## GLOBAL MONETARY INTEGRATION AND DETERMINATION OF STRATEGIC PRIORITIES FOR THE EXCHANGE RATE POLICY IN UKRAINE

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#### INTRODUCTION

The integration process, which initially actively developed only among a small number of countries, now encompasses all continents of the world. There are several reasons for the rapid increase in the number of integration associations. Among them are the idea of open economy becoming more popular, the strengthening of specialization processes, and the growth of the MNCs role in the international division of labour.

The internationalization and fragmentation of the world's production, distribution, exchange and consumption is reflected in the currency system, which has long since been not exclusively determined by political boundaries. The concept of 'One State – One Currency' has ceased to be (and, by and large, has never been) an axiom of the global financial system. As Nobel laureate Robert Mundell has quipped, emphasizing efficiency considerations, the optimum number of currencies is like the optimum number of gods: "an odd number, preferably less than three" loft course, taking into account the global price, income and productivity divergence (and significant political resistance), the monochrome world is now utopian. Rather, while considering the spatial organization of currency relations, we can talk about the phenomenon that B. Cohen informally calls "monetary geography" 23.

<sup>&</sup>lt;sup>1</sup> Mundell, R. A. A theory of optimum currency areas / R. A. Mundell. // The American Economic Review, 1961, Vol. 51, No. 4, pp. 657–665.

<sup>&</sup>lt;sup>2</sup> Cohen, B. J. The geography of money / B. J. Cohen. Ithaca, NY: Cornell University Press, 2000. ISBN 978-0-8014-8513-8.

<sup>&</sup>lt;sup>3</sup> Ліщинський, І. Нова економічна географія та альтернативні концепції агломерації виробництва / І. Ліщинський. // Журнал європейської економіки, 2009, Vol. 8, No. 3, pp. 241–264.

Theoretical and practical aspects of monetary integration, exchange rate policy, the historical reasons for the function of dollarization and currency board have been researched by Arteta C., Balassa B., Baliño T., Bergin P., Berkmen S., Bignon V., Bogetic Z., Bordo M., Borensztein E., Brillembourg A., Broda C., Catão L., Claessens S., Cohen B., De La Torre A., Eichengreen B., Gelos M., Ghosh A., Girton L., Hartmann P., Honig A., Ingram J., Ize A., Kenen P., Keynes J., Kokenyne A., Levy-Yeyati E., Mecagni M., Miles M., Mugano G., Mundell R., Mwase N., Nicoló G., Ortiz G., Reinhart C., Rose A., Silva J., Vetlov I., Vieira F., Weymouth S.

The problem of selecting an appropriate exchange rate regime still plagues the economic scientific community very much. The economic community is, to some extent, divided between those who believe that exchange rates do not matter (monetarists) and those who believe that exchange rates matter and can and should be an essential part of the economic policy (DeGrauwe, 2004, Liashenko, 2012, p. 300). After many years, we know that truth is somewhere in-between. J. Frankel (1999)<sup>4</sup> is right, when he states "that no single exchange rate regime is appropriate for all the countries or at all times". Thus, we have to investigate the cases properly to use the right regime for the country.

The **purpose** of the research is justification of the process of global monetary integration and determining in this context the priorities of exchange rate policy in Ukraine. The **object** of research is the country's monetary regime under the conditions of globalization. The **subject** of research is a set of tools to be implemented for the adjustment of national monetary policy to the processes of global monetary integration. The **tasks** of the paper correspond to its structural parts and include: reasoning of monetary integration; selection of dollarization and currency board as the most appropriate types of monetary integration practice for the developing countries; classification of exchange rate regimes; review of economic and financial conditions of Ukrainian development; justification of a currency board as the possible type of exchange rate arrangement for Ukraine.

# MONETARY INTEGRATION IN THE CURRENT WORLD MONETARY SYSTEM

Regulation of currency relations in the world community developed within the genesis of the world monetary system. International currency

<sup>&</sup>lt;sup>4</sup> Frankel, J. (1999). No single currency regime is right for all countries. National Bureau of Economic Research, Working Papers 7238.

relations were conditioned by the process of creating the world market, the deepening international division of labour and the development of economic relations between different states.

The international monetary system includes: international payment instruments (freely convertible currencies, international reserve assets); exchange rate regimes, including exchange rates and currency parities; conditions for convertibility; mechanisms for providing the international trade with foreign exchange payment instruments; regulation and unification of international payments; regimes of international currency and gold markets; status of intergovernmental institutions that regulate foreign exchange relations; networks of national and international banks engaged in international payment and credit transactions related to foreign economic activities<sup>5</sup>.6

The world monetary system is designed to fulfill two main functions: firstly, to create favourable conditions for the development of production and the international division of labour, and secondly, and most importantly, to ensure the smooth functioning of its structural elements<sup>7</sup>.

The instability problems of the modern international monetary system lie in increasing structural global imbalances and the accumulation of hidden systemic risks. The policy of preserving the old order conserves the weak elements of the structure and preserves its instability. The real stabilization of the world economic and financial system requires the formation of a new approach, new principles and basis for the existence of international monetary system. Modern currency order is limited or unable to create the set of mechanisms necessary for stabilizing the system in a timely and adequate manner. Since the security of the whole system of political and economic relations is connected with the conscious necessity of moving to the new order of the international monetary system, the latter must be reformed and new concepts must be found.

Monetary integration is one of the main trends of the global monetary system at the present stage of globalization of the world economy. Monetary integration should be considered in the aspect of implementing the coordinated monetary policies of its member-countries and the creation and functioning of international organizations engaged in interstate currency regulation.

Mediating all international economic relations of the subjects of the world economy, foreign exchange relations are experiencing profound

 $<sup>^5</sup>$  Cohen, B. J. The geography of money / B. J. Cohen. Ithaca, NY : Cornell University Press, 2000. ISBN 978-0-8014-8513-8.

<sup>&</sup>lt;sup>6</sup> Balassa, B. A. The theory of economic integration / B. A. Balassa. R. D. Irwin, 1961.

<sup>&</sup>lt;sup>7</sup> Лизун, М. В. Розвиток світової валютної системи крізь призму її елементів / М. В. Лизун. // Вісник Тернопільського національного економічного університету, 2016, No. 4, pp. 82–95.

qualitative changes together with the sphere of international production, services, investment. Monetary integration and the forms it takes, is usually associated with regional economic integration and the emergence of regional currencies.

The most common in the scientific literature interpretation of integration's evolution is represented by B. Balassa, who identified five stages: free trade area, customs union, common market, economic union, political union (Balassa, 1961)<sup>8</sup>. The typology was based on criteria abolition of discrimination between foreign companies and degree of liberalization of the international factor movement. At the highest stage, the harmonization and unification of social economic and monetary policy takes place.

One of the most difficult practical problems concerns the process of transition to full monetary integration. The debate between 'monetarists' and 'economists' about strategy and the timing of further steps toward monetary union has dealt largely with this interim stage. 'Monetarists' argue that positive steps toward monetary integration would strengthen and accelerate the process of economic integration. Such steps would force member nations to coordinate their economic and financial policies, thus reducing disparities in wage and price trends and making exchange-rate rigidity easier to achieve<sup>9</sup>. 'Economists' argue that policy harmonization and real economic integration must come first, and that further steps toward monetary integration should not be taken until wage and price changes have in fact converged and structural adaptations in response to intra-Community free trade have been completed (Ingram, 1973)<sup>10</sup>.

But nevertheless monetary integration leads to positive effects, if there are sufficient conditions. In a path-breaking paper, Rose used an augmented gravity equation to show that trade between countries sharing the same currency is much larger than trade between other pairs of countries (Rose, 2000)<sup>11</sup>. His cross-sectional regression results imply that the bilateral trade between two currency-union countries is, on average, 3.35 times as large as the bilateral trade between other countries. In language used hereafter, the trade raising effect of a currency union is 235 per cent, and this is additional to the

<sup>&</sup>lt;sup>8</sup> Balassa, B. A. The theory of economic integration / B. A. Balassa. R.D. Irwin, 1961.

<sup>&</sup>lt;sup>9</sup> Лизун, М. В. Теорія оптимальних валютних зон як концептуальна основа регіональних валютних угруповань / М. В. Лизун. // Журнал європейської економіки, 2016, No. 3, pp. 312–334.

<sup>&</sup>lt;sup>10</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.

<sup>&</sup>lt;sup>11</sup> Rose, A. K. One money, one market: estimating the effect of common currencies on trade / A. K. Rose. National Bureau of Economic Research, 1999.

most obvious trade-raising effect of a currency union – the complete suppression of exchange-rate variability (Kenen, 2008)<sup>12</sup>.

Generally, the economic literature (e.g.) considers two quite different processes to be a part of monetary integration or, in other words, currency consolidation<sup>13</sup>. They are:

- Dollarization one-way state decision on full or partial use of foreign currency at the same time or instead of the national currency<sup>14,15</sup>;
- Forming full-fledged monetary union<sup>16</sup> collective decision of two or more countries to use the same currency<sup>17</sup>.

Despite several common characteristics and the end result (fewer currencies in use), these two processes differ greatly in their meanings. Namely, in the reason behind their use and the subjectivity of the monetary policy (in case of a monetary union, the policy is implemented by the central bank of the union in consideration of collective interests, whereas in case of substitution, the initiator and often sole beneficiary is the foreign central bank).

We focus on two of the very hard pegs – the currency board and dollarization – because these two systems are very often proposed as a solution for Ukraine. We think that the solution of common currency and especially an early adoption of the Euro is unrealistic and that is the reason why we do not include this solution in our discussion.

There are two ways a country can adopt a foreign currency. The first one is the unilateral way, when a country adopts a currency of the foreign country without its consent, as it was done for example in Kosovo or Montenegro, when they adopted the Euro unilaterally. This case is identical to dollarization and this will be covered in this section. The second one is the case of a multilateral adoption of currency, that is an adoption of currency with agreement of the country to which the currency is going to be adopted, like the official adoption of Euro as it happened 19 times till now.

<sup>&</sup>lt;sup>12</sup> Kenen, P. Regional monetary integration / P. Kenen, E. Meade. Cambridge University Press, 2008.

<sup>&</sup>lt;sup>13</sup> Currency consolidation (in Forex terminology) is also referred to as a long-term lateral movement of the currency against the uptrend or downtrend.

<sup>&</sup>lt;sup>14</sup> Usually, the term *dollarization* is used regardless of the name of the substitute currency (including for the euro or the South African rand), although sometimes the term *euroisation* is used in relation to the European currency.

<sup>&</sup>lt;sup>15</sup> Often, especially in earlier studies and in Ukrainian literature, currency substitution is seen as similar to dollarization, but in contemporary writings it is considered a somewhat narrower process, as will be discussed below.

<sup>&</sup>lt;sup>16</sup> In Western literature, they are distinguished from ordinary currency or monetary unions that do not involve further economic integration of member states, except for the introduction of a common currency [2, 3].

<sup>&</sup>lt;sup>17</sup> Investopedia Currency union / Investopedia. 2011.

The dollarization involves a number of slightly different processes, which have led to numerous and varied research directions on the subject. The classification of dollarization is carried out in three ways according to: (1) the type of assets or liabilities, (2) the formality of the process and (3) its completeness (Fig. 1).

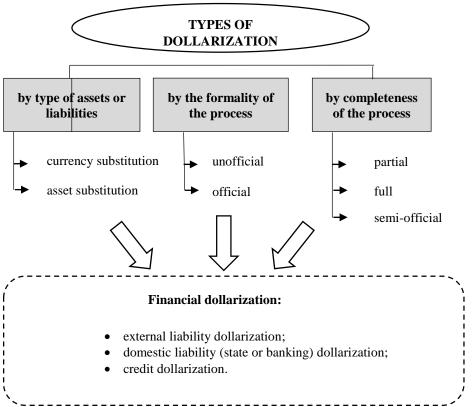


Fig. **Error! No text of specified style in document.** Types of dollarization Source: created by the authors

According to the modern classification  $^{181920}$  there are the following types of dollarization:

<sup>&</sup>lt;sup>18</sup> Levy-Yeyati, E. Financial dedollarization: a carrot and stick approach / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2003.

<sup>&</sup>lt;sup>19</sup> Levy-Yeyati, E. Liquidity insurance in a financially dollarized economy / E. Levy-Yeyati. National Bureau of Economic Research, Inc, 2006.

<sup>&</sup>lt;sup>20</sup> Borensztein, E. The pros and cons of full dollarization / E. Borensztein, A. Berg. Rochester, NY: Social Science Research Network, 2000.

- 1. Informal, unofficial, de facto dollarization, which is usually partial and includes the following sub-types:
- a). Currency substitution, transaction dollarization<sup>21</sup> execution of the majority of the money functions in the domestic economy by a foreign currency, with foremost emphasis on the functions of the medium of exchange, unit of account<sup>22</sup>;
- b). Asset substitution foreign currency acting<sup>23</sup> mainly as the store of value<sup>24</sup>, although sometimes foreign currency may partly fulfill the functions of measure of value or medium of exchange (for example, when buying real estate).
- 2. Formal, official, de jure dollarization, which is a complete dollarization and involves replacing the national currency with a foreign currency<sup>25</sup> in all transactions of state entities and, most importantly, the denomination of all public and private assets and liabilities in foreign currency.
- 3. Semi-official dollarization, bimonetary systems Foreign currency is an official legal tender at the level of the national currency. Often, such equality is rather relative, for example, opening deposits is allowed in foreign currency, whereas salary payments or small purchases are made in the national currency<sup>26</sup>.

In addition, in the structure of dollarization (mainly as a component of the unofficial asset substitution), some distinguish financial dollarization with numerous subtypes. Financial dollarization is the accumulation of assets and liabilities denominated in foreign currency (bank deposits, corporate and government bonds, etc.) by residents. Within the framework of financial dollarization, most researchers often investigate:

- external liability dollarization<sup>27</sup>, both corporate and public;
- domestic liability dollarization, which is most often considered in the context of the liabilities of state and banking (so-called dollarization of deposits) sectors [6];

<sup>26</sup> Bogetic, Z. Official dollarization: current experiences and issues / Z. Bogetic. Rochester, NY: Social Science Research Network, 2000.

<sup>&</sup>lt;sup>21</sup> Sometimes currency substitution can be official.

<sup>&</sup>lt;sup>22</sup> That is, national currency is a pseudo-currency according to the *currency pyramid* of B. Cohen.

<sup>&</sup>lt;sup>23</sup> Or securities denominated in it.

<sup>&</sup>lt;sup>24</sup> That is, national currency is a pseudo-currency according to the *currency pyramid* of B. Cohen.

<sup>&</sup>lt;sup>25</sup> Sometimes excluding coins.

<sup>&</sup>lt;sup>27</sup> Sometimes the analysis of non-financial external liability dollarization

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• credit dollarization<sup>28</sup> and others.

Several types of dollarization can be observed simultaneously in a state in accordance with the variety of assets and liabilities predominantly represented in foreign currency (Table 1).

Table Error! No text of specified style in document. Assets and liabilities most susceptible to dollarization

Tibbets and machines most susception to domain autom							
	Households / Enterprises	Banking sector	Public sector				
Assets	Cash and quasi money Error! Bookmark not defined. Bank deposits Assets denominated in foreign currency Foreign assets	Foreign currency assets abroad Loans to households and enterprises Loans to the public sector Assets denominated in foreign currency	Net international reserves Government foreign currency savings abroad				
Liabilities	Debt Liabilities denominated in foreign currency Foreign liabilities	Deposits of households, enterprises and the public sector Foreign debt	Reserve requirements for foreign currency bank deposits Net foreign currency loans External debt Indexed debt				

Source: modified by the authors<sup>2930</sup>

The most important prerequisites for dollarization are:

- significant macroeconomic turbulences and high levels of inflation;
  - financial repression<sup>31</sup> and control over capital flow;

<sup>&</sup>lt;sup>28</sup> Gelos, M. G. Macroeconomic implications of financial dollarization: the case of Uruguay / M. G. Gelos, M. A. L. Mejía, M. M. A. Piñón-Farah. International Monetary Fund, 2008. ISBN 978-1-4519-4002-2.

<sup>&</sup>lt;sup>29</sup> Bignon, V. Monetary union with a single currency and imperfect credit market integration / V. Bignon, R. Breton, M. R. Breu. FIW, 2015.

<sup>&</sup>lt;sup>30</sup> Investopedia Currency Union / Investopedia. 2011.

<sup>&</sup>lt;sup>31</sup> Policies that make lenders' income less than inflation (one of the means of liquidating government debt in the national currency).

- use of foreign currency as an anchor for achieving macro stability;
  - underdeveloped financial markets<sup>32</sup>.

### THE EVOLUTION OF DOLLARIZATION MODELS

Among the many theoretical and empirical research efforts in the field of dollarization, we can clearly distinguish several stages, which were influenced by the political and economic reality of their time.

Table 2 Evolution of dollarization models

Time Period	Model Types	Determinants		
1970s- 1980s	Currency substitution view	Inflation and macroeconomic imbalances, for instance fiscal cliffs		
1980s- 1990s	Attempts to adjust the currency substitution models to new economic reality	Remembrance of past periods of inflation; Hysteresis effect		
1990s-	Currency portfolio view	Choosing the optimal ratio of the set of currencies by the criterion of <i>risk-return</i> (including the idea of <i>original sin</i> )		
2000s	Market failure view	Market imperfections (including the threat of default in some countries) and externalities		
	Institutional view	'Weak Institutions', exchange rate regime, regulatory measures		
2000s- 2010s	De-dollarization view	Anti-inflationary policy, macro- prudential measures, fall of the global interest rates, etc.		

Source: systematized by the author

<sup>&</sup>lt;sup>32</sup> Mecagni, M. Dollarization in Sub-Saharan Africa: experience and lessons / M. Mecagni, J. S. Corrales, J. Dridi[et al.]. Washington, DC, U.S.A: International Monetary Fund, 2015. ISBN 978-1-4983-6847-6.

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The first studies<sup>33343536</sup> of the 1970s and 1980s highlighted the differences between the two types of dollarization: currency substitution (foreign currency as a means of circulation) and the replacement of assets (foreign currency as a means of accumulation), mainly focusing on the first type<sup>37</sup>. The high level of inflation in Latin American countries was a historic prerequisite and statistical basis for research, mainly due to significant fiscal imbalances in the states of the region<sup>38</sup>. The main postulate of the first concepts was the statement about the ineffectiveness of monetary policy instruments in the context of currency substitution. It was concluded that the elasticity of the currency substitution increases with the rise of perceived risk of changes in the value of domestic currency, whereas the expected level of inflation is the main driving force of dollarization in the same way as it is influenced by a change in exchange rates.

However, these seemingly obvious assertions were not confirmed by time – in the 1990's inflation levels in Latin America dropped significantly and stabilized, while dollarization continued to be high. A possible explanation for such a phenomenon was residents vividly remembering the past periods of inflation, which required a disproportionately longer period of stability and an increase in the value of currency for the rejection of a foreign substitute<sup>39</sup>. The reduction in the cost of switching to the US dollar<sup>40</sup> as a convenient and already familiar means of payment is also considered an alternative reason for this<sup>41</sup>. Therefore, we can observe a phenomenon similar to the *decision inertia* – one

<sup>33</sup> Girton, L. Theory and implications of currency substitution / L. Girton, D. E. Roper. Board of Governors of the Federal Reserve System (U.S.), 1976.

<sup>&</sup>lt;sup>34</sup> Brillembourg, A. A model of currency substitution in exchange rate determination, 1973-78 (modèle de substitution des monnaies dans la détermination des taux de change, 1973-78) (un modelo de sustitución de monedas en la determinación del tipo de cambio, 1973-78) / A. Brillembourg, S. M. Schadler. // Staff Papers (International Monetary Fund), 1979, Vol. 26, No. 3, pp. 513–542.

<sup>&</sup>lt;sup>35</sup> Miles, M. A. Currency substitution, flexible exchange rates, and monetary independence / M. A. Miles. // American Economic Review, 1978, Vol. 68, No. 3, pp. 428–436.

<sup>&</sup>lt;sup>36</sup> Ortiz, G. Dollarization in Mexico: causes and consequences / G. Ortiz. // NBER. 1983, pp. 71–106.

<sup>&</sup>lt;sup>37</sup> Often dollarization was interpreted as currency substitution.

<sup>&</sup>lt;sup>38</sup> Catão, L. Fiscal deficits and inflation / L. Catão, M. Terrones. // Journal of Monetary Economics, 2005, Vol. 52, No. 3, pp. 529–554.

<sup>&</sup>lt;sup>39</sup> Savastano, M. M. A. Dollarization in latin america: recent evidence and some policy issues / M. M. A. Savastano. International Monetary Fund, 1996. ISBN 978-1-4552-6356-1.

<sup>&</sup>lt;sup>40</sup> Fixed cost of switching to the dollar.

<sup>&</sup>lt;sup>41</sup> Catão, L. Fiscal deficits and inflation / L. Catão, M. Terrones. // Journal of Monetary Economics, 2005, Vol. 52, No. 3, pp. 529–554.

of the cornerstones of the reduced transaction costs models from the internationalization of the currency, which was discussed in the previous paragraph. Not surprisingly, the already mentioned phenomenon of *hysteresis* is often also presented in the context (for example  $^{4243}$ ).

In the 1990s, the emphasis on dollarization studies gradually began to shift towards analyzing the substitution of assets and, in particular, financial dollarization. A wide range of scientific developments in this direction is classified into three groups<sup>4445</sup>: the portfolio view; market failure view and institutional view. Also notable in this period are the work of A. Ghosh, A.M. Gulde, H. Wolf<sup>46</sup>, which concludes that for states with higher dollarization rates or tighter binding of currency rates, as a rule, the inflation is lower and the rate of economic growth is higher. This happens even despite losing the benefits of monetary policy flexibility.

Portfolio view models explain dollarization through the choice of optimal ratio of the set of currencies using the *risk-return* criterion. For example, A. Ize and E. Levy-Yeyati<sup>47</sup>, make an assumption about the direct dependence of the proportion of assets dollarization on the ratio of inflation and the nominal exchange rate<sup>48</sup>. Based on this they make the following conclusions:

• the choice of exchange rate regime depends on the state monetary policy (the combination of "floating exchange rate + inflation targeting" or "rigid + permanent unchanged fixation of the exchange rate" hold back dollarization, while the combination of "floating exchange rate + high inflation" or "strict fixation of currencies + frequent revision of currency parity", on the contrary, stimulate it);

<sup>&</sup>lt;sup>42</sup> Levy-Yeyati, E. Financial dedollarization: a carrot and stick approach / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2003.

<sup>&</sup>lt;sup>43</sup> Vieira, F. A. C. Financial dollarization and systemic risks: new empirical evidence / F. A. C. Vieira, M. Holland, M. F. Resende. // Journal of International Money and Finance, 2012, Vol. 31, No. 6, pp. 1695–1714.

<sup>&</sup>lt;sup>44</sup> Mecagni, M. Dollarization in sub-saharan africa: experience and lessons / M. Mecagni, J. S. Corrales, J. Dridi[et al.]. Washington, DC, U.S.A: International Monetary Fund, 2015. ISBN 978-1-4983-6847-6.

<sup>&</sup>lt;sup>45</sup> Levy-Yeyati, E. Financial dollarisation: evaluating the consequences / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2005.

 $<sup>^{46}</sup>$  Ghosh, A. R. Currency boards: the ultimate fix? / A. R. Ghosh, A.-M. Gulde, H. C. Wolf. International Monetary Fund, 1998.

<sup>&</sup>lt;sup>47</sup> Ize, A. Financial dollarization / A. Ize, E. L. Levy-Yeyati. Rochester, NY : Social Science Research Network, 2004.

<sup>&</sup>lt;sup>48</sup> The authors refer to this ratio as the coefficient of exchange rate pass-through.

- states with more open economies are more prone to dollarization (depending on the weight of imports components in the exchange rate formation);
- residents and non-residents form portfolios of assets in different ways the share of residents' assets denominated in the national currency (the currency of future consumption) is higher than that of non-residents. This assertion has common ideas with the observation of other economists about the inverse dependence of debt dollarization on the depth of the domestic market<sup>49</sup>, as well as the level of domestic liability dollarization on the size of the domestic financial market<sup>5051</sup>. In this context, we must note the rather popular concept of *original sin* the inability of developing countries to attract loanable funds denominated in the national currency from abroad (or even within the country for the long term)<sup>52535455</sup>.

In the market failure view, the main reasons for dollarization are considered as derivatives of market imperfections and externalities, as well as the inappropriate regulatory system. Thus, C. Broda Ta E. Levy-Yeyati<sup>56</sup> associate dollarization<sup>57</sup> with a positive correlation between default probability, real exchange rate and incomplete awareness of the structure of

<sup>49</sup> Bordo, M. D. How 'original sin' was overcome: the evolution of external debt denominated in domestic currencies in the United States and the British Dominions / M. D. Bordo, C. Meissner, A. Redish. National Bureau of Economic Research, 2003.

<sup>&</sup>lt;sup>50</sup> Claessens, S. Government bonds in domestic and foreign currency: the role of macroeconomic and institutional factors / S. Claessens, D. Klingebiel, S. L. Schmukler. The World Bank, 2003.

<sup>&</sup>lt;sup>51</sup> Eichengreen, B. Currency mismatches, debt intolerance and original sin: why they are not the same and why it matters / B. Eichengreen, R. Hausmann, U. Panizza. National Bureau of Economic Research, 2003.

<sup>&</sup>lt;sup>52</sup> Bordo, M. D. How 'original sin' was overcome: the evolution of external debt denominated in domestic currencies in the United States and the British Dominions / M. D. Bordo, C. Meissner, A. Redish. National Bureau of Economic Research, 2003.

<sup>&</sup>lt;sup>53</sup> Eichengreen, B. Currency mismatches, debt intolerance and original sin: why they are not the same and why it matters / B. Eichengreen, R. Hausmann, U. Panizza. National Bureau of Economic Research, 2003.

 $<sup>^{54}</sup>$  Eichengreen, B. Exchange rates and financial fragility / B. Eichengreen, R. Hausmann. National Bureau of Economic Research, 1999.

 $<sup>^{55}</sup>$  Hausmann, R. On the determinants of original sin: an empirical investigation / R. Hausmann, U. Panizza. // Journal of International Money and Finance. 2003. Vol. 22, No. 7, pp. 957–990.

<sup>&</sup>lt;sup>56</sup> Broda, C. Endogenous deposit dollarization / C. Broda, E. L. Yeyati. // Journal of Money, Credit and Banking. 2006. Vol. 38, No. 4, pp. 963–988.

<sup>&</sup>lt;sup>57</sup> Particularly, domestic liability dollarization.

the lenders' funds. Other supporters of this approach<sup>5859</sup> use the correlation between changes in real GDP and changes in the real exchange rate as a counterpart to the correlation of default and exchange rates.

Another popular method of analyzing the dollarization is the institutional view. For example, G. de Nicolo et al. 60 revealed a relationship between distrust of the government (which leads to increased dollarization) and weak institutions that do not act as dollar debtors in the event of a sudden devaluation of the national currency. I. Vetlov distinguished the following determinants of dollarization<sup>61</sup>: the high expectations of devaluation, the difference in the levels of inflation, the difference between interest on deposits in national and foreign currencies, current account deficit and insufficient level of reserves<sup>62</sup>. Other studies have shown an inverse relation between the level of dollarization and measures of limiting it (the prohibition of foreign currency deposits for residents) and the rule of law indices<sup>636465</sup>. A. Honig proved the importance of the quality of governance (which was assessed using indicators of bureaucracy, corruption, law and order) in counteracting dollarization<sup>66</sup>. Similarly, S. Weymouth demonstrated the dependence of financial dollarization on the low investor confidence regarding their property rights, which, in turn, manifests itself in a shortage of institutions capable of

 $^{58}$  De La Torre, A. Coping with risks through mismatches: domestic and international financial contracts for emerging economies / A. De La Torre, S. L. Schmukler. // International Finance, 2004, Vol. 7, No. 3, pp. 349–390.

 $<sup>^{59}</sup>$  De La Torre, A. Coping with risks through mismatches: domestic and international financial contracts for emerging economies / A. De La Torre, S. L. Schmukler. // International Finance, 2004, Vol. 7, No. 3, pp. 349–390.

<sup>&</sup>lt;sup>60</sup> Nicoló, G. D. Bank consolidation, internationalization, and conglomeration: trends and implications for financial risk / G. D. Nicoló, P. Bartholomew, J. Zaman, M. Zephirin. // Financial Markets, Institutions & Instruments, 2004, Vol. 13, No. 4, pp. 173–217.

<sup>&</sup>lt;sup>61</sup> Based on the empirical study of the situation in Lithuania.

<sup>&</sup>lt;sup>62</sup> Vetlov, I. Dollarization in Lithuania: an econometric approach / I. Vetlov. Rochester, NY: Social Science Research Network, 2001.

<sup>&</sup>lt;sup>63</sup> Levy-Yeyati, E. Liquidity insurance in a financially dollarized economy / E. Levy-Yeyati. National Bureau of Economic Research, Inc, 2006.

<sup>&</sup>lt;sup>64</sup> Levy-Yeyati, E. Classifying exchange rate regimes: deeds vs. words / E. Levy-Yeyati, F. Sturzenegger. // European Economic Review, 2005, Vol. 49, No. 6, pp. 1603–1635.

<sup>&</sup>lt;sup>65</sup> Rennhack, R. Financial dollarization in Latin America / R. Rennhack, M. Nozaki. // Financial Dollarization / A. Armas, A. Ize, E. L. Yeyati. Palgrave Macmillan UK, 2006, pp. 64–96.

<sup>&</sup>lt;sup>66</sup> Honig, A. Dollarization, exchange rate regimes and government quality / A. Honig. // Journal of International Money and Finance, 2009, Vol. 28, No. 2, pp. 198–214.

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influencing government decisions (the so-called 'Veto Players')<sup>67</sup>. A study by N. Mwase and F. Kumah on the level of real domestic liability dollarization in low-income countries has shown that macro-prudential measures (such as reserve requirements, exchange rate restrictions, etc.) do not particularly restrain dollarization<sup>6869</sup>.

Scholars' views differed about the impact of the exchange rate regime on the dollarization rate: some (e.g. <sup>70</sup>) argue that fixed regime leads to more domestic liability dollarization; others <sup>7172</sup> argue that the regime is not fundamental; still others <sup>7374</sup> indicate that under more flexible regimes, domestic liability dollarization is more intense. Some studies <sup>7576</sup> confirm that the high bilateral volatility of the exchange rate generally contributes to the dedollarization <sup>77</sup>.

<sup>67</sup> Weymouth, S. Political institutions and property rights: veto players and foreign exchange commitments in 127 countries / S. Weymouth. // Comparative Political Studies, 2011, Vol. 44, No. 2, pp. 211–240.

 $<sup>^{68}</sup>$  Mwase, N. Revisiting the concept of dollarization: the global financial crisis and dollarization in low-income countries / N. Mwase, F. Y. Kumah. International Monetary Fund, 2015. ISBN 978-1-4843-0334-4.

<sup>&</sup>lt;sup>69</sup> However, the dependence was not statistically significant.

<sup>&</sup>lt;sup>70</sup> Levy-Yeyati, E. Classifying exchange rate regimes: deeds vs. words / E. Levy-Yeyati, F. Sturzenegger. // European Economic Review, 2005, Vol. 49, No. 6, pp. 1603–1635.

<sup>&</sup>lt;sup>71</sup> Honig, A. Dollarization, exchange rate regimes and government quality / A. Honig. // Journal of International Money and Finance, 2009, Vol. 28, No. 2, pp. 198–214.

<sup>&</sup>lt;sup>72</sup> Berkmen, S. P. Exchange rate policy and liability dollarization: what do the data reveal about causality? / S. P. Berkmen, E. Cavallo. // Review of International Economics, 2010, Vol. 18, No. 5, pp. 781–795.

 $<sup>^{73}</sup>$  Weymouth, S. Political institutions and property rights: veto players and foreign exchange commitments in 127 countries / S. Weymouth. // Comparative Political Studies, 2011, Vol. 44, No. 2, pp. 211–240.

<sup>&</sup>lt;sup>74</sup> Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.

 $<sup>^{75}</sup>$  Garcia-Escribano, M. Peru: drivers of de-dollarization / M. Garcia-Escribano. International Monetary Fund, 2010.

<sup>&</sup>lt;sup>76</sup> Kokenyne, A. Dedollarization / A. Kokenyne, J. Ley, R. Veyrune // IMF Working Paper, 2010, Vol. 10, No. 188.

<sup>&</sup>lt;sup>77</sup> Evidence of this are the facts of a significant de-dollarization in Laos (1995), Poland (1995-2000), Turkey (2001), Bolivia, Peru, Paraguay and Uruguay (2001-10).

Since 2000, many countries have observed decentralization<sup>78</sup> processes, which have been reflected in scientific research<sup>798081</sup>. However, the trend was not particularly long-term – after the global financial crisis of 2008, the processes of decentralization slowed down, and in some (but not all) states went down.

# ADVANTAGES AND DISADVANTAGES OF DOLLARIZATION FOR DEVELOPING COUNTRIES

The consequences of dollarization cannot be considered unambiguously for the states that are its subjects. However, perhaps more important is the aspect of the states that use dollarization instead of full autonomous monetary policy (in the case of official dollarization) or adapt monetary policy to the loss of some functions of the national currency (under the conditions of partial dollarization). The results of comparing the advantages and threats of dollarization are shown in Fig. 2.

In this context, the following benefits of dollarization of the economies of developing countries can be highlighted:

- 1. Reducing administrative costs in support of the infrastructure for issuing and servicing the national currency<sup>82</sup> in the case of full dollarization, as well as reduction of transaction losses<sup>83</sup> in the case of partial dollarization. The effect of this reduction is particularly significant for small economies;
- 2. Minimizing the risk of the national currency depreciation, as well as stabilizing the inflation processes (especially in the context of official dollarization, or different types of exchange rate fixation). First of all, the volatility of the real exchange rate decreases, since dollarization gives more opportunities for hedging and conducting a weighted exchange rate policy in accordance with the currency basket of the trading partners<sup>84</sup>.

<sup>78</sup> The IMF describes this process in a rather colourful way as *to lean against the wind*.

<sup>&</sup>lt;sup>79</sup> Kokenyne, A. Dedollarization / A. Kokenyne, J. Ley, R. Veyrune. // IMF Working Paper, 2010, Vol. 10, No. 188.

<sup>&</sup>lt;sup>80</sup> Catão, L. Financial de-dollarization; a global perspective and the Peruvian experience / L. Catão, M. Terrones. International Monetary Fund, 2016.

<sup>&</sup>lt;sup>81</sup> Levy-Yeyati, E. Financial dedollarization: a carrot and stick approach / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2003.

 $<sup>^{82}</sup>$  Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973

<sup>&</sup>lt;sup>83</sup> Gopinath, G. Currency choice and exchange rate pass-through / G. Gopinath, O. Itskhoki, R. Rigobon. National Bureau of Economic Research, Inc, 2007.

<sup>&</sup>lt;sup>84</sup> Gopinath, G. Currency choice and exchange rate pass-through / G. Gopinath, O. Itskhoki, R. Rigobon. National Bureau of Economic Research, Inc, 2007.

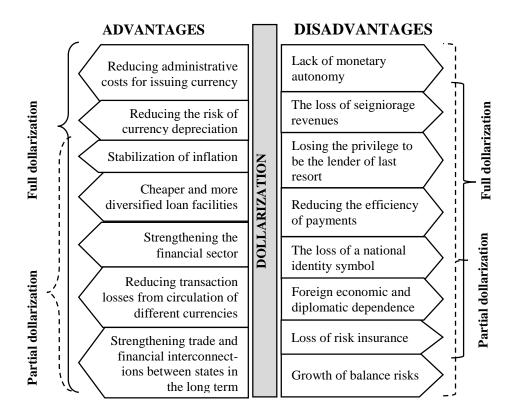


Fig. 2. Advantages and disadvantages of dollarization for developing countries

Source: created by the authors

3. Dollarization is often associated with a significant decrease in interest on loans for domestic borrowers. This effect arises, first, because of the increased access to global credit resources for the commercial banks<sup>85</sup> and, secondly, because of the reduced risk of national currency depreciation, which in turn reduces the 'margin' of domestic creditors<sup>86</sup>. At the same time, the reduction of exchange rate risk also leads to increased confidence and, accordingly, the investment of foreign investors and lenders that become cheaper, promote diversification of residents' portfolios, intensification of their consumption and investments and, ultimately, economic growth in the

<sup>86</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973

<sup>85</sup> Bergin, P. Monetary union / P. Bergin.

state. In addition, by allowing the creation of currency deposits in commercial banks, the government stimulates demonetization of the economy, slows down the currency substitution and broadens sources of income for the commercial banks. Ultimately, this reduces capital outflows and enhances the financial stability of the state<sup>87</sup>.

- 4. Strengthening the financial sector of the state may be achieved through this kind of integration with a more powerful issuer of substitute currency. This will stimulate domestic institutions to increase the efficiency and quality of provided services. Dollarization can be seen as a signal of the country's permanent aspiration to a low level of inflation, fiscal responsibility and transparency (especially if there had been no price and financial stability in the past). Dollarization reduces the loss of purchasing power of taxes accrued today but paid in the future (inverse effect of Olivera-Tanzi)<sup>88</sup>. The amount of required reserves is also reduced, as dollarization and financial integration make the state's financial system a part of the global liquidity pool.
- 5. The strengthening of trade and financial relations between the states in the long-term perspective can be considered yet another positive aspect of dollarization<sup>89</sup>.

In contrast to the considered benefits, a number of threats are also inherent to dollarization. Researchers mostly focus on economic disadvantages – such as loss of monetary autonomy or revenues from the seigniorage, however, according to B. Cohen, they are not as essential as it may seem<sup>90</sup>. The political consequences of dollarization, such as the loss of a mighty national identity symbol, diplomatic isolation, etc., can be considerably more dangerous. Nevertheless, let us consider each of these threat groups in more detail.

In the economic sphere there are the following disadvantages of dollarization:

• Inability to implement unilateral control over the supply of money and the exchange rate results in the loss of monetary autonomy. The Federal Reserve, the ECB or other institutions, head the hierarchical pyramid of

<sup>&</sup>lt;sup>87</sup> Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.

<sup>&</sup>lt;sup>88</sup> Gopinath, G. Currency choice and exchange rate pass-through / G. Gopinath, O. Itskhoki, R. Rigobon. National Bureau of Economic Research, Inc, 2007.

<sup>&</sup>lt;sup>89</sup> Hartmann, P. Currency competition and foreign exchange markets: the dollar, the yen and the euro / P. Hartmann. Cambridge University Press, 1998. ISBN 978-0-521-63273-7.

<sup>&</sup>lt;sup>90</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.

monetary policy under the conditions of official dollarization. When making decisions, they ought to take into account the national interests of the dollarized states only de jure. In fairness, it should be noted that monetary autonomy in dollarized countries is usually lost long before the official recognition or introduction of dollarization. Under the conditions of market factors, the level of currency substitution got higher, so the government's ability to influence the macroeconomic situation lessened. Therefore, the real loss of monetary authority in the case of official dollarization would be purely technical<sup>91</sup>. However, some economists<sup>9293</sup> indicate that fear of dollarization is not unfounded. They indicate that in the context of currency substitution, the economy faces an unstable demand for money, a more elastic price response to monetary shocks, and stronger devaluation expectations. In conditions of financial dollarization (first of all, domestic liability dollarization) requirements for reserves are increased:

- Losing an alternative source of budget revenues seigniorage. In the context of official dollarization, the state loses its prerogative of issuing money, and therefore cannot finance part of its own expenditures through quantitative easing. Although quite often, states receive the right to some compensation for losses by concluding additional agreements with the issuer of the substitute currency for participation in the seigniorage. The loss of seigniorage is also quite significant in conditions of considerable unofficial currency substitution.
- Partial dollarization increases balance sheet risks. Direct currency risks arise because of currency mismatches of bank balances. Indirect credit risks associated with devaluation arise on the basis of significant foreign currency loans to non-hedged borrowers. Devaluation reduces the yield on interest rates on foreign currency loans, limits borrowers' ability to repay foreign currency debt, which in the end may give an impetus to the outbreak of banking and macroeconomic crises<sup>94</sup>.
- Losing the privilege of being the lender of last resort, which results in the inability of the central bank to freely discount in the event of a financial

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<sup>&</sup>lt;sup>91</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.

<sup>&</sup>lt;sup>92</sup> Mundell, R. A. A theory of optimum currency areas / R. A. Mundell // The American Economic Review, 1961, Vol. 51, No. 4, pp. 657–665.

<sup>&</sup>lt;sup>93</sup> Cohen, B. J. The macrofoundation of monetary power / B. J. Cohen. // International Monetary Power / D. Andrews. Ithaca and London: Cornell University Press, 2006.

 $<sup>^{94}</sup>$  Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.

crisis and, accordingly, an increase in liquidity risk for national commercial banks. However, dollarization reduces the overall need for reserves, since external transactions that required exchange of currencies before official dollarization could now be considered equivalent to domestic transactions. Thus, part of the currency assets of central banks from the stabilization fund may be redirected to support financial institutions in crises. Among the alternatives one may consider is creating contingent funds or flexible credit lines with foreign monetary and financial institutions that would have support in the form of future tax revenues or shares from seigniorage<sup>95</sup>.

• Dollarization can reduce the efficiency of payments, since foreign banknotes are not always adapted to local business needs (and small transactions). The dollarized country cannot control the quality of banknotes in circulation<sup>96</sup>. This category of disadvantages can also include a one-time cost of converting prices, computer programs, cash registers, ATMs, etc<sup>97</sup>.

It is more difficult to distinguish political disadvantages and threats of dollarization clearly, given their more complex nature. They include:

- The loss of a national identity symbol. B. Cohen describes two ways such change can have an impact: first, the national monetary unit reminds citizens every day of their connection to the state; second, the monetary unit emphasizes the social cohesion of the residents and their isolation from the 'rest of the world'98.
- The presence of a national monetary unit serves as risk insurance for the government as well. Returning to seigniorage, one can argue that it is somewhat more than just an alternative source of income. More important factor is the fact that the seigniorage can be a 'crisis' source of revenue that the government is able to engage immediately in case of emergencies (such as military operations) without waiting for the receipt of taxes or borrowing. As J. Keynes wrote: "A government can live by these means [seigniorage] when it can live by no other" 1999.

<sup>&</sup>lt;sup>95</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.

<sup>&</sup>lt;sup>96</sup> Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.

<sup>&</sup>lt;sup>97</sup> Gopinath, G. Currency choice and exchange rate pass-through / G. Gopinath, O. Itskhoki, R. Rigobon. National Bureau of Economic Research, Inc, 2007.

<sup>&</sup>lt;sup>98</sup> Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.

<sup>&</sup>lt;sup>99</sup> Silva, J. M. C. S. Currency unions in prospect and retrospect / J. M. C. S. Silva, S. Tenreyro. Centre for Economic Performance, LSE, 2010.

- The threat of foreign economic and diplomatic dependence. Under dollarization, the state cannot completely isolate itself or establish clear economic boundaries with the outside world, thereby losing the symbol of political power. Participation in the currency hierarchy system inevitably leads to dependence.

In general, it can be argued that dollarization is a natural consequence of an increase in the openness of the economy and liberalization of financial markets<sup>100</sup>. Integrating into the world economy, states become more sensitive to external shocks; and the desire of subjects to hedge the risks inevitably leads to some level of dollarization<sup>101</sup>. The task of the state, in this case, should be to determine and maintain the optimal level of dollarization, which would depend on such structural factors as the size of the economy, its openness, the level of financial integration, and the development of markets.

#### **CURRENCY BOARD**

The currency board is a regime of exchange rates, according to which the national currency is secured (more than 50 per cent) with foreign currency reserves, and the exchange of national currency to foreign currency is done on demand and at a fixed exchange rate. Currency board regime assumes that monetary policy is subject to a simple rule – the issue of money is allowed only if there is a reserve of foreign currency. At the same time, the fiscal discipline is achieved by using the mechanism of issuing money only on condition of foreign currency reserves being available. After all, legislative fixation of the exchange rate allows protecting it from speculative attacks, and thus ensuring its stability over a longer period of time. Advantages of the currency board for emerging markets also include a relatively low level of inflation compared to countries that use soft peg or free-floating national currencies.

Looking at the currency board, we see that the proponents of this regime aim to solve three main problems faced by the countries (Goldstein, 2002, p. 22)<sup>102</sup>.

First, by imposing a simple monetary rule, where the money is allowed to be printed only when there are reserves from abroad, the currency board

Mundell, R. A. A theory of optimum currency areas / R. A. Mundell. // The American Economic Review, 1961, Vol. 51, No. 4, pp. 657–665.

<sup>&</sup>lt;sup>101</sup> Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.

<sup>&</sup>lt;sup>102</sup> Goldstein, M. (2002). Managed Floating Plus., From Institute of International Economics. Retrieved on 04/12/2007 from http://iie.com/book-store/342.html.

aims to control the circulation of money and, therefore, to stabilize the inflation (Goldstein, 2002, p. 22).

Second, they hope that the same rule of printing money, when there are currency reserves, will impose fiscal discipline as well because fiscal authorities now know that financing through money printing or credit can cause problems.

Third, they hope that imposing the exchange rate by law will keep the currency stable for longer times without speculative attacks (Goldstein, 2002, p. 21).

Looking to those points from a practical point of view, we can say that empirical research did not reveal clear dependencies. By testing the relationship between exchange rate regimes and inflation, many studies found that countries with currency boards have lower inflation than countries that have soft pegs or free floating regimes (Goldstein, 2002, p. 24). If we take into consideration the size of the countries and other statistical characteristics, the results are not so clear. The same applies for the relationship between exchange rate regimes and fiscal discipline (Goldstein, 2002, p. 23). Testing the relationship between the exchange rate regime and fiscal discipline, the researchers found countries with pegs and currency boards, as well as countries with free floating regimes, that have low fiscal deficits and high fiscal disciplines (Goldstein, 2002, p. 24). As for the issue of very hard pegs, we have to admit that hard pegs are 'secured' by the law or constitution. For example, Argentina used to have a currency board and very often the peso was subject to speculative attacks.

Opposite to the above-mentioned insecure advantage, one has to consider serious drawbacks of the currency boards. First of all, the lost ability of the monetary policy to react to cyclical needs and asymmetrical shocks, because under the currency board the monetary policy mandate is not free (Goldstein, 2002, p. 25). This is particularly troubling when economic conditions in the reserve country are different from those in the country which uses the currency board.

Apologetics of the currency board constitute that this point is not so important because they think that even countries which use free floating do not use the monetary policy because of the fear of floating and try to adjust to the policy of big countries by using the interest rate (Goldstein, 2002, p. 26)<sup>103</sup>.

Second, we can consider the lost ability to use the exchange rate as an adjustment mechanism. This is of special importance when the country which

<sup>103</sup> Many researchers examined the hard pegs and floaters and the interest rate in order to see if there exists a stable relationship. The works show mixed results as much of the empirical works find for example that countries with free exchange rate regimes do use a monetary policy, where others find that they do not use it (Goldstein, 2002, p. 26).

is using the currency board experiences overvalued exchange rates. In such a situation, the country cannot use the nominal exchange rate, but has to find another adjustment mechanism, such curtailment of prices or wages, in order to restore its international competitiveness (Goldstein, 2002, p. 24).

Another very important point is the ability of the currency board regime to reduce currency mismatching. The currency board uses hard pegging to eliminate to some point the currency risk, but it can not remove the credit or country risk which may play an important role for currency mismatching as well (Goldstein, 2002, p. 26).

Last but not least, one has to mention the decreased ability of the central bank to act as a lender of last resort. This happens because the central bank cannot increase domestic money unless there are foreign reserves. To this point the proponents of the currency board argue that (Goldstein, 2002, p. 27):

- the currency board has an opportunity to perform the lender of last resort operations as far as the currency board does not fully (100%) back the home currency;
- banks themselves can create and halt special contingent lines, which can be used when there is a need in them;
- small countries, in fact, don't need the function of the lender of last resort, because what matters for them is not the ability to create liquidity in the home currency, but the ability to create liquidity in the foreign currency.

These issues, as far as they apply to currency board arrangement, undermine the functioning of the regime because (Goldstein, 2002, p. 27):

- the contingent lines or higher reserve requirements impose high costs and undermine the functioning of the economy;
- the liquidity in foreign currency is important because it does not make the liquidity in home currency unnecessary;
- not full backing of the home currency with foreign reserves undermines the entire philosophy of the currency board and does not stabilize the currency of the country.

In conclusion, we can state that the currency board arrangement is a regime, which puts great emphasis on the exchange rate. In reality, as we have already mentioned, it is based on a stable monetary rule, which uses the exchange rate as a monetary anchor. The apologists of the regime hope that by using this simple rule the economy will stabilize and this will boost the investment and the economy. Even if the specific regime aims to address many problems of the emerging economies that fall in the realm of the unblessed trinity, it does not seem to take care of the issues like the international acceptance of the currency, the currency mismatching, the underdeveloped financial market, the incomplete regulatory framework. It is difficult to see

how these issues will be resolved within the framework of such a simple regime as currency board without special measures.

The use of the currency board in the system of exchange rate policy requires the so-called currency-anchor, that is, the currency to which the hryvnia is pegged. It is considered right to use one or several freely convertible currencies of the major partner countries<sup>104</sup>. Today, the European Union has become such a partner for Ukraine. The share of exports there has been continuously growing since the signing of the Association Agreement. Thus, Ukraine's exports to the EU amounted to 26.9% in 2013, 31.8% in 2014, and 32.8% in 2015. The imports of the same years were 37. 2%, 39.8% and 42.1%<sup>105</sup>. Despite the popularity of the US dollar in international payments of Ukraine and the shadow economy, the share of Ukrainian businesses on the United States goods market is insignificant: in 2015, the share of exports was 1.3%, imports – 3.9% <sup>106</sup>.

The currency board regime in Ukraine can be implemented purely hypothetically based on the hryvnia fixation to special drawing rights (SDRs), which are issued by the IMF as reserve and payment instrument. Ukraine cooperates with the IMF in terms of reforms in the country. In 2015, the fund started a four-year program of Extended Fund Facility (EFF) for 17.5 billion USD or 12.348 billion SDR. However, the IMF steers the NBU towards the floating rate regime with inflation targeting. Despite the positive results of such policies in Georgia, Romania, Turkey, Israel and some other countries, it can't restore the purchasing power of the hryvnia to a sufficient extent and in a timely manner. After all, inflation targeting is associated with a large number of factors that do not have a direct impact on the exchange rate but are important to the Ukrainian economy, including the tax system, utilities tariffs, and energy prices for the population that the regulator does not influence. In addition, given the openness of the Ukrainian economy, inflation targeting can lead to significant "failures" due to the impact of world market processes.

After all, pegging the hryvnia to the euro has a significant advantage because of the present tight ties and tendencies of deepening direct and indirect links of the Ukrainian economic and financial systems to those of the EU as an issuer of anchor currency. This will increase Ukraine's export potential and

 $<sup>^{104}</sup>$  Найман, Э. Какой режим валютного курса нужен Украине / Эрик Найман. // Сучасна валютна політика і особливості її реалізації в Україні. К.: Центр Разумкова, 2016, с. 56.

 $<sup>^{105}</sup>$  Співробітництво між Україною і країнами &C у 2015 році. Статистичний щорічник. Київ, 2016 [Cooperation between Ukraine and EU countries in 2015. Statistical yearbook. Kyiv, 2016].

<sup>&</sup>lt;sup>106</sup> Зовнішня торгівля України товарами і послугами у 2015 році. Статистичний збірник. Київ: Держкомстат, 2016. с. 34.

attract investments from the EU aimed at restructuring the economy in line with the economy of the anchor currency countries, which is, in turn, in line with the objectives of European integration of Ukraine.

The inability of the monetary policy mechanism to affect cyclical needs and asymmetric shocks is the *Achilles heel* of the currency board regime. In addition, the exchange rate loses the function of changing the conditions of international competition, which must be achieved by lowering prices or wage costs. At the same time, the scale of adjustment of nominal wages, as a rule, is less than the scale of adjustment of prices.

#### **CLASSIFICATION OF EXCHANGE RATE REGIMES**

According to the latest classification of the IMF exchange rate regime at the time of the publication of the article (data from the *Annual Report on the Exchange Arrangements and Exchange Restrictions* from 2016<sup>107</sup>), there are three types of regimes, which in turn consist of ten categories:

- 1. Hard peg:
  - official dollarization (no national currency);
  - currency board arrangement.
- 2. Soft peg:
  - conventional peg;
  - pegged exchange rate within horizontal bands;
  - stabilized arrangement;
  - crawling peg;
  - crawl-like arrangement.
- 3. Floating regimes:
  - floating;
  - free floating.
- 4. Residual:
  - other managed arrangement.

Among the scholars and practitioners, this classification of the IMF got a brief definition – the de facto classification. Its key difference from previous versions is that it analyzes the actual dynamics of nominal exchange rates: the official exchange rate (de jure) and the rate of the parallel (black) market if there is a multiplicity of exchange rates. Table 3 shows the classification of foreign exchange rate regimes in the world according to IMF data. .

<sup>&</sup>lt;sup>107</sup> International Monetary Fund Annual report on exchange arrangements and exchange restrictions. / International Monetary Fund, Washington: 2016.

Table 3 Exchange rate regimes of countries

	Exchange rate regimes of countries									
Exchange		Anchor currency								
rate regime (No of countries)	US Dollar (43)	Euro (26)	Currency basket (12)	Other (8)	Money supply (25)	Inflation targeting (34)	Other reasons (43)			
Official dollarization (no national currency) (13) Currency board arrangement	Ecuador, Zimbabwe, Marshall Islands, Micronesia, Palau, Panama, El Salvador, East Timor Hong Kong, Djibouti Eastern Caribbean Currency Union (6)	Kosovo, San Marino, Montenegro Bosnia and Herzegovina, Bulgaria		Kiribati, Tuvalu Brunei Darussala m						
	Aruba, Bahamas, Barbados, Bahrain, Belize, Venezuela, Eritrea, Jordan, Qatar, Curacao and Sint- Maarten, UAE, Oman, Southern Sudan, Saudi Arabia, Turkmenistan	Denmark, Cape Verde, Comoros, Sao Tome and Principe West African Economic and Monetary Union (8), Economic Community of Central African Countries (7)	Fiji, Kuwait, Libya, Morocco, Samoa	Bhutan, Lesotho, Namibia, Nepal, Swaziland			Solomon Islands			
Stabilized arrangement (21)	Guyana, Iraq, Kazakhstan, Lebanon, Maldives, Suriname, Trinidad and Tobago	Macedonia	Vietnam, Singapore		Bangladesh, Burundi, DR Congo, Guinea, Sri Lanka, Tajikistan, Yemen		Angola, Azerbaijan, Bolivia, Egypt			

Table 4 (cont.)

## Exchange rate regimes of countries

1	Exchange rate regimes of countries									
Exchange		Anchor currency	_							
rate regime (No of countries)	US Dollar (43)	<b>Euro</b> (26)	Currency basket (12)	Other (8)	Money Supply (25)	Inflation targeting (34)	Other reasons (43)			
Crawling peg (2)	Nicaragua		Botswana							
Crawl-like arrangement (15)	Honduras, Jamaica	Croatia			China, Ethiopia, Uzbekistan	Armenia, Dominican Republic, Guatemala	Argentina, Belarus, Haiti, Laos, Switzerland, Tunisia			
Pegged exchange rate within horizontal bands (1)			Tonga							
Other managed arrangement (18)	Cambodia, Liberia		Argentina, Iran, Syria		Gambia, Myanmar, Nigeria, Rwanda	Czech Republic	Costa Rica, Kyrgyzstan, Malaysia, Mauritania, Pakistan, Russia, Sudan, Vanuatu			
Floating (36)					Afghanistan, Kenya, Madagascar, Malawi, Mozambique, Papua New Guinea, Seychelles, Sierra Leone, Tanzania,	Albania, Brazil, Colombia, Georgia, Ghana, Hungary, Iceland, Indonesia, Israel, Korea, Moldova, New Zealand, Paraguay, Peru, Philippines, Romania, Serbia, South Africa,	India, Mauritius, Mongolia, Zambia			

Exchange		Anchor currency					
rate regime (No of countries)	US Dollar (43)	S Dollar (43) Euro (26)		Other (8)	Money Supply (25)	Inflation targeting (34)	Other reasons (43)
					Ukraine, Uruguay	Thailand, Turkey, Uganda	
Free floating (29)					Cluguay	Australia, Canada, Chile, Japan, Mexico, Norway, Poland, Sweden, United Kingdom	Somalia, USA EMU (19)

As we can see from the data on table 3, the expectations of the economic community for the gradual transition of the world economy to the regime of floating exchange rates after the Jamaica conference, in general, were not justified. Approximately 66% of IMF member countries use some modes of fixing or managing exchange rates. Moreover, 'fear of floating' is gradually increasing, taking into account the moderate pace of global economic growth and financial stability recovery (in 2008, the share of floating countries was 39.9% compared to 34% in 2014). however, in fairness, we must note that most of the world's leading economies have moved to a floating exchange rate

### DEVELOPMENT OF UKRAINE

The social and economic development of Ukraine in recent years is characterized by a growing decline in the living conditions of the population. The basis of these processes are the fall in GDP per capita, reduction of real per capita income, and limited access to health care facilities, education and certain groups of goods and services. As a result, the lifestyle and manifestations of people's livelihoods in the areas of production and services deteriorate. In particular, the growth of the gross volume of GDP per capita in 2012-2013 stopped, and in 2014-2015 this trend became negative in comparison with the previous year (Table 4).

Table 4
Gross volume index of GDP per capita for the 2010-2015 (excluding the temporarily occupied territory of the Autonomous Republic of Crimea and the city of Sevastopol for 2014 – also excluding part of the ATO zone)

(percent to the previous year)

		Percent	trie pre tre	us j cui,		
Year	2010	2011	2012	2013	2014	2015
Percent	104.5	105.9	100.5	100.2	93.7	90.0

Apart from the fact that the creation of gross domestic product is the ultimate generalizing indicator of the development of the industry and services sectors, its widespread use to characterize the socio-economic state of the country is inadequate, and in some economies – even misleading. According to different dynamics of GDP in some periods, in particular during the period of the long general economic crisis of 1991-2000, the period of economic growth after 2001, and the fall of the economy from 2013, in Ukraine long-term unresolved social problems are always concealed. In general, they have become chronic and multilateral: the growing gap to the European standards of wage and labour organization, pensions, education and health systems, the role of society in science, culture, physical education and sports, job creation.

2014-2015 was a real period of testing for Ukraine, which was marked by a series of economic shocks. The most painful among them was monetary crisis. The inability of the National Bank of Ukraine to cope with the challenges facing the country, including the result of Russian aggression, led to deep currency crisis, the most prominent appearance of which was the striking devaluation of national currency<sup>108</sup>.

As a result, over the last decade, Ukraine's economy is again experiencing a severe crisis caused by macroeconomic imbalances that were accumulated long before the 2008 and 2014 crisis. In addition to a number of factors that are prerequisites for both periods of crisis, the regime of de facto fixed exchange rate leads to an increase in the trade deficit, that was financed mainly by FDI inflows and external borrowings in pre-crisis years. However, when access to international capital markets was deteriorated, capital inflows changed into outflows, resulting in a powerful devaluating pressure on the national currency<sup>109</sup>.

The economic situation of the country shows many weaknesses and imbalances. First of all, this is the state of economic stability. The country has a chronically high inflation. From the beginning of the transition period, the country experienced the inflation rates which were higher than 10% on average, as we can see in Figure 3.

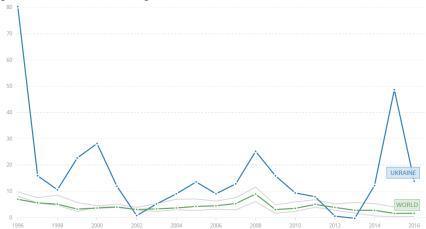


Fig. 3. Inflation, consumer prices (annual %)

Source: International Monetary Fund

 $^{108}$  Лизун, М. В. Теорія оптимальних валютних зон як концептуальна основа регіональних валютних угруповань / М. В. Лизун. // Журнал європейської економіки, 2016, No. 3, c. 312–334.

<sup>&</sup>lt;sup>109</sup> Лизун, М. Валютні союзи: ретроспективні та сучасні форми / М. Лизун, І. Ліщинський. // Економічний простір, 2017, No. 118, с. 47–60.

Investigating the evolution of inflation over the years in detail, we can recognize the main macroeconomic problems and major macroeconomic imbalances of Ukraine. In the first years after the independence, the years of price liberalization, inflation rose to very high levels (Zholud, 2016)<sup>110</sup>. After the introduction of the hryvnya the inflation stabilized somehow because of cutting the deficit spending and the peg of hryvnya to the dollar, but the situation deteriorated with the crises in Russia, which spilled over to Ukraine as well. When the Russian debt pyramid fell, the fear was transmitted to Ukraine and the foreigners started to withdraw from Ukraine, hryvnya depreciated and inflation increased (Zholud, 2016). During the crises of 2008, Ukraine, like other European emerging markets, was hit very hard, its GDP decreased by some 14%, but inflation remained at relatively high levels because of the devaluation of hryvnya. Judging in retrospect, we can see a clear picture, a kind of a vicious cycle, where deficit spending, inflation, devaluation, and depreciations mutually reinforce each other.

This situation of high instability is particularly evident in the foreign exchange market. Since 2008, volatility of hryvnya has exhibited a strong trend towards devaluation. A sharp decrease in the hryvnya's exchange rate began in October 2008, when it fell from level of 5 to 5.8 hryvnyas per dollar, reaching by December the level of 7 hryvnyas per dollar. In January 2009, the dollar could be exchanged for 7 hryvnyas. At the end of 2009, the exchange rate was already 7.9-8 hryvnyas per dollar. The exchange rate remained at this level until the active phase of the Euromaidan. In 2014, within one week after the removal of President Yanukovych, from February 22 to March 1, the exchange rate depreciated from 8.8 to 10 hryvnyas per dollar, later returning to the level of 9.3 hryvnyas per dollar.

The third wave of hryvnya devaluation began after the State Duma of Russia approved the decision to annex the Crimea to Russia. On March 16, 2014 – the first half of April, a dollar could be bought for 11 hryvnyas, and in the second half of April, during escalation of the conflict in the eastern regions of Ukraine, the exchange rate began to climb up, reaching in November the level of 15.7 hryvnyas per dollar. Finally, on February 5, 2015, hryvnya collapsed as its exchange rate reached 24.8 hryvnyas per dollar. Today it is relatively stabilized and does not exceed 26 hryvnyas per dollar (Cyclowiki, n.d.).

Signing the Association agreement with the EU, Ukraine has committed itself to reform the financial sector, whose ultimate goal should be the complete liberalization of the currency market and cross-border capital

<sup>&</sup>lt;sup>110</sup> Zholud, O. (2016). Inflation in Ukraine: Past, Present and Future. In Voxukraine.org. (Retrieved on 10/03/2016).

flows. For the process of financial liberalization international experience should be studied to select the appropriate pace and sequence of reforms that will take advantage of the free movement of capital and minimize the risks associated with the volatility of its flow. Experience of instant financial liberalization (e.g. in Israel, Argentina) clearly demonstrates that under the absence of appropriate macro-stability and developed financial markets, shock mechanisms can significantly enhance the economic crisis.

Recent studies of IMF economists also show that states which introduced capital controls before the global recession, were less affected by the sharp economic recession. The choice of regulatory instruments depends on many factors: economic conditions, the level of reserves, the stability of the national currency, the nature of capital flows and so on 111.

Given the current state of socio-economic development and highlighting its main components that can become the basis, the starting point of human development in Ukraine, we can legitimately assert that the main national interest should be and is the welfare of the population. All other interests, including security, are such as to ensure that this interest is met. Ignoring it, even in times of armed conflicts, is unacceptable, as is shown by the Israeli experience. However, this does not mean that temporarily lowering living standards due to the increased costs of ensuring victory is impossible. In the hybrid war with Ukraine, at this stage Russia relies on the financial and economic levers of influence, which complicates the positive resolution of social issues, but does not delay them altogether, it rather requires timely preventive and proactive actions. In particular, an answer to the termination of the Free Trade Agreement with Russia is signing such agreements with other countries on different continents; the Russian ban on import of agricultural products, raw materials and food from Ukraine requires the promotion of these goods in other markets, etc. The effectiveness of conducting hybrid warfare determines the opportunities for the development of the social sphere, and vice versa.

#### MONETARY FACTOR IN SHAPING WELFARE IN UKRAINE

The formation and development of the exchange rate policy concepts concentrates mainly on the macroeconomic aspects. Researchers study the impact of the exchange rate on the external trade balance, the dynamics of exports and imports in value terms, the creation of foreign exchange reserves. Also studied are the micro-level problems associated with the activities of

<sup>&</sup>lt;sup>111</sup> Лизун, М. Валютні союзи: ретроспективні та сучасні форми / М. Лизун, І. Ліщинський. // Економічний простір, 2017, No. 118, с. 47–60.

firms that operate for export and/or compete with imports. However, as concluded in the doctoral thesis of Y. Belinska, "Exchange rate regulation is a two-tier one, which includes relations between exchange rate dynamics and socio-economic parameters of the country's development (macro level), as well as specific features of relations between monetary authorities and subjects of the foreign exchange market (the micro level), and takes into account the cyclical process, due to which the gaps between the exchange rate and socio-economic indicators periodically grow." Despite the correct general premise of the comprehensive influence of the exchange rate on the processes of economic and social spheres, the dissertation limited its research to the entrepreneurial sector.

Table 5 Synthesis of exchange rate policy objectives \*

Stability of the national currency
Maintaining recognition of being a great state
Ensuring international competitiveness of the state
Economic growth (GDP)
Legitimizing the economy
Full employment
Growth of investment
Curbing inflation
Stimulating economic activity
Growth of savings in the national currency
Growth of savings in the foreign currency
Optimizing balance of payments
Growth of foreign investment
Achieving adequate level of gross reserves
Smoothing the sharp exchange rate fluctuations
Service and payment of external debt
The optimum rate of exchange rate

<sup>\*</sup>Created by the author on the basis of 113114

 $<sup>^{112}</sup>$  Белінська, Я. В. Регулювання валютного курсу в Україні в умовах глобалізації: автореф. дис. . . . д-ра ек. наук :  $08.00.08 \, / \,$  Я. В. Белінська : Національний університет Державної податкової служби України, Ірпінь, 2009, с. 4.

<sup>&</sup>lt;sup>113</sup> Барсегян, А. Г. Валютно-курсова політика України в системі макроекономічного регулювання. Автореф. канд. екон. наук: 08.00.02. К.: КНУ, 2007.

 $<sup>^{114}</sup>$  Валютно-курсова політика України : монографія / [М. І. Крупка, М. І. Кульчицький, Н. В. Жмурко, Д. В. Ванькович]. – Львів : ЛНУ імені Івана Франка, 2012, с. 11.

In economic literature devoted to exchange rate policy, most authors are trying to determine its objectives. The generalization of these researches (Table 5) indicates the ambiguity of the target orientation of the exchange rate policy. It can be determined by geopolitical, geo- macro-, or microeconomic factors, as well as by the state of the country's financial system. In particular, China, in an attempt to win the commodity competition with the US and the EU, supported the devaluation trends of the RMB, sometimes even in the form of a currency war. At the same time, it pursued the goal of transforming the national currency into the fifth international reserve currency and influencing (together with the dollar, the euro, the pound and the yen) the value of SDR. Ultimately this goal was achieved – by the decision of the IMF Board of Directors starting from October 1, 2016, yuan is included in the reserve currency basket. Meanwhile, in the Russian Federation the volatility of the exchange rate is allowed as long as large foreign exchange reserves are maintained, as they consider the latter a guarantee of national security<sup>115</sup>. Such a policy was tested by the Russian Federation after the 888 War<sup>116</sup>, when thanks to this policy Russia came out of the financial crisis of 2008 without significant losses. Accordingly, in conditions of war with Ukraine and sanctions from the USA, Europe and Ukraine, the Central Bank of Russia is ready to accept any level of volatility, in order not to spend gold and foreign exchange reserves. The Russian version of the exchange rate policy acquires geopolitical orientation, which has little to do with economic laws. Although, as we can conclude after a relatively long-term compliance with such a policy by Russia, it is eventually impossible to avoid catastrophic consequences for gold and foreign exchange reserves.

Even the constitutional and legislative support of the provision that "the main function of the National Bank is to ensure the stability of the monetary unit of Ukraine"<sup>117</sup> does not entail its maintenance at a constant level under all conditions and at any costs, as that is essentially impossible <sup>118</sup>. Moreover, as V. Yurchyshyn rightly observes, the NBU itself deliberately avoids a clear

<sup>115</sup> Сокровищница Кремля: Путин пожертвует стабильностью рубля ради роста золотовалютных резервов, 01 марта 2016 / [Електронний ресурс] / Режим доступу: http://finance.obozrevatel.com/business-and-finance/90617-sokrovischnitsa-kremlya-putin-pozhertvuet-stabilnostyu-rublya-radi-rosta-zolotovalyutnyih-rezervov.htm

<sup>&</sup>lt;sup>116</sup> The start of the war with Georgia – 08.08.2008.

<sup>&</sup>lt;sup>117</sup> Закон України Про Національний банк України (Відомості Верховної Ради України (ВВР), 1999, № 29, ст. 238). [Електронний ресурс]. Режим доступу: http://zakon5.rada.gov.ua/laws/show/679-14.

<sup>&</sup>lt;sup>118</sup> The concept of stability of the monetary unit of Ukraine is not legally defined, but is periodically debated among scientists.

presentation of the monetary policy, monetary mechanisms and instruments that would allow us to assess the current dynamics, to control, correct and predict the most important macroeconomic indicators<sup>119</sup>.

It is no coincidence that the main objective pursued by the European Central Bank is tied to price stability, on the basis of which the two-fold objective must be achieved: economic growth and job creation<sup>120</sup>. Therefore, the European Central Bank purposefully pays special attention to price stability as the most effective instrument of monetary policy. It is important to take into account, however, that the European employment strategy develops from the relatively narrow task of eliminating unemployment into a comprehensive socio-economic objective, which, in particular, includes the formation of an effective labour market, addressing the problem of aging of the population, social protection of citizens, and preventing the growth of inequality and climate change.

Table 6
The hryvnia exchange rate to the US dollar and the euro (average for the period) and the average nominal wage in UAH, USD and EUR

Year	2009	2010	2011	2012	2013	2014	2015
Rate \$	7.8	7.9	8.0	8.0	8.0	11.9	21.9
Rate €	10.9	10.5	11.1	10.2	10.6	15.6	24.2
Wages	1692	2250	2648	3041	3282	3408	4195
UAH							
Wages \$	216.9	248.8	331.0	380.1	410.2	286.4	191.5
Wages €	155.2	214.3	238.6	298.1	309.6	218.5	173.3

Source: Calculations by the author according to the data of the State Statistics Service of Ukraine and the NBU.

Therefore, returning to Ukrainian realities, it should be noted that highlighting only the stability of the monetary unit as the purpose of the National Bank, with no clear link to the development of the socio-economic sphere, largely leads to the irresponsibility of this important part of market relations for the welfare of the population. This can be seen particularly across the most important Ukrainian conditions – wages and pensions. As shown in

<sup>&</sup>lt;sup>119</sup> Юрчишин, В. Глобальний контекст валютної політики і напрями посилення стійкості національної грошової одиниці в Україні / Василь Юрчишин. // Сучасна валютна політика та особливості її реалізації в Україні, К., 2016, с. 35.

<sup>120</sup> Objective of monetary policy. [Електронний ресурс]. Режим доступу: https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html; Die Europäische Zentralbank. Eurosystem. [Електронний ресурс]. Режим доступу: https://www.ecb.europa.eu/ecb/tasks/html/index.de.html

Table 7, for two years (2014-2015) the exchange rate of hryvnia against major currencies – the US dollar and the euro fell almost 2.5 times. Accordingly, wages, measured in these monetary units, decreased almost twice, which is unprecedented for countries declaring a course on European integration.

Table 7 Average monthly pension as of January 1 (in UAH, USD and EUR)

Year	2011	2012	2013	2014	2015
Pension, UAH	1121.8	1123.2	1140.0	1487.1	1536.0
Pension, \$	140.1	140.4	142.5	125.0	70.1
Pension, €	101.1	110.1	107.5	95.3	63.5

Source: Calculations by the author according to the data of the State Statistics Service of Ukraine and the NBU.

Due to monetary factors, the tension in pension provision has grown, which covers more than 25% of the population (Table 7). In 2015, the average pension in hard currencies – US dollar and Euro, respectively, was 50.0 and 62.8. By this indicator Ukraine occupies the penultimate position in Europe, outperforming only Albania by 8 US dollars (Table 4). Meanwhile, there is no state policy and concepts for the developing the welfare of retirees, and moreover, there are no developing theories that consider this issue. There are no programs of a humane attitude towards the elderly, which would provide for a well-deserved rest and preserve the usual way of life of retirees, as it was done in Norway, Greece, Denmark, Turkey, Spain, Czech Republic and in many European countries.

In the end, nowadays, the socio-economic situation of an ordinary Ukrainian who works or is in retirement is determined by the exchange rate policy. It was because of the fall of the hryvnia exchange rate, that the wages and pensions in hard currencies tended to fall sharply. This trend can be paused, as we saw in 2016. However, the only way to influence the return of Ukraine to the fold of states with average European incomes in the coming years is by using monetarist methods, meaning returning the hryvnia exchange rate to the old level. According to the experts of *The Economist*, hryvnia has one of the lowest ratings among the most undervalued currencies of the world<sup>121</sup>. Its rate against dollar by the Big Mac index should be 7.3, which corresponds to an undervaluation of the national monetary unit by almost 70%. In the monetary and exchange rate policy, the state must make its citizens the

<sup>&</sup>lt;sup>121</sup> The Big Mac index / [Електронний ресурс]. Режим доступу. http://www.economist.com/content/big-mac-index

ultimate goal, rather than institutions. This understanding was lacking in the European Union, which eventually ended in Brexit.

In general, the socio-economic policy of any state should be based on employment and wages that also determine the level of pensions. One cannot agree with the opinion of the Razumkov Center's director of social programs that "While labour in the country is undervalued, and half of the economy is in the shadows, there is no need to talk about normal social policy. If we do not deal with primary issues (adequate wages), then secondary (raising the retirement age, taxation of pensions, etc.) can be discussed in any capacity – it will not change anything, as we have witnessed for 25 years. A European country cannot be proud of the fact that its main competitive advantage is cheap labour" Of course, it is unclear how to determine a sufficient level of wages for the near future. One can positively perceive the point that salaries need to be raised by at least 80% 123. However, undervaluation of wages lowers the added value of Ukrainian products on the world market, and, ultimately, the competitiveness of the Ukrainian economy.

#### FOREIGN EXCHANGE REGIMES IN UKRAINE

Undervaluation and overvaluation of the national currency determines the parity of its purchasing power. Under globalization, these phenomena have a transitory effect on the functioning of the country's economy. They affect exporters and importers, the competitiveness and profitability of companies, change the situation with external debt and attract foreign investment. However, instability of the exchange rate and its undervaluation cause negative socio-economic consequences. They are expressed in structural changes of the economy due to the shrinking share of consumption in the national income, the growth of consumer prices and, ultimately, worsening living standards of the population. On December 18<sup>th</sup>-24<sup>th</sup> of 2015, Razumkov Center conducted sociological surveys in all regions of Ukraine, excluding Crimea and the occupied territories of Donetsk and Luhansk regions. The results have shown that the hryvnia to the dollar exchange rate has no impact on the standard of

<sup>&</sup>lt;sup>122</sup> Шангіна, Л. Основою соціальної політики повинні бути зайнятість і гідна оплата праці / Людмила Шангіна // [Електронний ресурс]. Режим доступу: http://www.razumkov.org.ua/ukr/expert.php?news\_id=6176

<sup>&</sup>lt;sup>123</sup> Юрчишин, В. Зростання зарплат залежить від якості праці і підвищення конкурентоздатності / Василь Юрчишин. // Сегодня. 21 липня 2016. [Електронний ресурс]. Режим доступу: http://www.razumkov.org.ua/ukr/expert.php?news id=6194

living of only 7.4% of the population, a significant impact for 44.4 %, and is the determining factor for the welfare of 23.9% of the population<sup>124</sup>.

In Ukraine, different approaches have been tested over the years of independence. Among them are: floating regime (1993), currency board (1994), managed floating exchange rate regime (1997), pegged exchange rate within horizontal bands (1998), fixing on the Ukrainian Interbank Stock Exchange (1999), floating (2000-2003), the gradual transition to free floating (2006-2007), as the weighted average of buyers and sellers rates on the interbank foreign exchange market on the previous day with the possibility of deviation  $\pm$  2 and its fixation (2009-2012). Currently, the NBU is trying to implement a free-floating exchange rate regime <sup>125126</sup>.

De facto, the National Bank switched to the inflation targeting regime in the beginning of 2016. Prior to this, preparatory work was under way to create all critical prerequisites for its implementation. In the first phase (by 2015) technical prerequisites were created, in particular, macroeconomic models were built, a quarterly forecast cycle was developed. In the second phase (in the first half of 2015), institutional conditions were created, including ensuring the independence of the National Bank in using the instruments to achieve its goal, eliminating fiscal dominance, changing the decision-making process on monetary policy. Since the second half of 2015, the third phase has started – the implementation of all key elements of inflation targeting.

When choosing a currency exchange rate regime, it is important to form the hierarchy of goals to be achieved by it. Many authors emphasize macroeconomic objectives: economic growth (GDP), shadow economy reduction, full employment, investment growth, containment of inflation, stimulation of economic activity. Among the objectives of monetary policy are: achieving growth in foreign currency savings, improving the availability of loans, optimizing the balance of payments, increasing the flow of foreign

<sup>&</sup>lt;sup>124</sup> Міщенко, М., Ставлення громадян України до проблеми стійкості курсу національної валюти / Михайло Міщенко. // Сучасна валютна політика і особливості її реалізації в Україні. К., : Центр Разумкова, 2016, с.112.

<sup>125</sup> Гальчинський, А. Плаваючий курс — це початок кінця адміністративного ринку / Анатолій Гальчинський. // Дзеркало тижня, 21 лютого 2014 // [Електронний ресурс]. Режим доступу: http://gazeta.dt.ua/macrolevel/anatoliy-galchinskiy-plavayuchiy-kurs-ce-pochatok-kincya-administrativnogo-rinku-\_.html

<sup>126</sup> НБУ. Лист про наміри та Меморандум про економічну та фінансову політику, 21 липня 2015 року. // [Електронний ресурс]. Режим доступу: http://www.bank.gov.ua/d НБУ. Лист про наміри та Меморандум про економічну та фінансову політику, 21 липня 2015 року. // [Електронний ресурс]. Режим доступу: http://www.bank.gov.ua/doccatalog/document?id=20163929occatalog/document?id=20163929

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investments, achieving an adequate level of gross reserves, servicing and payment of external debt <sup>127128</sup>.

#### THE CHOICE OF EXCHANGE RATE REGIME

The scientific literature and business practices have not yet found an indisputable solution to the problem of choosing an exchange rate regime that could be used when shaping the economic policy. The economic community was partially divided into those who believe that exchange rates are not important (monetarists), and those who believe that exchange rates are essential, and therefore the instruments of exchange rate policy can and should be a part of the overall economic policy. The western economic thought is said to have reached a consensus that the truth lies somewhere in the middle. That is to say, there is no model of the exchange rate regime that would be equally suitable for all countries and times. Hence, it is necessary to study the national conditions and peculiarities in detail in order to choose the exchange rate regime suitable for a particular country. Only thus can one choose an exchange rate regime that would meet the objectives of economic development <sup>129</sup>.

The choice of the exchange rate regime is the basis for achieving subordination of the exchange rate policy to the socio-economic needs of the country's development.

Most of the emerging countries, when choosing a currency exchange rate, were guided by systems of inflation stabilization by linking the exchange rate to the currencies of developed countries. Their decisions were inspired by seeking an independent path (Chile, Israel, and Poland) or serious currency crises (Mexico, Thailand, Indonesia, South Korea). European integration was the basis of the economic policy of Central and Eastern European countries. Their experience shows the non-viability of a flexible exchange rate regime at the transitional stage<sup>130</sup>.

As for Ukraine, given its euro integration strategy, it is necessary to choose a direction in the monetary and exchange rate policy toward adaptation

<sup>&</sup>lt;sup>127</sup> Барсегян, А. Г. Валютно-курсова політика України в системі макроекономічного регулювання. Автореф. канд. екон. наук: 08.00.02. К.: КНУ, 2007.

<sup>&</sup>lt;sup>128</sup> Валютно-курсова політика України : монографія / [М. І. Крупка, М. І. Кульчицький, Н. В. Жмурко, Д. В. Ванькович]. Львів : ЛНУ імені Івана Франка, 2012, с. 11.

<sup>&</sup>lt;sup>129</sup> Сіску, Т., Савельєв, Є. (2016) Валютні режими і валютно-курсова політика України у вимірах 'благословенної' і 'неблагословенної' трійці / Томас Сіску, Євген Савельєв. // Журнал європейської економіки, 2016, № 2.

<sup>&</sup>lt;sup>130</sup> Дін, Д. В. Режими валютного курсу в країнах Центральної та Східної Європи з уроками для України / Джеймс В. Дін. К. : Центр соціально-економічних досліджень CASE-Україна, 2002.

to the financial and economic order of the Eurozone. At the same time, the highest priority should be to ensure the European level of living standards and welfare. For this, one of the two models should be chosen from either the currency board or the official dollarization (regime without sovereign currency). Another way – the 'euro-zation' or joining the Eurozone in the near future for Ukraine is unfortunately not feasible.

# DRAWING UP THE UKRAINIAN MODEL OF THE CURRENCY BOARD

Weighing the impact of voting for or against one of the models of the exchange rate regime in the Ukrainian economy reform, one must realize that they are not universal. However, choosing the currency board regime allows stabilizing the financial market and quickly offsetting the fall in the standard of living, which resulted from miscalculations, abuses and possibly fraudulent decisions in favour of certain corrupt oligarchic groups in the system of exchange rate policy. To do this, we need to find the middle ground between the existing exchange rate of hryvnia and the level that can be considered a 'ceiling' of undervalued hryvnia. It seems that returning to the exchange rate of hryvnia to the dollar at the level of 12.0-16.0 would correspond to the national consensus and restore confidence in the banking system.

The confidence in the currency board system is due to its success in Hong Kong (1983), Argentina (1991), Estonia (1992), Lithuania (1994), Burkina Faso (1997), and Bosnia (1997). In order for Ukraine to be able to repeat this experience just as well, Ukraine needs to adapt the regime to its conditions and tasks. One must bear in mind that the exchange rate of the currency is derived from the balance of payments. In view of this, the strengthening of the national currency in Ukraine requires financial recovery. Largely, this can be done by using reserves that 'lie on the surface', most of which are already or are becoming well known. These are: financing of the budget deficit through the issue of bonds; legalization of the economy; deoffshorization; radical increase in import substitution; restraining capital flight; increasing transparency in the banking sector; preventing concealment of foreign exchange earnings abroad; expanding the use of hryvnia in domestic money circulation; a special regime of currency relations with 'law-abiding' companies; involving the currency in the hands of the population into the banking sector; restraining the processes of capital flight; spreading the practice of interstate currency swaps; using unconventional instruments of monetary policy on the purchase of securities and debt obligations by the National Bank.

#### **CONCLUSION**

The currency board is a monetary mechanism for reforming the economy. However, it is able to significantly improve the socio-economic indicators of Ukraine's development and, above all, contribute to bringing the standard of living to the average European level. On this basis, conditions can be created for a rapid reduction of inflation, the return of confidence in the national currency. At the same time, the currency board is not a remedy for all problems of the Ukrainian economy. A paradigm of economic growth should now be developed, an integral part of which will be the updated concept of the exchange rate regime.

Ukraine today faces a very difficult and complex situation, where inflation, exchange rate and currency mismatching reinforce each other in a negative spiral, a kind of vicious cycle, where high inflation leads to lack of confidence for the hryvnya, and this situation together with a stable exchange rate lead to currency substitution, the substitution of hryvnya with foreign currencies. In order to break this vicious circle, Ukraine cannot only rely on using the exchange rate regime, like those of the currency board and dollarization, because the former offers the best temporary solution, while the latter does not exploit the great potential of the country. What really the country needs is the change in the paradigm of the economy, a change, which will bring again stability in the economy, and the people will regain confidence in their home currency, an environment, where the exchange rate will not mislead the people. What the country needs is a rigorous attempt to develop a well functioning local financial market to back the inflation targeting policy and the floating rate. This attempt will not be simple and will require a lot of efforts, patience and devotion. The earlier Ukraine starts to implement the new monetary regime, the higher the benefits will be.

#### **REFERENCES**

- Барсегян, А. Г. Валютно-курсова політика України в системі макроекономічного регулювання. Автореф. канд. екон. наук: 08.00.02. К. : КНУ, 2007.
- Белінська, Я. В. Регулювання валютного курсу в Україні в умовах глобалізації: автореф. дис. . . . д-ра ек. наук : 08.00.08 / Я. В. Белінська : Національний університет Державної податкової служби України, Ірпінь, 2009, с. 4.

- Валютно-курсова політика України : монографія / [М. І. Крупка, М. І. Кульчицький, Н. В. Жмурко, Д. В. Ванькович]. Львів : ЛНУ імені Івана Франка, 2012, с. 11.
- Гальчинський, А. Плаваючий курс це початок кінця адміністративного ринку / Анатолій Гальчинський. // Дзеркало тижня, 21 лютого 2014 // [Електронний ресурс]. Режим доступу: http://gazeta.dt.ua/macrolevel/anatoliy-galchinskiy-plavayuchiy-kurs-ce-pochatok-kincya-administrativnogo-rinku-\_.html.
- Дін, Д. В. Режими валютного курсу в країнах Центральної та Східної Європи з уроками для України / Джеймс В. Дін. К. : Центр соціально-економічних досліджень CASE-Україна, 2002.
- Закон України Про Національний банк України (Відомості Верховної Ради України (ВВР), 1999, № 29, ст. 238). [Електронний ресурс]. Режим доступу: http://zakon5.rada.gov.ua/laws/show/679-14.
- Зовнішня торгівля України товарами і послугами у 2015 році. Статистичний збірник. Київ: Держкомстат, 2016, с. 34.
- Куриляк, В. Є. Україна в системі європейського та євразійського інтеграційних процесів [Електронний ресурс] / В. Є. Куриляк. // Вісник економічної науки України, 2013, № 1, с.84-93.
- Лизун, М. В. Розвиток світової валютної системи крізь призму її елементів / М. В. Лизун. // Вісник Тернопільського національного економічного університету, 2016, No. 4, с. 82–95.
- Лизун, М. В. Теорія оптимальних валютних зон як концептуальна основа регіональних валютних угруповань / М. В. Лизун. // Журнал європейської економіки, 2016, No. 3, c. 312–334.
- Лизун, М. Валютні союзи: ретроспективні та сучасні форми / М. Лизун, І. Ліщинський. // Економічний простір, 2017, No. 118, с. 47–60.
- Ліщинський, І. Нова економічна географія та альтернативні концепції агломерації виробництва / І. Ліщинський. // Журнал європейської економіки, 2009, Vol. 8, No. 3, с. 241–264.
- Ліщинський, І. О.,Лизун М. В. Вплив регіоналізації ринків нафти на динаміку валютних курсів та процеси валютної інтеграції / М. В. Лизун, І. О. Ліщинський. // Економічний простір, 2015, № 100, с. 13-23.
- Міщенко, М., Ставлення громадян України до проблеми стійкості курсу національної валюти / Михайло Міщенко. // Сучасна валютна політика і особливості її реалізації в Україні, К. : Центр Разумкова, 2016, с.112.
- Найман, Э. Какой режим валютного курса нужен Украине / Эрик Найман. // Сучасна валютна політика і особливості її реалізації в Україні. К.: Центр Разумкова, 2016, с. 56.

- НБУ. Лист про наміри та Меморандум про економічну та фінансову політику, 21 липня 2015 року. // [Електронний ресурс]. Режим доступу: http://www.bank.gov.ua/doccatalog/document?id= 20163929.
- Савельєв, Є. Валютнокурсова політика України: сучасні тенденції та вимір валютного курсу / Євген Савельєв, Віталіна Куриляк. // Журнал європейської економіки, 2016, Т. 15, № 4, с. 424-444.
- Савельєв, Є., Куриляк В. Соціально-економічна орієнтація валютнокурсової політики України: плаваючий валютний курс, офіційна доларизація чи валютна рада / Євген Савельєв, Віталіна Куриляк. // Світ фінансів, 2016, № 3, с. 149-165.
- Савельєв, Є., Сіску Т. (2016) Валютні режими і валютно-курсова політика України у вимірах 'благословенної' і 'неблагословенної' трійці / Томас Сіску, Євген Савельєв. // Журнал європейської економіки, 2016, №2.
- Сокровищница Кремля: Путин пожертвует стабильностью рубля ради роста золотовалютных резервов, 01 марта 2016 / [Електронний ресурс] / Режим доступу: http://finance.obozrevatel.com/business-and-finance/90617-sokrovischnitsa-kremlya-putin-pozhertvuet-stabilnostyu-rublya-radi-rosta-zolotovalyutnyih-rezervov.htm.
- Співробітництво між Україною і країнами ЄС у 2015 році. Статистичний щорічник. Київ, 2016 [Cooperation between Ukraine and EU countries in 2015. Statistical yearbook, Kyiv, 2016].
- Шангіна, Л. Основою соціальної політики повинні бути зайнятість і гідна оплата праці / Людмила Шангіна. // [Електронний ресурс]. Режим доступу: http://www.razumkov.org.ua/ukr/expert.php?news\_id=6176.
- Юрчишин, В. Глобальний контекст валютної політики і напрями посилення стійкості національної грошової одиниці в Україні / Василь Юрчишин. // Сучасна валютна політика та особливості її реалізації в Україні, К., 2016, с. 35.
- Юрчишин, В. Зростання зарплат залежить від якості праці і підвищення конкурентоздатності / Василь Юрчишин. // Сегодня, 21 липня 2016. [Електронний ресурс]. Режим доступу: http://www.razumkov.org.ua/ukr/expert.php?news\_id=6194.
- Arteta, C. O. Exchange rate regimes and financial dollarization: does flexibility reduce bank currency mismatches? / C. O. Arteta. Board of Governors of the Federal Reserve System (U.S.), 2002.
- Balassa, B. A. The theory of economic integration / B. A. Balassa. R. D. Irwin, 1961.
- Baliño, T. J. T. Monetary policy in dollarized economies / T. J. T. Baliño, A. Bennett, E. Borensztein. International Monetary Fund, 1999.
- Bergin, P. Monetary union / P. Bergin.

- Berkmen, S. P. Exchange rate policy and liability dollarization: what do the data reveal about causality? / S. P. Berkmen, E. Cavallo. // Review of International Economics, 2010, Vol. 18, No. 5. pp. 781–795.
- Bignon, V. Monetary union with a single currency and imperfect credit market integration / V. Bignon, R. Breton, M. R. Breu. FIW, 2015.
- Bogetic, Z. Official dollarization: current experiences and issues / Z. Bogetic. Rochester, NY: Social Science Research Network, 2000.
- Bordo, M. D. How 'original sin' was overcome: the evolution of external debt denominated in domestic currencies in the United States and the British Dominions / M. D. Bordo, C. Meissner, A. Redish. National Bureau of Economic Research, 2003.
- Bordo, M. D. The future of EMU: what does the history of monetary unions tell us? / M. D. Bordo, L. Jonung. National Bureau of Economic Research, 1999.
- Borensztein, E. The pros and cons of full dollarization / E. Borensztein, A. Berg. Rochester, NY: Social Science Research Network, 2000.
- Brillembourg, A. A model of currency substitution in exchange rate determination, 1973-78 (modèle de substitution des monnaies dans la détermination des taux de change, 1973-78) (un modelo de sustitución de monedas en la determinación del tipo de cambio, 1973-78) / A. Brillembourg, S. M. Schadler. // Staff Papers (International Monetary Fund). 1979, Vol. 26, No. 3. pp. 513–542.
- Broda, C. Endogenous deposit dollarization / C. Broda, E. Levy-Yeyati. // Journal of Money, Credit and Banking, 2006, Vol. 38, No. 4, pp. 963–988.
- Catão, L. Financial de-dollarization; a global perspective and the peruvian experience / L. Catão, M. Terrones. International Monetary Fund, 2016.
- Catão, L. Fiscal deficits and inflation / L. Catão, M. Terrones. // Journal of Monetary Economics, 2005, Vol. 52, No. 3, pp. 529–554.
- Claessens, S. Government bonds in domestic and foreign currency: the role of macroeconomic and institutional factors / S. Claessens, D. Klingebiel, S. L. Schmukler. The World Bank, 2003.
- Cohen, B. J. Dollarization: pros and cons / B. J. Cohen. Depart of Political Science, University of California: 2000.
- Cohen, B. J. The geography of money / B. J. Cohen. Ithaca, NY: Cornell University Press, 2000. ISBN 978-0-8014-8513-8.
- De La Torre, A. Coping with risks through mismatches: domestic and international financial contracts for emerging economies / A. De La Torre, S. L. Schmukler. // International Finance, 2004, Vol. 7, No. 3, pp. 349–390.

- Eichengreen, B. Currency mismatches, debt intolerance and original sin: why they are not the same and why it matters / B. Eichengreen, R. Hausmann, U. Panizza. National Bureau of Economic Research, 2003.
- Eichengreen, B. Exchange rates and financial fragility / B. Eichengreen, R. Hausmann. National Bureau of Economic Research, 1999.
- Feige, E. L. Unofficial dollarization in Latin America: currency substitution, network externalities and irreversibility / E. L. Feige, V. Šošiæ, M. Faulend, V. Šonje. EconWPA, 2002.
- Frankel, J. (1999). No single currency regime is right for all countries. National Bureau of Economic Research, Working Papers 7238.
- Garcia-Escribano, M. Peru: drivers of de-dollarization / M. Garcia-Escribano. International Monetary Fund, 2010.
- Gelos, M. G. Macroeconomic implications of financial dollarization: the case of uruguay / M. G. Gelos, M. A. L. Mejía, M. M. A. Piñón-Farah. International Monetary Fund, 2008. ISBN 978-1-4519-4002-2.
- Ghosh, A. R. Currency boards: the ultimate fix? / A. R. Ghosh, A.M. Gulde, H. C. Wolf. International Monetary Fund, 1998.
- Girton, L. Theory and implications of currency substitution / L. Girton, D. E. Roper. Board of Governors of the Federal Reserve System (U.S.), 1976.
- Goldstein, M. (2002). Managed Floating Plus. From Institute of International Economics. Retrieved on 04/12/2007 from http://iie.com/bookstore/342.html.
- Gopinath, G. Currency choice and exchange rate pass-through / G. Gopinath, O. Itskhoki, R. Rigobon. National Bureau of Economic Research, Inc, 2007.
- Hartmann, P. Currency competition and foreign exchange markets: the dollar, the yen and the euro / P. Hartmann. Cambridge University Press, 1998. ISBN 978-0-521-63273-7.
- Hausmann, R. On the determinants of original sin: an empirical investigation / R. Hausmann, U. Panizza. // Journal of International Money and Finance, 2003, Vol. 22, No. 7, pp. 957–990.
- Honig, A. Dollarization, exchange rate regimes and government quality / A. Honig. // Journal of International Money and Finance, 2009, Vol. 28, No. 2, pp. 198–214.
- Ingram, J. C. The case for European monetary integration / J. C. Ingram. International Finance Section, Department of Economics, Princeton University, 1973.
- International Monetary Fund Annual report on exchange arrangements and exchange restrictions. / International Monetary Fund. Washington: 2016.

- International Monetary Fund Policy instruments to lean against the wind in Latin America. / International Monetary Fund, 2011. ISBN 978-1-4623-1531-4.
- Investopedia Currency union / Investopedia. 2011.
- Ize, A. Financial de-dollarization: is it for real? / A. Ize, E. L. Yeyati. // Financial Dollarization / A. Armas, A. Ize, E. Levy-Yeyati. Palgrave Macmillan UK, 2006, pp. 38–63.
- Ize, A. Financial dollarization / A. Ize, E. L. Levy-Yeyati. Rochester, NY: Social Science Research Network, 2004.
- Jeanne, O. Debt maturity and the international financial architecture / O. Jeanne. // American Economic Review, 2009, Vol. 99, No. 5, pp. 2135–2148.
- Kenen, P. Regional monetary integration / P. Kenen, E. Meade. Cambridge University Press, 2008.
- Keynes, J. M. A tract on monetary reform / J. M. Keynes. London : Macmillan and Co., Limited, 1923.
- Kokenyne, A. Dedollarization / A. Kokenyne, J. Ley, R. Veyrune. // IMF Working Paper, 2010, Vol. 10, No. 188.
- Kuryliak, V., Savelyev, Yev. (2013). Reformierung der ukrainischen Wirtschaft unter dem Einfluss der Globalisierung / Vitalina Kuryliak, Yevhen Savelyev. // Osteuropa: Schwierigkeiten bei Berichte September Neuorientierung. Juli – 2013. Berlin: Forschungsinstitut der Internationalen Wissenschaftlichen Vereinigung Weltwirtschaft und Weltpolitik (IWVWW) e. V. s. 33–40.
- Levy-Yeyati, E. Classifying exchange rate regimes: deeds vs. words / E. Levy-Yeyati, F. Sturzenegger. // European Economic Review, 2005, Vol. 49, No. 6. pp. 1603–1635.
- Levy-Yeyati, E. Financial dedollarization: a carrot and stick approach / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2003.
- Levy-Yeyati, E. Financial dollarisation: evaluating the consequences / E. Levy-Yeyati. Universidad Torcuato Di Tella, 2005.
- Levy-Yeyati, E. Liquidity insurance in a financially dollarized economy / E. Levy-Yeyati. National Bureau of Economic Research, Inc, 2006.
- Lyzun, Mariia. Theory of Optimum Currency Areas as Conceptual Background for Regional Monetary Unions. // Journal of European economy, 2016, 15, № 3: 304-325.
- Mecagni, M. Dollarization in Sub-Saharan Africa: experience and lessons / M. Mecagni, J. S. Corrales, J. Dridi[et al.]. Washington, DC, U.S.A: International Monetary Fund, 2015. ISBN 978-1-4983-6847-6.

- Miles, M. A. Currency substitution, flexible exchange rates, and monetary independence / M. A. Miles. // American Economic Review, 1978. Vol. 68, No. 3, pp. 428–36.
- Mugano, G. Cost benefit analysis of dollarisation / G. Mugano. 2016.
- Mundell, R. A. A theory of optimum currency areas / R. A. Mundell. // The American Economic Review. 1961, Vol. 51, No. 4, pp. 657–665.
- Mwase, N. Revisiting the concept of dollarization: the global financial crisis and dollarization in low-income countries / N. Mwase, F. Y. Kumah. International Monetary Fund, 2015. ISBN 978-1-4843-0334-4.
- Nicoló, G. D. Bank consolidation, internationalization, and conglomeration: trends and implications for financial risk / G. D. Nicoló, P. Bartholomew, J. Zaman, M. Zephirin. // Financial Markets, Institutions & Instruments, 2004, Vol. 13, No. 4, pp. 173–217.
- Objective of monetary policy. [Електронний ресурс]. Режим доступу: https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html; Die Europäische Zentralbank. Eurosystem. [Електронний ресурс]. Режим доступу: https://www.ecb.europa.eu/ecb/tasks/html/index.de.html.
- Ortiz, G. Dollarization in Mexico: causes and consequences / G. Ortiz. // NBER, 1983, pp. 71–106.
- Reinhart, C. M. Addicted to dollars / C. M. Reinhart, K. S. Rogoff, M. A. Savastano. National Bureau of Economic Research, 2003.
- Reinhart, C. M. Financial repression redux / C. M. Reinhart, J. F. Kirkegaard, M. B. Sbrancia. Rochester, NY: Social Science Research Network, 2011.
- Rennhack, R. Financial dollarization in Latin America / R. Rennhack, M. Nozaki. // Financial Dollarization / A. Armas, A. Ize, E. Levy-Yeyati. Palgrave Macmillan UK, 2006, pp. 64–96.
- Rose, A. K. One money, one market: estimating the effect of common currencies on trade / A. K. Rose. National Bureau of Economic Research, 1999.
- Savastano, M. M. A. Dollarization in Latin America: recent evidence and some policy issues / M. M. A. Savastano. International Monetary Fund, 1996. ISBN 978-1-4552-6356-1.
- Silva, J. M. C. S. Currency unions in prospect and retrospect / J. M. C. S. Silva, S. Tenreyro. Centre for Economic Performance, LSE, 2010.
- Siskou, T., Savelyev Yev. (2016) Currency Regimes and Exchange Rate Policy in Ukraine in the Realm of 'Blessed' and 'Unblessed' Trinity / Tomas Siskou, Yevhen Savelyev. // Journal of European Economy, № 2.
- The Big Mac index / [Електронний ресурс]. Режим доступу: http://www.economist.com/content/big-mac-index.

- Vetlov, I. Dollarization in Lithuania: an econometric approach / I. Vetlov. Rochester, NY: Social Science Research Network, 2001.
- Vieira, F. A. C. Financial dollarization and systemic risks: new empirical evidence / F. A. C. Vieira, M. Holland, M. F. Resende. // Journal of International Money and Finance, 2012. Vol. 31, No. 6, pp. 1695–1714.
- Weymouth, S. Political institutions and property rights: veto players and foreign exchange commitments in 127 countries / S. Weymouth. // Comparative Political Studies, 2011, Vol. 44, No. 2, pp. 211–240.

## ГЛОБАЛНАТА ПАРИЧНА ИНТЕГРАЦИЯ И ОПРЕДЕЛЯНЕ НА СТРАТЕГИЧЕСКИ ПРИОРИТЕТИ В ПОЛИТИКАТА НА ОБМЕННИЯ КУРС В УКРАЙНА

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Резюме: Интернационализацията и фрагментацията на световното производство, разпространение, обмен и потребление се отразяват върху валутната система, която отдавна не се определя единствено от политическите граници. Целта на изследването е да обоснове процеса на глобалната парична интеграция и в този контекст, да определи приоритетите на обменния курс в Украйна. Представени са два вида парична интеграция, подходяща за развиващите се страни: доларизация и валутен борд. Описани са видовете доларизационни модели и тяхното развитие. Акцентът е насочен към предимствата и недостатъците на доларизацията за развиващите се страни. Разглеждат се същността и теоретичната основа на валутния борд. Представена е класификация на режимите на обменните курсове според МВФ. Обръща се внимание на социалноикономическото развитие на Украйна и паричния фактор за благосъстоянието на държавата. След двадесет и пет годишни усилия, Украйна изглежда се сблъсква със същите предизвикателства, пред които е била изправена преди двадесет и пет години: предизвикателствата на интеграцията и това да е част от глобализирания свят. Макар да е постигнат значителен напредък, все още има какво да се направи. Като се имат предвид кризите, които страната е претърпяла, може да се каже, че за Украйна е от голямо значение да присъства на международните финансови пазари. Страната не успя да извлече полза от капиталовата мобилност. Днес страната отново преживява тежка валутна и банкова криза, националната валута гривня девалвира ежедневно и много хора осъзнават факта, че салдата по сметките им се влошават. Политиците, властите и особено Националната банка на Украйна (НБУ) използват мерки, които не дават резултат. Обществото е обезпокоено и резочаровано; започнаха да се обмислят решения подобни на тези на твърдите привържениците на теорията за биполярното схващане като например валутния борд и доларизацията. Когато се гласува за или против някой от моделите на валутния режим в икономическата реформа на Украйна, трябва да се има предвид факта, че те не са универсални. Изборът на режим на валутен борд обаче позволява стабилизиране на финансовия пазар и бързо компенсиране на спада в жизнения стандарт, който е резултат от грешни изчисления, злоупотреби и вероятно измами в полза на някои корумпирани олигархични групи в системата на валутната политика.

**Ключови думи**: парична интеграция, доларизация, валутен борд, режими на обменните курсове, инфлационно таргетиране, парична политика.

JEL: F30, F31, F33, G20, G28.

## GLOBAL MONETARY INTEGRATION AND DETERMINATION OF STRATEGIC PRIORITIES FOR THE EXCHANGE RATE POLICY IN UKRAINE

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**Abstract:** The internationalization and fragmentation of the world's production, distribution, exchange and consumption is reflected in the currency system, which has long since been not exclusively determined by political boundaries. The **purpose** of the research is justification of the process of global monetary integration and determining in this context the priorities of exchange rate policy in Ukraine. Two types of monetary integration that fits best to developing countries are heighlighted: dollarization and currency board. The types and evolution of dollarization models are described. The accent is focused on advantages and disadvantages of dollarization for developing countries. The essence and theoretical backgrounds of currency board are considered. A classification of exchange rate regimes according to IMF is presented. The social and economic development of Ukraine and monetary factor in shaping the welfare of the state are marked. After twenty-five years of efforts, Ukraine seems to have encountered the same challenges that it had faced twenty-five years ago: the challenges of integration and participation in the globalized world. Even though the country has made substantial progress, there is still much to be done. Judging from the couple of crises the country has suffered, one is inclined to say that participation of the country in the international financial markets is a point which matters much for Ukraine. The country did not manage to reap the advantage of capital mobility. Today, the country suffers again from a severe currency and banking crisis, where the national currency, hryvnya, devalues on a daily basis, and many people see their balances deteriorating. The policy-makers, the authorities and especially the National Bank of Ukraine (NBU) have used measures that did not work. The society is anxious and frustrated; it has even started to think about solutions like those on the hard side of the 'Bipolar View' theory, such as the currency board and dollarization. Weighing the impact of voting for or against one of the models of the exchange rate regime in the Ukrainian economy reform, one must realize that they are not universal. However, choosing the currency board regime allows stabilizing the financial market and quickly offsetting the fall in the standard of living, which resulted from miscalculations, abuses and possibly fraudulent decisions in favour of certain corrupt oligarchic groups in the system of exchange rate policy.

**Keywords**: monetary integration, dollarization, currency board, exchange rate regimes, inflation targeting, monetary policy.

JEL: F30, F31, F33, G20, G28.

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