

Krasovskis, D., Limanskis, A., & Pancenko, E. (2016). Measuring competitiveness of banks in Latvia. Copernican Journal of Finance & Accounting, 5(2), 125–147. <http://dx.doi.org/10.12775/CJFA.2016.019>

DENISS KRASOVSKIS*

RISEBA University

ANDREJS LIMANSKIS

RISEBA University

ERIKA PANCENKO

RISEBA University

MEASURING COMPETITIVENESS OF BANKS IN LATVIA

Keywords: banking sector, Herfindahl-Hirschman Index, market concentration, Lorenz curve, competitiveness, Latvia.

JEL Classification: G21.

Abstract: Analysis of competition in the banking industry allows to determine the obstacles to its effective functioning.

The aim of this research is to analyse the competitiveness level in the modern banking sector of Latvia.

Identification and analysis of the main characteristics of the competitive environment of the banking sector in Latvia is done on the basis of indicators characterizing the concentration of the industry, the intensity of competition as well as financial indicators reflecting the financial condition of banks and affecting their competitiveness.

As a result, for the first time the level of competitiveness of the banking sector in Latvia was evaluated and supported by comparative analysis of all the banks on the basis of their financial performance. It gives ground for recommendations to the stakeholders on measures to raise competitiveness. Results and directions for further re-

Date of submission: December 1, 2016; date of acceptance: January 13, 2017.

* Contact information: krasovskisd@riseba.lv, RISEBA University, Meza Street 3, Riga, LV-1048, Latvia, phone: +37126666614.

search can attract attention of the research community in Latvia, European Union and globally.

■■■ INTRODUCTION

In international economic research, the bank is regarded as an integral part of the modern economy, which forms the basis of financial and credit mechanism, by which the market economy operates.

Competitiveness is the basis for the development of market relations, including those in the banking sector. The essential feature of an effective and successfully developing economy in the banking industry is the competition of banks.

The relevance of the topic chosen is characterized by the fact that the banking sector has a direct impact on economic development, and the analysis of competition in the banking industry can determine the obstacles to its effective functioning. Therefore, the analysis of competition in the banking industry is not only an interesting theoretical and practical problem, but also a necessity for successful economic development, effective implementation of the redistribution of financial bank resources and efficient operation of banks in the markets. Analysis of competition in the banking industry is used to determine the obstacles to the development of competition, the formation of an effective banking system (Кисилевич, 2012).

The aim of this research is to analyse the competitiveness level in the modern banking sector of Latvia.

Following tasks are to be solved in order to reach the aim of the research:

1. To review literature and determine the design of the research.
2. To analyse competitiveness level of the banking in Latvia using specific industry indicators.
3. To investigate the competitiveness of banks on the basis of financial indicators.
4. To formulate conclusions.

Object of the research is the banking sector of Latvia in 2003–2015.

The subject of the research is a set of factors determining competitiveness of banks in modern Latvia.

The researchers used qualitative and quantitative methods of research. Qualitative methods are represented by analysis of literature, personal observations, and results of interviewing experts in the field. Quantitative meth-

ods are represented by plotting time series and calculating indicators of competitiveness in Latvian banking sector on the basis of statistical and financial analysis. The information base for the analysis was created by study and selection of data of Central Statistical Bureau of Latvia, Financial and Capital Market Commission of Latvia, Association of Commercial Banks of Latvia, as well as the data from financial statements of banks. Results of previously held research in this area, information periodicals and online sources were used.

COMPETITIVE ENVIRONMENT IN BANKING SECTOR: THEORETICAL ASPECTS

Banking competition – is the process of rivalry of commercial banks and other financial institutions, in which they seek to secure a strong position in the credit market and banking services. According to renowned researchers in the banking sphere Khabarov and Popov (2004) a number of specific features that distinguish banking competition from the competition in other sectors of the market include following:

- Banking competition differs by maturity of forms and high intensity.
- Commercial banks are challenged by other competitors. Universal banks compete with specialized banks (savings, mortgage, investment banks serving small and medium-sized businesses, clearing, innovative banks) non-bank credit institutions, non-financial institutions (credit unions, pawnshops, leasing companies, clearinghouses, financial brokers, investment companies, pension funds, post office, trading houses).
- Competitive space is represented by numerous banking markets, on some of which banks act as sellers, on others – as buyers.
- Intra-industry competition is deeply specified which reflects differentiation of banking products and services.
- Banking products and services may be interchangeable, but have no competitive “external” (non-bank) substitutes and therefore the inter-industry competition is carried out mainly through the flow of capital.
- Banking business lacks a number of barriers to entry, typical for many industries, which leads to a relatively greater intensity of competition in this area.
- Limitations of price competition make banks pay more attention to the quality management of the banking products and advertising services.

The research team finds it necessary to draw attention to interference of the state in the banking business and crucial role of political parties both nationally and on international level.

In World Bank publications (World Bank, 2016), as concerns measuring bank competition, the so-called structure-conduct-performance paradigm assumes that there is a stable, causal relationship between the structure of the banking industry, firm conduct, and performance. Competitiveness can be regarded as the ability of business entities to carry out economically viable operations under lack of resources and the availability of similar business entities. Competitive environment is defined as conditions for economic activities of homogeneous market players.

From the point of view of corporate training expert, the concept of competitiveness is a methodological device, which consists in extending to different sets of objects (countries, industries, regions, resources, institutions, companies, products, employees) of competitive-rivalry approach, where all the elements of one set are compared to competing business entities on a single competitive field. Hence competitive success is represented as an analogy of leadership, excellence, the prevalence, the benefits of one over the other objects, regardless of to which set of objects the concept is applied (Каганов, 2012).

RESEARCH METHODOLOGY

Methodology of the research of the competitive environment in the banking sector is based on market concentration indices, such as the concentration index, the Herfindahl-Hirschman Index, the dispersion of market shares and the Gini index. This set of variables is instrumental for general statistical description of the sector. The research team implemented publicly available data of the Association of Latvian Commercial Banks for the analysis, which include data on assets, liabilities and profit / loss of banks in the period from 2003 to 2015.

Concentration indices are based on a comparison of the size of the market and the size of the bank operating in this market. Thus, the larger the banks, the higher the level of concentration. To determine market concentration following proven in other industries indices can be used as recommended by Avdasheva with Rozanova (1998):

- Concentration index,
- Herfindahl-Hirschman Index,

- Market shares dispersion,
- Gini index.

Concentration index or concentration ratio is measured as sum total of market shares of biggest banks present on the market:

$$Ck = \sum Y_i, i = 1, 2 \dots k, \text{ where:} \quad (1)$$

Y_i – market share (could be determined by various indicators),

k – the number of banks, for which the ratio is calculated.

For the same number of the largest banks, the greater the concentration of the index, the more the market is far from the ideal of perfect competition. However, the information provided by the concentration index is not sufficient for the characteristics of the market. Concentration index indicator does not say what is the size of the banks, which were not included in the sample k , as well as the relative size of the banks in the sample, as indicated in the theory of industrial organization (Авдашева и Розанова, 1998). With this feature, the concentration index is associated with the possible inaccuracy of its use, so the authors used method of financial analysis for more accurate analysis of competitiveness.

Herfindahl-Hirschman Index is defined as the sum of the square of market shares of all the banks operating in the market (Авдашева и Розанова, 1998). When calculating the index the market shares of all the banks are ranked by shares from largest to smallest (Grandars, 2016).

$$HHI = S_1^2 + S_2^2 + S_3^2 + \dots + S_n^2, \text{ where:} \quad (2)$$

HHI – Herfindahl-Hirschman Index,

S_1 – the market share of the largest bank,

S_2 – the market share of the second largest bank,

S_n – the market share of the smallest bank.

If just one company operates in the industry, then $S_1 = 100\%$, and $HHI = 1$. If there are 100 equal companies in the industry, then $S = 1\%$ and $HHI = 0,01$. The industry is considered as a highly monopolised, if Herfindahl-Hirschman Index exceeds 1800 (Grandars, 2016).

Dispersion is calculated as average square deviation of individual values of the market shares of the banks in the square from of arithmetic mean (Балинова, 2004).

$$\delta^2 = \frac{\sum(x-\bar{x})^2n}{\sum n}, \text{ where:} \quad (3)$$

x – factor,

n – frequency (repetitiveness of factor x).

The Gini index is a ratio of a completely uniform distribution of market shares to the actual distribution of the shares between the participants (Авдашева и Розанова, 1998):

$$G = D / N, \text{ where:} \quad (4)$$

G – Gini coefficient,

D – cumulative share of market (industry) size,

N – cumulative share of enterprises on the market (industry).

The higher the Gini index, the more unequal is the distribution of market shares between sellers and hence, ceteris paribus higher the concentration in the market (Авдашева и Розанова, 1998).

Literature review, unfortunately, didn't reflect attempts to apply the Gini index for the banking sector concentration study in Latvia. Internationally Gini index is considered to underestimate the role of big banks in the market (Bikker & Haaf, 2002).

The maximum value of 1 indicates a situation of absolute inequality (one company accounts for the entire volume of the industry). The minimum value of the index of 0 means perfect equality: each enterprise produces (sells) an equal share in the industry (Суслова, 2002).

To deepen the analysis, comparative analysis of the competitiveness of Latvian banks is to be carried out on the basis of publicly available financial statements and financial analysis indicators: return on equity ratio (ROE), return on assets ratio (ROA), total liquidity ratios, capital adequacy ratios and financial stability. The source of data for the analysis are the quarterly reports published by banks, publicly available data of Association of Commercial Banks of Latvia

from 2012 to 2015 inclusive. For comparative analysis of the competitiveness of banks data for 2015 as the last year of financial reporting is to be used.

Return on equity (ROE) is net profit compared with a net worth of the organization (Audit-it (1), 2016).

$$ROE = \text{Net profit} / \text{Average own capital} \quad (5)$$

Return on assets (ROA) describes the ability of management to effectively use organization assets to generate earnings (Audit-it (1), 2016).

$$ROA = \frac{\text{Net profit} + \text{Interest} (1 - \text{Tax rate})}{\text{Average total assets}} \times 100\% \quad (6)$$

The capital adequacy ratio shows the proportion between of bank's own capital and the liabilities. Liabilities are risk-weighted by each bank. The minimum value is 0.1 (Kudinska, 2008).

$$\text{Capital adequacy ratio} = \text{Own capital} / \text{Total risk-weighted liabilities} \quad (7)$$

General liquidity as ratio of liquid assets to paid raised funds, characterizes the balance of active and passive bank policy to achieve optimal liquidity. The minimum value is 0.95 (Жарковская, 2010).

$$\text{General Liquidity} = \text{Liquid assets} / \text{Pay-raised funds} \quad (8)$$

According to Basel III terms, the general liquidity ratio for 2015 had to be above 70%. The aim for 2019 is 100% (Basel Committee on Banking Supervision, 2013).

Coefficient of autonomy (financial independence ratio) is the ratio of equity to total assets of the organization. Ratio shows the degree of independency on the creditors. In world practice a 30–40% share of equity is considered to be minimally acceptable (Audit-it (3), 2016).

$$\text{Coefficient of autonomy} = \text{Equity capital} / \text{Assets} \quad (9)$$

Unfortunately, the visual presentation of results of research in the banking sector is usually simplistic and minimalistic. There is a need for more advanced

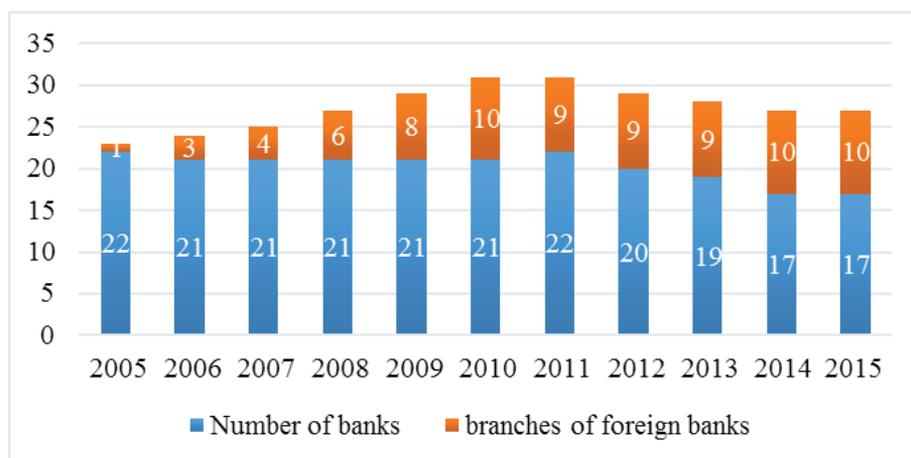
visual presentation methods, such as 3-D Bubble graphs, reflecting the absolute values of indicators. Authors consider it necessary to complicate the 3-D Bubble graph by introducing absolute values of capital and reserves of banks, as well as assets.

To generalize, the methodology of research is based the above disclosed set of indicators that are to be calculated making use of recent financial statements of banks in Latvia.

THE RESEARCH OF THE COMPETITIVE ENVIRONMENT IN THE BANKING SECTOR OF LATVIA

In this research the banking industry has been limited to those registered in Latvia. In 2015 there were 27 banks operating in Latvia, 10 of which were branches of foreign banks (Banku sektors skaitļos, 2016). The dynamics of the number of banks in the period from 2005 to 2015 can be seen in the graph below.

Figure 1. Number of banks in Latvia 2005–2015



Source: Banku sektors skaitļos, 2016.

The peak number of banks in Latvia was reached in 2010 and 2011, when the sum of the number of banks and foreign branches was 31. In 2014 and 2015 the number of operating banks and branches fell to the level of 2008 and was equal to 27. Ten largest players and their market shares in 2015 are presented in Table 1.

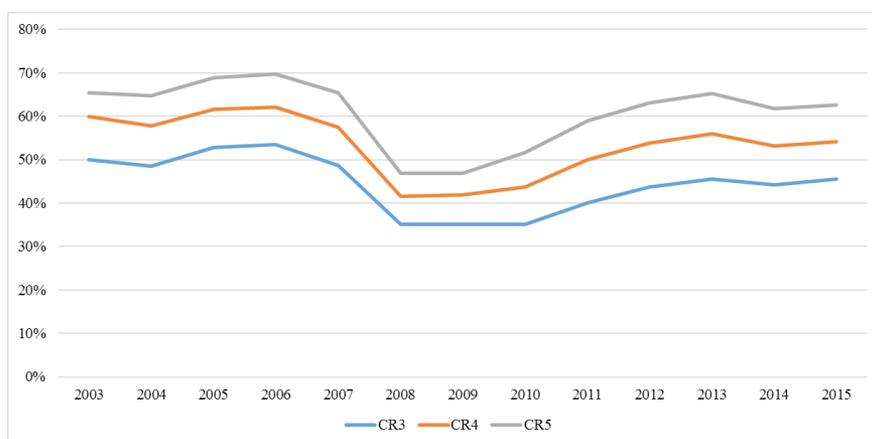
Table 1. Distribution of shares in the banking sector in Latvia in 2015

No	Name of the bank	Assets, 000 EUR	Share of total assets, %	Share of Top 10 assets, %
1	Swedbank	5 497 635	17,21	19,62
2	ABLV Bank	4 948 814	15,50	17,66
3	Rietumu Banka	3 871 508	12,12	13,82
4	SEB banka	3 591 094	11,24	12,82
5	Nordea Bank AB Latvijas filiāle	2 696 629	8,44	9,62
6	Citadele banka	2 535 343	7,94	9,05
7	DNB banka	2 337 240	7,32	8,34
8	NORVIK BANKA	1 106 606	3,46	3,95
9	Baltikums Bank	765 489	2,40	2,73
10	Reģionālā investīciju banka	671 161	2,10	2,40

Source: compiled by the authors.

Four banks singled out in 2015 as leaders of the Big Ten concentrating nearly two-thirds of the assets.

To deepen the analysis, the authors calculated concentration indices for the period and plotted linear charts to trace the concentration indices (see Fig. 2)

Figure 2. Concentration indices (CR3, CR4, CR5) of Latvian banking sector 2003–2015

Source: compiled by the authors.

It can be concluded that the major share of the market, an average of 69.7% from 2003 to 2006, belonged to the five largest banks, the largest three controlled from 35% to 50% of the market in the analyzed period. This indicates a low level of concentration of the industry in the pre-crisis period.

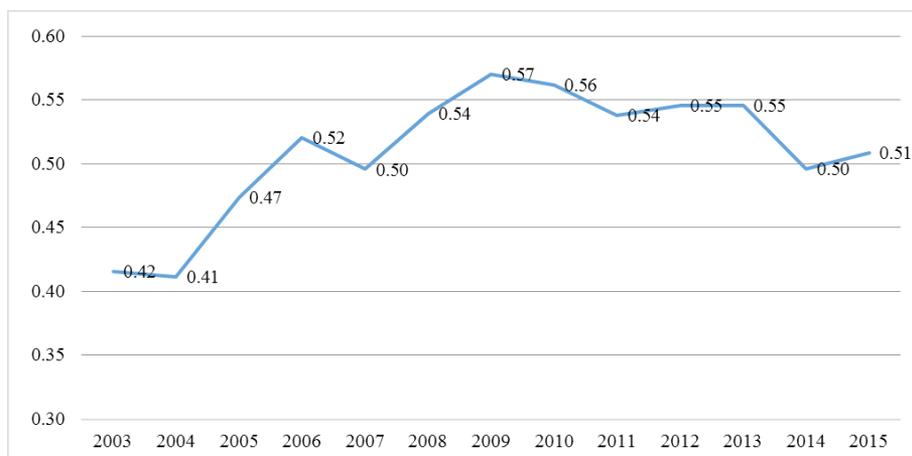
In turn, during the financial crisis of 2008–2010, one can observe a sharp decline of CR5 index to 46.9%, indicating a more uniform distribution of market shares between banks.

In the period from 2010 to 2013 there was a steady increase in the index, and in 2014 a slight decline. From this it can be concluded that market shares and influence, respectively, is developing in a consistent and gradual way.

In 2015 indices failed to reach pre-crisis indicators of 2007 year. Throughout the period, on the basis of these indices it can be argued that the concentration is moderate.

Analyzing the Gini index for the period of 2003–2015 one can judge upon the uniformity of banks market shares distribution in Latvia (see. Fig. 3).

Figure 3. Gini index for Latvian banking sector 2003–2015

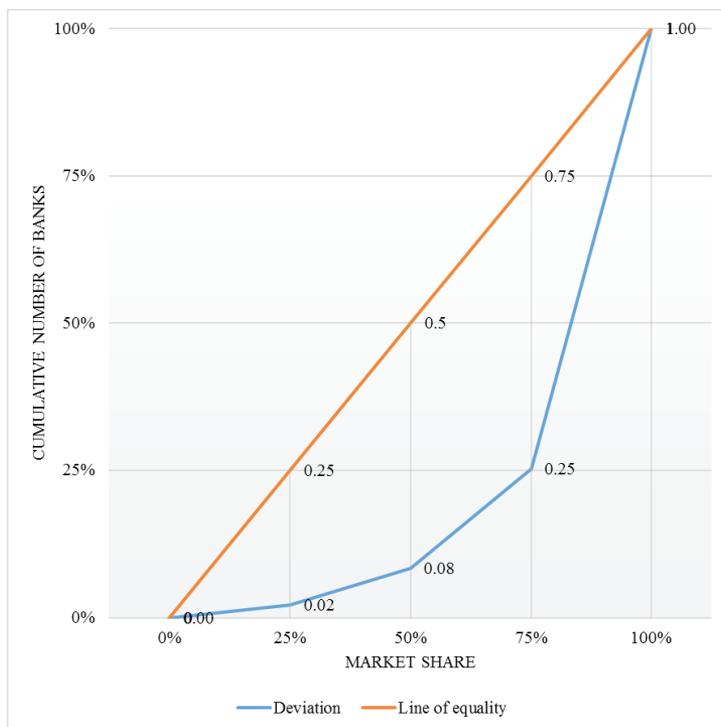


Source: compiled by the authors.

Analyzing the period from 2003 to 2015, a slight increase in the Gini index can be noted from 2003 to 2006, which may be associated with an increase in the number of market participants. Subsequently there were small fluctuations from 0.5 to 0.57. From this, it is possible to conclude that the distribution of market shares of banks is relatively non-uniformed.

Authors reviewed the distribution using the Lorenz curve (see. Fig. 4). It is worth noting that the curve shows the distribution of market share and highlights the obvious participants, who have the lowest and the highest shares.

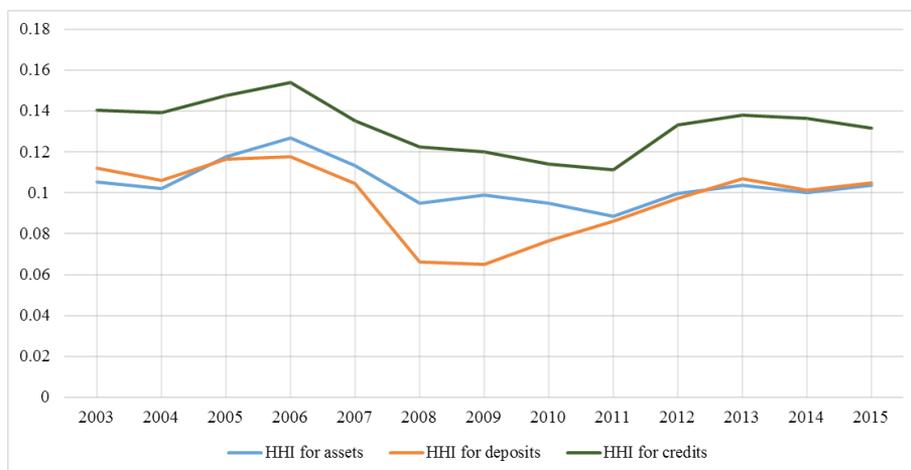
Figure 4. Lorenz curve for Latvian banking sector in 2015



Source: compiled by the authors.

The curve demonstrates less polarized picture of the banking sector in Latvia against traditional market economies, like the Dutch one, where the Pareto rule of 20/80 dominates (Bikker & Haaf, 2002).

Next step in the research was exploring the HHI (see. Fig. 5).

Figure 5. Herfindahl-Hirschman Index for Latvian banking sector 2003–2015

Source: compiled by the authors.

Investigating the HHI and the dispersion of the market shares for Latvian banking sector, the similarity with index of concentration should be noted, which again confirms the fact that throughout the analyzed period, there is a moderate level of market concentration in the Latvian banking and, accordingly, a moderate level of competition in the industry. Data on concentration of the market during the analyzed period are presented in Table 2.

Table 2. Market concentration Latvian banking sector in the period since 2003 by 2015

Year	CR3, %	CR4, %	CR5, %	HHI	Market type
2003	50.02	59.9	65.39	1,193	Moderately concentrated market
2004	48.54	57.84	64.71	1,157	Moderately concentrated market
2005	52.9	61.54	68.82	1,272	Moderately concentrated market
2006	53.46	62.17	69.72	1,328	Moderately concentrated market
2007	48.75	57.46	65.44	1,177	Moderately concentrated market
2008	35.03	41.52	46.9	0,945	Low concentrated market
2009	35.03	41.86	46.87	0,947	Low concentrated market
2010	35.04	43.66	51.64	0,952	Low concentrated market
2011	40.14	49.93	58.98	0,953	Low concentrated market

Table 2. Market concentration Latvian banking sector...

Year	CR3, %	CR4, %	CR5, %	HHI	Market type
2012	43.64	53.88	63	1,101	Moderately concentrated market
2013	45.49	55.97	65.25	1,161	Moderately concentrated market
2014	44.23	53.18	61.69	1,126	Moderately concentrated market
2015	45.53	54.21	62.53	1,133	Moderately concentrated market

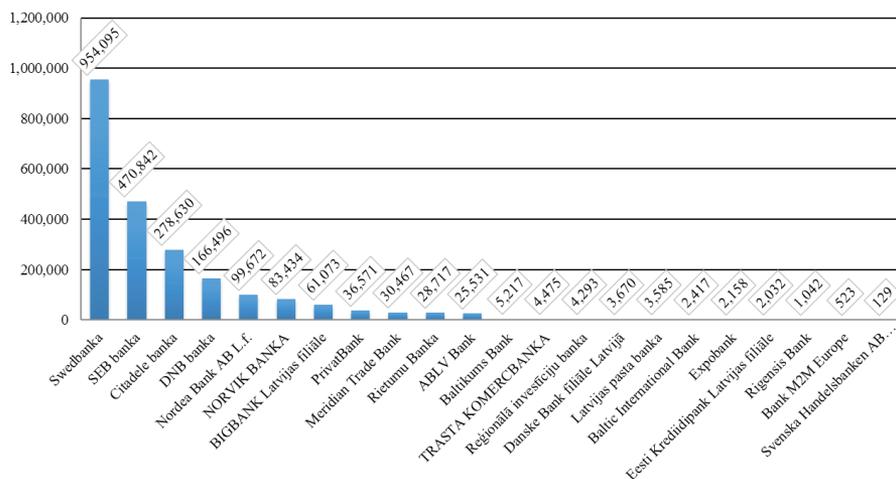
Source: compiled by the authors.

It can be concluded that during the crisis and post-crisis periods of 2008–2011, the market of the banking sector was low concentrated, indicating a more uniform distribution of market shares between the participants. But then the market has become more concentrated.

COMPARATIVE ASSESSMENT OF THE COMPETITIVENESS OF LATVIAN BANKS

The authors conduct a comparative assessment of competitiveness of the participants in the banking sector of Latvia. Picture 6 shows the distribution of clients between banks in 2015 year.

Figure 6. Distribution of clients between Latvian banks in 2015

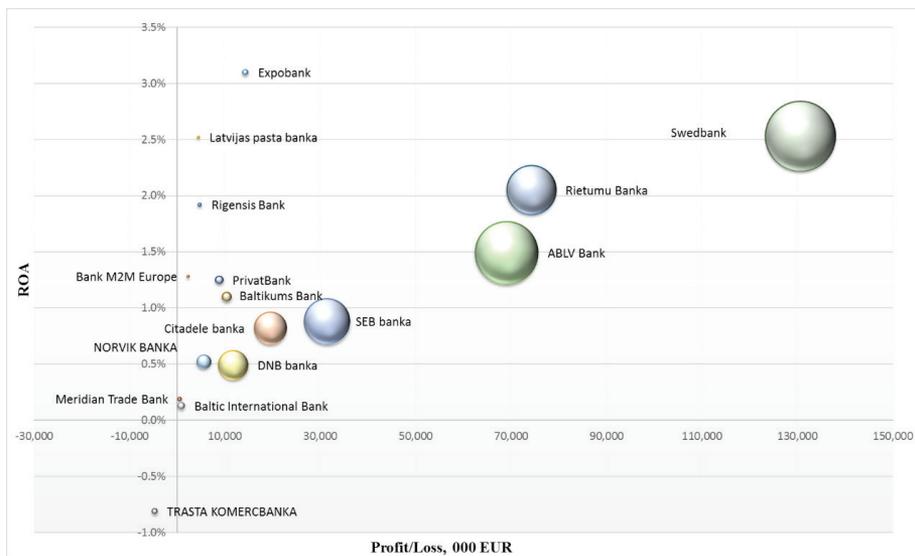


Source: compiled by the authors.

In evaluation of the client distribution, both individuals and legal entities were taken into account. This chart shows that majority of commercial banks in Latvia belongs to small and medium-sized, so there is not so many large banks in the market like Swedbank, SEB Banka, Parex Banka, DNB Banka (4 biggest banks).

The banks mentioned above have approximately $\frac{3}{4}$ of the total number of customers. However, total assets, gain/loss of banks, as well as return on assets for 2015 (see Figure 7) indicate that the number of customers has no direct impact on the financial results of banks. Leaders in terms of profit are Swedbank, ABLV Banka, Rietumu Banka, and SEB Banka, as shown in the chart (see Figure 7).

Figure 7. Assets, ROA and profits/losses of Latvian banks in 2015



Source: compiled by the authors.

One can observe in the figure different bubble (sphere) sizes, which correspond to the dimensions of the bank's assets. Analysing coefficient of return on assets (ROA) and the size of the profits/losses of the banks, it might be concluded that the management of banks, Rietumu Banka, Swedbank and ABLV most effectively uses assets for generating profit. Leaders in ROA are Expobank and

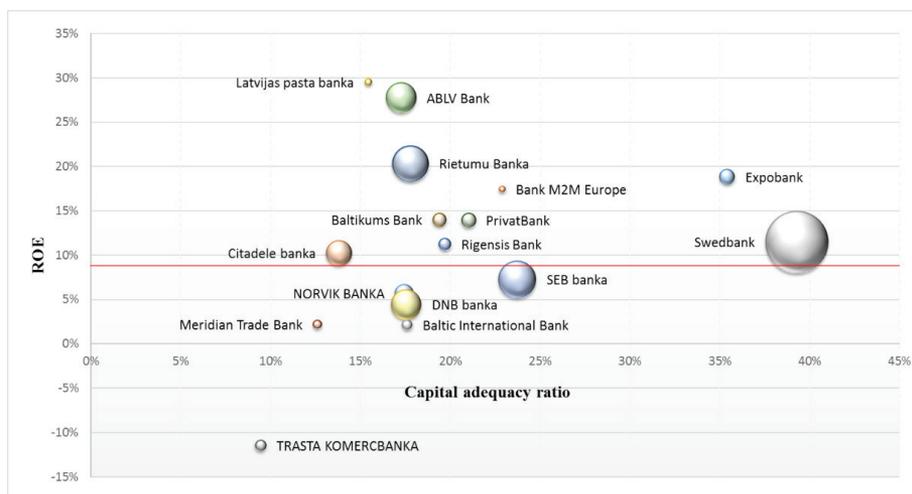
Swedbank in 3.10 percent and 2.53 percent respectively, indicating most efficient asset utilization policies, despite the size of the bank (in Figure 7).

The low position of SEB banka, one of the big players in the market, makes a concern. Comparing two large and almost identical banks by size of assets, Rietumu banka and SEB bank, one can see that their placement on the chart in terms of losses/gain and value of ROA is significantly different. Rietumu banka is about twice ahead of SEB bank in size of profits and in the value of ROA coefficient.

From that, assumption can be made about the unused potential of SEB bank and its ability to improve the position. Also on the chart (see Figure 7) ROA of four banks is seeking zero, namely, DNB bank, Norvik bank, Meridian Trade bank and Baltic International bank. From this quartet, DNB bank, which is among of the 10 largest banks in Latvia, has lowest profit and return on assets. It is fairly small for a bank of its size, especially when the influence of such bank is large enough.

Continuing a comparative analysis of the banks in terms of capital (on Figure 8. size of the capital match the size of the bubble), return on equity (ROE) and the capital adequacy ratio, one can determine how reliable and attractive bank is for investors.

Figure 8. Capital and reserves, ROE and capital adequacy of Latvian banks in 2015



Source: compiled by the authors.

Two banks occupy the top positions on the graph, namely Latvijas pasta banka and ABLV. It is based on a high rate of ROE, which serves as greatest attraction for investors.

A large part of the banks is over the red line, which indicates the accepted standard on ROE (10%–12%). Again, a few big players like SEB bank and DNB bank remained below the line along with smaller banks like Norvik bank, Meridian Trade bank and Baltic International bank. It is worth to mention that the same banks stood out with not the best indicators in the analysis of profit/loss and return on assets.

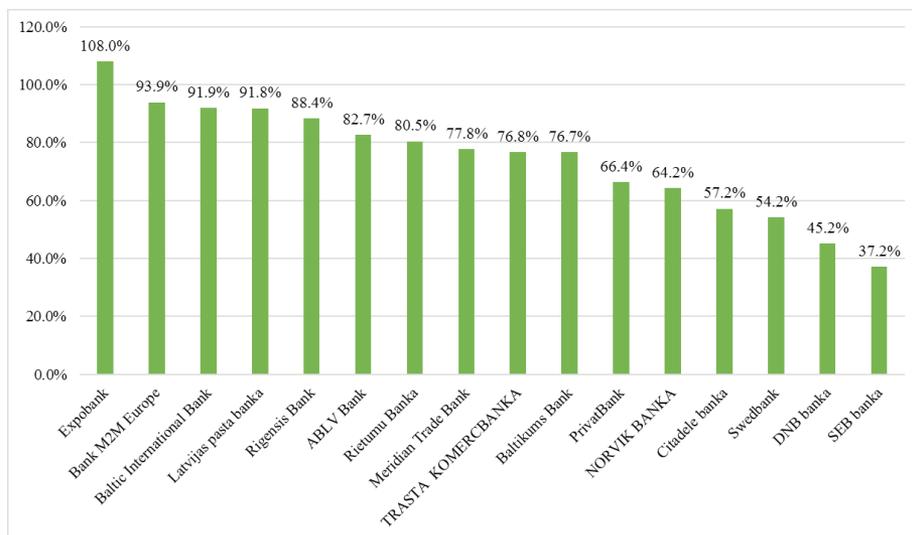
Analysing the capital adequacy ratio, the undoubted leader is Swedbank, but in the second place there is Expobank with the highest reliability rates in the market. This is a positive indicator, as Swedbank is the overall leader by market share and its influence on the market is huge. The third place belonged to SEB banka with 22% difference from the leaders. With a small difference in indicators Rietumu Banka and ABLV follow suit. In general, the big banks are quite reliable with capital adequacy rates mainly focused in the range of 17% to 24% (except leader's figure that is twice bigger).

Citadele bank is having nearly the lowest capital adequacy rate, which indicates low reliability comparing to other market players.

Given the recent changes in the composition of the owners and overall situation with Citadele bank, but if the dynamics of this coefficient is positive that this indicator may be good for the Bank itself. According to data for the 2012 to 2015 year Citadele bank has positive dynamics, more detailed analysis in the context of one bank is not provided.

From the analysis one can conclude that the most attractive banks for investors are banks with a good reliability (Rietumu Banka and ABLV), although a high proportion of non-residents is increasing risk factor. In turn, the most reliable banks (Swedbank and Expobank) do not yield the same return on capital as leaders on these indicators. According to results of ROE SEB bank, DNB bank and Citadele bank need to improve indicators or, at least, bringing them to the standard, thereby making them more attractive to investors and at the same time improving their own competitiveness.

One of the most important indicators of efficiency of banks is liquidity. Analysis of liquidity is presented on Figure 9.

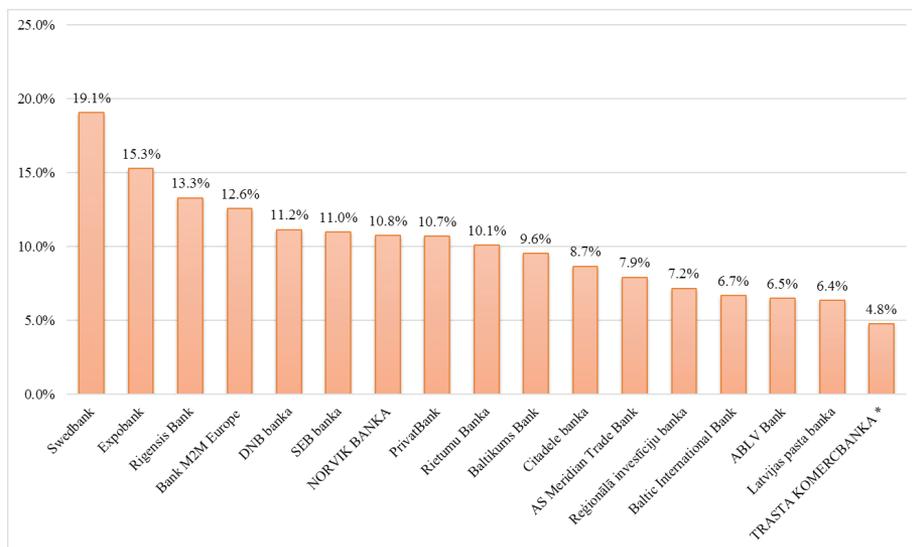
Figure 9. The liquidity ratio of Latvian banks in 2015

Source: compiled by the authors.

From analysis of liquidity ratio, it can be concluded that the majority of banks are able to repay their current (short-term) liabilities. According to the Basel III, standard value of this coefficient is 70% (in 2015) (Bank for International Settlements 2013). As one can see in the chart, some of the banks have not reached this level.

A small inverse dependence is noticeable on the size of the bank (by number of customers, in terms of assets) to the overall liquidity – the bigger the bank, the less liquidity it has. Top 5 worst on this indicator in 2015 are SEB Bank, DNB bank, Swedbank, Citadele Banka and Norvik Banka. Low level of liquidity can indicate a high financial risk, like whether bank steadily can pay current obligations, but also may be caused by irrational capital structure.

The financial autonomy ration (see Figure 10) is also one of the most important characteristics on sustainability of the bank financial condition.

Figure 10. The financial autonomy ratio of Latvian banks in 2015

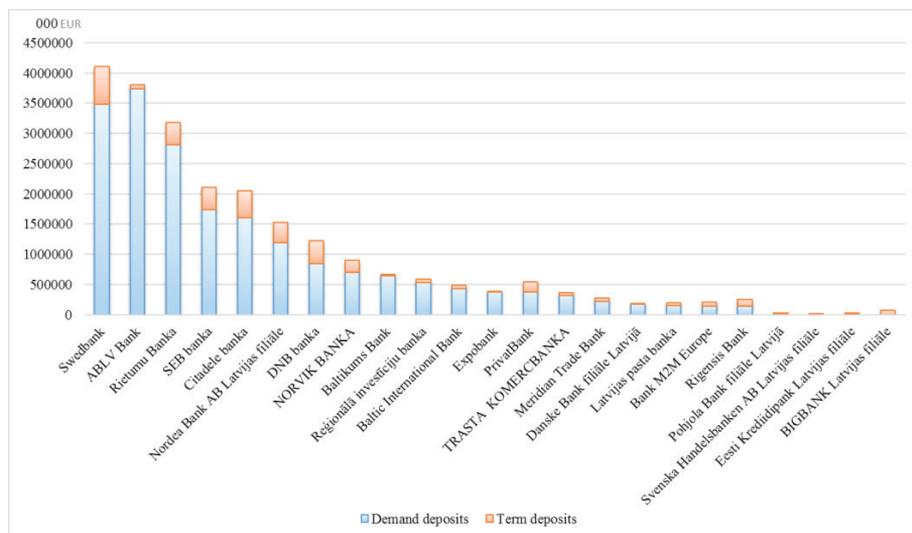
Source: compiled by the authors.

The higher the value, the more likely the organization can pay off debts at the expense of own means, i.e. shows how the company is independent on the external sources of financing. The higher ratio of autonomy is demonstrated by Swedbank with value of 19.1%. The worst indicator (4.8%) was shown by Trasta Komercbanka.

Analysing the graphs, one can see a large variation between big players of the market, i.e. the size of the bank does not directly affect the indicator of financial sustainability.

Competitiveness of banks can be influenced by structure of deposits. Data for Latvia in 2015 can be seen on Figure 11.

Figure 11. Distribution of term deposits and demand deposits of Latvian banks in 2015



Source: compiled by the authors.

Analysing the graph, it can be concluded that compared with the distribution of demand deposits, distribution of term deposits is not strongly dependent on the volume of demand deposits. Researches consider dominance of demand deposits over term deposits as a risk factor in banking sector of Latvia.

Analysing the amount of deposits one can see the three largest banks by deposits: Swedbank, ABLV and Rietumu Banka. Leader again is Swedbank to the amount of deposits in 4 107 683 thousand euros (of which 3 479 003 are demand deposits and 628 680 term deposits).

Bank ABLV Bank is ahead of Swedbank in terms of demand deposit volume, but is lagging behind in term deposits that may indicate unfavourable conditions for customers.

The three largest banks (Swedbank, ABLV and Rietumu Banka) together have almost half (48%) of all deposits in the market. The difference between the third (Rietumu bank) and the fourth participant of the market (SEB bank) is 34%. Considering the size of these banks in the market, this gap is large. It indicates a potential for SEB bank in the area of deposits. As SEB Banka and Citadele bank could attract more demand deposits, thus trying to improve their own position in the market and competitiveness.

Researchers interviewed three experts from the banking sector of Latvia to identify the causes of the differences in the financial performance of banks.

The first problem highlighted by interviewees was explanation of interaction between bank size (by customers) and financial indicators, such as ROE, ROA and liquidity ratio. According to expert opinion such factors as cost to income ratio (CIR), bank business model, bank internal policy and macroeconomic factors, i.e. “left keys” legislation discussion were considered as major influences.

The second question brought to light by interviewees was reasons for low ROA level of SEB Bank. Experts underlined credit portfolio decline due to “left keys” legislation discussion, as well as high administrative costs.

As to the third problem raised by interviewees, difference between liquidity indicators of banks, four following factors were defined as explanations: different products & services structure, change of market positions of banks in crediting, long-term financial investment preferences and unexpected decline of ECB interest rates into negative area.

The fourth problem indicated by interviewees regarded the difference between bank deposit. The following factors were of the greatest importance: the size of the bank and number of clients, resident and non-resident clients, legal entities and individuals, orientation on different geographic markets and new wave of economic instability and geopolitical risks.

■■■ CONCLUSIONS

Based on the study, the following conclusions were drawn:

1. Research has disclosed the moderate competition in the Latvian banking sector, based on the analysis of the indices of concentration throughout the period 2003 to 2015 year. Five largest banks had major market share by assets ranged from 46.9% to 69.7%. The banking sector of Latvia in 2015 failed to reach the pre-crisis level of concentration indices.
2. During the financial crisis and post-crisis periods in 2008–2011 g. banking market was low concentrated with a more even distribution of market shares between the market players.
3. By the end of 2015, the number of operating banks and branches in Latvia decreased to the level of 2008 year, i.e. 27. Taking into account the introduction of criteria for Basel III, the trend towards fewer players in the market can remain.

4. Since 2003 to 2015 year Gini index ranged from 0.41 to 0.57. Index distribution is balanced throughout, that indicates the stability of the market situation and, in turn, reveals a possible oligopoly that is confirmed by the analysis of the Lorenz curve.
5. Analysis of the number of clients of the banks, individuals and entities, showed that Swedbank has the largest percentage of clients among all market participants. Five leaders (Swedbank, SEB Banka, Citadele Banka, DNB Banka and Nordea Bank AB L.f.) in total had 87% of clients. However, after comparing the number of clients and banks' profit and loss indicators, it might be concluded that the number of customers had no direct effect on the final financial result of a commercial bank.
6. Based on an analysis of the size and liquidity of banks, it can be noted that the leaders in market share and in the number of customers have low liquidity ratios comparing to small banks: SEB Banka 37.2%, DNB Banka 45.2%, Swedbank 54.2%, Citadele Banka 57.2%. The difference may be due to various management and marketing strategies, positioning on the market and selection of target segment.
7. Large banks SEB Banka and DNB Banka, as well as the Norvik bank, Meridian Trade bank and Baltic International bank have unsatisfactory values of ROE at the end of 2015. The same banks stood out with not the best indicators in the analysis of profit/loss and return on assets.
8. Despite the large market players, small banks (by market share), such as Expobank, have good financial performance and found own niche.
9. According to the competitiveness analysis of the Latvian banks in the end of 2015, the market leader is Swedbank in terms of number of customers, market share, volume of assets, amount of deposits, by financial autonomy ratio, adequacy of capital and profit.
10. Analysing and comparing the financial performance of banks, it may be concluded that the market share is not a major factor in the effective work of the organization. Other important factors are difference in marketing strategies, the target consumer, image of banks, which all can influence the financial performance of banks.

Further study may be directed to identify the causes of the differences in the financial performance of banks and Latvian banks' future perspectives in the light of the risks associated with high proportion of non-resident customers. It is necessary to investigate the problem of enlarging capital adequacy ra-

tios by increasing the proportion of equity or decreasing risk weighted assets and raising liquidity ratio, due to Basel III requirements for 2019.

■ ■ ■ REFERENCES

- Audit-it (1) (2016). Рентабельность собственного капитала, http://www.audit-it.ru/finanaliz/terms/performance/return_on_equity.html (accessed: 04.05.2016).
- Audit-it (2) (2016). Ликвидность. Расчет коэффициентов ликвидности, http://www.audit-it.ru/finanaliz/terms/liquidity/calculation_of_liquidity.html (accessed: 04.05.2016).
- Audit-it (3) (2016). Коэффициент автономии, http://www.audit-it.ru/finanaliz/terms/solvency/coefficient_of_autonomy.html (accessed: 04.05.2016).
- Banku sektors skaitļos (2016). Latvijas Banka, Finanšu un kapitāla tirgus komisija un banku sniegtā informācija, <http://lka.org.lv/lv/statistika> (accessed: 01.05.2016).
- Basel Committee on Banking Supervision (2013). Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools. Bank for international settlements, <http://www.bis.org/publ/bcbs238.pdf> (accessed: 01.05.2016).
- Basel III and European Banking: Its Impact, How Banks Might Respond, and the Challenges of Implementation (2010). EMEA Banking, McKinsey & Company, 26, <http://www.mckinsey.com/business-functions/risk/our-insights/basel-iii-and-european-banking> (accessed: 21.04.2016).
- Bikker, J.A., Haaf, K. (2002). Measures of Competition and Concentration in the Banking industry: a review of the literature. Central bank of the Netherlands, http://www.dnb.nl/en/binaries/Measures%20of%20Competition_tcm47-145799.pdf (accessed: 14.05.2016).
- Grandars (2016). Индекс Херфиндаля-Хиршмана, <http://www.grandars.ru/student/ekonomicheskaya-teoriya/indeks-herfindalya-hirshmana.html> (accessed: 07.05.2016).
- Kudinska, M. (2008). Kreditēšana: mācību grāmata. Rīga: Latvijas Komercbanku asociācija. Konsultāciju un mācību centrs.
- Publiskie ceturkšņa pārskati banku dalījumā (2016). FKTK, <http://www.fktk.lv/lv/statistika/kreditiestades/publiskie-ceturksna-parskati-i.html> (accessed: 02.05.2016).
- World Bank. Banking competition (2016). <http://www.worldbank.org/en/publication/gfdr/background/banking-competition> (accessed: 13.01.2017).
- Авдашева, С.Б., Розанова, Н.М. (1998). Теория организации отраслевых рынков. Москва: Магистр.
- Акаева, А.И. (2014). Особенности риск-ориентированного надзора «Базель III» // Молодой ученый, <http://www.moluch.ru/archive/63/9771> (accessed: 11.05.2016).
- Балинова, В.С. (2004). Статистика в вопросах и ответах. Учеб. Пособие – ТК Велби. Изд-во Проспект.
- Газизуллин, Н.Ф., Нуруллина, А.Х., (2010). Конкурентоспособность экономики: комплексный подход, <http://cyberleninka.ru/article/n/konkurentosposobnost-ekonomiki-kompleksnyu-podhod> (accessed: 09.05.2016).

- Жарковская, Е.П. (2010). Банковское дело: учебник для студентов вузов. 7-ое издание. Москва: Омега-Л.
- Каганов, В.Ш. (2012). Корпоративное обучение как фактор обеспечения конкурентоспособности российских предпринимательских структур, <http://www.dissercat.com/content/korporativnoe-obuchenie-kak-faktor-obespecheniya-konkurentosposobnosti-rossiiskikh-predprini> (accessed 25.04.2016).
- Кисилевич, Ю.В., (2012). Особенности анализа конкуренции в банковской отрасли, <http://viperson.ru/articles/osobennosti-analiza-konkurentsii-v-bankovskoy-otrasli> (accessed: 20.04.2016).
- Коломийченко, О.В., (2003). Антимонопольная политика на рынке финансовых услуг // Конкуренция и рынок.
- Комарова, К. БДМ. Банки и деловой мир. N 6. Июнь 2012 г. <http://base.garant.ru/58089290> (accessed: 12.05.2016).
- Пасс, К., Лоуз, Б., Дэвис, Л. (1998). Словарь по экономике. Санкт-Петербург: Экономическая школа. СПбГУЭФ. Москва: Высшая школа экономики.
- Симкин, Л., Дибб, С. (2002). Практическое руководство по сегментированию рынка. Издание 1-ое.
- Суслова, Ю.Ю. (2002). Анализ рынка потребительских товаров: Учебное пособие.
- Хабаров, В.И., Попова, Н.Ю. (2004). Банковский маркетинг. /Московская финансово-промышленная академия.

