INVESTMENT BANKS EFFICIENCY AND CORPORATE GOVERNANCE FRAMEWORK: FINDING UNIQUE PECULIARITIES?

Yuliya Lapina*

Abstract

The main aim of this paper is to research the features of investment banks in comparison with commercial banks, what has allowed distinguishing principal differences in their functioning. The research identifies the main economic factors, which give the opportunity to evaluate the financial intermediaries' performance in the investment banking sphere. The author suggests the phased system of scientific and methodological approach to assess the effectiveness of quantitative determination of specific investment banking activities, which will include system of the most relevant indicator for this specific banking area. In complex this method assesses efficiency of assets, cost, risk, capital and liquidity management. The author defined the investment banking efficiency by using the comprehensive procedure which allows input indicators base, highlighted integrated assessment which is based on the calculation of synthetic investment banking key performance index (SIBKPI).

Keywords: Corporate Governance, Investment Banking, SIBKPI, CMIB, Bank Efficiency

* PhD researcher, International Center for Banking and Corporate Governance, Ukrainian Academy of Banking of the National Bank of Ukraine (Ukraine)
Tel. +380542619942
Email: yu.h.lapina@virtusinterpress.org

1. Introduction

Investigation of the specificity of the investment-banking activity of specialized and universal banks allowed to distinguish fundamental differences in their operation, namely, to identify the main economic indicators by which to assess the effectiveness of financial intermediaries in the market for investment banking. Thus, at this stage of dissertation the urgency is the gradual development of scientific and methodological approach to determining the quantitative assessment of the effectiveness of specific investment banking activities, which will include system most relevant to specific areas of banking indicators are assessed using a set of criteria of financial performance, namely, asset management effectiveness, costs, risks, capital and liquidity.

Determination of the effectiveness of specific investment banking - a complex procedure which allows input based on a set of indicators by their transformation and aggregation determine the integrated assessment based on the calculation of the synthetic index of financial efficiency of investment banking (SIBKPI - synthetic investment banking key performance index). So, let's consider the sequence of steps proposed by the scientific and methodical approach.

As a result, the proposed model provides an adequate comprehensive assessment of the effectiveness of the specific banking intermediaries, without requiring complex analysis and aggregation of a large number of financial indicators.

2. Model Description

Stage 1. Selection and justification of backbone components, by means of which to evaluate performance characteristics and to analyze investment banking efficiency: regulatory capital adequacy (CA), return on equity (ROE), return on annual average tangible assets (ROATA), cost-to-income ratio (CIR) and ratio of equity capital to debt (Leverage). Thus, the formation of an information base through research of these five indicators is due to the fact that these factors comprehensively to assess financial performance and characterize the correlation between corporate governance factors and investment banking efficiency.

Stage 2. Collecting the statistical data in terms of selected objects observation. Rating list of such investment banks was formed in terms of the size of the fee income earned from investment banking transactions during 2012 (see table 1). Analysis of the functioning of foreign investment banks will determine the leading banks and outsiders, and highlight the main factors of corporate governance, which allowed achieving certain results. Subsequently, the findings will be useful in building

effective corporate governance models for banks, which provide investment banking services.

Table 1. The Leading Bank by the factor of commission fee, mln. $, 2012 – 2013

Rating place, 2013	Name of Investment Bank	Year		
		2013		2012
		Change comparing with 2012	Fee	Change of fee, %
1	Bank of America **Merrill Lynch**	+1	1,522	28,6
2	JP Morgan	-1	1,479	10,8
3	**Goldman Sachs**	No change	1,274	37,4
4	**Morgan Stanley**	+1	1,217	40,5
5	Citi	+1	1,171	35,9
6	Deutsche Bank	+1	998	17,9
7	**Barclays**	+1	977	26,6
8	Credit Suisse	-4	814	-11,4
9	**UBS**	No change	718	23,1
10	Wells Fargo & Co	+1	615	36,3
11	**RBC Capital Markets**	-1	573	15,1
12	HSBC Holdings PLC	No change	367	-9,3
13	BNP Paribas SA	+1	310	-7,2
14	Jefferies & Co Inc	+6	276	33,3
15	Mizuho Financial Group	No change	265	-10,4
16	RBS	-3	263	-30,1
17	Nomura	+1	262	13,3
18	Sumitomo Mitsui Finl Grp Inc	-2	227	-10,1
19	Mitsubishi UFJ Financial Group	No change	198	-11,5
20	**BMO Capital Markets**	-3	187	-21,2
21	Societe Generale	+2	180	6,2
22	Credit Agricole CIB	+3	187	5,1
23	Scotiabank	+1	155	0,3
24	Rothschild	+5	137	31,5
25	TD Securities Inc	-3	133	-29,9
			19782	**5,9**

This stage involves filling out the information base in tabular form in the context of the banks` financial performance, which identifying in the previous step. In addition, we provide complex systematic analysis of input data to identify the main ways to increase the efficiency of the financial activities of investment banks.

Table 2. Financial data of the investment banks performance

Bank	ROATA, %	CIR, %	CA, %	ROE, %	Leverage, %
Bank of America Merrill Lynch	0,19	133,33	16,31	1,94	129,30
JP Morgan	0,92	303,03	15,30	11,48	162,20
Goldman Sachs	0,79	136,99	20,10	10,94	279,50
Morgan Stanley	0,01	202,02	19,85	0,11	305,80
Citi	0,40	155,76	14,10	4,11	154,20
Deutsche Bank	0,01	104,17	17,10	0,37	420,60
Barclays	-0,07	156,25	17,00	-1,98	268,00
Credit Suisse	0,13	138,89	22,30	3,83	469,80
UBS	-0,15	93,90	25,20	-5,20	278,20
Wells Fargo & Co	1,39	346,25	14,63	13,78	117,10
RBC Capital Markets	0,92	327,00	15,10	9,80	109,30
HSBC Holdings PLC	0,53	192,31	16,10	8,40	29,80
BNP Paribas SA	0,40	153,85	15,60	8,90	277,00
Jefferies & Co Inc	0,60	230,00	15,45	7,96	279,00
Mizuho Financial Group	0,46	165,00	14,18	8,60	335,40
RBS	-0,41	169,49	14,50	-7,98	178,10
Nomura	0,12	135,00	13,90	2,14	470,50
Sumitomo Mitsui Finl Grp Inc	0,34	245,00	14,71	8,89	238,40
Mitsubishi UFJ Financial Group	0,34	232,56	16,68	1,76	147,60
BMO Capital Markets	0,78	138,00	8,70	15,30	15,90
Societe Generale	0,06	151,98	9,90	1,42	875,00
Credit Agricole CIB	-0,42	151,98	15,23	-14,13	73,30
Scotiabank	0,98	205,34	13,50	17,60	72,60
Rothschild	0,50	120,92	14,34	5,10	359,60
TD Securities Inc	0,82	248,76	15,70	14,99	23,80

The research of trends changes which represents in Table 2 allows us to make conclusion about heterogeneity of index's values and wide range of fluctuation between the minimum and maximum possible values. In addition, the defining feature of international investment banks serving a relatively stable trend of variation of the indicators relative to the average level, as evidenced by acts averaged characteristic RMS deviation in the amount of 42 % compared to the expectation within the target set of banks.

Stage 3. Bringing the performance characteristics of banks efficiency to the comparable form by applying the normalization of Savage. The choice of this normalization approach of input information due to the presence of negative values and improving the financial activity with increasing

values of the studied parameters. Thus, the ratio that allows you to bring statistics in comparable form takes the following form:

$$\hat{e}_i = \frac{e_i - \min_j\{e_{ij}\}}{\max_j\{e_{ij}\} - \min_j\{e_{ij}\}}$$

where $\hat{e}_i$ - normalized value of financial performance indicator;

e_i - value of financial performance indicator;

$\min_j\{e_{ij}\}$ ($\max_j\{e_{ij}\}$) – minimum (resp. maximum) value of the financial performance indicator.

Table 3. Normalized value of financial performance indicator

Bank	ROATA, %	CIR, %	CA, %	ROE, %	Leverage, %
Bank of America Merrill Lynch	0,34	0,16	0,46	0,51	0,13
JP Morgan	0,74	0,83	0,40	0,81	0,17
Goldman Sachs	0,67	0,17	0,69	0,79	0,31
Morgan Stanley	0,24	0,43	0,68	0,45	0,34
Citi	0,45	0,25	0,33	0,57	0,16
Deutsche Bank	0,24	0,04	0,51	0,46	0,47
Barclays	0,19	0,25	0,50	0,38	0,29
Credit Suisse	0,30	0,18	0,82	0,57	0,53
UBS	0,15	0,00	1,00	0,28	0,31
Wells Fargo & Co	1,00	1,00	0,36	0,88	0,12
RBC Capital Markets	0,74	0,92	0,39	0,75	0,11
HSBC Holdings PLC	0,52	0,39	0,45	0,71	0,02
BNP Paribas SA	0,45	0,24	0,42	0,73	0,30
Jefferies & Co Inc	0,56	0,54	0,41	0,70	0,31
Mizuho Financial Group	0,49	0,28	0,33	0,72	0,37
RBS	0,01	0,30	0,35	0,19	0,19
Nomura	0,30	0,16	0,32	0,51	0,53
Sumitomo Mitsui Finl Grp Inc	0,42	0,60	0,36	0,73	0,26
Mitsubishi UFJ Financial Group	0,42	0,55	0,48	0,50	0,15
BMO Capital Markets	0,66	0,17	0,00	0,93	0,00
Societe Generale	0,27	0,23	0,07	0,49	1,00
Credit Agricole CIB	0,00	0,23	0,40	0,00	0,07
Scotiabank	0,77	0,44	0,29	1,00	0,07
Rothschild	0,51	0,11	0,34	0,61	0,40
TD Securities Inc	0,69	0,61	0,42	0,92	0,01

Preliminary analysis of the normalized performance of financial activity brings out the bank Wells Fargo & Co, which holds leading positions in such characteristics as ROATA and CIR. This situation is explained by the fact that the mentioned investment bank is using a business model diversification of services provided the same as trying to better meet customer needs, while diversifying risks in investment banking transactions. This development model is quite successful for Wells Fargo & Co and can receive 80% of the bank's revenue growth by providing various services a large number of existing customers. Get the highest level, only one indicator Leverage and ROE is typical of such foreign banks like Societe Generale and

Scotiabank. It should be noted that Scotiabank, which is one of the five most successful banks in Canada, allows you to keep a leading position chosen strategy for global expansion. This investment bank has the most extensive network of subsidiaries and offices worldwide, so you can serve a large number of customers around the world. The main reason for the success of such banking institutions in Canada is the natural conservatism of the business, which is achieved by using a significant level of capital adequacy, conservative borrowing policy and strict financial supervision by an independent Canadian regulator - OSFI (Office of the Superintendent of Financial Institutions). Despite the relatively low capital base of the first level, Canadian banks should

be considered promising in terms of lending. Therefore, OSFI conducts reasonable policy for the implementation of Basel III. The lowest level of efficiency in terms of CA, Leverage and ROATA, ROE ranked according Credit Agricole CIB and BMO Capital Markets. Negative trends among selected indicators of bank Credit Agricole CIB are presents because of financial intermediary owned local banks, and the controls in which only 25% of non-voting . This complex organizational structure of corporate governance, on the one hand, allows you to get discounts on the stock exchange in France, on the other hand , complicates the management of the investment bank. It is also worth noting that despite the expansionary orientation recent decades Credit Agricole practically not represented in the UK and the U.S., which greatly reduces the number of potential customers of the bank. We need special attention to analyze the investment bank UBS, which is one indicator (CA) is the highest level of performance, while other parameters (CIR) significantly loses leading position.

Stage 4. Determination of the impact proportion of each of the indicators to measure the financial activities of banks on the integral level of efficiency. The need for this phase variations due to varying degrees of effective features by changing subjects factor variable. Therefore, priority of each performance indicator is proposed to calculate basing on the first count formula Fishburne:

$$r_i = \frac{2 \cdot (N - R_i + 1)}{N \cdot (N + 1)}$$

where:

r_i - weight of the i variable of bank's financial performance,

N – total number of selected variables of bank's financial performance,

j – priority level of the variable characterizing bank's financial performance

Using the results of peer review performance of investment banks, including the specific operations according to specialized intermediaries Rating of each financial indicator chosen among the set of factors, namely, CA – 1 (0,33%), ROE - 2 (0,267%), CIR- 3 (0,20%), ROATA - 4 (0,13), Leverage – 5 (0,067%). The input information that made it possible to rank the degree of influence these indicators is the view of experts engaged in research in the banking sector. Collection of information held by questionnaire.

Analysis of Table 3.4 reveals that the greatest power of influence on the integral level of effectiveness of the Bank shall indicator CA, which

accounts for a third of the priority. With minor deviations from the most influential figure of 0.0667 of a unit second place in the ranking is ROE. All other financial indicators with weights within no more than 0.2000 of a unit, providing 40% of the amount of the received integral efficiency level.

Stage 5. The definition of the integral evaluation of the effectiveness of the financial activities of an investment bank based convolution values of normalized deviations from the normative level, weighted by the corresponding weights. Mathematical formalization of this approach to the calculation of the effective rate can be represented by the following relationship:

$$SIBKPI = \sum_{i=1}^{5} r_i \cdot (\hat{e}_i - 0.3)$$

0.3 - standart level of efficiency of investment bank (share units), i.e., a level that is considered to be statistically significant. Yes, in statistics there is a classical approach , according to which the relationship between the discussed parameters is confirmed and essential in making quantitative characteristic of the coupling values equal to or greater than the threshold of 30% . If the normalized financial indicator resultant variable characteristics of the investment bank's minimum required level, the level of efficiency is low (0.3 to 0.5 of a unit), medium (0.5 to 0.7 of a unit) and high (from 0.7 to 1.0 of a unit). If the level of financial normalized index less than 0.3, a quantitative assessment of the effectiveness is considered negligible, i.e., the expected effect of the variation factor variable is equal to zero.

The implementation of this phase of the research and methodological approach to the evaluation of the effectiveness of integrated financial activities of an investment bank provides, firstly, the identification of the effectiveness of each of the considered investment banks by calculating the deviation of normalized values of their standard level (columns 1-5 Table 4).

The sample of banks was formed by analyzing the most specialized banks that provide investment banking, based on the amount of fee income received by any financial intermediary in 2012. It was determined that the amount of fee income from providing investment banking services is logical to form this kind of rating, in fact, a group of banks that organize this type of financial intermediary, fall not only specialized investment banks, universal banks but also from separate division of investment banking and commercial banks to structure transactions where a significant proportion of the services of a specialized financial intermediary.

Table 4. The growth rate of the financial performance relatively standart (30% of value) level, integrated assessment and qualitative interpretation

Bank	ROATA, %	CIR, %	CA, %	ROE, %	Leverage, %	SKPI	Qualitative characteristic level
Bank of America Merrill Lynch	0,04	-0,14	0,16	0,21	-0,17	0,07	middle
JP Morgan	0,44	0,53	0,10	0,51	-0,13	0,32	high
Goldman Sachs	0,37	-0,13	0,39	0,49	0,01	0,28	high
Morgan Stanley	-0,06	0,13	0,38	0,15	0,04	0,18	high
Citi	0,15	-0,05	0,03	0,27	-0,14	0,08	middle
Deutsche Bank	-0,06	-0,26	0,21	0,16	0,17	0,06	middle
Barclays	-0,11	-0,05	0,20	0,08	-0,01	0,06	middle
Credit Suisse	0,00	-0,12	0,52	0,27	0,23	0,24	high
UBS	-0,15	-0,30	0,70	-0,02	0,01	0,15	middle
Wells Fargo & Co	0,70	0,70	0,06	0,58	-0,18	0,40	high
RBC Capital Markets	0,44	0,62	0,09	0,45	-0,19	0,32	high
HSBC Holdings PLC	0,22	0,09	0,15	0,41	-0,28	0,19	high
BNP Paribas SA	0,15	-0,06	0,12	0,43	0,00	0,16	high
Jefferies & Co Inc	0,26	0,24	0,11	0,40	0,01	0,23	high
Mizuho Financial Group	0,19	-0,02	0,03	0,42	0,07	0,15	middle
RBS	-0,29	0,00	0,05	-0,11	-0,11	-0,06	low
Nomura	0,00	-0,14	0,02	0,21	0,23	0,05	middle
Sumitomo Mitsui Finl Grp Inc	0,12	0,30	0,06	0,43	-0,04	0,21	high
Mitsubishi UFJ Financial Group	0,12	0,25	0,18	0,20	-0,15	0,17	high
BMO Capital Markets	0,36	-0,13	-0,30	0,63	-0,30	0,07	middle
Societe Generale	-0,03	-0,07	-0,23	0,19	0,70	0,00	middle
Credit Agricole CIB	-0,30	-0,07	0,10	-0,30	-0,23	-0,12	low
Scotiabank	0,47	0,14	-0,01	0,70	-0,23	0,26	high
Rothschild	0,21	-0,19	0,04	0,31	0,10	0,09	middle
TD Securities Inc	0,39	0,31	0,12	0,62	-0,29	0,30	high

Increase pace of the financial performance of foreign investment banks relative to normative values showed RBS Scottish and French bank Credit Agricole CIB. As defined earlier, the reason for this situation for the French investment bank was the specific complex structure of corporate governance factors that Royal Bank of Scotland has not overcome the crises associated with global destabilization is that this bank should focus on their activities in the UK, avoiding market investment banking services the U.S., where it has subsidiaries ceased activity due to inability to improve their financial situation a crisis.

The next step is the implementation of the fifth stage of the scientific and methodical approach advocates the definition of an integrated assessment of the efficiency by reducing the values of the graph 1-5 tables 4 into a single indicator using the formula (3), which in expanded form can be represented as follows:

$$SIBKPI_j = 0.33 \cdot (\hat{C}A_j - 0.3) + 0.27 \cdot (\hat{R}OE_j - 0.3) + 0.20 \cdot (\hat{C}IR_j - 0.3) +$$
$$+ 0.13 \cdot (\hat{R}OATA_j - 0.3) + 0.07 \cdot (\hat{L}everage_j - 0.3)$$

Stage 6. Qualitative characteristics of financial efficiency of investment banks. Based on the fact that in excess of normalized values for each financial indicator of each investment bank may correspond to one of three levels (as described in step 5), this will hold graduation and within a qualitative assessment. Thus, depending on the calculated quantitative assessment of the effectiveness of integrated financial activities considered investment banks allocate these limits its qualitative interpretation:

- Low level ((-0,12) – (-0,02)):

$$SIBKPI_j \in [\min_j \{SIBKPI_j\}; \frac{\min_j \{SIBKPI_j\} + \max_j \{SIBKPI_j\}}{3})$$

- Middle level ((-0,2) – (0,16)):

$$SIBKPI_j \in [\frac{\min_j \{SIBKPI_j\} + \max_j \{SIBKPI_j\}}{3}; \frac{2\left(\min_j \{SIBKPI_j\} + \max_j \{SIBKPI_j\}\right)}{3})$$

- High level (0,16 – 0,40):

$$SIBKPI_j \in [\frac{2\left(\min_j \{SIBKPI_j\} + \max_j \{SIBKPI_j\}\right)}{3}; \max_j \{SIBKPI_j\}] \cdot$$

Thus, developed scientific and methodological approach allows for integrated assessment of investment banking, based on a quantitative analysis of: category "performance" meaning (dynamic factor variable values exceeding the standard value), the importance and priority of each of the relevant parameters (using the formula Fishburn) and the nature and direction their impact (with normalization Savage).

3. Corporate Governance influence on the Investment banking efficiency

Determining the impact of the quality of corporate governance on the financial efficiency of investment banking requires building an evidence-based approach to identify quantitative relationship between the

efficiency of investment banking and qualitative performance indicators of corporate governance. To implement the task proposed calculation matrix display factors influence the effectiveness of corporate governance in investment banking - Corporate Governance Matrix Investment Banking (CMIB).

Construction of the model is divided into seven basic steps that will greatly facilitate the settlement system and allow for a comprehensive analysis of the structure and magnitude of the effect of selected characteristics of corporate governance. In addition, based on the analysis we propose an effective corporate governance system date just for banks engaged in investment banking operations.

Stage 1. Formation of information support of scientific and methodical approach by mixing and systematization of banks engaged in investment activities, to binary form, i.e., in such form, as relevant characteristics accepts: unit value in case of substantial impact on the efficiency of financial operations, and a zero value otherwise case.

Table 5. The Corporate Governance Characteristics

Bank	CRO in the Board of Directors (BD)	Number of directors in the BD	% of independent directors in the BD	Other factors	Ownreship structure	CRO subordinates to the CEO and Chairman	% of women in the BD	SIBKPI
Bank 1	b_{11}	b_{12}	b_{13}	b_{14}	b_{15}	b_{16}	b_{17}	$SIBKPI_1$
…	…	…	…	…	…	…	…	…
Bank i	b_{i1}	b_{i2}	b_{i3}	b_{i4}	b_{i5}	b_{i6}	b_i	$SIBKPI_i$
…	…	…	…	…	…	…	…	...
Bank n	b_{n1}	b_{n2}	b_{n3}	b_{n4}	b_{n5}	b_{n6}	b_{n7}	$SIBKPI_n$
Total	$\sum_{i=1}^{n} b_{i1}$	$\sum_{i=1}^{n} b_{i2}$	$\sum_{i=1}^{n} b_{i3}$	$\sum_{i=1}^{n} b_{i4}$	$\sum_{i=1}^{n} b_{i5}$	$\sum_{i=1}^{n} b_{i6}$	$\sum_{i=1}^{n} b_{i7}$	-
Structure Relative Indicator	$\dfrac{\sum_{i=1}^{n} b_{i1}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{ij}}$	$\dfrac{\sum_{i=1}^{n} b_{i2}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{ij}}$	$\dfrac{\sum_{i=1}^{n} b_{i3}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{ij}}$	$\dfrac{\sum_{i=1}^{n} b_{i4}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{i}}$	$\dfrac{\sum_{i=1}^{n} b_{i5}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{i}}$	$\dfrac{\sum_{i=1}^{n} b_{i6}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{ij}}$	$\dfrac{\sum_{i=1}^{n} b_{i7}}{\sum_{j=1}^{7}\sum_{i=1}^{n} b_{i}}$	-
Corporate governance impact on the efficiency	E_1	E_2	E_3	E_4	E_5	E_6	E_7	-

Stage 2. Identification of the magnitude of the effect of each factor of corporate governance on banks financial performance based on the definition of the calculated value using the following formula:

$$E_{j,j=1\div7} = \begin{bmatrix} 0 \mid \sum_{i=1}^{n} b_{ij} \le \dfrac{n}{3} \\[2em] \dfrac{\sum_{i=1}^{n} b_{ij} - \dfrac{n}{3}}{\dfrac{n}{3}} \times 100\% \mid \sum_{i=1}^{n} b_{ij} > \dfrac{n}{3} \end{bmatrix}$$

Where:

$E_{j,j=1\div7}$ - the impact strength of the j-th factor of corporate governance;

n - total number of examined banks;

b_{ij} - Binary characteristic.

Stage 3. Comprehensive analysis of the dependence of financial performance of banks engaged in investment instruments of corporate governance. The basis of this analysis are the calculated data.

In the context of this step is to determine the critical exponents arises in respect of which are relevant to a single assignment or zero value to a particular factor of corporate governance, which is studied in this paper. Thus, this factor of corporate governance as Chief Risk Officer, a member of the bank's board of directors that provides investment banking, was found in the previous stages of dissertation research, positive impact on the process of minimizing the risks of implementing such specific activities occurs during the decision- making board. Therefore, this factor in this condition takes a single value. In the opposite case, i.e., when the director of risk is not included in the board of directors or any bank has no such separate official, this factor gets zero. For the same pattern occurs assignment unit and zero values by factors of corporate governance as Chief Risk Officer, subordinate to the CEO and Chairman of the Board.

Considering such factors as corporate governance quantitative composition of the board of directors of banks engaged in investment activities

necessary question the definition of a critical number of directors.

Thus, if the number of directors on board more than twelve members, the bank receives a single value of the factor of corporate governance, if the rate is less than the critical level - zero.

Factors such as corporate governance ratio of independent directors on board and the number of women in its structure, have established normative values, which can calculate by the mathematical method. It is therefore proposed to the critical average value for the studied set of banks. Thus, higher ratio compared to the average for the set of assigned unit value of less - zero.

With respect to the following quality indicators, namely, other factors, which take into account the degree of diversification of investment banking services offered by the author to provide a single value of those financial intermediaries that specialize in more than one type of operation and zero - for those that are intended to focus only on one type of service.

Regarding the factor structure of ownership, financial intermediaries, controlling shareholding of which is owned by foreign or domestic banks receiving unit value, all of which are not included in the group under certain circumstances - zero.

7 Stage. Checking the adequacy of the proposed research and methodological approach to assess the impact of corporate governance on the cost-effectiveness of investment bank. Based on the fact that economic and mathematical model of this problem is formalized for the first time, it is impossible to verify the adequacy of using such common approaches like comparing simulation results with some experimental results obtained with the same (similar) conditions or by the use of other similar models. It is necessary to compare the structure and functioning of the constructed model of a real economic system based on the following requirements (Table 9).

Table 6. The Corporate Governance Characteristics in Investment Banks with high level of financial efficiency

Bank	CRO in the Board of Directors (BD)	Number of directors in the BD	% of independent directors in the BD	Other factors	Ownreship structure	CRO subordinates to the CEO and Chairman	% of women in the BD	SIBKPI
JP Morgan Chase	0	1	1,00	1	0	0	1,00	0,32
Goldman Sachs	0	1	1,00	1	1	1	1,00	0,28
Morgan Stanley	0	1	1,00	1	0	1	1,00	0,18
Credit Suisse	0	1	1,00	1	0	1	1,00	0,24
Wells Fargo & Co	0	1	1,00	1	0	1	0,00	0,40
RBC Capital Markets	0	1	0,00	1	1	0	0,00	0,32
HSBC Holdings PLC	0	1	1,00	1	0	0	0,00	0,19
BNP Paribas SA	0	1	1,00	1	0	0	0,00	0,16
Jefferies & Co Inc	1	0	1,00	1	0	1	1,00	0,23
Sumitomo Mitsui Finl Grp Inc	0	1	0,00	1	0	0	1,00	0,21
Mitsubishi UFJ Financial Group	1	1	0,00	1	1	0	1,00	0,17
Scotiabank	1	1	1,00	1	0	1	0,00	0,26
TD Securities Inc	0	1	1,00	1	1	0	0,00	0,30
Total	3,00	12,00	10,00	13,00	4,00	6,00	7,00	3,00
Structure Relative Indicator	5,45	21,82	18,18	23,64	7,27	10,91	12,73	5,45
Corporate governance impact on the efficiency	-40,00	140,00	100,00	160,00	-20,00	20,00	40,00	-40,00

Table 7. The Corporate Governance Characteristics in Investment Banks with middle level of financial efficiency

Bank	CRO in the Board of Directors (BD)	Number of directors in the BD	% of independent directors in the BD	Other factors	Ownreship structure	CRO subordinates to the CEO and Chairman	% of women in the BD	SIBKPI
Bank of America Merrill Lynch	0	1	1,00	1	1	1	0,00	0,07
Citi	0	1	1,00	1	0	0	0,00	0,08
Deutsche Bank	1	1	0,00	1	1	1	0,00	0,06
Barclays	0	1	1,00	1	0	1	1,00	0,06
UBS	0	1	1,00	1	0	1	0,00	0,15
Mizuho Financial Group	0	1	0,00	1	1	0	1,00	0,15
Nomura	0	1	1,00	1	0	0	1,00	0,05
BMO Capital Markets	1	1	1,00	1	1	0	0,00	0,07
Societe Generale	1	1	0,00	1	0	0	0,00	0,00
Rothschild	0	1	1,00	0	0	0	1,00	0,09
Total	3,00	10,00	7,00	9,00	4,00	4,00	4,00	3,00
Structure Relative Indicator	7,32	24,39	17,07	21,95	9,76	9,76	9,76	7,32
Corporate governance impact on the efficiency	-50,00	66,67	16,67	50,00	-33,33	-33,33	-33,33	-50,00

Table 8. The Corporate Governance Characteristics in Investment Banks with low level of financial efficiency

Bank	CRO in the Board of Directors (BD)	Number of directors in the BD	% of independent directors in the BD	Other factors	Ownreship structure	CRO subordinates to the CEO and Chairman	% of women in the BD	SIBKPI
RBS	0	1	1,00	1	1	0	0,00	-0,06
Credit Agricole CIB	1	1	0,00	1	1	1	1,00	-0,12
Total	1	2	1	2	2	1	1	1
Structure Relative Indicator	10,00	20,00	10,00	20,00	20,00	10,00	10,00	10,00
Corporate governance impact on the efficiency	0	100	0	100	100	0	0	0

Table 9. Criteria for checking the adequacy of economic and mathematical models for assessing the impact of corporate governance on the cost-effectiveness of investment banking (

Requirement	Content requirements
1. Authenticity	With a reasonable level of accuracy reflected the main characteristics of the corporate governance of the bank that provides investment, determining the variation trends and key patterns of influence tools of corporate governance on the efficiency of financial activities
2. Efficiency	Timely decision-making on necessary adjustments to areas of financial activity from obtaining and practical application of simulation results assess the impact of corporate governance on the effectiveness of the Bank
3. Consistency	Consideration of corporate governance as a holistic, complex and dynamic set of backbone elements interconnected at different levels of functioning, the relationship with other models, primarily to the financial performance of the bank that provides investment
4. The ability to control outcomes	The capability for logical control simulation results in terms of quantitative assessment of the impact of power tools of corporate governance on the efficiency of financial performance in terms of matching the extreme range of possible values at the theoretical level, control going beyond the accepted limits of the functioning of the economic system under consideration

Thus, based on the results of Table 9 it can be argued that the proposed scientific and methodical approach to assessing the impact of corporate governance on the cost-effectiveness of investment bank meets the general criteria of adequacy, and thus makes it possible on the basis of the results obtained on the basis of economic and mathematical model to isolate the most important for each group of banks, corporate governance factors in modern conditions of development.

4. Conclusions.

At the current stage of development, there is no single universal mechanism of corporate governance in banks that provide specific investment banking services. However, the calculations based on the proposed scientific and methodical approach in the paper provide an opportunity to assert that the impact of corporate governance factors in different groups of banks by a combined measure of efficiency is not the same. This trend has observed, on the one hand, the nature of the influence of corporate governance factors, on the other hand, its strength. This explains the need of identifying an effective model of corporate governance, which should be inherent of a particular group of banks that carry out investment banking activities.

References

1. Al-Hussain, A.H. Corporate Governance Structure Efficiency and Bank Performance in Saudi Arabia / A. Al-Hussain // [Electronic resource]. - Access mode: http://ru.scribd.com/doc/34103290/Corporate-Governance-Structure-Efficiency-and-Bank-Performance-in-Saudi-Arabia.
2. Barclays Bank PLC Annual report 2010 (2011) // [Electronic resource]. - Access mode: http://reports.barclays.com/ar10/files/Annual_Report_2010.pdf
3. Borge, D. Don't Bank Too Much on the Chief Risk Officer. / D. Borge// U.S. Banker; Jun 2010. - Vol. 120 Issue 6. – 38 p.
4. Capizzi, V. Investment Banking Services: Ownership Structures, Financial Advisory and Corporate Governance Models / V. Capizzi, R. Giovannini, G.M. Chiesti // International Journal of Business Administration. – 2010. - Vol. 1, No. 1. – 49 p.
5. Fama, E. Separation of ownership and control / Fama E., Jensen M. // Journal of Law & Economics. – 1983. - №26. – P. 301–325.
6. Financial Times. Investment Banking. League Tables. [Electronic resource]. - Access mode: http://markets.ft.com/investmentBanking/tablesAndTrends.asp
7. Global Investment Banking Review. Thomson Reuters. [Electronic resource]. - Access mode: http://share.thomsonreuters.com/PR/IB/Quarter_End/Q12013_Global_IB_Review.pdf
8. Guidelines on Investment Banks. [Electronic resource]. - Access mode: http://www.bnm.gov.my/guidelines/01_banking/04_prudential_stds/12_investmentbank_guideline.pdf
9. Holmquist. E. The Evolving Role of the Chief Risk Officer. ERM Advantages (2011) [Electronic resource]. - Access mode: http://ermadvantage.com/2011/11/01/evolving-role-of-the-cro/
10. Separating the CEO and Chairman Roles [Electronic resource]. - Access mode: http://www.businessweek.com/managing/content/jan2010/ca20100115_826268.htm
11. The Financial Times Ltd. League Tables. [Electronic resource]. - Access mode: http://markets.ft.com/investmentBanking/tablesAndTrends.asp
12. Thomson Reuters. Global Investment Banking Review. First Quarter 2013. [Electronic resource]. - Access mode: http://share.thomsonreuters.com/PR/IB/Quarter_End/Q12013_Global_IB_Review.pdf