FOREIGN CURRENCY REFINANCING
AS A NEW ELEMENT OF STIMULATING THE ECONOMIC
DEVELOPMENT OF TRANSITION ECONOMIES

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Abstract. Transition economies require finding and implementing new elements to stimulate their development, especially with regard to the economic systems of the former Soviet countries (Ukraine and Belarus). Under these conditions, it is important to use the experience of other transition economies, which includes the use of foreign currency refinancing. Purpose. Substantiation of the introduction of foreign currency refinancing as a new element of stimulating the economic development of transition economies through assessment of the development of the mentioned economies in Belarus and Ukraine. Design/methodology/approach. The study employed a quantitative analysis of statistical data to assess the development of transit economies in Ukraine and Belarus over the 21-year period. Correlation and regression analysis was also involved to identify key areas of impact of foreign currency refinancing on transitive economic systems. In this case, it was proposed to use five regression functions (linear; exponential; polynomial; logarithmic; power). It was separately proposed to determine the correlation ratio between the key areas of impact of foreign currency refinancing on the transition economy and the volume of foreign exchange refinancing using three methods: the determination factor; checking the correlation coefficient on the Chaddock’s scale; comparison of the correlation coefficient with the critical correlation coefficient. Findings. The article analyses the development of the transition economies of Ukraine and Belarus over the 21-year period (from 1999 to 2019) and emphasises that since 2008 the development of economic systems of the countries selected for the study has almost stopped despite activities (tools) used to stimulate the growth of national economies. The authors prove the importance of finding and using new elements to stimulate the economic development of the economies of Belarus and Ukraine. The use of foreign currency refinancing as a new element of stimulating the development of economic systems of Ukraine and Belarus is justified. The mechanism, beneficial and negative impacts of the use of foreign currency refinancing for transition economies selected for the study are identified. The key areas of influence of foreign currency refinancing on the economic systems of Belarus and Ukraine are identified, where the size of lending; revenues of budgets of different levels, business entities, households are the main ones. At the same time, the authors managed to refute the possibility of a significant negative impact of currency refinancing on the growth of the monetary base, inflation and devaluation processes in the countries selected for the study. Practical implications: the conducted research is important for ensuring the long-term development of transition economies, primarily in Ukraine and Belarus. Originality/value: the study will allow to identify key areas of impact of foreign currency refinancing on transitive economic systems, and revealing its beneficial and negative impacts for economies of this type on the example of Ukraine and Belarus.

Keywords: foreign currency refinancing, the economy of Belarus, the economy of Ukraine, economic development, key areas of influence, transitional economies.

JEL Classification: E51, E52, E58

1. Introduction

Economies in transition have significant economic growth potential (Lyasnikov, Usmanov, Magaramov, Omarova, 2019). Significant industrial and social bases, including a quality system of education and employee training, allow them to ensure high rates of economic development over long periods of time, and move to the list of developing countries with high incomes, providing their population with living standards and economic opportunities no worse than in a number of economically developed countries (Tsaurai, Ndou, 2019). Poland, the Czech Republic, Lithuania, and

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Latvia (Dombi, 2013; Iradian, 2014) can be called examples of successful development of transition economies.

At the same time, we note significant problems in the development of transition economies in the post-Soviet space, which include Ukraine and Belarus. Being geographically close to successful transition economies and having even greater economic potential than the above-mentioned countries of Central and Eastern Europe, these countries have not been able to fully realize it (Benešová, et al, 2017; Alexiou, Vogiazas, Solovev, 2020). We note a set of modern economic and social problems that hinder the effective development of economic systems of Ukraine and Belarus. The main problems include a large number of “institutional traps”, corruption, shadow market size, loss of competition in domestic and foreign markets, ineffective state support for small and medium-sized businesses, low innovation of the economy and production, inefficient social support system, critical shortage of investment and credit resources (Ghedrovici, et al., 2013; Benešová, Smutka, 2016).

One of the key problems of the economies of Ukraine and Belarus is the problem of attracting investment and credit funds, both in terms of size and cost of funding (Khamutovska, 2013; Adarov, et al, 2016). Under these circumstances, countries need to find new ways to attract credit resources, where it is possible to use the crisis and post-crisis experience of South Korea, Hungary, Poland and the Philippines to use foreign currency refinancing of the country’s banks by the Central Bank to stimulate their lending activity and reduce credit costs (Mihaljek, Subelyte, 2011).

Given the above, we consider it appropriate to determine the research objective as follows: the rationale for the introduction of foreign exchange refinancing as a new element to stimulate the economic development of transition economies based on the assessment of those economies in Belarus and Ukraine.

This objective requires confirmation or refutation of the following hypotheses:
– economic systems of Belarus and Ukraine have accumulating development problems;
– foreign currency refinancing will have both positive and negative effects on transition economies;
– foreign currency refinancing has a limited number of key areas of influence on transition economies.

2. Literature review

We note a significant scientific interest in the development of transitional economies, including through the use of monetary policy instruments.

It is possible to distinguish two major areas of research in this direction: revealing the problems of the development of transitive economies, where one of the ways to stimulate the economy is monetary policy; research of various aspects of refinancing in the context of stimulating the development of transitive economic systems.

Regarding the first direction of research, the following works are worth noting:
– Gorynia M. and Wolniak R. (2002), who try to reveal the advantages and disadvantages of globalization for countries of this type on the example of the transitive economy of Poland;
– A team of scholars led by Durčáková J. (2002), who reveal the impact of monetary policy on the development of transition economies through the establishment and regulation of the exchange rate and its impact on inflation in countries of this type;
– Fries S. and Taci A. (2002), who study the impact of banking reforms and banking activities on the development of transition economies;
– Dowling M., Wignaraja G. (2006), which reveal the problems of economic development of the Central Asian countries that were part of the former Soviet Union, including the impact of the monetary policy and its instruments on the transition economy of these countries;
– Directorate-General for Economic and Financial Affairs, European Commission (2009), which examines the economic development of the Western Balkan countries (Albania, Bosnia and Herzegovina, Croatia, Macedonia, Montenegro, Serbia, Kosovo), including the problematic issues of monetary policy implementation with an emphasis on attracting loans and investments;
– Melnyk L., Kubatko O. and Pysarenko S. (2014), who assessed the impact of foreign direct investment on the economic development of countries with transition economies;
– A group of scholars led by V.A. Arsenyeva (2016), who focused on the impact of innovation on the development of transition economies on the example of the situation in the Russian Federation.

The following scholars studied the issue of refinancing in the context of stimulating the development of transitive economic systems:
– De Melo M., Denizer C. (1997), who, based on a study of the monetary policy of twenty-six countries in Europe and Central Asia with transition economies, identified the features of their development and assessed the impact of refinancing on the development;
– Bergløf E., Roland G. (1998), who focused on budget constraints and refinancing within the interaction of banks and borrowers in transition economies;
– Camen U. (2006), who examines Vietnam’s monetary policy, focuses on the tools to be used to increase its effectiveness in the country’s integration into the world economic community. The author also studies in detail the features of macro-level refinancing transactions in the Vietnam’s economy;
– Park A., Shen M. (2008), who focused on studies of China’s monetary policy, and justified the need
to decentralize and liberalize its banking system, in particular when improving the efficiency of refinancing to increase the loan performance of Chinese banks; 
– Mihaljek D. and Subelyte A. (2011), who studied the practice of application of monetary policy instruments by central banks of the countries, including transition economies, in the context of their effectiveness in stimulating the recovery of national economies of these countries. The issues of refinancing and attraction of foreign currency resources as alternative instruments of monetary policy, as well as conducting refinancing transactions by central banks were separately covered. 
– Eichenbaum, M., Rebelo, S., Wong, A. (2018), who focused on the impact of monetary policy on the country’s economy through mortgage refinancing, and investigated the impact of low interest rates on the functioning of the economic system. This study can be fully used for transition economies; 
– Bonizzi B., Laskaridis C. and Griffiths J. (2020), who tried to study private lending and debt risks in the context of the development of the countries building their economic systems, which include transition economies. The instruments of monetary policy, including refinancing, are also studied.

Despite a large number of scientific papers on the issue of stimulating the development of transit economies, we note the need for a detailed study of introducing alternative instruments of monetary policy of central banks, especially foreign currency refinancing with a focus on countries in need of accelerated economic development, in particular Belarus and Ukraine.

3. Materials and methods

The study was based on the data and an empirical analysis of the development of the economic systems of the two former Soviet countries with economies in transition (Belarus, Ukraine) for 1999 to 2019. We took statistics from the databases of the State Statistics Service of Ukraine, the National Statistical Committee of the Republic of Belarus, and the World Bank.

The study used a quantitative analysis of statistics to assess the development of transit economies of Ukraine and Belarus over a period of twenty-one years.

We also used a correlation and regression analysis to identify key areas of impact of foreign currency refinancing on transit economic systems. For this purpose, we proposed to use five regression functions: 
- linear: \[ y = b_0 + b_1x_i \]
- exponential: \[ y = b_0e^{b_1x_i} \]
- polynomial: \[ y = b_0 + b_1x_i + b_2x_i^2 \]
- logarithmic: \[ y = b_0 + b_1\ln(x_i) \]
- power: \[ y = b_0x_i^{b_1} \]

where \( y \) is a key area of impact of foreign currency refinancing on the transition economy; \( x \) means foreign currency refinancing volumes, monetary units; \( b_0 \) is a constant; \( b_1 \) is the regression coefficient; \( i \) is a country

under research (in our case, Ukraine and Belarus); \( t \) is the time period of the study (in our case, the 21-year period from 1999 to 2019).

Based on the works of V. R. Baraz (2005) and S. Tsonova (2020), we separately proposed to determine the correlation ratio between the key areas of impact of foreign currency refinancing on the transition economy and foreign currency refinancing volume using three methods: determination factor \( R^2 \); checking the correlation coefficient \( r \) on the Chaddock’s scale; comparison of the correlation coefficient \( r \) with the critical correlation coefficient \( r_c \) for the significance level \( (\alpha) \) equal to 0.01 and the degree of freedom \( f \) equal to 20 (the difference between the time interval (21 years) and the number of indicators of the model (1)). To select the key areas of impact of foreign currency refinancing on transit economic systems, we proposed to choose those with two of the three methods to assess the correlation ratio indicate a strong or very strong correlation between the indicators of the model.

4. Results

4.1. Assessment of the development of economic systems of Ukraine and Belarus

Since gaining independence in 1991, the economies of Ukraine and Belarus have been actively transformed in the context of the development and introduction of market mechanisms. At the same time, while Ukraine uses a model where the state mostly performs regulatory functions, having a fairly low impact on the economy through state-owned enterprises, Belarus focuses on the development of the public sector (Alexiou, Dovgiagizas, Solovev, 2020). We can also emphasize the export-oriented economic systems of both countries (Benešová, Smutka, 2016). In this context, it is important to analyse the development of the economies of Ukraine and Belarus since 1999, when the countries recovered from the structural economic crisis caused by the transition from a command to a market economy (Table 1).

Analysis of the development of economic systems of Ukraine and Belarus allows drawing the following conclusions:
- despite the chosen models of development, the economies of Belarus and Ukraine had almost identical trends, taking into account that economic system of Belarus is smaller in quantitative terms than the economic system of Ukraine;
- two crises (2008-2009 and 2014-2015) had a negative impact on the economies of Ukraine and Belarus, but Belarus went through these periods somewhat more smoothly and showed a higher pace of economic system development, but the difference was not critically significant;
Given the problems of the economies of Ukraine and Belarus and their lack of development (as Ukraine did not reach 2008 key economic indicators at the end of 2019, and Belarus did not significantly exceed them (see Table 1)), countries need to find ways to stimulate their economic systems. At the same time, it should be noted that Belarus and Ukraine either tried to implement a significant number of tools to stimulate economic development without much success, or are implementing those tools under current conditions of functioning of their economic systems (Benešová, et al., 2017; Alexiou, Vogiazas, Solovev, 2020).

Let us note that the critical problem that hinders the development of the economies of Belarus and Ukraine is the insufficient investment and credit support for business. Ukraine receives investment in two main ways: from domestic investors, which generates critically low and insufficient investment in the Ukrainian economic system because most households moved away from investment activity almost completely and because of significant problems in corporate governance of Ukrainian economic entities; this is especially true for investment support of small (micro-) and medium-sized business; from foreign investors, which, in the context of distrust of this type of investors to the Ukrainian market and their constant oppression by state institutions and Ukrainian partners, leads to critically low investment support of the country’s economy, where resources flow in the economic system from the shadow market under the guise of foreign investment (Melnik, Kubatko, Pysarenko, 2014).

While attracting investment, Belarus emphasizes state support of the economy, which, in the absence of significant financial opportunities in state institutions, as well as low efficiency of such investment leads to significant restrictions on investment in the country’s economic system. Domestic private and foreign investment in Belarus is limited due to a number of economic, social and political reasons (Hrechyshkina, Samakhavets, 2019).

As regards credit resources, they are available in Ukraine only to a small number of enterprises due to the requirements of banking institutions and the cost of raising and servicing, while in Belarus mostly state-owned enterprises can count on affordable credit (Gattini, Borysko, 2018; Volshunov, Riabushka, Bielova, 2019).

Given these issues, Belarus and Ukraine need to introduce new tools to stimulate their economic development, which indicates the low stability of national economies.
systems by increasing the opportunities for credit support to businesses at affordable prices, including small and medium-sized businesses. Under these conditions, foreign currency refinancing can be such an instrument. The mechanism for using this instrument will be as follows: public institutions identify priority areas to stimulate economic development; the authorized banks that will provide loans are determined; borrowing companies apply for a loan; the authorized bank considers it and upon approval of the loans receives refinancing in foreign currency from the Central Bank; having received foreign currency credit resources through the authorized bank, the borrower sells them to the Central Bank and receives the national currency; when repaying the loan, the borrower buys currency in the foreign exchange market through the authorized bank, or if it is an exporter – uses its own foreign exchange earnings and closes the loan agreement; the bank gives foreign exchange resources to the Central Bank, which increases its gold and foreign exchange reserves.

The use of this instrument has significant advantages for transition economies selected for the study of states, which include:

– growth of credit support for the economic system;
– growth of gold and foreign exchange reserves of Central Banks;
– decreasing demand for currency during the loan repayment period in case the borrower is an exporter;
– stimulating the development of priority sectors and industries for national economies;
– increasing the number of small and medium-sized enterprises;
– reducing the cost of credit resources for business;
– stimulating the banking system development;
– increasing business activity in the country, due to the synergy effect among other things;
– growth of tax and other revenues of the state and local self-government;
– increasing the income level of business entities;
– increasing the household income;
– reducing the unemployment;
– acts as an additional instrument of the central bank as part of the currency policy.

Table 2
Identifying key areas of impact of foreign currency refinancing on transition economies

<table>
<thead>
<tr>
<th>Factor</th>
<th>Regression model</th>
<th>R²</th>
<th>r²</th>
<th>r₁</th>
<th>r₂</th>
<th>r₃ (&gt; , &lt;) rₑ</th>
</tr>
</thead>
<tbody>
<tr>
<td>GDPr</td>
<td>power</td>
<td>0.344</td>
<td>0.587</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>LPS</td>
<td>logarithmic</td>
<td>0.725</td>
<td>0.852</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>BR</td>
<td>linear</td>
<td>0.623</td>
<td>0.789</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>IBE</td>
<td>power</td>
<td>0.519</td>
<td>0.720</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>HI</td>
<td>exponential</td>
<td>0.677</td>
<td>0.823</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>Mh</td>
<td>linear</td>
<td>0.346</td>
<td>0.588</td>
<td>0.537</td>
<td>&lt;</td>
<td></td>
</tr>
<tr>
<td>I</td>
<td>logarithmic</td>
<td>0.415</td>
<td>0.644</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
<tr>
<td>NCR</td>
<td>power</td>
<td>0.390</td>
<td>0.625</td>
<td>0.537</td>
<td>&gt;</td>
<td></td>
</tr>
</tbody>
</table>

Source: developed by the author

The use of a new element of stimulating the economy may, however, adversely affect the growth of the monetary base, inflation and devaluation processes in the countries selected for the study, which requires the identification of key determinants of the impact of its application.

4.3. Key areas of impact of foreign currency refinancing in transition economies

The above study allowed to identify possible key areas of impact of foreign exchange refinancing on the economic systems of the countries selected for the study, which should include: real GDP (GDPr); loan portfolio size (LPS); budget revenues of different levels (BR); income of business entities (IBE); household income (HI); monetary base size (Mh); inflation (I); national currency rate (NCR). We consider it appropriate to distinguish those areas that are really key and have a high correlation with the size of foreign currency refinancing through correlation and regression analysis. To do this, we will use the regression functions and evaluate the correlation ratio of the determinants according to the three verification methods proposed by S. Tsonoeva (2020). Table 2 shows the data obtained.

In view of the above evaluation, we can note the following:

– the impact of foreign currency refinancing on real GDP will be noticeable, but this factor will be one of many influencing the country’s gross domestic product (only one of the three methods of verification included foreign exchange refinancing among the key factors influencing real GDP);
– foreign currency refinancing will have a strong impact on the size of lending in transition economies, as well as revenues of budgets of different levels, businesses, households (two of the three methods of verification have confirmed this);
– foreign currency refinancing will have a negligible impact on the monetary base size, inflation and the national currency exchange rate (only one of the verification methods indicated a high correlation).

Thus, based on the results of verification of the areas of impact of foreign currency refinancing on transition...
economies on the example of Ukraine and Belarus, we can say that it will have the key impact on: the size of lending; revenues of budgets of different levels, business entities, households. At the same time, we can refute the possibility of a significant negative impact of foreign currency refinancing on the monetary base growth, inflation and devaluation processes in the countries selected for the study.

5. Discussion

Transition economies need to find new ways and instruments to stimulate their economic development. At the same time, special attention should be paid to the instruments to increase the volume and reduce the cost of lending to businesses. Foreign currency refinancing may be one of those instruments for the economic systems of Ukraine and Belarus. It is necessary to test several hypotheses.

Analysis of the development of the economies of Belarus and Ukraine for 1999 to 2019 showed that since 2008 there has been almost no growth due to the accumulating problems. Thus, the first hypothesis of the study is confirmed.

The study of foreign currency refinancing as one of the possible elements of stimulating the economic development of the economic systems of Ukraine and Belarus showed that it has a mostly positive impact on the economies of the countries selected for the study. Thus, the second hypothesis is partially confirmed.

The correlation and regression analysis revealed that foreign currency refinancing has a limited number of key areas of influence on the economies of Ukraine and Belarus, and refuted its negative impact on the monetary base growth, inflation processes and national currency devaluation. This allowed to confirm the third hypothesis of the study.

Given the above, we can note that the we achieved the purpose of the study set at the beginning of the work. The key value of this article is the substantiation of the use of foreign currency refinancing as one of the new elements of stimulating the development of transition economies of Ukraine and Belarus.

In this regard, we can identify some limitations in the application of the results of this article, namely: the need to test the proposed element for other transition economies; assessment of the introduction of foreign currency refinancing on economic systems, taking into account the comparative assessment of the monetary aggregates, both in transition and developed national economies. At the same time, the said restrictions do not reduce the scientific and practical value of this article, and rather describe the prospects for further research.

6. Conclusion

Transition economies, including the economic systems of Ukraine and Belarus, need to find new ways (elements) to ensure their long-term growth under the current conditions of the international and world economic systems. The intensification of business activity due to increased credit support for business entities becomes especially important, which can be achieved by introducing foreign currency refinancing of the country’s banking system by the central bank for these purposes. This makes it important and appropriate to study both the introduction of foreign currency refinancing in transition economies and its impact on economic systems of this type on the example of Ukraine and Belarus.

The study will allow to identify key areas of impact of foreign currency refinancing on transition economic systems, reveal its pros and cons for economies of this type on the example of Ukraine and Belarus.

The practical implementation of the proposals and conclusions of this article should be considered in the context of their importance to ensure the long-term development of transition economies, especially in Ukraine and Belarus.

Prospects for further research based on the scientific results of this study include: assessing the use of foreign currency refinancing to stimulate the economic development of transitive economic systems of countries other than Ukraine and Belarus; analysing foreign currency refinancing to maximize the development of transition economies.

References:


