

**Financial and Banking Services Market**

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**THE SOCIO-ECONOMIC ORIENTATION
OF EXCHANGE RATE POLICY IN UKRAINE:
CURRENCY BOARD VS
OFFICIAL DOLLARIZATION**

Abstract

The article studies the problem of choosing an exchange rate arrangement in Ukraine with priority given to socio-economic living conditions of its population. The concept is based on the assumption that monetary policy should lay the basis for solving the problem of bringing the population's welfare closer to average European indicators. In Europe, Ukraine ranks among countries with the lowest average wages (173 euros) and pensions (63 euros). In addition, the hryvnia is one of the most undervalued currencies in the world. In view of this, it is necessary to reconsider the country's exchange rate policy, which is currently based on the free-floating arrangement for the Ukrainian hryvnia. This arrangement will conserve the population's impoverishment for many years to come, stalling all processes of economic and social development and postponing the country's Eurointegration plans for an indefinite period of time. Exiting from the economic and welfare crisis should be based on the exchange rate mechanism. For that, it is necessary to revalue the hryvnia's exchange rate so that to bring within a relatively short period of time the size of wages and pensions (as measured in the

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currencies of developed countries) close to the level observed in Ukraine one year prior to the beginning of the Russian aggression against Ukraine and the start of the anti-terrorist operation. Further revaluation will be supported by the country's economic development. In considering exchange rate arrangements, in particular an official dollarization and a currency board arrangement, the authors approach the conclusion that it would be feasible to build the country's exchange rate policy upon the model of the currency board arrangement. However, since the exchange rate is derived from the balance of payments, this task can only be achieved by healthening the country's finance and using the reserves that are "intuitively obvious". The majority of them are well-known, while some of them are only gaining in popularity. These include: financing the budget deficit through bond issues; de-shadowing of the economy; de-offshoring; encouraging import substitution; restraining the flight of capital; increasing the transparency of the banking sector; preventing the concealment of foreign currency profits abroad; expanding the spheres for circulation of the hryvnia as domestic currency; special foreign exchange arrangements with «law-abiding» companies; attracting foreign currency cash holdings of the population into the banking sector; expanding the practice of inter-governmental foreign currency swaps; using the non-conventional instruments of monetary policy by the National Bank to repurchase securities and debt obligations.

Key words:

Balance of payments, currency board, de-shadowing, de-offshoring, dollarization, exchange rate, exchange rate arrangement, flight of capital, pensions, wages, welfare.

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

1. On the state of socio-economic development in Ukraine

During the recent years, the well-being and living conditions of Ukraine's population have been falling at an increasing rate. These processes were driven by decreasing average per capita GDP volumes, falling real incomes per capita, deteriorating access to healthcare system, education, and certain groups of products and services. This leads to worsening quality of life and activity of individuals in the spheres of manufacturing and services. In particular, growth of the volume index of GDP per capita stopped in 2012–2013, turning negative in 2014–2015 compared to previous year (Table 1).

Table 1

Volume index of GDP per capita in 2000–2015 (% to previous year)

2010	2011	2012	2013	2014	2015
104.5	105.9	100.5	100.2	93.7	90.0

Note: excluding temporarily occupied territory of AR Crimea and Sevastopol in 2014, as well as part of the area under anti-terrorist operation).

Apart from the fact that Gross Domestic Product is the final aggregate indicator describing the development of material and non-material spheres, its popular usage for characterization of the socio-economic state of the country is insufficient and even misleading in some economies. As for Ukraine, the varying dynamics of its GDP in separate periods (in particular during long-term economic crisis of 1991–2000, economic growth after 2001, and economic recession since 2013) always covers up the protracted and unsolved problems in the social sphere. These problems have already become chronic and multidimensional in nature: The increasing gap between the national and the European standards in the system of wages and labour, provision of pensions, systems of education and healthcare, role of science, culture and sports in society, and supply of jobs.

Thus, after twenty-five years of independence, the Ukrainian state must finally settle on its main national interest and make all directions in the activities of governmental authorities and business subservient to it. It is methodologically unacceptable to study national interests without singling out the main interest,

otherwise a big «basket» of interests is formed, from which active leaders or certain parties of the country can always select those to their own benefit.

One example of such «a basket» is the definition given by R. T. Kovalyuk¹: «In modern geopolitics, national interests are understood as strategically important goals set by each and every state and the means which are used to reach these goals. Ukrainian national interests are vitally important material, intellectual and spiritual values of the Ukrainian nation as the bearer of sovereignty and the sole source of power in Ukraine, as well as the crucial needs of the society and the state, the realization of which ensures the state sovereignty of Ukraine and its progressive development. In this sense, national interests are the most important tasks of internal and external policy».

The category of national interest in scientific literature has mainly been developed by experts in political science and international relations. As a rule, they concentrate on external orientation of interests and avoid defining their hierarchy, primarily the main interest. It is generally recognized that «formation of the hierarchy of national interests is significantly affected by passions or stereotypes of political thinking»².

Definition of the country's main interest should proceed from the modern understanding of the direction of civilizational development. On the verge of the 20th and 21st centuries, the UNO formulated this task as «development of human potential», which has been recently termed «human development». This means that the individual, his needs and development are the main preconditions for progress, and respectively, for social policy of every UNO member state. While solving this problem in the developing countries, and especially those that are deeply in crisis (as it is currently the case in Ukraine), it is necessary to understand that it is impossible to reach all of the world's riches of human development at one and the same time. Therefore, it would be feasible to primarily focus on the socio-economic dimension connected with improvement of the population's living standards.

In view of the current socio-economic situation and proceeding from its main elements that could become the basis or a starting point of human development in Ukraine, it is possible to state that *the main national interest is and should be the welfare of population*. All other interests, including security, are such that are meant to satisfy this particular interest. It cannot be ignored even in the conditions of military action (as it was proven by the experience of Israel), which does not mean that standards of living cannot be temporarily lowered due

¹ Kovalyuk, V. T. (2007). National interests of Ukraine in the new geopolitical situation. *Visnyk Kyivskoho Mizhnarodnoho Universytetu. Seriya Mizhnarodni Vidnosyny, Issue 6*. Retrieved from <http://www.kymu.edu.ua/vmv/v/06/kovaluk.htm> (in Ukrainian).

² Hay-Nyzhnyk, P., Chupriy, L. (2014). National interests, national values and national goals as structuring factors of national security policy. *Gileia, 84 (5), 465–471* (in Ukrainian).

to increased requirements for financing connected with provision of the victory. What concerns Ukraine, in its hybrid war at its current stage Russia relies on financial and economic levers, which makes it harder for us to positively solve social problems. However, it does not mean their settlement is totally postponed; it rather calls for timely preventive and leading action. In particular, an alternative to halted Free Trade Agreement with Russia is to create similar areas with other countries on different continents; Russia's ban on agricultural, raw-materials and food imports from Ukraine should be compensated by promotion of these products on other markets, etc. The effectiveness of waging the hybrid war determines the capacity for social sphere development and vice versa.

Perceiving welfare as the main value of the nation is corroborated by the research of both foreign and domestic sociologists. In particular, the sociological survey performed by the National Institute for Strategic Studies revealed that in the system of values the highest priority was assigned to welfare (46.5%). Other votes were distributed as follows: fairness (44.3%), stability (40.9%), human rights (37.4%), order (36.1%), equality under the law (30.2%), freedom (18.1%), spirituality (14.6%), patriotism (13.1%), mutual assistance (10.1%), and efficiency (4.1%)³.

2. Economic welfare as the priority of socio-economic development in Ukraine

While giving priority to welfare in the system of human development, from the standpoint of Ukrainian reality, it should be noted that its scientific and practical aspects were studied at the micro- and macro-levels at different stages of economic science development. W. Petty studied the impact of taxes on welfare; D. Ricardo studied the aspects of labour reproduction; K. Marx studied welfare as a socio-economic category; E. Engel and W. Pareto researched welfare from the standpoint of incomes of working families and their distribution. A. Pigou, the adherent of A. Marshall's neoclassical ideas, authored the theory of economic welfare. In the modern conditions, it still retains its significance in the sense that it allows to «directly or indirectly use money as the scale of measurement»⁴. For measurement of economic welfare, Pigou used the size of national dividend (the share of material profits which can be expressed in money terms), albeit acknowledging its imperfections arising from its inability to take into account numerous indicators of life quality.

³ Hai-Nyzhnyk, P., Chupriy, L. (2014). National interests, national values and national goals as structuring factors of the national security policy. *Gileya*, 84 (5), 465–471 (in Ukrainian).

⁴ Pigou, A. (1985). *The economic theory of welfare*. [Transl. to Russian]. Moscow, Progress, pp. 73–74 (in Russian).

Modern theories try to model the individual as a central element of the economic system by using such terms as «the level of living», «lifestyle», «the quality of life», and others, next to the category of «human development». In developed societies, the popularity of subjective evaluations of welfare is growing. Extrapolating this growth onto transition economies, we cannot but take into account the scarcity of resources that are necessary to simultaneously achieve the world-class standards in all dimensions of human development. Proceeding from the Ukrainian reality, we should focus on the fundamental elements of economic welfare – wages and pensions, which should be recognized as the main national economic interest for the nearest future.

Instead, the transformation of Ukraine during the recent decades has been orientated towards spheres of production and services as «the things in themselves». The levers of economic policy are being modernized so that priority is given to business, which in Ukraine is mainly oligarchic in nature and whose ultimate goal is income in general and net income of the entrepreneur in particular. As a result, in the system of expanded reproduction, it is labour force that reveals itself as an unnaturally cheap input. Over the whole period of independence, labour has been the cheapest resource. The Ukrainian political beau monde calls it «the competitive advantage» of the country. However, foreign and national investors cannot fully benefit from it because people are looking for jobs outside the national market, where Ukrainian migrants earn at least three times higher wages⁵. According to the World Bank, 7 million people that were born in Ukraine are now residing outside its borders⁶.

The transformation of Ukraine into a pariah country in the consciousness of the Ukrainians is caused by the fact that the factor of welfare has not been organically embedded in the economic mechanism of the state. Such an approach could be acceptable if in the system of expanded reproduction, the productive relations at the stages of production, exchange, distribution, and consumption were directly related. Within uncontrolled environment, however, each of these stages can exhibit different behaviour, affecting the socio-economic development in either positive or negative ways. Finally, employees, in contrast to the class of entrepreneurs and politicians, assign critical value to economic welfare, i.e. the high level of life quality.

At its current stage, the successful economic development of Ukraine, including the creation of real preconditions for European integration, can acquire sufficient significance in the geopolitical and geoeconomic space only if Ukrainians finally reach the level of welfare similar to that of the Europeans. There is no other way to do this but to ensure that Ukrainian workers earn the European level

⁵ Syrochuk, N. A. (2014). International labor migration of Ukrainians to the countries of European Union: Factors of influence. Retrieved from 12_kpi_2014.doc. (in Ukrainian).

⁶ Kravchuk, K. (2013). How many Ukrainians work abroad? Retrieved from http://society.lb.ua/life/2013/11/28/243134_skilki_ukraintsiv_pratsyuie.html. (in Ukrainian).

of wages. Today, Ukraine occupies the last position in Europe in terms of this indicator (Table 2). In 2015, the average wage in Ukraine was 173 euros (135 euros according to other estimates). This means that the target wage level over the next 2–3 years should be 500 euros, i.e. the wage level in the majority of new EU member countries.

Table 2

Average monthly wages in the countries of Europe in 2015 (€)

#	Country	€	#	Country	€	#	Country	€
1.	Norway	3527	13.	Italy	1898	25.	Latvia	504
2.	Luxembourg	3189	14.	Spain	1615	26.	Hungary	497
3.	Denmark	3113	15.	Slovenia	1000	27.	Serbia	436
4.	France	2449	16.	Portugal	805	28.	Bosnia and Herzegovina	422
5.	Finland	2321	17.	Poland	750	29.	Romania	395
6.	Sweden	2268	18.	Slovakia	745	30.	Belarus	353
7.	Ireland	2160	19.	Estonia	735	31.	Bulgaria	333
8.	The Netherlands	2136	20.	Croatia	712	32.	Turkey	277
9.	Great Britain	2054	21.	Greece	704	33.	Moldova	181
10.	Germany	2012	22.	Czech Rep.	702	34.	UKRAINE	173
11.	Austria	2010	23.	Lithuania	527			
12.	Belgium	1946	24.	Russian Fed.	527			

Note: *Compiled by the author based on: The map of European wages. Retrieved from http://divannaya-sotnya.com.ua/One_Photo_News/karta-vropeyskih-zarplat.html.

The most problematic issue is the population's welfare, the major source of which is made up of pension payments. Their weight relative to total size of the population is approximately 30%, given that the size of an average pension was 1 536 hryvnias in 2015 with no indexations made. For comparison: The minimal wage was set at 1 378 hryvnias as of September 1, 2015; 1 450 hryvnias as of May 1, 2016; and 1 600 hryvnias as of December 1, 2016. Under such conditions, people that reached their retirement age depend on active workable population, the majority of which is incapable of supporting the pensioners at the current level of wages. At the same time, the government focuses its socio-economic policy towards «freezing» the pensions due to deficit of the Pension Fund. Thus, the welfare of pensioners falls into a so-called «vicious circle»: In 2015, the Pension Fund was financed by 64.16% from its own sources, and by

35.81%⁷ from the funds allocated to pension programs from the state budget, which can hardly be further extended. In order to break this «vicious circle», the welfare policy must be radically reconsidered, starting from raising the pensioners' purchasing power and strengthening of the national currency unit.

Table 3

Average monthly pensions in the countries of Europe (€)

#	Country	€	#	Country	€	#	Country	€
1.	Luxembourg	3000	14.	Spain	877	27.	Latvia	258
2.	Norway	1760	15.	Belgium	847	28.	Lithuania	220
3.	Greece	1600	16.	Malta	615	29.	Russia	196
4.	Denmark	1411	17.	Slovenia	604	30.	Romania	174
5.	Switzerland	1393	18.	Turkey	580	31.	Bosnia and Herzegovina	171
6.	Germany	1270	19.	Great Britain	460	32.	Bulgaria	145
7.	Italy	1141	20.	Poland	437	33.	UKRAINE	63
8.	France	1108	21.	Czech Rep.	396			
9.	Sweden	1060	22.	Portugal	354			
10.	Finland	1050	23.	Slovakia	351	34.	Albania	55
11.	Iceland	1046	24.	Hungary	332	35.	Ireland	n.a.
12.	Austria	1020	25.	Croatia	324	36.	The Netherlands	n.a.
13.	Belgium	847	26.	Estonia	280	37.	Serbia	n.a.

Source: Top pensions – only ten countries. Retrieved from <http://ubiznes.ru/skolko-zarabatyvaet/samye-vysokie-pensii-v-evrope-top-desyat-stran.html> (in Russian).

As for the policy of pension provision, it is worth to note that, today, there is a global tendency towards maintaining high levels of humane treatment of the citizens that reached their retirement age. In particular, a pension in Austria makes 77% of the wage size; in Italy it amounts to 75% of the average wage, which is 2.3 thousand euros; in Turkey pensions make 64.5% of the level of 900 euros. The richest pensioners live in Greece, where the pension size reaches 96% of the previously earned wages.⁸ Obviously, Ukraine cannot possibly reach these levels in a short period of time, but it can set this modern ten-

⁷ Budget performance of the Pension Fund as against 2015. Retrieved from http://www.pfu.gov.ua/pfu/control/uk/publish/category?cat_id=95533. (in Ukrainian).

⁸ The highest pensions – only ten countries. Retrieved from <http://ubiznes.ru/skolko-zarabatyvaet/samye-vysokie-pensii-v-evrope-top-desyat-stran.html>. (in Russian).

dency as a target for the socio-economic policy of the country, determining the steps which are necessary to gradually advance in this direction every year. Below we will focus on the development of monetary approach to improving the state of socio-economic development, taking into account the Ukrainian specifics.

3. The monetary factor of national welfare in Ukraine

The development of exchange rate policy conceptions is focused primarily on macroeconomic aspects. Researchers study the influence of exchange rates on the country's external trade balance, dynamics of export and import values, and accumulation of foreign exchange reserves. They also study the problems at the micro-level which are connected with business activity of the firms that are engaged in exporting and/or compete with imports. Y. Belinska⁹, however, states in her Doctoral thesis: «The exchange rate regulation is performed at two levels, constantly revealing the linkages between exchange rate dynamics and socio-economic parameters of the country's development (macro-level), as well as specific features of the relations between monetary authorities and business entities at the foreign exchange market (micro-level), and the cyclical process underpinned by periodically escalating gaps between the exchange rate and the socio-economic indicators». Although the researcher made a correct general assumption as to comprehensive influence of the exchange rate on the processes in economic and social spheres, she reduced her research exclusively to the business sector.

In the economic literature on exchange rate policy, the majority of authors try to determine its goals. The generalization of these studies in Table 4 shows that the goals of exchange rate policy are ambiguous. They can be determined by geopolitical, geoeconomic, macro- or micro-economic factors, as well as the state of the country's financial system. For example, in trying to win product competition with the USA and the EU, China supports devaluatory tendencies of the yuan, sometimes even in the form of currency wars. At the same time, it pursues the goal of transforming its national currency into the fifth international reserve currency in order to influence upon the value of the IMF's SDR together with the dollar, the euro, the pound, and the yen. This goal was finally reached – by the decision of the Board of Directors of the IMF the Chinese yuan is to be included in the basket of reserve currencies starting from October 1, 2016.

⁹ Belinska, Ya. V. (2009). Regulation of foreign exchange rate in Ukraine in the conditions of globalization. [Abstract of Thesis for the Degree of Doctor of Economic Sciences in speciality 08.00.08]. National University of State Taxation Services of Ukraine. Irpin, p. 4 (in Ukrainian).

Table 4

Overview of exchange rate policy objectives *

Maintaining the stability of national currency
Obtaining international recognition as a powerful state
Ensuring international competitiveness of the country
Economic growth (GDP)
Decreasing the shadow sector of the economy
Full employment
Growth of investments
Curbing the inflation
Stimulating business activity
Increasing savings in national currency
Increasing savings in foreign currency
Balancing the balance of payments
Increasing foreign investments
Reaching an adequate level of gross reserves
Smoothing sharp changes in the exchange rate
Servicing and repaying external debts
Supporting the optimal level of exchange rates

*Developed by the author based on: Krupka, M. I., Kulchytskyi, M. I., Zhmurko, N. V., Vankovych, D. V. (2012). Exchange rate policy of Ukraine. [Monograph]. Lviv, Lviv National Ivan Franko University, p. 11. (in Ukrainian); Barsegian, A.G. (2007). Exchange rate policy of Ukraine in the system of macroeconomic regulation. [Abstract of Candidate Thesis]. Kyiv, Kyiv National University. (in Ukrainian); Dzyublyuk, O.V. (2007). Foreign exchange policy. [Textbook]. Kyiv, Znannya. (in Ukrainian).

Instead, the Russian Federation finds it acceptable to tolerate volatile exchange rates while preserving large foreign exchange reserves, which are viewed as the guarantee of national security¹⁰. This policy was tested after the «War 888»¹¹, thanks to which Russia managed to survive through the financial crisis of 2008 without too much of a loss. Respectively, in the conditions of the ongoing war with Ukraine and sanctions imposed by the USA, Europe and Ukraine, the Central Bank of Russia is willing to accept any level of volatility as long as its foreign exchange reserves are kept intact. The Russian style of for-

¹⁰ Treasury-house of the Kremlin: Putin will sacrifice the stability of the ruble for growth of foreign exchange reserves. (2016, March 1). Retrieved from <http://finance.obozrevatel.com/business-and-finance/90617-sokrovischnitsa-kremlya-putin-pozhertvuet-stabilnostyu-rublya-radi-rosta-zolotovalyutnyih-rezervov.htm> (in Russian).

¹¹ The war with Georgia started on 08.08.2008.

eign exchange policy acquires a geopolitical orientation, which is only tentatively connected with observance of economic regularities. However, we can also conclude that it will be impossible for Russia to avoid catastrophic consequences for its foreign exchange reserves after such a policy is maintained for a relatively long time.

Even the constitutional and legal clause postulating that «the main function of the National Bank is to secure the stability of the currency unit of Ukraine»¹² cannot be interpreted as keeping the national currency at a constant level «at any price and no matter what happens at the end» as this is in fact not possible¹³. Moreover, as V. Yurchyshyn¹⁴ fairly acknowledges, the NBU itself consciously avoids clearly articulating its monetary policy, as well as the monetary mechanisms and instruments which can be used to assess the current dynamics and to control, adjust and forecast key target macroeconomic parameters.

It is not accidental that the main goal of the European Central Bank is linked with price stability, which lays the foundation for achieving a double objective: Economic growth and job creation¹⁵. At that, it is important to take into account that the European employment strategy has developed from a relatively narrow task of overcoming unemployment into a comprehensive socio-economic goal, which in particular entails formation of an effective labour market, solving the problem of population aging, social providing of citizens, preventing growth of inequality, and climate change.

Thus, in the Ukrainian reality, we must acknowledge that putting the focus of the NBU solely on the stability of national currency, but without its clear correspondence to the development of the socio-economic sphere, frees this important institution of the market relations from responsibility for the population's welfare. This phenomenon can be particularly observed in the dynamics of Ukraine's key indicators – wages and pensions. As we can see in Table 5, over the last two years (2014–2015), the hryvnia has depreciated almost 2.5 times with respect to US dollar and the euro. Thus, when measured in these currencies, wages have become almost two times smaller, which has no precedent in the countries proclaiming the course towards European integration.

¹² The Law of Ukraine «On the National Bank of Ukraine». (1999). *Vidomosti Verkhovnoyi Rady*, 29, p. 238. Retrieved from <http://zakon5.rada.gov.ua/laws/show/679-14> (in Ukrainian).

¹³ The concept of currency unit stability in Ukraine has not been legislatively defined, but is discussed by scientists from time to time.

¹⁴ Yurchyshyn, V. (2016). The global context of exchange rate policy and directions for increasing the resilience of national currency unit in Ukraine. In: *Modern exchange rate policy and peculiarities of its realization in Ukraine*. Kyiv, p. 35 (in Ukrainian).

¹⁵ Objective of the monetary policy. Retrieved from <https://www.ecb.europa.eu/mopo/intro/objective/html/index.en.html>; Die Europäische Zentralbank. Eurosystem. Retrieved from <https://www.ecb.europa.eu/ecb/tasks/html/index.de.html>.

Table 5

Average hryvnia-dollar and hryvnia-euro exchange rates and average monthly nominal wages as measured in hryvnias, dollars and euros

Year	2007	2008	2009	2010	2011	2012	2013	2014	2015
Exchange rate, USD/UAH	5.0	5.4	7.8	7.9	8.0	8.0	8.0	11.9	21.9
Exchange rate, EUR/UAH	6.9	7.7	10.9	10.5	11.1	10.2	10.6	15.6	24.2
Wage, UAH	1352	1806	1692	2250	2648	3041	3282	3408	4195
Wage, USD	270.2	334.4	216.9	248.8	331.0	380.1	410.2	286.4	191.5
Wage, EUR	195.9	234.5	155.2	214.3	238.6	298.1	309.6	218.5	173.3

Source: Calculated by the author based on data of the National Bank of Ukraine and the State Statistical Service of Ukraine.

Table 6

Average monthly pensions as of January 1 (in hryvnias, dollars and euros)

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: Calculated by the author based on data of the State Statistical Service of Ukraine and the National Bank of Ukraine.

Monetary factors increased pressure on pensions paid out to more than 25% of the population (Table 6). In 2015, average pensions measured in internationally recognized currencies – the dollar and the euro – made 50.0% and 62.8% respectively. In terms of this indicator, Ukraine ranks second last in Europe, outperforming only Albania by 8 dollars (Table 3). At that, Ukraine lacks both the state policy and the concept of welfare development for pensioners, which are not even being developed. Moreover, there are no programs targeted at humane treatment of seniors, which could ensure preservation of their usual lifestyle after retirement, as it was done in Norway, Greece, Denmark, Turkey, Spain, the Czech Republic, and other European countries.

Today, the socio-economic welfare of an ordinary Ukrainian, either employed or retired, is determined by the exchange rate policy. It is due to hryvnia depreciation that wages and pensions as measured in terms of internationally recognized currencies have started to plummet. This tendency can be restrained,

and we see this happening in 2016. However, bringing Ukraine back into the circle of countries with incomes close to the European average can only be realized through monetarist methods. This means that the hryvnia should regain its value. Experts of *The Economist* consider the hryvnia to be one of the most undervalued currencies in the world¹⁶. According to the Big Mac Index, its exchange rate should be 7.3 hryvnias per dollar, which means that the hryvnia is undervalued by almost 70%. In realizing its exchange rate policy, the state must focus on citizens, not institutions. The understanding of this fact was missing in the EU, leading to Brexit.

In general, the socio-economic policy of any country is oriented towards employment and wages, which are determined by the level of pension provision. We cannot but agree with the Director of Razumkov Centre that «as long as labour in the country is undervalued, while half of the economy is in the shadow, it is pointless to talk about normal social policy. If we do not work on primary issues (adequate labor remuneration), then we can work on secondary issues (increasing the retirement age, taxation of pensions, etc.) indefinitely – it will bring no result. This is what we have been observing over the last 25 years. A European country cannot take pride in that its main competitive advantage is cheap labour force»¹⁷. Of course, it is impossible to determine exactly the level of wages that would be sufficient for the nearest future. We can positively accept a viewpoint that wages should be raised by at least 80%¹⁸. However, when measured in foreign currency terms, undervalued wages result in lower value added of the Ukrainian products sold at the world market, which finally leads to lower competitiveness of the Ukrainian economy.

4. Exchange rate arrangements in Ukraine

Purchasing power parity determines whether the national currency unit is overvalued or undervalued. In the conditions of globalization, these phenomena have a profound influence on the functioning of the country's economy, affecting exporters and importers, competitiveness and profitability of companies, as well as changing the state of external indebtedness and attraction of foreign invest-

¹⁶ The Big Mac index. Retrieved from <http://www.economist.com/content/big-mac-index>.

¹⁷ Shangina, L. (n. d.). Social policy should be based on employment and decent labour remuneration. Retrieved from http://www.razumkov.org.ua/ukr/expert.php?news_id=6176. (in Ukrainian).

¹⁸ Yurchyshyn, M. (2016, July 21). Growth of wages depends on quality of labour and growth of competitiveness. Retrieved from http://www.razumkov.org.ua/ukr/expert.php?news_id=6194. (in Ukrainian).

ments. However, the unstable and undervalued national currency gives rise to negative socio-economic consequences, manifesting themselves as structural changes in the economy caused by the decreasing share of consumption in the national income coupled with increasing consumer prices, and thus, worsening living conditions of the population. The sociological survey performed by Razumkov Centre on December 18–24, 2015, in all regions of Ukraine (excluding the Crimea and the occupied territories of Donetsk and Luhansk regions) shows that hryvnia-to-dollar exchange rate produces no effect on welfare only for 7.4% of the population. At the same time, it produces a significant impact on welfare for 44.4%, and crucial impact on welfare for 23.9% of the population.¹⁹

Over the years of its independence, Ukraine has tried different approaches, including such arrangements as floating exchange rate (1993), managed peg (1994), managed float (1997), exchange rate band (1998), method of fixing the exchange rate at the Ukrainian Interbank Exchange (1999), floating exchange rate (2000–2003), gradual transition to free floating (2006–2007), exchange rate determined as a weighted average rate for the foreign exchange transactions of the previous day within a 2% band and its hard pegging (2009–2012). Today, the NBU tries to implement the model of free floating of the exchange rate²⁰.

When choosing the exchange rate arrangement, it is important to form the hierarchy of goals which are supposed to be solved. Many of the authors focus on macroeconomic objectives: economic growth (GDP), de-shadowing of the economy, full employment, growth of investments, curbing the inflation, stimulating the economic activity. The goals of the money and credit policy include growth of savings denominated in foreign currency, expansion of access to credit, optimization of the balance of payments, growth of foreign investments, and reaching the adequate level of gross reserves, as well as servicing and repayment of foreign debts²¹.

¹⁹ Mishchenko, M. (2016). Attitudes of Ukrainian citizens to the problem of resilience of the national currency. In: *Modern exchange rate policy and peculiarities of its realization in Ukraine*. Kyiv, Centr Razumkova, p. 112. (in Ukrainian).

²⁰ The NBU. (2015, July 21). Letter of Undertaking and Memorandum on Economic and Financial Policy. Retrieved from <http://www.bank.gov.ua/doccatalog/document?id=20163929> (in Ukrainian); Halchynskyi, A. (2014, February 21). Floating exchange rate is the beginning of the end of administrative market. *Dzerkalo tyzhnya*. Retrieved from <http://gazeta.dt.ua/macrolevel/anatoliy-galchinskiy-plavayuchiy-kurs-ce-pochatok-kincy-administrativnogo-rinku-.html>. (in Ukrainian).

²¹ Krupka, M. I., Kulchytskyi, M.I., Zhmurko, N.V., Vankovych, D.V. (2012). *Exchange rate policy of Ukraine*. [Monograph]. Lviv, Lviv National Ivan Franko University, p.11 (in Ukrainian); Barsegyan, A.G. (2007). Exchange rate policy of Ukraine in the system of macroeconomic regulation. [Abstract of Thesis for the Degree of Candidate of Economic Sciences in speciality 08.00.02]. Kyiv, KNU. (in Ukrainian); Dzyublyuk, O.V. (2007). *Foreign exchange policy*. [Textbook]. Kyiv, Znannia. (in Ukrainian).

5. Choosing an exchange rate arrangement

The scientific literature and business practice have not yet produced such a solution to the problem of choosing an exchange rate arrangement that could be used as a rule of thumb in forming the economic policy. The economic community has split into advocates of the proposition that exchange rates do not matter (monetarists) and those who believe that exchange rates do matter, and therefore, instruments of exchange rate policy can and should be part of the economic policy. Western economic scientists can be said to agree that truth is somewhere in the middle. This means that there is no model of the exchange rate regime that would equally fit all the countries and all the times. In view of this, it is necessary to study national conditions and peculiarities in detail before such an exchange rate arrangement that would fit a particular country can be chosen. This is the only way to select an exchange rate regime that would satisfy the tasks of economic development²².

The basis for solving the task of subordinating the exchange rate policy to socio-economic needs of the country's development is the choice of the exchange rate arrangement. According to IMF classification, there are 10 types of exchange rate arrangements grouped as shown in Table 7.

When choosing the exchange rate arrangement, the majority of developing countries preferred systems of inflation stabilization based on pegging their national currencies to currencies of the developed countries. Their choice was driven by either search for an independent development model (Chile, Israel, Poland) or serious currency crises (Mexico, Thailand, Indonesia, South Korea). The experience of CEE countries, whose economic policy is focused on European integration, testifies to the inadequacy of floating exchange rates at the transition stage of development²³.

As for Ukraine, in view of its Eurointegration strategy, it should choose such a direction of exchange rate policy that would help to adapt the country to the financial and economic order of the Eurozone. At that, the highest priority should be assigned to the goal of ensuring the European level of welfare for the population. In order to solve this task, we have to choose between two alternative models – the currency board and the exchange arrangement with no separate legal tender (also called official dollarization). The third way – euroisation or accession to the Eurozone – is not possible for Ukraine in the nearest future.

²² Siskou T., Savelyev, Yev. (2016). Currency regimes and exchange rate policy in Ukraine in the realm of «blessed» and «unblessed» trinity. *Journal of European Economy*, 2.

²³ Dean, J. V. (2002). Exchange rate arrangements in the CEE countries with lessons for Ukraine. Kyiv, Centr Socialno-Ekonomichnyh Doslidzhen CASE-Ukraine. (in Ukrainian).

Table 7

Exchange rate arrangements according to IMF classification as of 2011²⁴

Arrangement	Countries
Floating	Brazil, Georgia, Moldova, Romania, Turkey, SAR, India
Free floating	USA, Eurozone, Poland, Australia, Canada
Stabilised arrangement	Honduras, Vietnam, Macedonia, Belarus, Ukraine
Crawling peg	Nicaragua, Botswana, Uzbekistan
Crawl-like arrangement	China, Kazakhstan, Argentina, Croatia
Pegged exchange rate within horizontal bands	Tonga
Other managed arrangement	Singapore, Nigeria, Malasia, Russia
Exchange arrangement with no separate legal tender	Ecuador (USD), Zimbabwe (USD), Montenegro (EUR), Andorra (EUR)
Currency board arrangement	Hong Kong, Bulgaria
Other conventional fixed peg arrangement	UAE, Saudi Arabia, Denmark

6. Official dollarization

Official dollarization is a situation where national currency is replaced with some foreign currency, usually the dollar, the euro or the Yen. This keeps the financial market from splitting into the market denominated in national currency and that denominated in the currency of the foreign country. Under conditions of official dollarization, there are no problems of currency mismatching, exchange rate risk or risk of a bank run. However, under official dollarization, in countries with large resource and human capital bases, central banks have limited ability to perform the creditor-of-last-resort function and lose their earnings from seigniorage. Moreover, implementation of official dollarization significantly reduces the country's independence in forming and realizing its own monetary policy at the international level.

²⁴ Annual Report on Exchange Arrangements and Exchange Restrictions. – <https://www.imf.org/external/pubs/>; Naiman, E. (2016). Which exchange rate arrangement does Ukraine need. In: *Modern foreign exchange policy and peculiarities of its realization in Ukraine*. Kyiv, Centr Razumkova, p. 56 (in Russian).

Official dollarization should be distinguished from de-facto dollarization, which is typical of the Ukrainian economy.²⁵ The latter is a situation «where foreign currency is used along with national currency as a means of exchange (i.e. «currency substitution») or as a store of value in a cash form (i.e. «asset substitution»).²⁶ De-facto dollarization is a spontaneous process whereby two internationally recognized currencies are used in parallel. The majority of such transactions fall beyond the supervisor's control. According to IMF classification, de-facto dollarization takes the forms of dollarization of payments (payments in dollars within the country) and financial dollarization (using foreign currency for savings).

7. Currency board

A currency board is the exchange rate arrangement which requires that national currency be backed (by more than 50%) with foreign currency reserves, whereas currency is exchanged on demand and at a fixed exchange rate. The currency board model assumes that monetary policy follows a simple rule – money issue is only acceptable when there are enough foreign currency reserves. At the same time, fiscal discipline is achieved through mechanism of money issue only under condition that foreign currency reserves are available. Finally, fixing the exchange rate legislatively allows protecting it from speculative attacks and thus ensures its stability over longer time periods. In the countries with emerging markets, benefits of the currency board arrangement include relatively lower levels of inflation compared to countries, which use soft pegs or free floating of national currencies.

Using the currency board model in the system of exchange rate policy requires that an anchor currency is chosen, i.e. the currency to which the hryvnia is to be pegged. For anchoring, it is feasible to use one internationally recognized currency or a basket of internationally recognized currencies of the major trading partner countries.²⁷ Today, Ukraine's major trading partner is the European Union, which accounts for a growing share of Ukrainian exports after conclusion of

²⁵ Dyba, M. I., Myronenko, H. V. (2013). Modern approaches to using exchange rate arrangements. *Visnyk ONU im. I.I.Mechnykova*, 18 (1), 141 (in Ukrainian).

²⁶ Levy-Yeyati, E. Sturzenegger, F. (2003). To Float or to Fix. *American Economic Review*, 93(4), 1173–1193.

²⁷ Naiman, E. (2016). Which exchange rate does Ukraine need? In: *Modern exchange rate policy and peculiarities of its realization in Ukraine*. Kyiv, Centr Razumkova, p. 56 (in Russian).

²⁷ The NBU. (2015, July 21). Letter of Undertaking and Memorandum on Economic and Financial Policy. Retrieved from <http://www.bank.gov.ua/doccatalog/document?id=20163929> (in Ukrainian).

the Association Agreement. Thus, exports from Ukraine to the EU made 26.9% in 2013, 31.8% in 2014, and 32.8% in 2015. The dynamics of imports was 37.2%, 39.8% and 42.1% respectively.²⁸ Apart from the fact that the US dollar is very popular in Ukraine's international settlements, as well as in its shadow economy, the commodity trade of Ukrainian business on the US market remains to be insignificant: In 2015, the share of exports to the USA made only 1.3% of total exports, while the share of imports from the USA was 3.9% of total imports²⁹.

Hypothetically, Ukraine can implement the currency board arrangement by pegging the hryvnia to Special Drawing Rights (SDR) issued by the IMF as a reserve means of payment. Ukraine continuously cooperates with the IMF on issues of economic reforms implemented in the country. In 2015, the Fund launched the four-year Extended Fund Facility program for the total sum of 17.5 billion dollars or 12.348 billion SDRs. However, the IMF advocates that the National Bank of Ukraine should pursue floating exchange rate arrangement with inflation-targeting framework. Although such a policy produced positive results in Georgia, Romania, Turkey, Israel, and some other countries, it cannot make the hryvnia regain its purchasing power in full and in a short period of time. Inflation targeting is linked to a large number of factors, which do not have direct influence on the exchange rate, but are important for the Ukrainian economy, in particular tax system, tariffs for communal services, prices for energy resources for population that are not subject to state regulation. In addition, in view of Ukraine's economic openness, inflation targeting can produce significant «malfunctionings» in response to processes taking place in the world market.

Finally, pegging the hryvnia to the Euro has a significant advantage in view of the existing – with a tendency to deepening – direct and indirect linkages with the economic and financial system of the EU as the issuer of the anchor currency. This will contribute to growth of economic potential of Ukraine and attraction of investments from the EU necessary to restructure the economy in accordance with the economy of the anchor currency issuer, which satisfies the goals of the European integration of Ukraine.

The chokepoint of the currency board is that the monetary policy mechanism loses its ability to influence upon cyclical needs and asymmetric shocks. Moreover, the exchange rate no longer functions as a switch, which changes the terms of international competition through reduction of prices or cutting expenses on salaries and wages. Along with that, the scale of nominal wage adjustment is normally smaller than the scale of price adjustment.

²⁸ Cooperation between Ukraine and EU countries in 2015. Statistical Yearbook. Kyiv, 2016.

²⁹ The SSSU. (2016). External trade of Ukraine in products and services in 2015. [Compilation of Statistics]. Kyiv, State Statistical Services of Ukraine, p.34. (in Ukrainian).

8. Drafting the Ukrainian model of the currency board

When weighting all arguments in favour and against choosing a particular model of exchange rate arrangement in the system of Ukrainian economic reforms, we have to be aware that they are not universal. Yet, the currency board arrangement allows to stabilize the financial market and to compensate for the loss of welfare produced by mistakes, abuse and corrupt decisions taken in favour of separate oligarchic groups in the system of exchange rate policy in a relatively short time. For that, it is necessary to find the «golden middle point» between the existing exchange rate and the level which could be labelled as the «undervaluation threshold» of the hryvnia. We think that returning to 12.0–16.0 hryvnias per dollar would be in the national interest, leading to regained confidence in the banking system.

High expectations for the currency board arrangement are based on the success of this system in Hong Kong (1983), Argentina (1991), Estonia (1992), Lithuania (1994), Bulgaria (1997), and Bosnia (1997). In order for Ukraine to achieve similar success, it must adapt this exchange rate arrangement to its own conditions and objectives. At that, one should proceed from the fact that the currency's exchange rate is derived from the balance of payments. In view of this, strengthening of the national currency unit in the conditions of Ukraine requires that the country's finance be healthened. To a large extent, this could be done by using the reserves that are using the reserves that are «intuitively obvious». The majority of them are well-known, while some of them are only gaining in popularity. These include: financing the budget deficit through bond issues; de-shadowing of the economy; de-offshoring; raising the import substitution; restraining the flight of capital; increasing the transparency of the banking sector; preventing the concealment of foreign currency profits abroad; expanding the spheres for circulation of hryvnia as domestic currency; special foreign exchange arrangements with «law-abiding» companies; attracting foreign currency cash holdings of the population into the banking sector; expanding the practice of inter-governmental foreign currency swaps; using the non-conventional instruments of monetary policy by the National Bank to buy back securities and debt obligations.

9. Conclusions

It is worth stressing that the currency board arrangement is a monetary mechanism of reforming the economy. However, it can considerably improve the socio-economic indicators of Ukraine's development and advance the population's welfare to the average European level. Further, it can help to curtail inflation in a short period of time and restore confidence in national currency. At the same time, the currency board is not a panacea for all economic ills of Ukraine. Thus, it is necessary to develop such a paradigm of economic growth that will incorporate the renewed conception of the exchange rate arrangement.

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