

# Bank Business Models and The Changes in CEE Countries

I. Erins and J. Erina

**Abstract**—The aim of this article is to assess the existing business models used by the banks operating in the CEE countries in the time period from 2006 till 2011.

In order to obtain research results, the authors performed qualitative analysis of the scientific literature on bank business models, which have been grouped into clusters that consist of such components as: 1) capital and reserves; 2) assets; 3) deposits, and 4) loans.

In their turn, bank business models have been developed based on the types of core activities of the banks, and have been divided into four groups: Wholesale, Investment, Retail and Universal Banks. Descriptive statistics have been used to analyse the models, determining mean, minimal and maximal values of constituent cluster components, as well as standard deviation. The analysis of the data is based on such bank variable indices as Return on Assets (ROA) and Return on Equity (ROE).

**Keywords**—Banks, Business model, CEE, ROA, ROE.

## I. INTRODUCTION

THE world has been witnessing the economic recession for the last four years or so and there seems to be no end in sight. The supreme mortgage crisis in the USA has been the genesis of this financial disaster. In the period of unbridled optimism that preceded the recession, American banks, mortgage companies and savings and loan associations granted housing loans and mortgages to thousands of eager buyers, and that enabled less than stellar credit worthy individuals to purchase an ownership in homes and other medium to long-term assets of their choice. The EU has taken steps to revive its industries, enacting new capital requirements, governance and other rules and regulations that it hopes will prevent such a crisis from happening again. But by and large, the world economy needs to be rescued and put back on its feet [1].

Clearly something is wrong with the way business has been conducted at the banks. We not only need a new business model, we also need good and honest governance in order to make it a success. The greed of bankers and their short-term insistence on earning fees and commissions need to be looked at thoroughly. New rules need to be enforced that would look at the long-term fundamentals and prevent a crisis from happening in any of the sectors that are so important for our

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business progress. Consequently, the banks also need to introduce economic innovations, as banks play a significant role in the national economy [2].

The purpose of this research is to assess the existing business models used by five largest banks in terms of total assets in each CEE country in the time period from 2006 till 2011.

To achieve the goal the following research methods were used: quantitative and qualitative methods, including monographic and descriptive methods.

## II. LITERATURE REVIEW

A bank's business model is described considering the following factors: how the bank's operations are organized, the way it actually performs its business activities, the quality of its products and services, as well as their price [3].

In the last decade banks mainly focused on consumer credits, considering lending the main bank product, at the same time disregarding other products and services. For example, Beck et al. mention loans and deposits as the main products offered by commercial banks [4]. However, their activities should perform three basic functions:

1. Banks provide the public with liquidity (money) and payment services through their deposit-taking business;
2. Banks transform assets in terms of denomination, quality and maturity, as well as manage the associated risks;
3. Banks process information and monitor borrowers using specialized technologies [5].

Particularly after the onset of the economic crisis in the scientific literature it is widely discussed that banks cannot anymore work according to the same principles as before, and that they should without delay change the traditional business model for a new one.

Beattie and Pratt state that with the increase of competition among the banks, know-how, patents, qualified staff and other intangible assets become the main values of the enterprise [6]. In the scientific literature two types of models that characterize banks are discussed: those considering a bank's economic activities and those considering a bank's ability to take risk [7].

The President of the Association of Commercial Banks of Latvia Tverijons also points at the necessity to introduce new business models, encouraging entrepreneurs not to rely on the business model that foresees development based on lending only – in the post-crisis Latvia such model would not anymore be feasible" [8].

Many authors mention that the existing banking business as well as its existence is threatened by new bank capital

requirements, which have been introduced according to Basel III. Basel III regulatory framework foresees to strengthen global capital and liquidity requirements with an aim to improve elasticity in the banking sector, in such a way reducing financial sector risks, which have the most direct impact on the real economy [9]. In order to introduce these requirements three parts of the framework have been developed: capital reforms, liquidity reforms, and overall stability improvement of the financial system. The essence of these reforms is to set firmer requirements for the first level equity capital and first level equity capital ratios [10].

Correlation among bank risks and other important factors, such as capital adequacy [11], securities and their connection with financial markets [12], operational efficiency and corporate governance [13], as well as the necessity to diversify risks [14] was analyzed in the scientific literature even in the pre-crisis period.

Discussing bank business models, Argosh points out that the processes used in bank operations are very obsolete, as still at present banks relatively widely use non-digitalized processes. In this respect banks will have to introduce digital products, as well as products and services which will respond to consumer needs [15]. In turn, Rajan stated that banks can obtain competitive advantage if they have as much information about their clients as possible [16]. That will give them the opportunity to adjust products and services to the needs of their clients. Haldane also stressed that banks should be as diversified as possible thus safeguarding themselves against financial crises [17]. Fremerey and Hagen, in their turn, point out that long-term development of a bank can be ensured only by such business model that will be focused on dynamic development, diversification and volume of the assets, balance between income and expenditures, and relative market share in relation to three biggest banks [18]. Other sources stress that monitoring is an important component of a business model [19], [20].

### III. METHODOLOGY

Analysis of the business models have been performed on the basis of clusters discussed in the scientific literature. They consist of: 1) capital and reserves; 2) assets; 3) deposits, and 4) loans.

Descriptive statistics have been used to determine the constituent cluster components; it was performed distinguishing four types of business models:

1. Wholesale Banks – provide services to large corporate clients, characterized by a relatively small branch network, few distribution channels developed, concentrate on lending and financial markets;
2. Investment Banks – activities are concentrated on financial markets, transactions in the stock market, issuance of shares, raising capital;
3. Retail Banks – core activities are concentrated on providing services to individual customers, fewer activities aimed at legal entities and fewer operations in

financial markets;

4. Universal Banks – combination of all three previous clusters, offer all types of bank products and services.

The authors study the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia as representative countries of Central and Eastern Europe. All countries mentioned joined the European Union in 2004.

Taking the above-mentioned cluster components as the basis, the authors analyzed the data on the existing bank business models at five leading banks in each CEE country considering the figures as of December 2011. The analysis was also based on such indices as Return on Assets (ROA) and Return on Equity (ROE).

The data were mainly extracted from publicly available information on the home pages of the Association of Commercial Banks of Latvia [21] and from in research used banks annual reports. The indicators were obtained from annual reports for the period from 2006 till 2011 as of December 31 of each year.

### IV. RESEARCH DATA

In order to present the data on the total assets of five largest banks in each CEE country as of 31.12.2011, as well as to analyze the changes in assets from 2006 till 2011, the data available on the banks home pages, Financial and Capital Market Commission of Latvia [22], the Association of Commercial Banks of Latvia [21] and banks were summarized. The changes in asset volume are summarized in Table I.

As demonstrated by the data summarized in Table I, the greatest positive changes in the volume of assets occurred at the banks in the Baltic States (Latvia, Lithuania, Estonia). For example, in the period from 2006 till 2011 the assets of Nordea Bank Latvia grew by 105.4%, which can be explained by the fact that in the period of economic growth the bank did not implement such aggressive credit policies as other banks. The assets of Nordea Bank Lithuania also grew by 119%, Krediidipank Estonia – 39%. In turn, the growth of assets of ABLV bank (Latvia) stems from the fact that in the post-crisis period the bank changed its specialization from a universal bank to an investment bank. However, minor changes can be observed in the volume of the assets of other CEE country banks, except two banks operating in Poland – Bank Pekao (101%) and Bre Bank Group (99%). The data have also shown that the greatest negative changes in the total assets occurred at the following banks: Lithuania – SEB Bank (-80%), Swedbank (-21.95% - Latvia, -47% - Estonia), Slovakia – VUB Bank (-47%), and Poland – Bank Zachodni WBK (-21%).

Based on the acquired data (see Table I), the authors have come to the conclusion that the greatest changes in the total assets have occurred at the banks operating in the Baltic States, as in all three countries bank implemented aggressive credit policies.

TABLE I  
CHANGE IN ASSETS OF THE CEE COUNTRY BANKS FROM 2006 TILL 2011

Pos. in 2011	Name of the bank	Assets (EUR mill 2011)	Change in assets (2006-2011) %
Latvia			
1.	Swedbank	3 708.00	-21.9
2.	SEB banka	2 699.00	8.5
3.	Nordea Bank Finland Latvian Branch	2 175.00	105.4
4.	ABLV Bank	1 853.00	96.8
5.	DnB Nord Banka	1 790.00	36.5
Czech Republic			
1.	Ceskoslovenska Obchodni Banka	1 084.00	21.0
2.	Ceska Sportelna	1 033.00	21.0
3.	Komerčni banka	873.00	24.0
4.	UniCredit Bank Czech Republic	334.00	8.0
5.	Raiffeisenbank	178.00	26.0
Estonia			
1.	Swedbank	8 840.00	-47.0
2.	SEB Bank	4 104.00	-6.0
3.	Nordea Bank	3 058.00	-2.0
4.	Krediipank	478.00	39%
5.	Danske Bank	460.00	17.0
Lithuania			
1.	SEB Bankas	7 378.00	-80.0
2.	Swedbank	5 166.00	30.0
3.	DnB Nord	3 256.00	50.0
4.	Danske Bank	1 410.00	-10.0
5.	Nordea	399.00	119.0
Poland			
1.	PKO Bank Polski	47 565.00	60.0
2.	Bank Pekao	37 014.00	101.0
3.	Bre Bank Group	24 966.00	99.0
4.	ING BSK	17 580.00	43.0
5.	Bank Zachodni WBK	13 555.00	-21.0
Hungary			
1.	OTP Bank	3 497.00	39.0
2.	ERSTE Bank Hungary	3 247.00	66.0
3.	K&H Bank	2 895.00	37.0
4.	MKB Bank	2 696.00	-6.0
5.	CIB Bank	2 524.00	1.0
Slovakia			
1.	Slovenska Sportelna	11 348.00	17.0
2.	VUB Banka	11 131.00	-47.0
3.	Tatra banka	9 160.00	56.0
4.	UniCredit Bank Slovakia	3 850.00	25.0
5.	C SOB	3 680.00	24.0
Slovenia			
1.	NLB Group	12 980.00	30.0
2.	Nova KBM Group	5 816.00	33.0
3.	Abanka Vipra Group	4 258.00	43.0
4.	UniCredit Bank	2 945.00	36.0
5.	SKB Bank Slovenia	2 791.00	23.0

Unicredit bank in Czech Republic started working on 1<sup>st</sup> October, 2006. The data on Nordea and Danske Bank in Lithuania, MKB bank in Hungary are available from 2007, but Nordea in Estonia from 2009 and CIB Bank in Hungary from 2010.

On the basis of cluster components considered in the methodological part of the article, the authors classified the existing CEE countries banks and branches of foreign banks according to 4 business models:

1. Wholesale banks - UniCredit Bank Czech Republic, UniCredit Bank Slovakia, UniCredit Bank Slovenia.

2. Investment banks - ABLV bank.
3. Retail banks - Danske Bank, PKO Bank Polski, NLB Group.
4. Universal – Swedbank, SEB banka, DnB banka, Ceskoslovenska Obchodni Banka, Ceska Sportelna, Komerčni banka, Raiffeisenbank, Krediipank, Bank Pekao, Bre Bank Group, ING BSK, Bank Zachodni WBK, OTP Bank, K&H Bank, ERSTE Bank Hungary, MKB Bank, CIB Bank, Slovenska Sportelna, VUB Banka, Nova KBM Group, Abanka Vipra Group Slovenia, SKB Bank Slovenia.

The summarized data on bank business models have demonstrated that among five biggest banks of each CEE country the majority are universal banks, there are fewer retail banks, wholesale bank business model is used by branches of one bank in several countries, and there is only one investment bank.

The authors used descriptive statistics in order to assess the four bank business models.

To evaluate bank business models such financial indicators as capital and reserves, deposits, loans and assets were used. The maximal and minimal values were determined for each of these indicators, as shown in Table II.

TABLE II  
DESCRIPTIVE STATISTICS ON BANK BUSINESS MODELS

	Capital and reserves	Deposits	Loans	Assets
Model 1 – Wholesale banks				
Min	186.00	752.67	1 431.00	628.83
Max	513.50	2 419.67	2 495.33	3 876.67
Mean	363.22	1 545.03	1 979.03	2 444.44
Std. Dev	142.06	706.95	450.57	1 390.30
Model 2 – Investment banks				
Min	655.00	659.00	491.00	817.00
Max	901.00	1 603.00	686.00	1 853.00
Mean	783.83	986.33	581.17	1 214.50
Std. Dev	79.77	334.13	74.45	341.87
Model 3 – Retail banks				
Min	1 043.20	648.00	1 203.80	1 584.80
Max	4 552.60	27 234.00	26 102.20	37 998.20
Mean	2 797.90	11 576.47	11 899.83	17 908.60
Std. Dev	1 754.70	11 509.97	10 635.05	15 162.94
Model 4 – Universal banks				
Min	100.17	469.67	3 361.67	431.83
Max	4 193.67	24 261.17	12 879.17	48 724.50
Mean	648.98	4 591.79	4 132.63	7 308.98
Std. Dev	780.11	4 940.49	2 929.70	10 101.96

Descriptive statistics data have shown that in terms of capital and reserves retail banks take the lead followed by universal banks, whereas wholesale banks have the smallest amount. Retail banks take the lead also in terms of investment in comparison with three other bank business models. At the same time, the smallest amount of deposits is recorded at retail banks, namely, at ABLV bank (Latvia), the same observation can be made concerning the amount of loans. Considering the bank assets, universal banks take the leading position followed by retail banks.

Having analyzed descriptive statistics the authors have

come to the conclusion that in the period analyzed in CEE countries the highest financial indicators were displayed by retail banks, followed by universal banks and only then by wholesale and investment banks.

In order to assess every business model in the most effective way, the changes in ROA (Return on Assets) indices for each model were analysed separately. The obtained data are presented in Fig. 1.

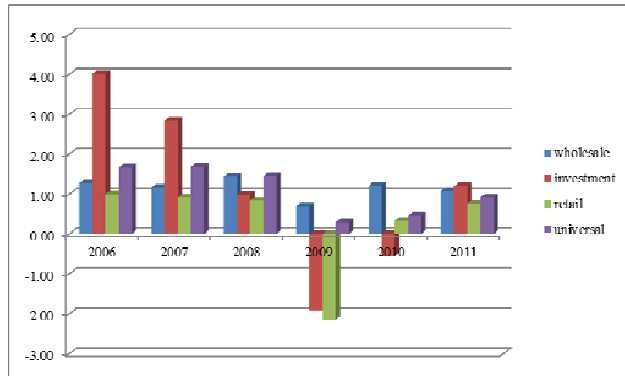


Fig. 1 Change in ROA (%) according to a business models

The data on ROA index demonstrates that investment, retail and universal banks have already changed their business models. In contrast, wholesale banks should consider adopting a new business model, as since 2010 their ROA index has shown the tendency to decrease.

Another essential bank performance index is ROE (Return on Equity). Changes in ROE index at EU banks are presented in Fig. 2.

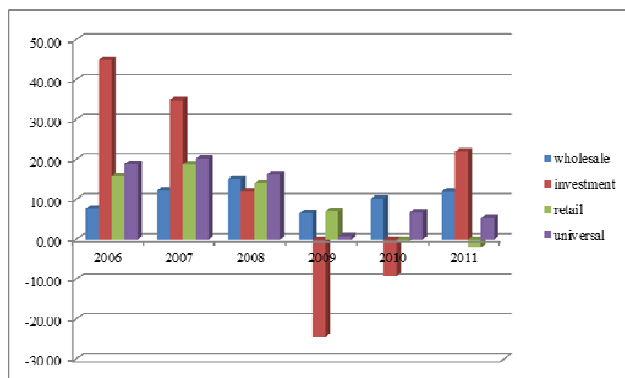


Fig. 2 Change in ROE (%) according to a business models

Considering ROE index it may be noted that retail and universal banks should alter their business models, at the same time wholesale and investment banks have already found solutions promoting further development of their activities.

Having analyzed ROA and ROE indices the author has come to the conclusion that the most successful business models are employed by investment banks, but the banks using the remaining three models should find new solutions.

## V. CONCLUSION

Having performed the analysis the authors have come to the conclusion that the greatest changes in the volume of the assets occurred at the banks of the countries that implemented aggressive credit policies. At the same time, the highest financial indicators in terms of capital and reserves, loans and deposits are demonstrated by retail banks. However, considering ROA and ROE indices, the banks using all business models analyzed in the present study with the exception of investment banks should alter their future strategy.

The authors have concluded that one of the main factors that the banks may use to ensure their sustainable development is to develop a unique entrepreneurial strategy based on business objectives, which would include development tendencies of sustainable factors both in the sector and in the market, in which a bank operates. In this respect, financial institutions should continuously improve working processes, as well as integrate the best standards, and that will provide financial value in the long term not only to the bank, but also to its clients and the society on the whole. The banks, which will use such strategy as the basis for their activities, will not only obtain a competitive advantage, but also will reinforce their position in the sector, promoting macroeconomic development in the country as well as integration at the international level and good sustainable model practices.

In order to be able to objectively assess advantages and disadvantages of each business model, the authors see it necessary to conduct assessment of bank business models in future considering not only on financial, but also sociological and environmental aspects.

The limitation the authors have faced conducting the present research consists in the fact that analyzing five biggest banks of each CEE country it appeared that the majority of these banks are universal banks; the remaining three bank business models are not widely represented.

The research conducted by the authors may be of practical significance for the banks analyzed in the article while they review their future aims and plan their future business strategy.

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