в Україні.

Дослідження спрямоване на формування практичних рекомендацій щодо підвищення ефективності наявних фінансових відносин в Україні та їх узгодження з процесами, що відбуваються в реальному секторі економіки. Доведено, що стабілізація фінансових відносин формулюється як процес досягнення стану балансу та рівноваги на ринку фінансових ресурсів на високому (достатньому) рівні попиту та пропозиції. Окремлено методологічні, теоретичні, нормативні та узагальнені підходи до визначення стабільності фінансових відносин. Оцінка факторів, що впливають на стабільність фінансових відносин, здійснюється на етапі формування фактичного ВВП (як основи фінансових відносин), формування первинних доходів та формування валового наявного доходу інституційних секторів щодо ВВП. Виявлено потенційні ризики дестабілізації фінансових відносин в Україні. Окремлено системні параметри раннього попередження нестабільності на основі визначення ключових макрошоків стабільності фінансових відносин.

Одним із найбільших чинників, що сприяють економічному розвитку, є стабілізація фінансових відносин — сукупність параметрів, факторів і заходів для досягнення оптимальної рівноваги фінансових ресурсів. Подальші дослідження будуть вивчати шляхи стабілізації фінансових відносин в Україні.

Ключові слова: фінансова стабільність, економічна стабільність, фінансові відносини, економічна безпека, оцінка фінансової стабільністі.

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СТАБИЛИЗАЦИЯ ФИНАНСОВЫХ ОТНОШЕНИЙ
КАК ОСНОВА НАЦИОНАЛЬНОЙ ЭКОНОМИЧЕСКОЙ БЕЗОПАСНОСТИ

Аннотация. Исследование направлено на формирование практических рекомендаций по повышению эффективности существующих финансовых отношений в Украине, их согласование с процессами, которые проходят в реальном секторе экономики страны. Определены методический, теоретический, нормативный и обобщенное подходы к определению стабильности финансовых отношений. Оценка факторов влияния на стабильность финансовых отношений осуществлена на этапах формирования фактического объема ВВП (как основы финансовых отношений), формирование первичных доходов и образования валового располагаемого дохода институциональных секторов экономики по отношению к ВВП. Определены потенциальные риски дестабилизации финансовых отношений в Украине. Определена система параметров заблаговременного предупреждения нестабильности основанный на определении ключевых макрошоков для стабильности финансовых отношений. Дальнейшие исследования будут направлены на обоснование путей стабилизации финансовых отношений в Украине.

Ключевые слова: финансовая стабильность, экономическая стабильность, финансовые отношения, экономическая безопасность, оценка финансовой стабильности.

Формул: 0; рис.: 1; табл.: 3; библ.: 10.

Problem statement. Depth study of the causes of the financial crisis, which has manifested in Ukraine's economy in recent years, proves that along with numerous external factors, discrepancy of existing financial and credit relations to modern realities of economic and social development has been laid in its foundation.

The stability of financial relations is one of the conditions for sustainable economic development and creation of conditions for the growth of material production, non-production sphere development, and increase of employment, improvement of social and economic conditions of the population lives.

The stability of financial relations should not be identified with their constancy. Stability characterizes the ability of financial relations to function (to ensure optimal financial aspect ratio) and be in equilibrium over time, that is to remain stable over time. Sustainability relates to compliance with strict limitations on the proportions of financial and other aspects of financial relations. Sustainability can act as a characteristic of the stability of financial relations (provided that the internal and external factors do not adjust this relationship).

The need to develop practical recommendations for improving the efficiency of existing financial relations in Ukraine, their coordination with the processes that occur in the real sector of the economy determine the relevance of the study.

Analysis of research and problem statement. The works of foreign scientists, such as Harry J. Schinasi, 2004 [1], A. Crockett, 1997, [2] K. Borio, 2011 [3], E. Philip Davis, 2003 [4], E. Siskos, 2005) [5] and others have played an important role in determining the economic content and parameters of financial stability.
The writings of most scientists observed a through line of a relationship between financial stability and the pace of economic development. So Klaudio Borio, 2011 stated that «...financial and macroeconomic stability are two sides of the same coin» [3].


The aim of the article is to define and clarify the basic principles of stability assessment of financial relations indicators and on this basis, assess the stability of financial relations in Ukraine.

Research results. Stable and balanced functioning of financial system provides optimal distribution and redistribution of financial resources between its main elements (areas, sectors, territories, etc.) and is one of the main factors stimulating economic development. At constant vector of changes in economic relations, even the «stagnation» (depression) can be interpreted as economic development, as it provides positive dynamics of changes.

In theory, the concept of stability of financial relations is connected with the content of equilibrium in financial resources market. State of equilibrium is achieved when there is balance between supply and demand. Thus, theoretically stabilization of financial relations is defined as a process to achieve a state of equilibrium between supply and demand in the market of financial resources.

Imbalance in financial resources causes disruption of the optimality criterion of GDP distribution between business entities. If the state's share in the distribution unduly increases, this leads to a decrease in financial opportunities for the development of non-governmental entities and individuals. The consequence of this situation is the decline in investment and consumer activity in the country and reduction of the results of material production. Otherwise, in case of unwarranted reduction of the financial resources of the state, there are certain financial problems associated with the performance of its basic functions.

Thus, the equilibrium in financial resources market in the country can be described as a state in which the need for growth of financial resources from businesses, households and the government is balanced with the possibility of their formation through the distribution the cost of GDP.

Thus, in theory, the concept of «stabilization of financial relations» is formulated as the process of achieving the state of balance and equilibrium in financial resources market provided high (enough) level of demand and supply. It can be considered on various aspects (Fig. 1).

![Fig. 1. Generalization of meaning «stabilization of financial relations» [development of authors]](image-url)
The normative notion of stability of financial relations is identified with the definition of the main parameters that characterize the state of stability of the financial system. It is expedient to consider the following as the main of them: the state of the budget, the budget deficit in the amount of % of GDP, the share of credit resources to finance the budget deficit, etc. Accordingly, the stabilization of financial relations determines what should be the conditions (parameters) for the attainment of stability.

Evaluation of factors that cause destabilizing effects on the financial relations in Ukraine, allows to explore the current state of financial relations (evaluate it as the optimal, unstable or critical). It is appropriate to evaluate factors of influence at the stages of actual GDP formation (as the basis of financial relationships), the formation of primary incomes and formation of gross disposable income of institutional sectors relative to GDP.

The resulting actual figures are compared with defined characteristic values. Methods for determining characteristic values are: analysis of existing approaches and analysis of statistical data determine «optimum value» – ($X_{opt}$), «unstable value» – ($X_{unst}$) (calculated as deviations from the optimal value by 20%); «critical» – ($X_{crit}$) (calculated as deviations from the unstable value by 10%).

At the stage of formation of GDP it is important to evaluate macroeconomic aggregates participating in this process. It is advisable, in our opinion, to include index of physical volume of production (% of GDP in 1990), final consumption expenditure (% of GDP), gross fixed capital formation (% of GDP), net exports (% of GDP) to the main indicators.

Justification of characteristic values of these parameters:

The index of physical volume of production – should be determined based on the need to restore a level typical for the Ukrainian economy in the early 1990s. In recent years, the volume index of production in Ukraine is less than 0.8 (80% of GDP in 1990). That is why as the optimal value of this indicator ($X_{opt} = 1 \ (100\%)$) will be the level in 1990. According to the proposed technique $X_{unst} = 0.8$ and $X_{crit} = 0.7$.

<table>
<thead>
<tr>
<th>Performance</th>
<th>Characteristic values</th>
<th>Actual values</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$x_{opt}$</td>
<td>$x_{unst}$</td>
</tr>
<tr>
<td>Financial relations at the stage of GDP formation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The index of physical volume of production before 1990*</td>
<td>1</td>
<td>0.8</td>
</tr>
<tr>
<td>Final consumption expenditure, % of GDP</td>
<td>60</td>
<td>75</td>
</tr>
<tr>
<td>Gross capital formation, % of GDP *</td>
<td>30</td>
<td>25</td>
</tr>
<tr>
<td>Net exports, % of GDP</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Financial relations at the stage of formation of primary income</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation of employees, % of GDP</td>
<td>47</td>
<td>55</td>
</tr>
<tr>
<td>Taxes on production and imports, % of GDP</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Gross profit, mixed income, % of GDP</td>
<td>43</td>
<td>34</td>
</tr>
<tr>
<td>Financial relations at the stage of formation of final incomes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(Percentage of gross disposable income)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ratio of wages to the amount of social benefits and other current transfers, times *</td>
<td>1.6</td>
<td>1.4</td>
</tr>
<tr>
<td>Non-financial corporations, % of GDP</td>
<td>14</td>
<td>9</td>
</tr>
<tr>
<td>Financial corporations, % of GDP</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>The sector of general government management, % of GDP</td>
<td>18</td>
<td>20</td>
</tr>
</tbody>
</table>


Determining of optimal, unstable and critical proportions at the stage of GDP formation is partly based on the values set out in the Guidelines on the calculation of economic security of
Ukraine [6]. In particular, the share of \textit{gross fixed capital formation}, in \% of GDP is determined by the following values: $X_{\text{opt.}} = 30$; $X_{\text{unst.}} = 25$; $X_{\text{crit.}} = 18$ [ibid].

The property values of the share of \textit{net exports}, as \% of GDP is impractical to determine based on the analysis of statistical data for the world economy, since this component of GDP is sensitive to the characteristics of a particular country, in particular sectoral structure of the national economy, strategic exports and imports, etc. That is why to determine index values we use analysis of the dynamics of net exports of goods and services in Ukraine. Analysis of the structure of GDP by end-use category (for the period 2000-2014) indicates that under favorable world market conditions the share of net exports can reach 8\% of GDP (2003-2004.), which can be defined as optimal ($X_{\text{opt.}}$). The value of the share of net exports at the level of 0\% can be considered the parameter of instability. The critical state is characterized by the index at the level (-2) – (-5)\% of GDP.

\textbf{Share of final consumption expenditure}, \% of GDP is the highest in the structure of GDP. Characteristic values for this parameter are determined by increasing the amount of gross fixed capital formation and net exports to 100\%. The values are as follows: $X_{\text{opt.}} = 60$\% of GDP, $X_{\text{unst.}} = 75$\% of GDP, $X_{\text{crit.}} = 87$\% of GDP (see. Table 1).

At the stage of formation of primary incomes characteristic values of financial proportions are based on analysis of statistics of Ukraine and other countries. Optimal values have been determined on the basis of the obtained results: \textit{the share of compensation of employees} – 47\% of GDP, \textit{net taxes on production and imports} – 10\% of GDP, \textit{gross profit, mixed income} – 43\% of GDP.

Calculations $X_{\text{unst.}}$ and $X_{\text{crit.}}$ have been conducted based on the methodology above. The values of parameters are shown in the Table 1.

At the stage of formation of institutional sectors final incomes to determine the characteristic values performance thresholds of macroeconomic security, offered by the Department of Economic Security [6] and the analysis of statistical data in dynamics have been used.

By comparing actual performance of the economy of Ukraine in 2004, 2010, 2014 and 2017 we define the characteristics of the stability of financial relations in Ukraine (Table 2).

Assessment of the stability of financial relations in Ukraine

<table>
<thead>
<tr>
<th>Indicators</th>
<th>2004</th>
<th>2010</th>
<th>2014</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial relations at the stage of GDP formation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index of physical volume of production, 1990</td>
<td>U</td>
<td>O</td>
<td>O</td>
<td>U</td>
</tr>
<tr>
<td>Final consumption expenditure, % of GDP</td>
<td>U</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Gross capital formation, % of GDP</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Net exports, % of GDP</td>
<td>O</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Financial relations at the stage of formation of primary income</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Compensation of employees, % of GDP</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>C</td>
</tr>
<tr>
<td>Taxes on production and imports, % of GDP</td>
<td>U</td>
<td>C</td>
<td>C</td>
<td>C</td>
</tr>
<tr>
<td>Gross profit, mixed income, % of GDP</td>
<td>O</td>
<td>O</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>Financial relations at the stage of formation of final incomes</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ratio of wages to the amount of social benefits and other current transfers, times</td>
<td>C</td>
<td>C</td>
<td>C</td>
<td>U</td>
</tr>
<tr>
<td>Non-financial corporations, % of GDP</td>
<td>O</td>
<td>C</td>
<td>U</td>
<td>O</td>
</tr>
<tr>
<td>Financial corporations, % of GDP</td>
<td>C</td>
<td>C</td>
<td>O</td>
<td>O</td>
</tr>
<tr>
<td>General government sector, % of GDP</td>
<td>U</td>
<td>O</td>
<td>O</td>
<td>U</td>
</tr>
</tbody>
</table>

Note: O - optimal; U - unstable; C - critical.
Source: Authors' calculations.

Thus, evaluation of the current state of stability of financial relations does not allow assessing their condition as stable. Signs of instability and in some cases criticality require the determination of the potential options for stabilizing the financial relations.
Among the set of potential risks of destabilization of financial relations in Ukraine today are:

1. Risks associated with deterioration of the country's GDP. Factors that may result in risks of this group include the following: deterioration in general economic conditions; deterioration of the real economy of Ukraine; the growth of the shadow economy; deterioration of fixed assets; reduction of investment activity etc.

2. The risks associated with foreign trade flows. Factors that may result in risks of this group include the following: changes in prices of key export and import goods, including prices of energy and other resources; significant devaluation or revaluation of the currency etc.

3. The risks associated with the global financial crisis. The growth of Ukrainian integration to the world economy, a significant amount of public debt, dependence on foreign investment and loans, and many other factors of this group require thorough research and analysis.

4. Risks associated with changes in instruments and focus of the state influence on key financial ratio. Significant changes in the mechanism of state regulatory impact on the content are like destabilizing factors, especially when they are introduced suddenly and without a thorough analysis of the current state of financial relations. This includes changes in the tax system (changing tax rates, tax base, tax administration changes, etc.), as well as the social security system and social insurance. The study of probability of occurrence, the ability to resist risks of financial relations and the effects of the impact factors of this group is very important for the stability of financial relations.

Formation of the system of early warning parameters of instability is based on the definition of key macro-shocks to stabilize the financial relations. Based on the research we have determined that the main manifestations of instability in the distribution of gross disposable income are characteristic of institutional sectors such as non-financial corporations, financial corporations and general government. Here are the key macro shocks to stabilize financial relations at the stage of formation of final income (Table. 3).

Table 3

<table>
<thead>
<tr>
<th>Macro-shock</th>
<th>Factors of influence</th>
<th>Indicators</th>
<th>The consequences for the real sector</th>
<th>The impact on income of institutional sectors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deviation of income of non-financial corporations sector to decrease</td>
<td>• Financial results (surplus) of the enterprises;</td>
<td>• Gross balance of primary income (gross income, mixed income, net income from property);</td>
<td>• Reduction of the competitiveness of national enterprises;</td>
<td>• Reduction of wages and increase of social tension in society;</td>
</tr>
<tr>
<td></td>
<td>• The share of investment in fixed assets;</td>
<td>• Current taxes on income and property.</td>
<td>• The slowdown in investment activity, lower investment potential;</td>
<td>• Reduction of the budget system;</td>
</tr>
<tr>
<td></td>
<td>• The share of the informal sector;</td>
<td></td>
<td>• Increase of enterprises' unprofitability;</td>
<td>• Increase in social spending.</td>
</tr>
<tr>
<td></td>
<td>• Import of goods;</td>
<td></td>
<td>• The growth of commodity imports;</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• State of Depreciation</td>
<td></td>
<td>• Negative expectations;</td>
<td></td>
</tr>
<tr>
<td>Deviation of total government budget revenues%', of GDP;</td>
<td>• The share of revenues of the consolidated budget, % of GDP.</td>
<td>• Gross balance of primary incomes (gross income, mixed income, net taxes on production and imports)</td>
<td>• The effect of crowding out the private sector;</td>
<td>• increase of the tax burden on non-financial corporations and households incomes.</td>
</tr>
<tr>
<td>Increase of direct governmental investments</td>
<td>• The share of the consolidated budget, % of GDP.</td>
<td>• Contributions to social insurance.</td>
<td>• The increase in the tax burden on business entities;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• The growth of state capital investments.</td>
<td></td>
</tr>
</tbody>
</table>

To determine the qualitative and quantitative characteristics of influence of these macro shocks two institutional sectors have been studied: non-financial corporations and general government.
Shock of income reduction for non-financial corporations due to: reducing the gross balance of the primary income; growth of current taxes on income and property. Shock of increase in revenues of the general government as a result of: growth of the gross balance of the primary income; reduction of social benefits to households.

The characteristics of each of the macro shock have been specified in table 3, the consequences for the real sector of the economy have been given, impact on the financial aspect ratio of distribution and redistribution of income of other institutional sectors has been formulated, and also a list of measurement indicators that allow monitoring of future shocks has been provided.

Conclusions. One of the factors stimulating economic development is the stabilization of financial relations – a set of parameters, factors and measures to achieve an optimal equilibrium in financial resources market.

The study of financial relations at the stage of the actual volume of GDP formation of the country led to the following conclusions: only positive developments in the real economy can be the basis of Ukraine's economic development; analysis of the structure of Ukraine's GDP by end-use categories shows that in the period 2000-2014 negative changes occur in the structure: the share of final consumption expenditure is increased and the share of gross capital formation is reduced; study of the structure of final consumption expenditure shows that there is increase in the share of final consumption expenditure of households with lower total government consumption.

Analysis of trends in financial proportions at the stage of formation and primary distribution of income allows drawing conclusions that the following changes occur in the structure of primary income during the period (2000-2014): the share of compensation of employees is increased and the share of gross profit and mixed income is decreased.

Analysis of trends and financial ratios at the stage of formation and distribution of final incomes shows that there were the following changes in the structure of final incomes of the institutional sectors of the Ukrainian economy during the analyzed period: the share of income of households and the financial corporations' sector significantly increases; the share of income of non-financial corporations’ sector and general government is reduced.

Further studies will study ways to stabilize financial relations in Ukraine.


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