THE INFLUENCE OF CONCENTRATION ON THE COMPETITION IN THE BANKING INDUSTRY

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Abstract

The existence of the economy of any country is impossible without an effective banking system. Banks of different levels actively influence the economic processes. The concentration of bank capital is primarily based on the centralization of production: large industrial companies usually put and keep their available cash capitals in large banks that strengthens their positions and contributes the displacement of small banks. The concentration of bank capital leads to the competition in the banking industry. The objective of the paper is to review and analyse the competition and to investigate the influence of concentration on the competition in the banking industry. The research results had showed that the Lithuanian banking industry is divided between the three largest commercial banks, which together manage more than 60 percent of all the assets, loans and deposits. Concentration level of the largest commercial banks is decreasing due to the financial situation in the country and the policy of the smaller banks of Lithuania.

Keywords: concentration, commercial banks, competition, analysis.
JEL Classification: G21, D41.

Introduction

One of the important factors in the development of market relations is the existence of competition. Competition is a situation of rivalry between two or more commercial entities for larger part of the market. Many authors describe competition as a multidimensional concept, emphasizing its relativity (Beniušienė, Svirskienė, 2008; Shevchenko, 2009; Garelli, 2006). Competition is needed in order to transform efforts and actions of the financial institutions into the more competitive financial institutions to get more profits and dividend income (Yoshino and Yokoi-Arai, 2006). Competition is an inherent attribute of a free market economy and is the key to efficiency improvement and the increase of the country’s economy as a whole (Rajesh, 2009). The restriction of the competition leads to the stagnation of the economy, because commercial entities lose the incentive to improve their performance.

Competition in the market is directly related with the concentration. Market concentration is associated with the concept of concentration of production related to the concentration of the production of related products for several major companies in the region (Bikker, Haaf, 2002). The concentration significantly affects the competition. The level of the concentration affects the behavior of companies in the market: the higher the concentration is, the more companies are dependent on each other. The result of self-selection by company of output and prices is determined by response force in the market competition. The level of concentration affects the propensity of companies to compete or cooperate: the smaller companies are operating in the market, the easier they realize their mutual dependence on each other and the sooner they will cooperate.

The aim of this article is to review and analyse the competition, which significantly affects the efficiency of financial services, and to investigate the influence of concentration on the competition in the banking industry. In order to achieve the aim the following tasks were set: to analyse the competition and to assess the main factors ensuring a leading position in the competitive banking industry; to investigate the influence of concentration on the competition in the banking market and to disclose the impact of concentration.

The paper consists of two parts. The first part presents the main aspects of the competition in the Lithuanian banking industry, the distribution of assets, loans and deposits between three segments in which Lithuanian banking market is divided. Theoretical aspects of the concentration and the influence of concentration on the competition are presented in the second part of the paper. Conclusions are presented at the end of the article.

The Competition in the Banking Industry

The competition is the process of rivalry between commercial banks and other credit institutions, which seek to secure a strong position in the banking market. The existence of competition ensures the development of choice of the banking services. Moreover, competition encourages commercial banks to
move towards more effective ways of selling their products and services, provides a favourable environment for their growth and development. However, it should be noted that the development of new products does not guarantee a competitive advantage if the wishes and needs of potential customers are not taken into account during the development of new products.

Such situation is observed in Lithuania – more than 60 percent of the market belongs to three major banks of Lithuania. Lithuanian banking industry can be divided into three segments: the segment of the large commercial banks, the segment of the small and medium-sized commercial banks and the last one segment consists of foreign bank branches and subsidiaries (see Figure 1). Such matching or allocation is quite conditional, as, in comparison with West European countries, Lithuanian commercial banks are not big.

The major part of the Lithuanian banking market belongs to the largest segment consisting of the biggest commercial banks of the country, which operates the largest market share of the assets, serves the largest number of the customers and has a very wide range of banking products and services.

![Assets of the Lithuanian banking segments](image)

**Figure 1.** The distribution of the assets, loans and deposits in the Lithuanian banking industry  
(Source: designed by author using data of Association of Lithuanian Banks, 2010)

As it was mentioned, the group of the largest commercial banks in Lithuania consists of three major commercial banks. Together they control more than 60 percent of the assets market, 64 percent of loans market and 58 percent of deposit market (see Figure 1). The leader of the Lithuanian banking market, holding a large commercial banks, provides a wide range of banking products and services to private and corporate clients and carries out all banking operations mentioned in the Law on Banks of the Republic of Lithuania: accepts deposits, makes loans, carries out money transfers, provides settlement services to its customers, changes the currency, provides finance trade operations, investing and trading in the market of securities and performs other operations (LRS, 2004). The range of the operations and services offered by the largest commercial banks is very extensive. They also provide a range of financial services, motivate
physical and legal entities to use these services, form a positive image of the bank and also provide support to individuals and to individual areas with particular focus on education, culture and art.

Small and medium commercial banks are more oriented to a specific economic sector or class of customers. Medium and small-sized commercial banks are owned by foreign and local capital commercial banks, whose main objective is small and medium business development in the country. The range of their products and services is not as wide as of the largest commercial banks, but small and medium commercial banks specialize in accordance with market needs and customer expectations.

Foreign banks branches operating in Lithuania mainly specialize on the financial entities, investment management, deposit products and traditional banking areas. The customers of these foreign banks branches and subsidiaries of the third segment are the companies registered in Lithuania or international companies operating in Lithuania. Foreign banks branches operating in Lithuania are based on financial resources derived from their parent banks, but not from the Lithuanian market.

Such an obvious gap between the largest commercial banks and other commercial banks obliges smaller commercial banks to make an effort in order not only to survive in the market but also to attract new customers. Small and medium commercial banks try to stay in the market and increase the number of existing customers by offering new products, improving the quality of them, reducing the prices and improving the operational quality of customer service. However, the gap is too large that the major banks would become worried.

The competition between commercial banks in the Lithuanian banking market takes place in two segments: separately between smaller and medium commercial banks and separately between the largest commercial banks. Smaller and medium commercial banks are active in the fight for a higher position in the banking market, while the largest commercial banks compete with each other in order to occupy the larger part of the Lithuanian banking market. The competition between commercial banks operating in the Lithuanian banking industry is quite high – some of commercial banks try to keep their position in the market, while others try to entice customers by providing them better conditions of the products and services.

If we compare the range of banking products and services provided by commercial banks in Lithuania, we would see that the range of the large commercial banks is much higher and wider, their products and services are quite complex and meet the modern needs of the customers in comparison with small and medium commercial banks. The country’s largest banks increase the range of products and services carried out by the novelty and profitability, they also try to attract additional contributions from shareholders and investments from other commercial banks for additional development of their provided products and services. Otherwise, small commercial banks are more focused on the reduction of services fees, but the author’s view, this little helps. This can help only in order to attract customers to use such opportunity for some period, but if the fees of the banking operations become expensive, the number of customers will be decreased at the same pace, as it was increased.

The results of the activity of commercial banks largely depend on the exact customer satisfaction. The choice of the customers is often determined by experts as the ability of the bank to determine the exact needs of the customers. The financial results of the banks are directly dependent on the bank’s ability to offer customers useful and high quality financial services. Therefore, under comparable conditions the choice of the customers can be determined according to the bank staff and its experience in dealing with customers.

The competition in the banking industry encourages commercial banks to search for the most convenient products and services, which conform to customer requirements, and to seek new solutions improving the quality of the products and services.

Most of the customers usually win due to the strong competition in the banking industry, otherwise, commercial banks must focus on increasing the operational efficiency. However, when the price war starts, it can hurt. The competition can cause serious problems – the commercial banks in order to increase market share can start too liberal lending, do not considering the risks appreciated with, or use the interest margin, which does not reflect the real risk of lending (Liudvintaitytė, 2008). The negative effects of the intense competition are explained by the strong competition in the banking industry as well as forcing commercial banks to pay customers higher rates on deposits and reducing the range of products and services prices, which do not allow commercial banks to earn high profits and increases the probability of bankruptcy. The active competition in the banking industry is driving banks to take more risk, which may adversely affect the stability of the commercial banks.
The Influence of Concentration

Concentration in the banking industry means the concentration of funds in a small number of large and major banks. Being developed by the same laws as the concentration of the industry, it inevitably leads to monopoly.

Concentration in the banking industry is a situation when major banks, which play a decisive role, one or another way prevail the smaller banks. During the competition many smaller banks go bankrupt and simply cease to exist. Other smaller banks formally retain their independence, in fact, obeying the power of larger. Finally, many smaller banks are included in the sphere of influence of the big banks and eventually lose its independence, becoming prime offices or branches of larger one.

The concentration of bank capital is primarily based on the centralization of production: large industrial companies usually put and keep their available cash capitals in large banks that strengthens their positions and contributes the displacement of small banks. The concentration of bank capital leads to the competition in the banking industry, where large banks have a decisive advantage over smaller ones. First of all, investors prefer to put their money into larger, more solid and stable banks than smaller banks, which often fail. Secondly, large banks, in comparison with smaller banks, serve their customers in a wide branch network, attracting contributions from various localities. Thirdly, large banks are far superior in organizational and technical terms.

Lithuania is not an exception. In each more or less prominent city commercial banks compete with each other, luring customers with reliable image of the bank and its situation in the market, concessional credit terms and all sorts of advertising. Through a developed network of branches, exchange offices, the range of banking operations penetrates all the pores of the economy. Commercial banks put their hands everywhere and take control over the funds of thousands of businesses.

All the cash turnover of the economy is sharing through the banks. Over time, the system of the commercial banks to mobilize all the cash resources of the country is being more and more refined. In particular, in all less or more developed countries, almost all people keep their money on the bank accounts or in savings banks. Non-cashed transactions became widespread. All this contributes to the centralization of capitals and use of resources for capital accumulation.

As a result, the leading role in the banking industry goes to a few major banks. The large commercial banks are gaining themselves for a monopoly position. Through the collusion between them powerful monopolistic union banks appear in the market. Although, nobody is talking loudly about the collusions, because they are prohibited under the Competition Act (LRS, 2000), but there are some tendencies, showing such collusions to be existed. The large financial operations of respectable size are increasingly carried out not by some individual commercial banks or by special agreement between several leading commercial banks through the formation of the so-called banking consortium. Another example of such union would be the join of the several commercial banks in Lithuania, which have an extensive ATM (Automated Teller Machines) network, 177 units throughout the country. On the one hand, it is like a possibility for customers to enjoy the largest ATM network in the country, but on the other hand, it is some kind of collusion, because these both banks belong to the most powerful segment in Lithuanian banking industry.

The competition is no longer fragmented between the individual commercial banks, but between the major unions of the commercial banks, which occupy quite big position of the market. Such competition has enormous destructive power, carried by very strong operating funds, including prominent use of relations in state apparatus, parliaments and so on.

In order to disclose the concentration and measure it in the Lithuanian banking industry, the calculation of concentration indicators is described below. Based on the calculated proportion of the commercial banks operating in the banking market, indicators characterizing the degree of market concentration can be defined. Consider the most famous of them:

a) Concentration factor or concentration ratio (CR) is described as the proportion of the fixed number of enterprises in the market ranked by size. This indicator shows the relative size and number of firms “living” in the market, namely: the percentage of sales, size, assets or value added, which are calculated for a number of companies. The smaller number of companies operating in the market, the higher level of concentration is. The same number of firms in the market the less they differ from each other in size and the lower level of concentration is noted. The level of concentration affects the behavior of companies in the market: the higher the concentration, the more firms are dependent on each other. The level of concentration also affects the propensity of companies to
compete or to cooperate: the smaller firms operating in the market, the more they realise their mutual dependence of the each other and the sooner they will cooperate. Therefore, it can be assumed that the higher concentration is, the less competitive market will be. Figures of concentration are based on a comparison of firm size with the size of the market in which it operates. The higher the size of company is in comparison with the scale of the market, the higher the concentration of manufacturers is in this market. The concentration index is measured as the sum of market shares of major companies operating in the market (1):

\[ CR_i = \sum_i d_i \]  

(1),

where 
\( d_i \) – the market share,
\( i \) – the number of firms for which the figure is calculated.

The concentration ratio characterizes not the totality of enterprises in the market, but only the position of the major companies influencing the market and regulating it to their advantage (Bikker J.A., Haaf K., 2002).

b) Herfindahl-Hirschman Index (HHI) is widely used in the practice and is indicated as (2):

\[ HHI = \sum_i d_i^2 \]  

(2),

where 
\( d_i \) – the market share of firm \( i \) in the market,
\( n \) – the total number of firms operating in the market.

This index is fairly widespread in the international practice. If the HHI is close to zero, the market is perfect – there are many small companies where each of them controls a negligible sphere. Moreover, if the HHI exceeds 1800, then such a market is considered to be highly concerned and it is not allowed to merge companies. If the index is in the range from 1000 to 1800, the merging firms is allowed only if the result of this merger (HHI) will not rise by more than 100 points, without leaving a border of 1800. The value of HHI is directly connected with the index of dispersion of shares of the companies in the market. It shows how the shares of the occupied market are equal. In the case when shares are equal and the index of dispersion is zero, it indicates the presence of a competitive environment, and on the contrary, the greater the share of firms differ, the higher the index value and the greater the degree of monopoly power is (Bikker J.A., Haaf K., 2002).

Concentration ratio and Herfindahl-Hirschman index are most commonly used. According to the observation presented in the previous part of the paper, the segment which consists of three largest commercial banks manage more than half of the Lithuanian banking industry. And here we can see the concentration problem, where smaller banks have almost no chances to become leaders in the banking sector. However, according to the latest five years results, the concentration of the largest commercial banks is decreasing. As shown in the Table 1, Herfindahl-Hirschman Index (HHI) is being decreased in all spheres of banking activities from 2005 till 2010. The rates are not high, but still declining. The main reason of this fact could be the financial crisis of 2008, which redistributed the assets, loans and deposits of Lithuanian commercials banks. Another reason is the changing policy of foreign bank branches. According to the managed assets and loans, the results of the activity of foreign bank branches are quite good. Despite the difficult economic situation, some of foreign bank branches gained profit in 2009, when the largest commercial banks in Lithuania suffered the losses. This segment of foreign bank branches keeps the level of profitability and obtains stable financial results in all sectors of its banking business. Due to the increase of the capital, foreign bank branches slightly occupy the Lithuanian banking market and accordingly the indicators of the concentration are being declined. The year of 2009 was decisive. As shown in Table 1, the values of HHI in 2009 were less than 1.800, it means that Lithuanian banking industry has being changed from highly concentrated to moderate.
Table 1. The indicators of concentration in the Lithuanian banking industry from 2005 till 2010
(Source: designed by author using data of the Association of Lithuanian Banks, 2010)

<table>
<thead>
<tr>
<th></th>
<th>2005</th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
</tr>
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<tbody>
<tr>
<td>HHI</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>For assets</td>
<td>1.888</td>
<td>1.950</td>
<td>1.862</td>
<td>1.756</td>
<td>1.718</td>
<td>1.605</td>
</tr>
<tr>
<td>For loans</td>
<td>2.035</td>
<td>2.131</td>
<td>1.941</td>
<td>1.802</td>
<td>1.753</td>
<td>1.708</td>
</tr>
<tr>
<td>For deposits</td>
<td>2.134</td>
<td>2.122</td>
<td>2.079</td>
<td>1.901</td>
<td>1.797</td>
<td>1.677</td>
</tr>
<tr>
<td>CR (_3)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>For assets</td>
<td>30%</td>
<td>32%</td>
<td>31%</td>
<td>29%</td>
<td>29%</td>
<td>26%</td>
</tr>
<tr>
<td>For loans</td>
<td>33%</td>
<td>34%</td>
<td>31%</td>
<td>30%</td>
<td>29%</td>
<td>28%</td>
</tr>
<tr>
<td>For deposits</td>
<td>32%</td>
<td>30%</td>
<td>28%</td>
<td>27%</td>
<td>25%</td>
<td>21%</td>
</tr>
</tbody>
</table>

The values of concentration ratio (CR) are also being declined. What concerns the indicator CR\(_3\), which measures the banking market shares of the largest three commercial banks in the market, if CR\(_3\) is equal to more than 70%, the market is defined as concentrated. According to the results of the calculation of CR\(_3\), the Lithuanian banking market was very concentrated in 2005 and 2006, especially for loans and deposits. During this period, the Lithuanian banking industry was undergoing intense transformation and development. The modernization of distribution channels and the implementation of new technologies have increased the availability of products and service and the effectiveness of banks operation. The development of the information technology of the banking sector has improved an access to banking services and reduced operating costs of services provided. Three largest commercial banks of the country were one of the reliable commercial banks in Lithuania in 2006, that’s why the major supplier of the loans and deposits “maker” was the segment consisting of three largest commercial banks in Lithuania.

However, all the values of the indicators of the concentration slightly decline. It means, that the Lithuanian banking industry step by step becomes less concentrated and, as a result, it can be assumed that the lower concentration is, the more competitive Lithuanian banking market will be.

Conclusions

The objective of the paper was to review and analyse the competition, which significantly affects the efficiency of financial services, and to investigate the influence of concentration on the competition in the Lithuanian banking industry. The results reveal that the Lithuanian banking industry is divided into three segments, where the dominant position belongs to the segment which consists of the three largest commercial banks, managing more than 60 percent of all the assets, loans and deposits in the Lithuanian banking market.

The concentration of bank capital leads to the competition in the banking industry, where large banks have a decisive advantage over smaller ones. However, the concentration in the Lithuanian banking market is decreasing due to the financial crisis of 2008 and the active policy of the foreign banks branches operating in Lithuania. The rates are not high, but still declining. The gap between the largest and the smaller banks is still too large for the largest banks to become worried about the results of their activity. Moreover, the choice of the products and services offered by the largest commercial banks is much wider; the range of their products is being renewed constantly due to the rapidly growing banking market.

The result of the research also shows that the period of 2009 was very important to the Lithuanian banking industry, because the position of the Lithuanian banking market has being changed from highly concentrated to moderate. According to the tendency, which sows that the level of concentration is declining, it can be assumed, that Lithuanian banking market slightly becomes more competitive.

Finally, such environment slightly becoming competitive in Lithuanian banking industry will encourage all the banks to be more active and to try to take a leading position in the banking market.
References