

Atamanchuk Z.

*doctor of economics (PHd), associate professor
Lviv Institute of economics and tourism, Lviv
Ukraine; e-mail: dekanat_bef@ukr.net*

Tymchyshyn–Chemerys J.

*doctor of economics (PHd), associate professor
Lviv Institute of economics and tourism, Lviv
Ukraine; e-mail: juliatymchyshyn@gmail.com*

ANALYSIS OF THE FUNCTIONAL CHARACTERISTICS' MONETARY POLICY

Abstract. The article presents approaches, which explain the transition process of the financial systems' re-monetization, and on this basis — reasonable priority areas of the central bank monetary policy in Ukraine. Relevant depending modeled by using a dynamic model with rational expectations, where equation (1) describes factors that affect the price level; in equation (2) monetization dynamic is proportional to the change in the absolute value of this indicator. However, monetization is inversely proportional to the price level and inflation. Similarly, it is assumed that higher inflation \dot{P} limits the monetization dynamic. Likewise they are affecting currency devaluation and budget deficits. Among exogenous factors of monetization important are: efficiency of the banking system; completion of the market environment's formation; improve conditions for foreign investment. The equation (3) presents functional dependence for the current account balance, which is improved by lowering prices, currency devaluation and improving the budget balance. As the results of the study following conclusions were made, namely—the re-monetization tempo of the Ukrainian economy is strong even among successful Eastern European economies; a significant increase monetization may lead to crisis.

Keywords: monetary policy, economic growth, inflation, monetization, money supply, exchange rate, current account, financial stabilization.

GEL Classification: E5

Formulas: 8; fig.: 4; tabl.: 0; bibl.: 11

Атаманчук З.

*к. е. н., в.о. доцента кафедри обліку і фінансів,
Львівський інститут економіки і туризму, м. Львів
Україна; e-mail: dekanat_bef@ukr.net*

Тимчишин–Чемерис Ю.

*к. е. н., в.о. доцента кафедри обліку і фінансів,
Львівський інститут економіки і туризму, м. Львів
Україна; e-mail: juliatymchyshyn@gmail.com*

АНАЛІЗ ФУНКЦІОНАЛЬНИХ ХАРАКТЕРИСТИК ГРОШОВО–КРЕДИТНОЇ ПОЛІТИКИ

Анотація. У статті розроблено підходи до пояснення процесу ремонетизації перехідних фінансових систем, а на цій основі — обґрунтовано пріоритетні напрями проведення центральним банком грошово–кредитної політики в Україні.

Ключові слова: грошово–кредитна політика, економічне зростання, інфляція, монетизація, пропозиція грошей, валютний курс, поточний рахунок, фінансова стабілізація.

Формул: 8; рис.: 4; табл.: 0; бібл.: 11

Атаманчук З.

*к. э. н., и.о. доцента кафедры учета и финансов,
Львовский институт экономики и туризма, г. Львов
Украина; e-mail: dekanat_bef@ukr.net*

Тымчышын–Чемерыс Ю.

*к. э. н., и.о. доцента кафедры учета и финансов,
Львовский институт экономики и туризма, г. Львов
Украина; e-mail: juliatymchyshyn@gmail.com*

АНАЛИЗ ФУНКЦИОНАЛЬНЫХ ХАРАКТЕРИСТИК ДЕНЕЖНО–КРЕДИТНОЙ ПОЛИТИКИ

Аннотация. В статье исследованы подходы к объяснению процесса ремонетизации переходных финансовых систем, а на этой основе – обоснованно приоритетные направления реализации центральным банком денежно–кредитной политики в Украине.

Ключевые слова: денежно–кредитная политика, экономический рост, инфляция, монетизация, денежное предложение, валютный курс, текущий счет, финансовая стабилизация.

Формул: 8; рис.: 4; табл.: 0; библи.: 11

Introduction. Assessing the nature of monetary policy during the financial stability and transition to the sustainable economic growth in transitional financial systems such as in Ukraine, the attention should be made to the following provision: the transition to a flexible exchange rate increases the independence of monetary policy, but also increases the threat of deterioration in the current account balance by increasing private consumption, which, for its part, can stimulate an increase in property values.

The transition to greater flexibility exchange rate is one way to prevent an excessive increase of money supply, caused by capital inflows (partly contributed to this undervalued exchange rate). However, after the financial stability, other restrictions should be considered – some level achievement of equilibrium monetization.

However, the problem comes with the completion of re–monetization that does not arise intuitively expected inflationary impact, and the corresponding price pressure becomes latent character. Transition of inflation to the open form may occur only later under the influence of certain macroeconomic shocks. For example, such shock for the Baltic countries was the price correction in the realty market.

Similarly, this applies to the economy of Kazakhstan, which in summer – autumn of 2007 suffered from the mortgage crisis. As a result, Kazakhstan stopped increasing monetization, where in Estonia and Latvia this index dropped [1, с. 34–36]. It should not be considered that shift to sustainable economic growth accompanied by an increase of monetization level. Local monetization lowering was done in the Czech Republic right before entering EU (2004), Romania (2000–2001.). Since 2001 monetization index is lowering in Slovenia and Slovakia [1, с. 35–36].

Literature review and the problem statement. Common problems of monetary financial systems in transition quite informatively covered by the foreign experts Carranza L. [4], Coricelli F. [5], Dabrowski M. [9], Galdon–Sanz J. [4], Ghosh A. [10], Gomez–Biscardi J. [4], Korhonen I. [6], Mastern I. [5], Wachtel P. [6] etc. The studies of the given problematic were made in works of the national experts Atamanchuk Z. [1; 3], Arsenuika O. [7], Belinska J., Vovchak O., Halchynsky A., Hejets V., Matvienko P. [2], Dzubluka O., Zalilo J. [8], Lahutina V., Lytvitsky V., Matvienko P. [5], Ostvovska N., Petryka O., Savluka M., Cherkas N. [3], Shevchuk V. [11], Unkovska T., Jaremenko O. and others.

Despite significant professionals' achievements regarding this issue, the economic literature lacks definitive, compelling arguments regarding the prospect dynamics of macroeconomic indicators as complete re–monetization of the economy and on the equilibrium values of monetization for sustainable economic growth. The main goal of this work is to study the functional characteristics of the monetary financial systems in transition.

Research results. Traditionally monetization equilibrium value determined by: a comparison with other states or by assessing the dynamics of this index or comparison of inflation, interest rates, bank liquidity [2, c. 29]. Comparison of inflation and interest rate does not provide sufficient information to achieve equilibrium value monetization. One of the reasons is the lack of a strong enough connection between money and inflation, which would grow as complete re-monetization of the economy.

As the equilibrium value of monetization gets approached; increases the nominal interest rates due to inflation expectations, but this phenomenon was not observed in the Baltic States [3, c. 124].

Direct dependence of price changes with exchange rate — a structural feature which meets most modern models of open economy: Mandela—Fleminha, IS—LM—BP, AD—AS, monetary, with the inclusion of Fillips' curve, and has adequate empirical study especially for developing countries and transitional economies [4, p. 1375–1391; 5, p. 98–108; 6, p. 215–226].

Dynamics of monetization appears to be a mirror image of path regarded to the real exchange rate (RER), which is explained by mathematical calculations.

Assume that the equilibrium

$$Mv = PY, \text{ as well as} \quad (2.1)$$

$$q = EP^* / P, \quad (2.2)$$

where q — real exchange rate, which is defined by comparative price level in the country and abroad, P i P^* , and the nominal exchange rate E .

$$P = \left(\frac{M}{Y}\right)v \text{ or} \quad (2.3)$$

$$P = EP^* / q. \quad (2.4)$$

$$\left(\frac{M}{Y}\right)v = \frac{EP^*}{q}. \quad (2.5)$$

Out of (2.5) becomes clear inverse relationship between monetization and the real exchange rate. At steady state performance M/Y and q have to perform stability around the equilibrium value. If there is lack of exchange rate flexibility, the necessary adjustment will occur solely through domestic prices P . For floating exchange rate flexible exchange rate provides an additional mechanism.

The above considerations may provide schematic analysis of both indicators behavior during the financial stabilization and transition to sustainable economic growth (Fig. 1).

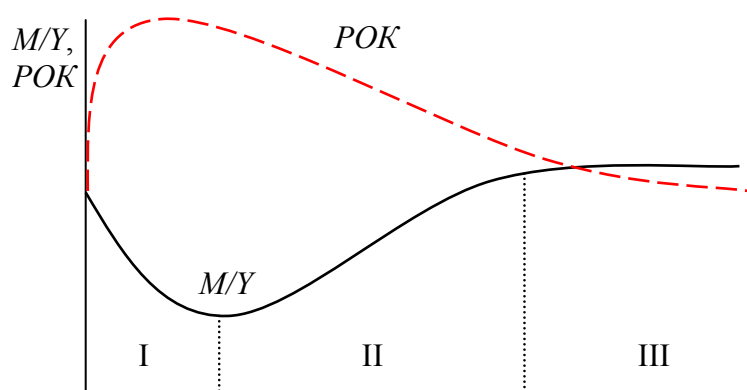


Fig. 1. The parameters monetization path and real exchange rate (RER) during the financial stabilization and transition to sustainable economic growth

Source: developed by the author

In the step of demonetization (I) decline in definition M/Y combined with the low real exchange rate. Great devaluation of currency is one of the factors reducing demand for money, which makes escape from the national currency. In step re–monetization increasing values M/Y combined with an increase in the real exchange rate, which can occur in two ways: higher prices or strengthening currency. If the exchange rate factor is dominant, the price increase is less noticeable and vice versa — lack of exchange rate flexibility towards strengthening involves correction of the real exchange rate exclusively by price.

Increasing trend M/Y gives opportunity for consummation of extra money supply, as mentioned by O. Arsenuk and A. Patenko [7, c. 6], nevertheless there should be a line, crossing which by the increase of money supply would lead to inflation. Even supporters of the expansionary monetary policy recognize that gradual saturation of the economy with money is not about mechanical increase in money supply and its management in order to stimulate production and prevent negative inflation effects [8, c. 4–5]. On the other hand, it is possible that re–monetization of the economy will be in excess of the equilibrium value M/Y . This return to the equilibrium rate can be sudden.

The resulting monetary neutrality regarding inflation can mean prevalence, such as in Central and Eastern Europe (CEE) exchange rate factor. Also, its influence could have worsening current account balance, and especially the use of cash for purchase real estate assets. Taking into account property prices link between money supply and inflation would be much more pronounced.

Clearly, monetization of the Baltic countries had to be higher than 15–20% of GDP, but based on the analysis of individual trajectories M/Y its difficult to establish a kind of saturation level certifying achieve equilibrium value. If the economy of Lithuania to the value M/Y on level 45–47 % GDP went fairly smoothly, in Estonia and Latvia it held an undesirable excess of the equilibrium value, which was the result of a sudden correction in the market.

Similar difficulties are relating to the former Soviet Union countries. Kazakhstan's economy rapidly went through re–monetization in 2006, but the figure M/Y remained below the 40 % of GDP, and although this does not prevent the difficulties in 2007–2008. In Belarus economy re–monetization goes caution (figure M/Y barely reached 24% of GDP), while in Russia and especially in Ukraine the quantity of money is growing very rapidly, which inclines to the analogy of the Baltic countries. Unfortunately, for Ukraine, the Baltic States and several other countries (Bulgaria, Croatia) trajectory M/Y does not tend to slow down, which would signal the approach to equilibrium value. In general, it's difficult to find countries re–monetization economy with low initial value of M/Y . It is clear that the rate of monetization cannot unremittingly grow, but at what level will it get stabilization: 50, 60, 80% of GDP? Each of these targets has the support of the experience of countries. If you focus on most CEE countries, the achieved level of monetization in Ukraine already exceeded values of Poland, Slovakia and Hungary [1, c. 33–44]. Economy of the Czech Republic has the highest monetization, but its value changes only slightly over time.

Overall, figure comparisons monetization of CEE and the former Soviet Union reveals a number of features. In particular, CEE countries are characterized by much higher level of monetization in the early transition, which can be attributed to lower cash "canopy" [9, p. 18], operative alignment balance of payments, lower inflation expectations and lower amplitude recession [10, p. 12].

The stability of the M/Y may be too restrictive assumption that ignores the realities of the transformation of the economy. A more realistic to assume that the monetization may change over time (although limited amplitude) and its dynamics affected by changes in prices and its expectations that characterize the mechanism of correction around the equilibrium value. A handy tool for modeling this type of dependency provides dynamic model with rational expectations.

The theoretical model consists of three equations:

$$P = f\left(\frac{M}{Y}, \dot{P}^e, E, G - T, A\right), \quad (2.6)$$

$$\frac{\dot{M}}{Y} = f\left(\frac{M}{Y}, P, \dot{P}^e, E, G - T, B\right), \quad (2.7)$$

$$CA = f\left(\frac{M}{Y}, P, E, G - T\right), \quad (2.8)$$

where P — level of price, M — money supply (amount of money in circulation), Y — revenue (GDP or industrial production), \dot{P}^e — expectations of future price levels, E — nominal exchange rate, G — budget deficit, A — other independent factors of prices, B — independent factors monetization of the economy. Indexes $\frac{\dot{M}}{Y}$ and \dot{P} characterize the dynamics of monetization and prices.

The equation (2.6) describes factors that affect the price level. Increased in monetization level accompanied by an increase in the price level, corresponding to the logic equation of monetary quantitative $PY=MV$, where V — swiftness of money circulation. In fact, being ahead in an increase of money supply is compared to the demand for money, which has anti-inflationary action and should be accompanied by an increase in prices. On the contrary, reducing the money supply leads to lower prices.

Waiting for prices level \dot{P}^e considered relatively independent factor increasing this value, as illustrated by countries' experience. There are several explanations. First of all, essential meaning has inflationary background. Based on the experience of previous periods, economic agents can set prices that do not correspond to objective market signals based on aggregate demand or supply. Secondly, the mechanism of action through expectations appears to be more important for contemporary economies with powerful influence of the media.

Direct dependence of price changes from the exchange rate — is a structural feature that corresponds to the logic models Mandella—Fleminha, and IS—LM—BP and AD—AS plus has adequate empirical foundation, especially for the developing countries and transitional economies. Increased exchange rate as a factor in inflation dynamics is typical not only for the period of 1990s, but has remained up to day. Empirical estimates suggest that the effect of the exchange rate on inflation got weaker slightly beginning with 1999, but remains quite noticeable: on average one percent devaluation of hryvnia increases decreases quarterly inflation on 0.6–0.7% [11, c. 528].

The budget deficit impact on the level of prices is difficult to identify unequivocally. The standard assumption is that the budget deficit increases aggregate demand and thus provokes increased prices. However, it should not be denied, that the budget deficit is a factor, which increases aggregate supply, and this may affect lower prices. In this case, important is a way through which the budget deficit is finance.

Additionally it's taken to account that the price level can affect many exogenous factors, which have internal or external origin. Among the internal factors should be noted economy monopolization and structural problems that prevent operative reallocation of resources between their individual sectors. External factors may influence domestic prices due to changes in world prices for essential goods exports and imports, the difference in economic dynamics growth as well as through the movement of capital, which causes changes in aggregate demand and aggregate supply, plus can be explain the difference of interest rates or take into consideration portfolio investment.

In equation (2.7) monetization rhythm is proportional to change in the absolute value of this indicator. However, it is assumed that the monetization rate is inversely dependent on the price level. The explanation for this functional relationship can serve as: reducing the demand for money, dollarized economy. Likewise, it can be assumed that higher inflation \dot{P} limits the monetization dynamic. Similar influence has currency devaluation and deficit increase. Among the exogenous factors of monetization may be distinguished: the effectiveness of the banking system; completion of the market environment formation; providing conditions for the foreign investment.

The equation (2.8) presents functional dependence to the current account balance, which gets improved by prices lowering, currency devaluation and improve the budget balance. The monetization impact is not straight, but gives more reason to believe that out of monetization increase there is a tendency to deterioration of the current account balance.

Graphic interpretation of model (2.1) – (2.3) shown in Fig. 2. The line PP describes relationship between the economy monetization and the price level in the absence of inflation expectations ($\dot{P}^e=0$). The line MM describes the corresponding relationship of monetization

equilibrium when there is no change in this indicator $\left(\frac{\dot{M}}{Y} = 0\right)$.

The line MM in Fig. 2 presented with a positive slope, which meets the studied conditions for transformation economies, but it is possible that monetization dependence of M/Y out of the price level P may not be as such (in this case MM line will be vertical).

Dynamic balance of the economic system characterizes the line EE. Let's assume that the equilibrium value of the economy's monetization $(M/P)_0$ observed at price P_0 (p. A). If the economy is on a lower equilibrium level of monetization (p. D), then inflation expectations contribute to the tendency of increasing the equilibrium price level, which occurs with increasing level of monetization, primarily due to rapid increase in money supply. Conversely, when the level of monetization overestimated, the need for slower growth in money supply creates expectations of lowering prices, the economy returns to equilibrium (p. A).

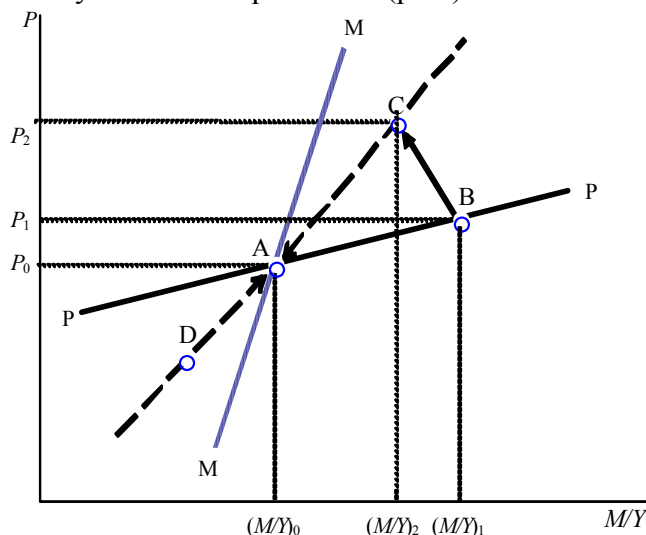


Fig. 2. Graphical representation of the model
Source: developed by the author

If a direct correlation between monetization and the price level is quite weak (that is line YY is inclined), even significant changes in the money supply, accompanied by significant excess indicator monetize its equilibrium value (p. B) have no significant impact on prices, which increased less than proportionally from P_0 to P_1 . Appear all prerequisites for a false conclusion about the possibility of a significant increase in non-inflation money supply.

Market participants, by understanding this situation, affects their contrast transition to the equilibrium trajectory (p. C), resulting in monetization decline from $(M/P)_1$ to $(M/P)_2$ and raising the price from P_1 to P_2 . Further, to move to equilibrium deflation is required. It does not exclude that lowering monetization level will occur due to increased production volumes. One of the important factors of this price's correction to an equilibrium level may be domestic prices convergence to world levels. The more economy is open, the faster this expected correction in prices will occur.

Increasing of the money supply or the currency devaluation provides more realistic appearance (Fig. 3).

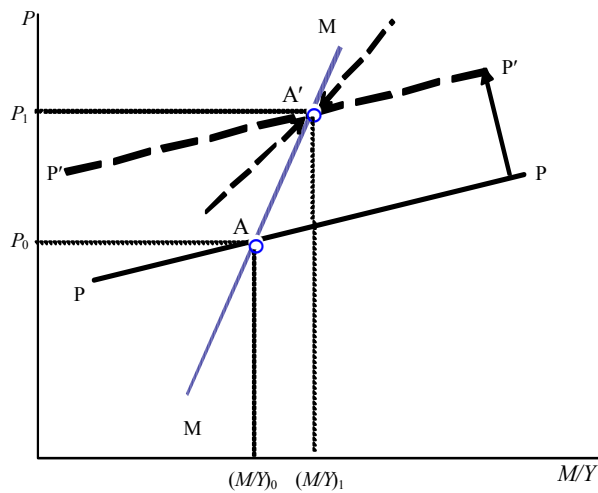


Fig. 3. Long-term effects of expansionary monetary policy
Source: developed by the author

In this case, the long-term equilibrium value prices increases to P_2 (p. A'). At the same time, insignificantly will increase the equilibrium value of the economy monetization to $(M/Y)_1$ (τ . A'). If monetization price level rate is independent (vertical line MM') than only one consequence of this correction may be—an increase in aggregate demand prices rising, without changing the equilibrium value of monetization.

Use of currency devaluation may seem to be attractive in case when monetary projection accompanied by noticeable deterioration in the current account balance. In this case, it becomes possible to pay no attention to the effects of increase in domestic absorption by means of an expansionary fiscal and monetary politic by adjusting price relationships to the foreign trade. However, the possibility of completely opposite developments should be taken into consideration, in case of exports it strongly depend on imports of critical raw materials, equipment and components. Under such circumstances, exporters may not realize the cost advantages obtained as parallel increases the cost of imports. It should be noted that depending off the effects of currency devaluation for external sector, improvement or deterioration, money supply may both increase and decrease.

Exogenous shocks permit increase the monetization equilibrium value of the economy; nevertheless, it is accompanied by an increase in prices that is to say— will accelerate local inflation (Fig. 4).

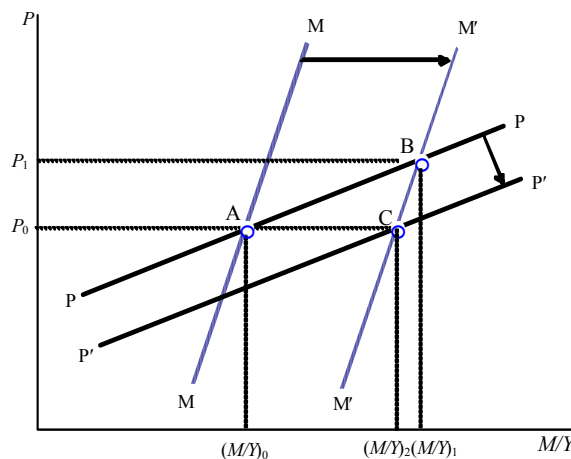


Fig. 4. The effects of increase the monetization equilibrium value of the economy due to increasing budget deficit

Let's assume that the increase in the budget deficit, which is financed by external loaning, has led to monetization level increased ($MM \rightarrow M'M'$). If the budget deficit has no effect on the price level alone, than there is monetization increase from $(M/Y)_0$ to $(M/Y)_1$. At the same time, such

monetization increase accompanied by increase in prices from P_0 to P_1 , which means inflation acceleration in the transition from one (p. A) to another equilibrium state (p. B). Simultaneously, by improving the budget balance, accompanied by drop in prices ($PP \rightarrow P'P'$), may be expected low level inflation increase in monetization. If a direct impact on monetization level ($MM \rightarrow M'M'$) leads to higher prices, then favorable price effect ($PP \rightarrow P'P'$) eliminates this tendency. In general, it is possible that prices could even decrease. Thus, there is a slight reduction in monetization from $(M/Y)_1$ to $(M/Y)_2$.

Conclusions. The stability of the economy monetization indicator M/Y may be too limited assumption, which ignores the actual situation in the transition process. Realistically, it should be assume that the monetization may be changed over the time (although with limited amplitude) and its dynamics may be affected by changes in prices plus their expectations, which describe the mechanism of return to the equilibrium value. The corresponding dependence was modeled by using a dynamic model with rational expectations, where the equation (1) describes factors that affect the price level; in the equation (2) dynamic monetization is proportional to the change in the absolute value of this indicator. However, monetization is inversely proportional to the price level and inflation. Similarly, it is assumed that higher inflation \dot{P} limits the monetization dynamic. Likewise affect has currency devaluation and budget deficits. Among monetization exogenous factors important are: efficiency of the banking system; completion of the market environment formation; environment improvement for the foreign investment. The equation (3) presents functional dependence of the current account balance, which gets improved by lowering prices, currency devaluation and by improvement of the budget balance. When the monetization is increasing, the current account balance is deteriorating.

The study highlights at least two conclusions. First of all, the rate of re-monetization of the Ukrainian economy is in "record" even out of successful Eastern European cluster economies, not taking into account inflation and the dollarized economy like in Argentina or Brazil. Second of all, the monetization peak growth may create problems that will emerge as always unexpectedly.

Taking into the account above mentioned arguments, special attention should be given to the question of empirical testing theoretically predictable relationships between monetary policy in its important manifestation — increasing monetization of the economy — and major macroeconomic indicators, which are planned to be studied in further studies.

Література

1. Атаманчук, З. А. Особливості монетизації трансформаційних економік: теоретичні та емпіричні аргументи [Текст] / З. А. Атаманчук // Вісник Львівської комерційної академії. Серія економічна. – 2009. – Вип. 32. – С. 33–44.
2. Матвієнко, П. Монетизація економіки України: реальний рівень та проблеми його визначення [Текст] / П. Матвієнко // Вісник НБУ. – 2003. – № 1. – С. 29–32.
3. Атаманчук, З. А. Оцінка макроекономічних ефектів монетарної політики в Україні [Текст] / З. А. Атаманчук, Н. І. Черкас // Економіка і прогнозування. – 2015. – № 3 (4). – С. 123–134.
4. Carranza, L. Exchange rate and inflation dynamics in dolarized economies [Text] / L. Carranza, J. Galdon-Sanchez, J. Gomez-Biscardi // Journal of Development Economics. – 2009. – Vol. 89, № 1. – P. 98–108.
5. Coricelli, F. Exchange rate pass-through in EMU acceding countries: Empirical analysis and policy implications [Text] / F. Coricelli, B. Jazbec, I. Masten // Journal of Banking & Finance. – 2006. – Vol. 30. – P. 1375–1391.
6. Korhonen, I. A note on exchange rate pass-through in CIS countries [Text] / I. Korhonen, P. Wachtel. – 2006. – Vol. 20, № 2. – P. 215–226.
7. Арсенюк, О. Правда і вигадки про монетизацію [Текст] / О. Арсенюк, А. Патенко // Вісник НБУ. – 2003. – № 2. – С. 4–6.
8. Жалило, Я. О современных ориентирах валютно-денежной политики [Текст] / Я. Жалило // Фондовый рынок. – 2006. – № 8. – С. 4–5.
9. Dabrowski, M. Disinflation, Monetary Policy and Fiscal Constraints. Experience of the Economies in Transition [Text] / M. Dabrowski // CASE Network Reports. – 1999. – № 16. – 118 p.
10. Ghosh, A. The Output-Inflation Nexus in Ukraine: Is there a Trade-off? [Electronic resource] / A. Ghosh // IMF Working Paper № 46. – Available at: <http://www.imf.org/external/research>.
11. Шевчук, В. О. Платіжний баланс, економічне зростання і стабілізаційна політика [Текст] / В. О. Шевчук. – Львів : Кальварія, 2008. – 734 с.

Стаття надійшла до редакції 12.05.2017

*© Атаманчук З.,
Тимчишин–Чемерис Ю.*

References

1. Atamanchuk, Z. A. (2009). Osoblyvosti monetyzatsii transformatsiinykh ekonomik: teoretychni ta empyrychni arhumenty. *Visnyk Lvivskoi komertsiinoi akademii. Seriya ekonomichna*, 32, 33–44.
2. Matvienko, P. (2003). Monetyzatsia ekonomiky Ukrainy: realnyi riven ta problemy yoho vyznachennia. *Visnyk NBU*, 1, 29–32.
3. Atamanchuk, Z. A., & Cherkas, N. I. (2015). Otsinka makroekonomichnykh efektyv monetarnoi polityky v Ukraini. *Ekonomika i prohnozuvannia*, 3(4), 123–134.
4. Carranza, L., Galdon-Sanchez, J., & Gomez-Biscardi, J. (2009). Exchange rate and inflation dynamics in dolarized economies. *Journal of Development Economics*, 89(1), 98–108.
5. Coricelli F., Jazbec B., & Masten I. (2006). Exchange rate pass-through in EMU acceding countries: Empirical analysis and policy implications. *Journal of Banking & Finance*, 30, 1375–1391.
6. Korhonen I., & Wachtel P. A. (2006). *A note on exchange rate pass-through in CIS countries*, 20(2), 215–226.
7. Arseniuk, O., & Patenko, A. (2003). Pravda i vyhadky pro monetyzatsiiu. *Visnyk NBU*, 2, 4–6.
8. Zhalylo, Ya. (2006). O sovremennykh orientirakh valiutno-denezhnoi polityki. *Fondoyyi rynok*, 8, 4–5.
9. Dabrowski, M. (1999). Disinflation, Monetary Policy and Fiscal Constraints. Experience of the Economies in Transition. *CASE Network Reports*, 16, 118.
10. Ghosh A. The Output–Inflation Nexus in Ukraine: Is there a Trade–off? *IMF Working Paper No. 46*. Washington: IMF. Available at: <http://www.imf.org/external/research/>
11. Shevchuk, V. O. (2008). *Platizhnyi balans, ekonomichne zrostantia i stabilizatsiina polityka*. Lviv: Kalvaria.

Received 12.05.2017

© Atamanchuk Z.,
Tymchyshyn–Chemerys J.