

SCALE MEASUREMENT OF THE INDICATORS OF BANK'S LIQUIDITY
(ON THE EXAMPLE OF UKRAINE)МАСШТАБНЕ ВИМІРЮВАННЯ ПОКАЗНИКІВ ЛІКВІДНОСТІ БАНКУ
(НА ПРИКЛАДІ УКРАЇНИ)

The article deals with theoretical aspects of the bank's liquidity estimation. The recommendations for improving the process of the bank's liquidity assessment are given, in particular, the choice of indicators for assessing the liquidity level of the bank are substantiated; the scale of measuring indicators of bank's liquidity is conducted. It is revealed that the majority of Ukrainian banks are characterized by the average level of liquidity. It is substantiated that improving the regulation of banks' liquidity based on the standards of the Basel Committee will help to increase liquidity, which will make banks more reliable and financially sustainable for financial stresses in the world and national financial markets. It is established that the introduction of standards for Basel III, which strengthen the bank's capital requirements and introduce new regulatory requirements for liquidity, should strengthen the stability of the banking system as a whole.

Key words: bank's liquidity, banking supervision, scale measurement of indicators, European integration, Basel III.

У статті розглянуто теоретичні аспекти оцінювання ліквідності банку, закордонний досвід оцінювання ліквідності банку. Надано рекомендації щодо удосконалення процесу оцінювання ліквідності банку, зокрема, обґрунтовано вибір показників для оцінювання рівня ліквідності банку; проведено шкальне вимірювання показників оцінки ліквідності банку. Виявлено, що більшість українських банків характеризуються середнім рівнем ліквідності. Обґрунтовано, що удосконалення регулювання ліквідності банків на основі стандартів Базельського комітету сприятиме підвищенню рівня ліквідності, що зробить

банки надійнішими і фінансово стійкими до фінансових стресів на світових і національних фінансових ринках. Встановлено, що впровадження стандартів за Базель III, які підсилюють вимоги до капіталу банку і вводять нові нормативні вимоги до ліквідності, має зміцнити стабільність банківської системи в цілому.

Ключові слова: ліквідність банку, банківський нагляд, шкальне вимірювання показників, європейська інтеграція, Базель III.

В статье рассмотрены теоретические аспекты оценки ликвидности банка, зарубежный опыт оценки ликвидности банка. Даны рекомендации по совершенствованию процесса оценки ликвидности банка, в частности, обоснован выбор показателей для оценки уровня ликвидности банка; произведено шкальное измерение показателей оценки ликвидности банка. Выявлено, что большинство украинских банков характеризуются средним уровнем ликвидности. Обосновано, что совершенствование регулирования ликвидности банков на основе стандартов Базельского комитета будет способствовать повышению уровня ликвидности, сделает банки более надежными и финансово устойчивыми к финансовым стрессам на мировых и национальных финансовых рынках. Установлено, что внедрение стандартов по Базель III, которые усиливают требования к капиталу банка и вводят новые нормативные требования к ликвидности, должно укрепить стабильность банковской системы в целом.

Ключевые слова: ликвидность банка, банковский надзор, шкальные измерения показателей, европейская интеграция, Базель III.

UDC 657.422

Hontar D.D.

Candidate of Economic Sciences,
Lecturer of the Department of Banking,
Simon Kuznets Kharkiv National
University of Economics

Urgency of the research. Today, the problem of ensuring the bank's stability, one of whose components is liquidity, gets a special attention. Therefore, the issue of the bank's liquidity assessment is one of the most urgent. From the position of banks, their liquidity is defined as the amount of funds they have at their disposal in a certain moment to perform their functions.

Liquidity of the banking system is one of the main objects of regulation of the state monetary authorities. Such regulation is carried out by conducting relevant transactions on the interbank market, through which central banks ensure fulfillment of their functions and tasks by changing the aggregate supply of money and their value.

Actual scientific researches and issues analysis. The research of bank's liquidity problems was undertaken by such Ukrainian scientists as R. Tyrkalo [1], L. Prymostka [2], L. Hyliarovska [3], A. Vozhzhov [4], I. Voloshyn [5], O. Horokhova [6], V. Stelmakh [7], R. Nabok [8], V. Mishchenko [9], A. Moroz [10] and

others. The issues of bank's liquidity are also covered in the writings of foreign authors: J. Sinkey [11], R. Duttweiler [12] and P. Rouse [13].

The mentioned scientists studied in detail issues of liquidity regulation, ways of solving the problem of liquidity – profitability, an analysis of internal and external factors that affect the need of liquidity.

However, the problem of improving the process of the bank's liquidity assessment, in particular, the scale measurement of the bank's liquidity indexes, was not thoroughly investigated. In addition, the theoretical and methodological provision of the process of the bank's liquidity assessment in conditions of European integration is not sufficiently developed, which proves the relevance of the research topic.

The research objective. The aim of the article is to substantiate the theoretical positions and develop practical recommendations for improving the process of the bank's liquidity assessment.

The statement of basic materials. In Ukraine improving the quality of liquidity management of the

banking system is possible through the adoption of correct strategic decisions, both at the level of the banks' management, and at the level of regulation of normative indicators of liquidity by the National Bank of Ukraine. The financial crisis has made it possible to realize that the central bank needs to improve the standards of liquidity assessment.

The process of the bank's liquidity assessment requires the development of effective tools that would allow seeing the impact on the level of liquidity, both external and internal factors. For this purpose it is suggested to carry out a scale measurement of indicators of the bank's liquidity assessment.

In order to determine the efficiency of the process of the bank's liquidity assessment using quantitative indicators, it is necessary to determine the composition of these indicators. The views of domestic and foreign scholars on the types of indicators of the bank's liquidity are given in tab. 1.

As shown in tab. 1, foreign and domestic scientists use from 2 to 12 indicators for assessment the bank's liquidity.

Taking into account the views of domestic and foreign scholars on the composition of liquidity indicators, it was proposed to use the following liquidity ratios for the scale measurement: total liquidity ratio K1, instant liquidity ratio K2, highly liquid assets ratio K3, ratio of loans and deposits K4, standard of current liquidity K5, short-term liquidity ratio K6, coefficient of structural ratio of deposits K7.

Output data for conducting an assessment of liquidity of Ukrainian banks is shown in tab. 2.

As shown in tab. 2, there are presented data for assessing the liquidity of 10 Ukrainian banks, there were investigated 99 banks that acted as of 01.01.2017.

At the same time, there were eliminated atypical or rare cases that deviated substantially from the distribution of other values of indicators.

Table 1

Indicators offered by domestic and foreign scientists that characterize bank's liquidity

| Indicators of the bank's liquidity | Authors | | | | | | | | Total |
|--|--------------|--------------|-------------|-------------|--------------|------|-------------|-------------|-------|
| | [14, p. 406] | [15, p. 102] | [2, p. 303] | [16, p. 25] | [17, p. 250] | [18] | [19, p. 30] | [20, p. 12] | |
| Total liquidity ratio | + | + | + | + | + | | + | | 6 |
| Instant liquidity ratio | + | | + | + | + | + | | | 5 |
| Highly liquid assets ratio | + | + | + | + | | | | + | 5 |
| Ratio of loans and deposits | + | + | + | + | | | | | 4 |
| Standard of current liquidity | + | | | | + | + | | | 3 |
| Short-term liquidity ratio | + | | | | + | + | | | 3 |
| Coefficient of structural ratio of deposits | + | + | + | | | | | | 3 |
| Coefficient of liquid securities | + | + | + | | | | | | 3 |
| Coefficient of resource liquidity of liabilities | + | | | + | | | | | 2 |
| Coefficient of general liquidity of liabilities | + | | | + | | | | | 2 |
| Long-term liquidity ratio | | + | | | + | | | | 2 |
| Ratio of liquid assets and total assets | | + | | | | | | | 1 |
| Absolute liquidity ratio | | | | | | | + | | 1 |
| Liquid asset ratio | | | + | | | | | | 1 |
| Ratio of assets and liabilities of the bank with the same maturity | | + | | | | | | | 1 |
| Total | 11 | 8 | 7 | 6 | 5 | 3 | 2 | 2 | 44 |

Table 2

Output data for conducting an assessment of liquidity of Ukrainian banks as of 01.01.2017 (fragment)

| Bank | Indicator | | | | | | |
|---|-----------|---------|------|------|---------|---------|------|
| | K1 | K2 | K3 | K4 | K5 | K6 | K7 |
| PJSC CB «Privatbank» | 1.06 | 0.64 | 0.22 | 0.30 | 1.47 | 0.74 | 0.34 |
| JSC «Ukreximbank» | 1.03 | 0.45 | 0.12 | 0.70 | 1.80 | 1.55 | 1.99 |
| JSC «Oschadbank» | 1.08 | 0.54 | 0.20 | 0.46 | 1.74 | 1.84 | 1.13 |
| AB «UkrGasbank» | 1.10 | 0.36 | 0.18 | 0.44 | 0.86 | 0.87 | 0.92 |
| PJSC «Ukrainian Bank of Reconstruction and Development» | 2.09 | 1019.05 | 0.02 | 0.00 | 3031.49 | 3031.49 | 0.00 |
| PJSC «Settlement Center» | 4.76 | 0.08 | 0.02 | 0.00 | 1.02 | 1.03 | 0.00 |
| PJSC «Prominvestbank» | 1.18 | 0.83 | 0.10 | 3.06 | 1.66 | 1.76 | 0.69 |
| PJSC «UkrSotsbank» | 1.44 | 0.79 | 0.26 | 0.88 | 0.70 | 0.80 | 0.79 |
| JSC «Raiffeisen Bank Aval» | 1.22 | 0.64 | 0.39 | 0.64 | 0.68 | 0.99 | 3.28 |
| PJSC «VTB Bank» | 1.20 | 0.39 | 0.05 | 1.53 | 0.80 | 0.80 | 0.40 |

Thus, too high liquidity indicators were observed in such banks as PJSC «Ukrainian Bank for Reconstruction and Development», PJSC «Credit Optima Bank», PJSC «Alpari Bank», PJSC «KB «Hephaestus», that is, 95 banks were involved in the study.

Data of tab. 2 give only generalized quantitative information about the level of liquidity of Ukrainian banks. For qualitative characteristics it is necessary to develop a scale of liquidity levels.

For this purpose it is proposed to use the «three sigma» method, according to which the probability that a random variable deviates from its mathematical expectation by a value greater than the triple value of the mean square deviation is practically equal to zero.

Descriptive statistics of the values of liquidity indicators of Ukrainian banks are given in tab. 3.

Table 3

Descriptive statistics of the values of liquidity indicators of Ukrainian banks

| Indicator | Arithmetic mean | Median | Mode | Standard quadratic deviation | Asymmetry coefficient |
|-----------|-----------------|--------|-------|------------------------------|-----------------------|
| K1 | 1,552 | 1,293 | 1,177 | 0,798 | 0,439 |
| K2 | 0,881 | 0,650 | 0,621 | 0,745 | 0,371 |
| K3 | 0,191 | 0,154 | 0,108 | 0,149 | 0,556 |
| K4 | 1,139 | 0,839 | 0,830 | 1,051 | 0,279 |
| K5 | 0,963 | 0,800 | 0,765 | 0,515 | 0,367 |
| K6 | 1,057 | 0,900 | 0,862 | 0,441 | 0,453 |
| K7 | 4,382 | 7,820 | 8,222 | 15,380 | 0,179 |

If the asymmetry value exceeds 0.5, then the asymmetry should be considered significant, if below this value, then asymmetry can be neglected. As a result of the calculations given in tab. 3, it is clear that the indicator K3 has the right-hand asymmetry. The correction factor was calculated for this indicator. Yes, in order to determine how far the distance between intensities with asymmetric distribution

changes with respect to the values in normal distribution, it is proposed to use a correction factor that reduced in proportion to the number of divisions of the scale lying to the right and left of the median n:

$$\frac{M}{M \times n}$$

where k is a correction factor;

M is a median of distribution of the variation in the number of liquidity indicators;

Mo is a mode of distribution of the variation in the number of liquidity indicators;

n is the number of divisions of the scale, located to the left and to the right of the median.

When constructing an interval scale for the indicator K3 according to the rule of «three sigma» with the right asymmetry, the scale has a range of values $[-\infty; M-1\sigma k; [M-1\sigma k; M+1\sigma(k+1)]; [M+1\sigma(k+1); +\infty)$.

The intervals of the values of the scale of liquidity indicators of Ukrainian banks with right-hand asymmetry at high, medium and low levels are given in tab. 4.

Based on the values of liquidity indicators, liquidity of Ukrainian banks was estimated (tab 5).

As shown in tab. 5, the majority of Ukrainian banks were characterized with the average value of liquidity levels.

In Ukraine it is extremely necessary to adapt regulatory and corporate banking practices to the provisions of the International Convergence of Capital Measurement and Capital Standards: New Approaches (Basel II) and Global Regulatory Approaches for Banks and Banks' Systems (Basel III) [12, p. 105; 21; 22; 23].

Yes, in Basel III («Global Regulatory Approaches for Banks and Banks' Systems») it was stressed on the need to monitor such liquidity indicators as a measure of net stable funding and an indicator of liquidity coverage [21].

Improving bank liquidity regulation based on the Basel Committee standards will help increase liquidity, which will make banks more reliable and financially sustainable for financial stresses on the world and national financial markets.

Table 4

The intervals of the values of the scale of liquidity indicators of Ukrainian banks

| Calculation procedure | Scale of indicators | Interval of the value of the indicator | | | | | | |
|------------------------|---------------------|--|--------------|---------------|--------------|--------------|--------------|----------------|
| | | K1 | K2 | K3 | K4 | K5 | K6 | K7 |
| $[-\infty; X-\sigma)$ | 1 – low | [0; 0,75) | [0;0,14) | [0; 0,09) | [0; 0,09) | [0; 0,45) | [0; 0,62) | [0; 11,00) |
| $[X-\sigma; X+\sigma)$ | 2 – medium | [0,75; 2,35) | [0,14; 1,63) | [0,09; -0,37) | [0,09; 2,19) | [0,45; 1,48) | [0,62; 1,50) | [11,00; 19,76) |
| $[X+\sigma; +\infty)$ | 3 – high | [2,35; +∞) | [1,63; +∞) | [-0,37; +∞) | [2,19; +∞) | [1,48; +∞) | [1,50; +∞) | [19,76; +∞) |

Table 5

Results of liquidity assessment of Ukrainian banks (as of 01.01.2017)

| Scale of indicators | The amount of banks with respective values of liquidity indicators | | | | | | |
|---------------------|--|----|----|----|----|----|----|
| | K1 | K2 | K3 | K4 | K5 | K6 | K7 |
| 1 – low | 0 | 4 | 18 | 4 | 1 | 1 | 0 |
| 2 – medium | 85 | 80 | 65 | 81 | 85 | 82 | 89 |
| 3 – high | 10 | 11 | 12 | 10 | 9 | 12 | 6 |

Conclusions. Thus, the study evaluates the bank’s activities in terms of liquidity, the main purpose of which is to improve the quality of liquidity assessment in banks, which, in turn, should strengthen the stability of the banking system as a whole. The scale of measuring indicators of bank’s liquidity was conducted. It was revealed that the majority of Ukrainian banks are characterized with the average level of liquidity.

REFERENCES:

1. Тиркало Р. Регулятивний капітал банків: сутність, порядок визначення та проблеми достатності / Р. Тиркало, Н. Ткачук // Світ фінансів. – 2008. – № 4. – С. 93-103.

2. Примостка Л. О. Фінансовий менеджмент у банку / Л. О. Примостка. – К.: КНЕУ, 2014. – 468 с.

3. Гиляровская Л. Т. Комплексный анализ финансово-экономических результатов деятельности банка и его филиалов / Л. Т. Гиляровская, С. Н. Паневина. – СПб.: Питер, 2013. – 240 с.

4. Вожжов С. П. Экономическая сущность ликвидности банка и ее адекватность системе регулирования / С. П. Вожжов, Е. С. Злагодух // Экономика і фінанси. – 2010. – № 109. – С. 12-19.

5. Волошин И. В. Матрица фондирования минимального процентного риска / И. В. Волошин // Финансовые риски. – 2012. – № 4. – С. 121-124.

6. Горохова О. В. Антикризове регулювання банківської сфери як умова фінансово-економічної стабільності / О. Горохова, В. Лагутін // Менеджмент та маркетинг в бізнесі XXI століття. – 2008. – № 18. – Т. 2. – С. 31-36.

7. Стельмах В. С. Энциклопедія банківської справи України / В. С. Стельмах. – К.: Молодь, ІнЮре, 2011. – 680 с.

8. Набок Р. Аспекти, що можуть призвести до виникнення проблемного банку / Р. Набок // Вісник Національного банку України. – 2009. – № 8. – С. 46-50.

9. Міщенко В. І. Ликвідність банківської системи: економічна сутність, структура і методологічний під-

хід до аналізу / В. І. Міщенко, А. В. Сомик // Наука й економіка. – 2010. – № 1. – С. 273-277.

10. Мороз А. М. Банківські операції: підручник / А. М. Мороз – К.: КНЕУ, 2005. – 383 с.

11. Sinkey J. F. Commercial bank financial management in the financial services industry / J. F. Sinkey. – New York: Prentice Hall, Pearson Education Inc., 1994. – 108 p.

12. Duttweiler R. Managing liquidity in banks. Top down approach / R. Duttweiler. – New York: John Wiley & Sons Ltd, 2010. – 286 p.

13. Rouse C. N. Bankers’ lending techniques (2nd ed.). New York: Financial World Publishing. – 2002. – 26 p.

14. Аналіз банківської діяльності: підручник / А. М. Герасимович, М. Д. Алексеєнко, І. М. Парасій-Вергуненко та ін.; за ред. А. М. Герасимовича. – К.: КНЕУ, 2004. – 599 с.

15. Парасій-Вергуненко І. М. Аналіз банківської діяльності: навч.-метод. посіб. / І. М. Парасій-Вергуненко. – К.: КНЕУ, 2003. – 347 с.

16. Ликвідність банку: окремі аспекти управління та світовий досвід регулювання і нагляду: науково-аналітичні матеріали / В. С. Стельмах, В. І. Міщенко, В. В. Крилова та ін. – К.: Національний банк України, Центр наукових досліджень, 2008. – Вип. 11. – 220 с.

17. Батракова Л. Г. Экономический анализ деятельности коммерческого банка: учебник для вузов / Л. Г. Батракова. – [2-е изд.]. – М.: Логос, 2005. – 368 с.

18. Про порядок регулювання діяльності банків в Україні: інструкція НБУ, затверджена Постановою Правління НБУ від 28.08.2001 р. № 368 [Електронний ресурс]. – Режим доступу: <http://zakon4.rada.gov.ua/laws/show/z0841-01>

19. Федотова К. О. Умови виникнення дивідендної премії при розміщенні акцій на фондовому ринку / К. О. Федотова // Вісник Хмельницького національного університету. – 2010. – № 6. – Т. 4. – С. 25-35.

20. Когденко В. Г. Разработка системы контроля над эффективностью управления стоимостью компании / В. Г. Когденко // Финансы и кредит. – 2012. – № 8. – С. 2-10.

21. Basel III: A global regulatory framework for more resilient banks and banking systems – revised version

June 2011 [Electronic source]. – Mode of access: <http://www.bis.org/publ/bcbs189.pdf>

22. Basel III: International framework for liquidity risk measurement, standards and monitoring, BCBS, Dec 2010 [Electronic source]. – Mode of access: <http://www.bis.org/publ/bcbs165.pdf>

23. Progress report on Basel III implementation. Basel Committee on Banking Supervision. [Electronic source] / Bank for International Settlements. October 2012. – Mode of access: <http://bis.org/publ/bcbs232.pdf>

REFERENCES:

1. Tyrkalo R. & Tkachuk N. (2008) Rehuliatyvnyi kapital bankiv: sutnist, poriadok vyznachennia ta problemy dostatnosti [Regulatory capital of banks: essence, procedure of determination and problems of adequacy]. *The World of Finances*, no. 4, pp. 93-103 (in Ukrainian).

2. Prymostka L. O. (2014) Finansovyi menedzhment u banku [Financial management in a bank]. Kyiv: KNUE (in Ukrainian).

3. Gilyarovskaya L. T. & Panevina S. N. (2013) Kompleksnyy analiz finansovo-ekonomicheskikh rezul'tatov deyatelnosti banka i ego filialov [Comprehensive analysis of financial and economic performance of the bank and its branches]. SPb.: Piter. (in Russian).

4. Vozhzhov S. P. & Zlagodukh E. S. (2010) Ekonomicheskaya sushchnost' likvidnosti banka i ee adekvatnost' sisteme regulirovaniya [The economic essence of the bank's liquidity and its adequacy to the regulatory system]. *Economy and Finance*, no. 109, pp. 12-19. (in Russian).

5. Voloshin I. V. (2012) Matritsa fondirovaniya minimal'nogo protsentnogo riska [The minimum interest risk funding matrix]. *Financial Risks*, no. 4, pp. 121-124. (in Ukrainian).

6. Horokhova O. V. & Lahutin V. (2008) Antykryzove rehuliuвання bankivskoi sfery yak umova finansovo-ekonomichnoi stabilnosti [Anticrisis regulation of the banking sector as a condition of financial and economic stability]. *Management and Marketing in the 21st Century Business*, vol. 2, no. 18, pp. 31-36. (in Ukrainian).

7. Stelmakh V. S. (2011) Entsiklopediia bankivskoi spravy Ukrainy [Encyclopedia of banking of Ukraine]. Kyiv: Molod, Inlure. (in Ukrainian).

8. Nabok R. (2009) Aspekty, shcho mozhut pryzvesty do vynyknennia problemnogo banku [Aspects that can lead to a troubled bank]. *Bulletin of the National Bank of Ukraine*, no. 8, pp. 46-50. (in Ukrainian).

9. Mishchenko V. I. & Somyk A. V. (2010) Likvidnist bankivskoi systemy: ekonomichna sutnist, struktura i metodolohichni pidkhid do analizu [Liquidity of the banking system: economic essence, structure and methodological approach to the analysis]. *Science and Economics*, no. 1, pp. 273-277. (in Ukrainian).

10. Moroz A. M. (2005) Bankivski operatsii [Bank's operations]. Kyiv: KNUE. (in Ukrainian).

11. Sinkey J. F. (1994) Commercial bank financial management in the financial services industry.

New York: Prentice Hall, Pearson Education, Inc. (in English).

12. Duttweiler R. (2010) Managing liquidity in banks. Top down approach. New York: John Wiley & Sons Ltd. (in English).

13. Rouse C. N. (2002) Bankers' lending techniques (2nd ed.). New York: Financial World Publishing. (in English).

14. Herasymovych A. M., Alekseienco M. D. & Parasii-Verhunencko I. M. (2004) Analiz bankivskoi diialnosti [Banking analysis]. Kyiv: KNUE. (in Ukrainian).

15. Parasii-Verhunencko I. M. (2003) Analiz bankivskoi diialnosti [Banking analysis]. Kyiv: KNUE. (in Ukrainian).

16. Stelmakh V. S., Mishchenko V. I., Krylova V. V. (2008) Likvidnist banku: okremi aspekty upravlinnia ta svitovyi dosvid rehuliuвання i nahliadu: naukovo-analitychni materialy [Liquidity of a bank: separate aspects of management and world experience of regulation and supervision: scientific and analytical materials]. Kyiv: National Bank of Ukraine, Center for Scientific Research. (in Ukrainian).

17. Batrakova L. G. (2005) Ekonomicheskii analiz deyatelnosti komercheskogo banka [Economic analysis of the activities of a commercial bank]. Moscow: Logos. (in Russian).

18. Pro poriadok rehuliuвання diialnosti bankiv v Ukraini: instruktsiia NBU, zatverdzhena Postanovoiu Pravlinnia NBU vid 28.08.2001 r. no 368 [About the order of regulations in Ukraine: the structure of the NBU, consolidated by the Decree of the NBU of August 28, 2001, no. 368] (electronic source). Available at: <http://zakon4.rada.gov.ua/laws/show/z0841-01> (accessed 20 July 2017) (in Ukrainian).

19. Fedotova K. O. (2010) Umovy vynyknennia dyvidendnoi premii pry rozmishchenni aktsii na fondovomu rynku [Conditions of a dividend bonus when placing shares on the stock market]. *Bulletin of Khmelnytsky National University*, vol. 4, no. 6, pp. 25-35. (in Ukrainian).

20. Kogdenko V. G. (2012) Razrabotka sistemy kontrolya nad effektivnost'yu upravleniya stoimost'yu kompanii [Development of a system for monitoring the effectiveness of company cost management]. *Finance and credit*, no. 2012, pp. 2-10. (in Russian).

21. Basel III: A global regulatory framework for more resilient banks and banking systems – revised version June 2011 (electronic source). Available at: <http://www.bis.org/publ/bcbs189.pdf> (accessed 20 July 2017) (in English).

22. Basel III: International framework for liquidity risk measurement, standards and monitoring, BCBS, Dec 2010 (electronic source). Available at: <http://www.bis.org/publ/bcbs165.pdf> (accessed 20 July 2017) (in English).

23. Progress report on Basel III implementation. Basel Committee on Banking Supervision (electronic journal). Bank for International Settlements. October 2012. Available at: <http://bis.org/publ/bcbs232.pdf> (accessed 20 July 2017) (in English).

Hontar D.D.Candidate of Economic Sciences,
Lecturer at Department of Banking,
Simon Kuznets Kharkiv National University of Economics**SCALE MEASUREMENT OF THE INDICATORS OF BANK'S LIQUIDITY
(ON THE EXAMPLE OF UKRAINE)**

The problem of improving the process of the bank's liquidity assessment, in particular, the scale measurement of the bank's liquidity indexes, was not thoroughly investigated. In addition, the theoretical and methodological provision of the process of the bank's liquidity assessment in conditions of European integration is not sufficiently developed, which proves the relevance of the research topic.

The process of the bank's liquidity assessment requires the development of effective tools that would allow seeing the impact on the level of liquidity, both external and internal factors. For this purpose, it is suggested to carry out a scale measurement of indicators of the bank's liquidity assessment.

Taking into account the views of domestic and foreign scholars on the composition of liquidity indicators, it is proposed to use the following liquidity ratios for the scale measurement: total liquidity ratio, instant liquidity ratio, highly liquid assets ratio, ratio of loans and deposits, standard of current liquidity, short-term liquidity ratio, coefficient of structural ratio of deposits.

For qualitative characteristics, it is necessary to develop a scale of liquidity levels. For this purpose, it is proposed to use the «three sigma» method, according to which the probability that a random variable deviates from its mathematical expectation by a value greater than the triple value of the mean square deviation is practically equal to zero. Based on the values of liquidity indicators, the liquidity of Ukrainian banks is estimated, and it is revealed that as of 01.01.2017 most of the banks were characterized with the average value of liquidity levels.

In Ukraine, it is extremely necessary to adapt regulatory and corporate banking practices to the provisions of the International Convergence of Capital Measurement and Capital Standards: New Approaches (Basel II) and Global Regulatory Approaches for Banks and Banks' Systems (Basel III).

Thus, the study evaluates the bank's activities in terms of liquidity, the main purpose of which is to improve the quality of liquidity assessment in banks, which, in turn, should strengthen the stability of the banking system as a whole.