IMPORTANCE AND STRUCTURE OF THE BANKING SECTOR IN THE COUNTRIES OF THE EUROPEAN UNION AND BULGARIA IN PARTICULAR

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Abstract: The number of the credit institutions on an international scale is oversized. At the same time, the world economy is developing at a relatively low pace. The existing downward tendency concerning the bank profits causes a significant cost pressure increase for a partial compensation. At least to some extent, the efforts of the financial sector are already shifted to not developing new business models, introducing innovative products and improving customer services, but rather to covering comprehensive regulatory requirements. The market entry of the so-called fintech firms, which are characterized by innovative activities and the adoption of typical bank functions such as payments, lead to overall market share loss by banks.

The consolidation of the banking sector is not only object of this paper, but also a promising solution to some of the current banking problems. Its subject is focused on the meaning as well as on the structure of the banking industry as a starting point of the consolidation process. The main tasks of the current survey are 1) the importance of the banking and 2) its structure in the European Union (EU) and Bulgaria in particular.

The methodology used is based on a comparative analysis of the importance and structure of the banking sector. The survey covers: countries with the most and also low developed banking spheres according to the size of credit institutions; analysis of the average indicators for the EU including their comparison with the values in Bulgaria.

Keywords: banking sector, credit institutions.

Introduction
Banks play a major role in modern financial systems (Burghof / Rudolpf, 1996). Among their most important functions are payment, lending, capital and investment transactions. At the same time banks maintain contacts with private and legal persons and with governments including their affiliated institutions. The importance and structure of the banking sector varies from country to country (Group of ten, 2001). For example, the US banking sector stands out not only as unique for its out-of-region expansion, but also for the eligible financial activities. These characteristics are the result of strict past restrictions such as the Glass-Stegall Act in 1933 and the Bank Holding Company in 1956 (Vander Vennet, 2002). Until the early 1990s the US banking sector was characterized by relatively high number of banks, significantly low concentration level (HHI <100) and limited economic importance. The banking in Europe has also its own typical features (Group of ten, 2001). In the 1990s the very high and stable degree of bank concentration was common for France, the Netherlands, Sweden and Switzerland. During the same period of time a significant consolidation growth was observed in other countries such as Belgium and Italy. In another countries like Switzerland and England the influence of the banking sector in their economies increased significantly.

Thesis
The importance of the banking sector within the state economy can be proved by the ratio of the banking balance sheet sum (BBS) to the gross domestic product (GDP) of a particular country, if it is exceeded by at least 3 times (European Central Bank, 1999):
Importance of the banking sector: 

\[ \sum_{i=1}^{n} \left( \frac{BBS_i + \ldots + BBS_n}{GDP_{\text{country}}} \right) > 3; \]

With the partial overcoming of the financial crisis in the EU, there is a trend towards decrease of the significance of the banking sector, measured by the reduction of the above mentioned index, from 2.7 in 2010 to 2.3 in 2013 and reaching its lowest value of 2.06 in 2018 (European Central Bank, 2017). Furthermore, there are major differences between the EU countries. For example, the banking sectors in the Netherlands, Spain and France reach very high index levels above 3 units. In England has been measured index level of 4.1 units in 2018, which underlines the high degree of banking intermediation and the crucial role of the banking sector. In countries such as Slovenia and Slovakia the economic weight of the banking sector, with index values of 0.5 and 0.1 respectively in 2016, is much lower than the EU average. For the last two years till 2018 both Slovenia and Slovakia reached a strong growth at index levels of 0.9. However, this values still stays behind the EU average.

Despite of the relatively low economic importance of the Bulgarian banking sector with an average index value of 1.0 in 2018, Bulgaria does not rank last in the EU. Moreover, the index level in Bulgaria stays almost unchanged i.e. without major improvements since 2013 and remains significantly far away from the EU average.

The participation of foreign banks is typically high in some EU countries. This pattern is most pronounced in Luxembourg where the banking assets of foreign credit institutions exceed essentially the country's GDP. In the period 2013-2018 the total assets of local banks in Luxembourg surpass the country's GDP by constant 1.9 times. In addition, the assets of foreign banks during the same period were at least 13.5 times higher than country's GDP and reached their highest level of 19 units in 2018. The extreme values of the index in Luxembourg underlines the hypothesis that at least some of the foreign credit institutions have gained extremely high importance and belong to the category "too big to fail". In crisis periods, overcoming their theoretical bankruptcy, is not only crucial for stabilizing the banking sector in Luxembourg, but also for preventing disruptions to the overall financial system in the EU and globally.

![Fig. 1. Importance of the banking sector (ratio) in selected EU countries](image)

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There are different financial structures in the banking market within the EU (Weese, 2007). The Herfindahl-Hirschmann index (HHI) is most commonly used for their analysis: formed by the sum of the squares of the market shares of the competing banks (BMS) in a given market. In practice, HHI is calculated using the market shares of the five largest credit institutions. It ranges between 0 in “full competition” and 10.000 in “absolute monopoly” (Braun / Segura, 2004). Values
- **below 1.000** are indicative for **low market concentration**, 
- **between 1.000 and 1.800** for **average market concentration** and 
- **above 1.800** for **high market concentration**.

When applying HHI it must be taken into consideration that the index is calculated on a non-consolidated basis: banking units and foreign agencies are not taken into account (European Central Bank, 2017).

The pre-crisis period in the EU was characterized by clear upward trend in the HHI index, which was interrupted immediately after 2008. During the post-crisis period, despite of the slow pace, the consolidation of the HHI continued until 2014 reaching its highest index value of 692 points. The main reason was the drop of the average market share of the five largest credit institutions for each country in the EU from 47% in 2014 to 46% in 2015. In 2016 the average HHI in the EU declined to 661 units, which underlines the low market concentration of the banking sector. Furthermore, there are typically significant differences in banks' market shares between the EU countries. For example, the market shares of the five largest credit institutions in Greece reached almost 97% in 2018. On the other side the market shares of the five largest credit institutions in Germany and Luxembourg are the lowest with respectively 29.1% and 26.3% in 2016. This dependence explains the lowest level of the HHI in the EU in 2018 of 245 units in Germany and 261 units in Luxembourg (European Central Bank, 2019). The differences across the EU are justified by number of structural factors. The banking systems in many large countries are fragmented and include strong saving banks. In some countries there is even a cooperative banking sector. This functional distinction reduces further the

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2 Own presentation using data from European Central Bank (2017, p.74), Bulgarian National Bank (2013) and European Banking Federation (2018, p. 113); Statista (2019).
concentration level. The banking systems of small EU countries are less fragmented and are characterized by higher degree of concentration. Those countries achieve significantly higher HHI values than the EU average in 2018: Lithuania (2.278), Slovenia (1.020) and Slovakia (1.383). The only exceptions here are Austria and Luxembourg with 370 and 261 points in 2018. While in Luxembourg there is a huge participation of many large foreign credit institutions, as stated previously, in Austria the high degree of fragmentation is entirely due to the structure of the banking sector, which is similar to those of the large EU countries (European Central Bank, 2017).

In Bulgaria the total assets of the banking system reached BGN 105.6 billion in December 2018 and thus increased by 2.3% or BGN 2.4 billion compared to the previous year. The market share of EU subsidiaries increased from 71.6% to 72.1% in the previous quarter and that of EU bank branches decreased from 3.0% to 2.8% (Bulgarian National Bank, 2018). Despite the overall growth of banks' assets and market shares in general, but due to the lack of large credit institutions, the concentration of the banking sector in Bulgaria remains relatively low. A comparative analysis with the EU average shows a growth in the consolidation of the banking sector in Bulgaria. For example, in 2013 the average HHI in the EU was 674 compared to 526 in Bulgaria. The fall of the EU average HHI in 2016 to 661 units on the one hand and at the same time the growth in Bulgaria on the other hand, lead to an increase in the HHI to 939 units, which turned the weights in favor of Bulgaria. The level of HHI in Bulgaria remains stable in the corridor between 900 and 1.000 units. After a slight decline in 2017 at 906 units the level of 939 units was confirmed again at the end of 2018. (European Central Bank, 2019). According to data of the Bulgarian National Bank (2018) there are 13 banks in Bulgaria in 2018 with market shares > 2%:

![HHI in the banking sector of selected EU countries](image)

**Fig. 3. HHI in the banking sector of selected EU countries**

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3 Own presentation using data from European Central Bank (2017, p.81; 2019), Bulgarian National Bank (2013) and European Banking Federation (2018, p. 113); As of 25.08.2019 the final EU HHI data for the period 2017-2018 has not been published yet. However, according to the economic development in the banking sector, the level of the HHI is expected to stabilize at the low level in comparison to 2016;
Fig. 4. Banks in Bulgaria with market share greater than 2% in 2018

The growth of the HHI within the period 2013-2018 is mainly due to the significant increase in UniCredit Bulbank's market shares from 14.84% in 2013 to 18.40% in 2018. DSK bank is also gradually expanding its market share to 13.7% in 2018. United Bulgarian Bank, FiBank and PostBank are characterized by variable market shares, which does not contribute to a significant increase in the concentration of the banking sector in Bulgaria (Bulgarian National Bank, 2018).

Conclusion

The steady increase in the concentration of the banking sector in Bulgaria can be continued by systematic expansion in the market shares of UniCredit Bulbank and DSK bank. Achieving a stable average or high market concentration (HHI > 1800) in a short term can be only reached by merging some of the 5 biggest credit institutions either with each other or with some of those having market share > 5%, see also Fig. 4. The theoretical merger of two banks having market share < 3% leads to a partial overall concentration of the banking sector in Bulgaria, but has no influence on the improvement of the HHI as a whole. As already mentioned, this is due to the fact that the HHI is calculated only on the basis of the five largest credit institutions in a country, which can be considered as significant model limitation.

Last but not least, the relatively fast consolidation and at the same time increase of the importance of the banking sector in Bulgaria can be theoretically reached by the market entry of a bank, which could displace, for instance, UniCredit Bulbank from its leading position. However, this does not mean an entry of another market participant by establishing a brand-new credit institution in Bulgaria aiming to take the leading position in the future through long-term organic growth. There are major credit institutions in the EU and in Switzerland, which neither have a subsidiary bank nor are characterized by equity interests in other banks in Bulgaria (UBS AG, 2016). The possible future establishment of a new credit institute in Bulgaria by banks such as UBS AG, which have the financial power to build a new "giant" in our banking sector, would be a significant impetus to the concentration of our banking market. Investments in Bulgarian credit institutions including establishing new credit institutions can be made much more attractive to foreign investors, if some major problems, already recognized by banking leaders in Germany and Switzerland (based on input from anonymous interviews), will be directly or indirectly solved within the banking sector in Bulgaria:

1. **Lack of credit assessment’s know-how**: unifying the credit assessment’s processes for loans to individuals and legal entities using established practices in the EU or globally. In this way, the evaluation of the credit portfolio quality will be objective and more understandable to a potential investor.
2. **Obsolete banking infrastructure**: a modern and efficient infrastructure in the banking sector increases the likelihood of bank merge by foreign banks.

3. **Simplification required for the legislative basis**: of state and cross-border bank consolidation as a consequence of facilitating the consolidation process and regulating the protection of foreign investments in the banking sector.

4. **Quality’s improvement concerning the loan portfolio**: its continuous improvement leads on the one hand to stabilization of the banking system and on the other hand to increase of its protection function against future distortions in the financial market. Furthermore, a good quality loan portfolio plays an important role within the consolidation process, because a significantly higher consolidation risk is always associated with a worse or substandard credit portfolio.

References