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THE ROLE OF THORNTON AND BAGEHOT FOR THE DEVELOPMENT OF LENDER OF LAST RESORT CONCEPT

The emergence of the lender of last resort concept is closely related to the emergence and institutionalization of the Bank of England as a Central Bank for England. The term **„lender of last resort"** was used by Sir Francis Baring in his „Observations on the Establishment of the Bank of England **a**nd on the Paper Circulation of the Country"[1], published in 1797, in which he referred to the Bank of England as the ***der-nier resort***[2], from which all banks could obtain liquidity in times of crises.

The concept itself was developed and systematized in the works of Henry Thornton and mainly in the book „An Enquiry into the Nature and Effects of Paper Credit of Great Britain"[3], published by him in 1802 where he identified the Bank of England's distinguishing characteristics as a lender of last resort. Thornton distinguished between the macro- and microeconomic aspects of this function as well as its role for preventing and absorbing macroeconomic shocks. He investigated what influence the banking sector liquidity support would have on the monetary control in the economy carried out by the Central Bank, incl. to what extent these two functions contradict each other. Besides, for the first time in the world literature the author enunciated and examined the „moral hazard" problem arising from the presence of a lender of last resort for the banking sector.

The main characteristics of a lender of last resort according to Thornton are[4]:

– Key and last resort of liquidity for the financial system;

– Guard of the central gold reserves and the responsibilities arising thereof;

– Specific social responsibilities, as a result of its particular role in the economy.

The Central Bank as a special type of bank maintains a strategic reserve of gold stocks and along with this – as a monopoly note-issuing bank – it can create unlimited amount of banknotes[5], which are accepted as legal currency and complete replacement of gold coins. Thus it is an **unlimited source of liquidity** for the whole financial system, which in turn enables it to give liquidity support in times of crises. In Thornton's view it is this ability that is the first and key characteristic of a lender of last resort. In this way he proves that only a Central Bank of issue can perform this function as, otherwise, any other institution would not have access to unlimited sources of liquidity, i.e. it would not be able to give unlimited liquidity support in crisis periods.

The second distinguishing characteristic of a lender of last resort defined by Thornton relates to special **responsibilities as a keeper of the central gold reserves**[6]. In his opinion this institution not only has to keep considerable reserves through which to inspire complete trust in their actual availability in times of crisis, but it also has to have enough own resources, as being a „last resort" it cannot turn to other sources of liquidity.

In addition to this characteristic Thornton adds that the Central Bank needs to be ready at any time to issue the necessary amount of banknotes to prevent the panics leading to internal drain of gold reserves[7]. Thus, the main purpose of the lender of last resort is not only to deal with the primary shock, but rather to prevent secondary shocks that lead to hardships for the real economy. It is

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[1] Baring, F. Observations on the Establishment of the Bank of England and on the paper circulation of the country. Minerva Press for Sewell and Debrett, London, 1797. http://www.ier.hit-u.ac.jp/library/fr71-56/44-1.htm

[2] From legal French – „last resort".

[3] The original title: Thornton H. An Enquiry into the Nature and Effects of Paper Credit of Great Britain, 1802.

[4] Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, pp. 9-11.

[5] The current study does not discuss the inflation problems resulting from over-issuing of banknotes unsecured with gold.

[6] This characteristic of a lender of last resort arises from the fact that at this historic moment England was in a gold standard, i.e. it guaranteed 100% converting of banknotes issued by the Central Bank into gold coins.

[7] According to Thornton there are two scenarios possible:

1. Internal withdrawal of the gold stocks when the gold stocks are withdrawn from the bank system, but remain in the country.
2. External withdrawal of the gold stocks when, for one reason or another, the gold stocks leave the national economy.

For details see Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Cato Journal, Vol. 4, N 1 (Spring/Summer 1984), pp. 275 – 318.

through willingness for additional but still prudent issuance of banknotes, that the Central Bank counteracts the drain of gold stocks. Thus it preserves the amount of money in circulation, protecting the economy from the unfavorable effects of the contractions in the money supply.

Unlike the ordinary commercial banks whose responsibilities spread only to the respective stockholders, according to Thornton, the responsibility of the lender of last resort spreads to the whole economy, i.e. it has **social responsibilities** as well. To these he refers the preserving of the aggregate amount and the purchasing power of the national currency during bank escapes and panics as well as the supporting of the entire financial system in times of a crisis. It is namely these responsibilities that predetermine the behaviour of the lender of last resort during a crisis, when it expands the range of extended credits and issued notes and credits in total contradiction to the policy of the commercial banks during a crisis[8]. Every contraction of credit or money expansion during a crisis by the lender of last resort would lead to an unfavourable impact on the entire economy.

All these specific requirements, described by Thornton, allow for the role of a lender of last resort to be played solely by the Central Bank of issue in compliance with the respective economy.

Along with the description of the specific characteristics of a lender of last resort Thornton's contribution to the studied issues is supplemented by his research on the influence which this function would have on the traditional activity of a central bank. This research can be most generally summarized in the following four trends[9]:

– possible conflict between the responsibilities of the Central Bank as a regulator of the note component of money stock and its function as a lender of last resort;

– degree of responsibility of the lender of last resort to the individual banks and the banking system as whole;

– role of the lender of last resort in preventing the shocks of the financial system;

– identifying the main purpose of the lender of last resort in economy.

As long as one of the main tasks of the Central Bank is to guarantee a stable non-inflation growth of the note component with the aim to avoid devaluation of the national currency and the drain of gold reserves, it has to follow a restrained policy regarding expansion of the banknotes it issues. At the same time in periods of liquidity crises it has to give credits freely and to issue such an amount of banknotes as to cover the liquidity need and thus – to overcome the crisis in its initial stage. This leads, of course, to an apparent **conflict between its goals and responsibilities as a regulator of the note component of money stock and as a lender of last resort.**

Thornton's contribution in this direction is that he was the first to distinguish clearly between the Central Bank's long-term policy for stable monetary growth and the short-term measures for coping with liquidity crises. In his opinion the short-term growth of the amount of notes issued for coping with the liquidity hardships will not affect the Central Bank's long-term goals provided that it takes them out of circulation after recovering its gold reserves. In this way it can enable the long-term growth of money in circulation to correspond to the growth rate of economic activity in the country and at the same time it will avoid the inflation processes caused by the growth of the note component.

If the Central Bank responds fast and firmly as early as the first symptoms of panic and liquidity hardships appear, these negative trends can be overcome within two days. The fast overcoming of panic will eliminate or greatly reduce the need of issuing additional notes, thus the deviation of the money from the long-term target level will be little regarding both time and amplitude.

As regards **commitments and responsibilities of a lender of last resort to individual banks**, Thornton simply and clearly expresses the view that the main responsibility is for the whole system or, as he calls them „common interests"[10], but not for the state of the individual banks. Besides, every bank that finds itself in a crisis due to poor and incompetent management, reckless risk-taking or negligence should be left to go bankrupt, i.e. to pay for its imprudence through the loss suffered by its shareholders.

According to him aiding distressed individual banks is justified only when the bankruptcy of the respective bank can lead to wide spreading problems for the banking system and the economy as a whole. Even in these cases the aid has to be meager and difficult to access, as a

[8] A logical step of commercial banks during a crisis is to limit the extended credits, to raise the collectibility of credits already extended as well as to contract the issuing of notes, with the aim to raise the liquidity and stability of the respective bank.

[9] When discussing Thornton's views on these problems we should bear in mind the historical era in which he lived and worked as well as the fact that these considerations mainly relate to the role of the Bank of England in the English economy.

[10] Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, p. 14.

policy of fast and generous lending to problem banks would create stimuli for poor management and excessive risk-taking in the lending policy of the other banks without fear of the consequences of such a policy and management. Thus, Thornton was the first to formulate the issue of the so-called „**moral hazard**".

Regarding the question **whether a lender of last resort has to try to prevent the shocks for the financial system,** Thornton replies negatively – according to him a lender of last resort exists not to prevent shocks but to minimize their secondary echo[11]. This statement is completely logical as the Central Bank is not able to control all triggering events; the only thing it can do is create a set of measures for limiting and reducing the negative impact of these events.

In this context if a particular bank goes bankrupt it is only the lender of last resort that can take measures to provide the necessary market liquidity with the aim to eliminate the secondary impact of that failure – liquidity difficulties in the entire banking system and chain bankruptcies among the other banks. From this point of view the emergence of large-scale panic in the national economy will be due not to the bankruptcy of a particular bank but rather to the failure of the Central Bank to protect the economy from the impact of that event[12]. In this way Thornton once again outlines the key role of the lender of last resort for the stability of the banking system and the economy as a whole and the price of every mistake it has made.

According to him the actions of a lender of last resort for preventing liquidity crises and bank escapes are subjected mainly to the task to preserve the money supply and stability of the national currency. The impossibility of a lender of last resort to fulfill its purpose would lead to a sharp decrease in the money supply, which in turn would result in a drop in the level of economic activity in the country. Thus he views **a lender of last resort as monetary rather than bank function.**

Summarizing his points of view Thornton defines the role and **purpose of a lender of last resort**[13]:

– preventing large-scale bank failures;

– preserving the confidence in the bank system;

– preventing collapse in the prices of assets in times of crises;

– counteracting the danger of mass withdrawal of currency;

– ensuring the ability of banks and other lending institutions to meet their liabilities.

Walter Bagehot[14] developed Thornton's ideas about lender of last resort. He extended and complemented the functions and commitments of the lender of last resort and gave a modern interpretation of the problem, which has remained unchanged over the past two centuries.

The contributions and innovations in Bagehot's views can be summarized in the following five areas[15]:

First, a clear distinction is made between preventive and subsequent support of the Central Bank during a crisis. In his opinion the role of the lender of last resort is not restricted only to the interference during a crisis, but to the giving of a clear and unambiguous sign to society that it will interfere unconditionally in any case of necessity and will lend freely to all institutions concerned. The presence of confidence for a future support in case of crises calms the population and helps to generate stabilization expectations reducing the stimuli for panicked withdrawals of gold from the bank system.

Second, last resort lending should be done with a penalty interest rate. In this way the distressed banks will receive the necessary liquidity support but will pay the price for their imprudence, i.e. they will pay for the protection provided by the Central Bank. At the same time the penalty interest rate will restrict the banks in using that form of lending, stimulating them to look for alternative sources of liquidity. Thus the credits obtained from the Central Bank will really be of last resort after exhausting all other options.

Third, it should be clearly defined which borrowers will have access to last-resort lending, and what the acceptable collateral for this will be. According to Bagehot the Bank of England **should lend to everybody who offers good collateral.** Thus he extends the range of the lender of last resort, going beyond the frameworks of the banking system and

[11] Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, p. 19.

[12] Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, p. 19.

[13] Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, p. 20.

[14] Bagehot W. Lombard Street: A Description of the Money Market. http://www.econlib.org/library/Bagehot/bagLom.html

[15] For details see Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective. Working paper 84-03, Federal Reserve Bank of Richmond, 1984, pp. 26 – 28.

covering the whole economy – banks, traders, firms and people[16].

This can be explained with his view that the Central Bank must give liquidity to the market rather than to the distressed banks. In this sense whether it will lend to banks or their clients, it satisfies the market's demand for liquidity.

As far as the acceptable collaterals against that kind of lending are concerned, according to Bagehot the Central Bank has to accept all quality assets (policies, securities, shares, bonds, etc.), which later can be cashed without any problems. The price at which these assets are to be evaluated should be their price at normal times regardless of the fact that at that moment their market price has temporarily fallen below the nominal, due to the drop in the securities market. Besides, according to him the Central Bank should rely mainly on the penalty interest rate and restrain from administrative caution, moral beliefs and other quality restraining measures in last-resort lending.

Fourth, Bagehot outlines precisely the scope of responsibility of the lender of last resort – only the banking system but not the insolvent banks. He thinks that only healthy banks should be helped and the others should be left to go bankrupt. Thus he specifies that the lender of last resort does not have to prevent individual bank failure at any cost but rather to limit its impact only to the unhealthy institutions creating a healthy and competitive environment in the banking sector. There is no exception from this rule even for the big and key banks whose failure could lead to a loss of public confidence and subsequent cascading financial collapses if they are poorly managed or have led an imprudent policy. In this way he declares unambiguously that the function of a lender of last resort should not be viewed as a guarantee that banks will not be allowed to fail, but rather that the failures will not be transferred to the healthy institutions.

Fifth, directly related to the above said is the view that **the lender is not a substitute of prudent banking practices.** Banks have to rely mainly on their own resources and soundness and not only on the liquidity assistance by the Central Bank. Thus he emphasizes the need of consolidation of individual banks. In compliance with his philosophy of non-interference in the private institutions and free market he thinks that the key power of the banking system has to be based not on the existence of a lender of last resort but on the individual banks' resources and health.

In his opinion the banking system must be organized in such a way that every individual bank is obliged to maintain certain cash reserves to ensure that it can meet a certain growth in the liquidity demand without any problems. In order to achieve such a system, he proposes that the banks have to face punishment for forced bankruptcy if they do not maintain appropriate levels of reserves. In this way he launches for the first time the prototype of the **idea of mandatory minimum reserves.**

The role of the penalty interest rate in last-resort lending takes a special place in Bagehot's views. As has already been indicated the Central Bank has to give liquidity support in case of crisis but the loans it extends must necessarily include an element of punishment in the form of penalty interest rate for the liquidity support it gives. Moreover, Bagehot thinks that the use of penalty interest rate will have a favourable impact as[17]**:**

– **it protects the gold reserves by encouraging the import and preventing the export of gold coins from the country**. The high interest rate will help to attract short-term capitals from abroad and at the same time will have a deflationary influence on the level of economic activity improving the balance of trade;

– the high interest rate on the credits extended by the Central Bank makes them unfavourable for the commercial banks and thus stimulates the prompt repayment of loans after the crisis period is over. This, in turn, **helps the rapid contraction of the note component,** which during the crisis has increased sharply as a result of the issuance of emergency banknotes. In this way the Central Bank avoids inflation risk and returns to pursuing its goals to maintain sustainable growth of the note component of the money supply, the deviations from these goals during the crisis being minimal both in duration and amplitude;

– **the high interest rate will reduce the amount of the precautionary cash reserves, which the banks maintain**. According to Bagehot the Central Bank must impose a penalty interest rate as early as the beginning of the panic in order to prevent the obtaining of credits from it, too as an additional precautionary measure by the commercial banks and thus to additionally protect its gold reserves;

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[16] Bagehot W. Lombard Street: A Description of the Money Market. http://www.econlib.org/library/Bagehot/bagLom.html

[17] For details see Humphrey T., R. Keleher. The Lender of Last Resort: A Historical Perspective, Working paper 84-03, Federal Reserve Bank of Richmond, 1984, pp. 29-30.

– **the penalty interest rate will provide an incentive for the banks to exhaust all market sources of liquidity and even to develop new sources before going to the Central Bank**. In this way, he thinks, the commercial banks will be encouraged to develop better techniques for managing their available resources, as well as to develop new channels for mobilizing the existing liquidity through the capital market.

According to Bagehot the penalty interest rate can also be used as a **test for the soundness of the borrowers in trouble.** The high interest rate set at several points above the market one will stimulate non-liquidity banks to turn first to the market for providing the liquidity they need. If the banks are in a good condition and only have temporary problems as a result of the sharp increase in the demand for liquidity, then the lenders will assess this and will extend them the credits they want. On the other hand, if the market decides that the respective bank is too risky to be credited, then it will be forced to turn to a lender of last resort to get the liquidity support it needs. Thus the turning itself of the distressed banks to the Central Bank for liquidity assistance will indicate the presence of serious weaknesses in the respective institutions.

Admittedly, the last arguments hold true only in normal times or at the beginning of the crisis before the market gets under massive liquidity pressure. The breakup of the market during a severe financial crisis even the healthiest banks would hardly get the necessary liquidity support from it, which would make them turn to the lender of last resort.

Walter Bagehot's points of view discussed above supplementing and developing Henry Thornton's conceptual formulations enable us to view him as the creator of modern concept of the role of the Central Bank as lender of last resort in the national economy.

Божінов Б. Роль Г. Торнтона та У. Беджета в розвитку концепції „кредитор останньої інстанції"

Виникнення і розвиток концепції „кредитор останньої інстанції" впритул пов'язано з виникненням та інституціоналізацією Bank of England в якості центрального банку Англії. Уперше термін „**кредитор останньої інстанції"** було використано сером Френсисом Берінгом, ідея отримала розвиток і була систематизована в роботах Генрі Торнтона і Уолтера Беджета. У статті детально показано розвиток ключових характеристик „кредитора останньої інстанції" в дослідженнях обох авторів та його генезис до сучасного тлумачення.

Ключові слова: банки, центральний банк, кредитор останньої інстанціїю, стабільність банку, надійність банківської мережі.

Божинов Б. Роль Г. Торнтона и У. Бэджета в развитии концепции „кредитор последней инстанции"

Возникновение и развитие концепции „кредитор последней инстанции" вплотную связано с возникновением и институционализацией Bank of England в качестве центрального банка Англии. Впервые термин „**кредитор последней инстанции**" был использован сэром Фрэнсисом Бэрингом, при этом идея получила развитие и была систематизирована в работах Генри Торнтона и Уолтера Бэджета. В статье детально прослеживается развитие ключевых характеристик „кредитора последней инстанции" в исследованиях обоих авторов и его генезис до современного толкования.

Ключевые слова: банки, центральный банк, кредитор последней инстанции, стабильность банка, надеждность банковский сети.

Bozhinov B. The Role of Thornton and Bagehot for the Development of Lender of Last Resort Concept

The emergence and development of the lender of last resort concept is closely related to the emergence and institutionalization of the Bank of England as a Central Bank for England. The term **„lender of last resort"** was firstly used by Sir Francis Baring and the idea was developed and systematized in the works of Henry Thornton and Walter Bagehot. The present article makes a detailed overview of the development of the key characteristics of lender of last resort in the works of the two authors, and its genesis to its modern interpretation.

Key words: banks, central banks, lender of last resort, bank stability, bank safety net.

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