

## Measurement of Financial Performance Using TOPSIS Method for Foreign Banks of Established in Turkey between 2003-2013 Years

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### Abstract

*In the globalization process of markets, it is seen that expanded international financial activities of the bank. In this process, is a flow, from banks of developed countries to developing countries markets. Turkey is one of the market attention in the banking sector. Therefore, is needed, works of based on foreign-owned banks financial performance which established in our country. The purpose of the study, between the years 2003-2013 Financial performance of foreign banks operating in the Turkish banking sector is measured by TOPSIS METHOD.*

**Keywords:** TOPSIS, Financial Performance, Foreign Bank, Turkish Banking System

**JEL Code:** C44, G21

### 1. Introduction

Foreign capital has become directly a common element between countries with globalization. However, the banking sector is an activity area that permeates the entire economy of the country, with different properties. Therefore, said foreign capital have been related with the banking sector, the importance of the issues discussed are increasing on literature and applications. World financial system, according to the most important weight banks received, countries dont only be formed from national banks, this is not expected condition. The presence of foreign capital more or less as much as a country's banking system is not an unusual situation. The issues discussed here, how much space you have in the banking system of the country, does not present a hazard in terms of foreign capital in the economy.

Foreign banks contribute benefit to householder country as well as there are some disadvantages that make. If foreign bank comes with technological innovations to the country, there may be increased competition and to increase the quality of services sector. With additional funding sources will bring each country's foreign banks while supporting economic growth, when experiencing a shortage of funds in the country to create effects using the power of foreign banks to increase liquidity in the international market are positive developments for the country. In contrast, foreign banks may reduce national banks profit margins. Performing the operation of small-scale enterprises in the credit field with much larger companies can cause to remain in the background to meet the funding needs. On the other hand, removing funds from the system they have in crisis deepening crisis can impact has a negative impact of foreign banks can bring, by providing liquidity from external sources Central Bank's liquidity and interest rate restrictions and their impact on the sector can reduce the effectiveness of control (Turan, Kaya, 2014).

Other financial services and/or services to other groups of clients may be seen as less desirable, perhaps due to higher risks, and/or high levels of information and transaction costs. Consequently, domestic banks may dominate in providing financial services such as consumer credit, credit to small and medium enterprises, etc. In markets for these services competitive pressure on domestic banks due to foreign bank presence may then be low.

Since competitive pressure is low, domestic banks may be able to pass on increased investment costs due to spill-over effects to their clients in these markets. If their activities in these markets form the main part of their total activities, this may lead to higher margins on financial services of banks. (Hermes, Lensink, 2004)

While evaluating financial performance, multiple decision-making matrix to provide a versatile base measurement taking more than one financial ratio, provides more comprehensive assessment made by the fundamental analysis.

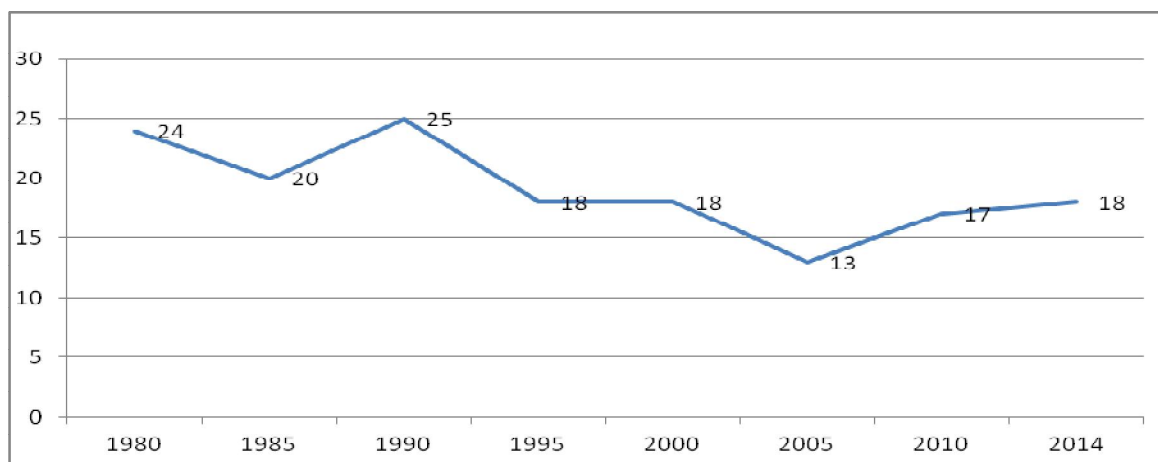
In this study, Foreign-owned banks incorporated in Turkey, determined on the basis of sixteen financial ratios aimed to measure the financial performance between the years 2003-2013.

## 2. Foreign Banks' Capital Availability in Turkish Banking Sector

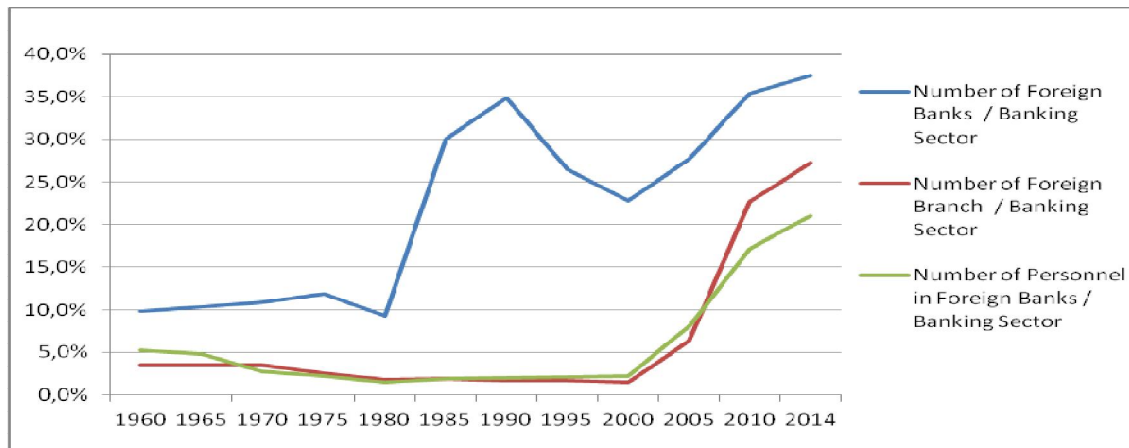
The onset of action with a modern sense of foreign banks in the Turkish banking sector is based on the Ottoman Bank. Although there have been attempts in banking before the Ottoman Bank, it took less and activity has been very limited, therefore this is a view unless otherwise agreed banking was started in 1856 with Ottoman Bank (TBB, 2008) Banking activities in the modern sense in the world is based on the surplus funds. Advances in the increase of trade and industry in Europe has been an increase in earnings, individuals and institutions have laid the foundations of banking gained by excess supply. One of the important features of the established with the purpose of borrowing banking is started banking with foreign capital in the Ottoman era. In other words, the banking is in our country, It is a struggle emerged in the sovereignty of foreign capital.

Establishment of the Republic Turkey, 21.January 1980 decrees, 2001 banking crisis ve followed privatization policy are acceptable milestones the existence and effect of foreign banks in Turkey. (Akgüç, 2007) Foreign entry into the Turkish banking sector is not a new phenomenon, nonetheless, the share of foreign banks in the Turkish banking system is limited with before 1980. Later 1980 which facilitated the entry of foreign banks competition and efficiency of the financial system within the framework of liberalization policies implemented to increase. As a result, the system has more foreign inflows. But, despite the reduction of barriers to entry long-term high inflation and instability in Turkey, the share of foreign banks in the system has not changed much. Since the year 1990, active in total did not exceed 5 percent of the share of foreign banks. But, since 2004 increases the share of foreign banks in the system, as a result of foreign interest in the sector (Yayla and Others, 2005) the 1. graph below, there are the number of foreign-owned banks in Turkey from 1980 until 2014. There were 24 foreign banks in 1980, now the number is 18. Despite this decline, in the near future as a result of interest in the Turkish banking system can be expected that the number in question.

**Figure 1: Number of Foreign Banks in Turkey (1980-2014)**



**Resource:** The Banks Association of Turkey, (2008). 50th Anniversary of the Banks Association of Turkey and Banking System 1958-2007, No.:262, p.183

**Figure 2: Foreign Banks in Turkish Banking System (1960-2014)**

**Resource:** The Banks Association of Turkey, (2008). 50th Anniversary of the Banks Association of Turkey and Banking System 1958-2007, No.:262, p.183

The above figure 2 as, The number of foreign banks in the Turkish banking sector, branches and the condition of the staff were examined. For the Turkish financial markets, which is a key year with the 1980 the share in total banking system the number of foreign banks came from %9,3 to %30. But, this foreign banks seems to show the same development in terms of number of branches and staff until 2000. Later year 2000, such a cause of increase in the share of foreign banks in the entire banking system banking crises in 2000-2001 period. In this crisis, in the Turkish banking system number of branches declined from 7873 to 6247, about forty thousand bankers lost work. Whereas in this crisis foreign banks have increased the number of branches and staff. In other words, banking crises has increased its share in the Turkish banking system of foreign banks.

With transition to a free market economy of the Turkish economy, the liberalization of the banking sector has also been very important step has to offer. As worldwide, Follow openness policies in Turkey was later year 1980, freedom in exchange arrangements were made. Later 24.January decrees, increasing domestic savings and the effective use of the targeted, but in this period, financial market can not reach the desired size and not appear to offer sufficient depth (Çakar, 2003)

Banks are affected by the financial liberalization process in different degrees depending on their missions, composition of assets and liabilities in their balance sheets, degree of risk aversion, degree of governmental support, their ability to deal successfully with the changing environment and the incentive schemes as a solution to possible conflicts of interest between managers and owners of banks. As a result of this, some banks may be affected negatively while some others gain from the process.(Aysan, Ceyhan, 2006)

There have been marked changes in the financial sector following the liberalization of financial prices and policies. While there were occasional setbacks during 1980-89, the trend has been towards liberalization. By 1989, interest rates were market-determined. This halted the decline in financial intermediation ratios observed prior to 1980 and contributed to financial deepening. The new regulatory regime attracted a large number of banks, both Turkish and foreign, and sectoral concentration decreased. The Istanbul Stock Exchange was reopened and, over time, became an integral part of the financial system. Government securities began to be auctioned in 1985 and quickly became an important portion of the stock of financial assets. The interbank market began to operate in 1986 allowing banks to lend and borrow from each other for overnight facilities. (Denizer, 2000) Later 1990, with foreign banks technical and financial advantages experimenting by national banks financial products, starting to application, the share of foreign banks in the sector has entered a downward trend (Aksoy, 1998).

Opening branches, including EU countries, particularly the resident banks in Turkey, through participation in local banks or other financial affiliates increase their activities in abroad. This is because Between banks abroad by banks in Turkey, built against the emerging, which leads to unfair competition and monetary arrangements with the loads tax. Competition in the banking sector is the most open in the world regulations affecting the cost of the country through inability to be fully compatible as a result of banks and customers are provided competition is better directed to the cheapest service can provide financial centers. (TBB, 2005)

Foreign capital from the financial markets as Turkey, not only a player in markets same time There is also a demand to have a say in the management of financial institutions. In this context, existing banks and other financial institutions in qualified partners or judge they want to have a say in the form of the approach is common. foreign banks investments increased in Turkey later 2001 crisis, finance sector rooted arrangements made, in particular with banking law issued in 2005 increased investments in foreign banks. Foreign investment in the sector has been a large number of qualified sales or bank transfer. (Akbalık, Sırma, 2013)

The Stability Program introduced in 1999 to overcome the problems of the Turkish economy failed and Turkish economy experienced crises in November 2000 and February 2001. The banking sector suffered the interest risk during November 2000 crisis and exchange rate risk during February 2001 crisis, and their balance sheets faced significant losses. Another factor contributing the losses of the banks was the macroeconomic fluctuations leading to insolvency of companies and increasing nonperforming loans of the banks. “Banking Sector Restructuring Program” was introduced in May 2001 to make the banking sector more stable, which faced considerable losses due to the experienced shock, and to overcome the problems permanently. (Bumin, 2007)

### **3. Literature Review**

There are many studies that measure the financial activities of the different methods Turkish banking sector. This is a part of the ratio analysis of these studies has been used in some of the econometric analysis. But, Turkish banking system does not include enough studies based on multi-criteria decision-making techniques. Especially later 2000-2001 crisis Turkish banking sector on the rise there is a need to measure the financial performance until today. The purpose of this study in response to this need, measuring with TOPSIS method between years of 2003-2013 active in Turkish banking sector financial performance of foreign banks.

The financial performance of the Turkish banking sector in the literature studies analyzing ; in the study Çağıl (2011) between years 2006-2010 in Turkish banking sector, with 13 public and private equity banks 11 foreign banks which established in Turkey by using ELECTRE method crisis has been the impact on the bank's performance rankings. Demireli (2010)'s study is compared banks performance which active in Turkey via TOPSIS method over the years. As a result of studies nationwide coaches widely state-owned banks which affected the local and the global financial crisis based on the data points show the performance of overseas constant fluctuations that, based on the data points show the performance of overseas constant fluctuations that a noticeable improvement in the banking sector was determined not recorded.

Bülbül ve Köse (2009)'s studies total 29 banks rated with TOPSIS method in Turkish Banking Sector which 3 state-owned, 10 established in Turkey and 6 opened branch in Turkey 2008 frame of global financial crisis. Foreign banks of established or opened branch in Turkey %50 was increased their performance in crisis year, %25 declined and %25 was not change.

Akkoç ve Vatansever (2013)'s studies using AHP and TOPSIS methods 12 banks financial performance measured. As a result of study, both methods were given similar results. Yayar ve Baykara (2012)'s studies banks in Turkey, between years 2005-2011 measured their efficiency and activity. As a result of analysis efficiency and activity are different concepts and for per period has been efficient score banks activities scores of located same years different series.

### **4. Data Set and Methodology**

TOPSIS (Technique For Order Preference By Similarity To An Ideal Solution) is a method using for multi-criteria decision-making and solving problems. By Hwang and Yoon developed in 1981 this methods guiding rule is choosing one of the nearest from negative ideal solution set and the farthest. Firstly a decision matrix is generated in the TOPSIS method. The line of the decision matrix decision points required to listed superiority, if the column is located assessment factors to be used in decision-making. A matrix is a matrix formed by the initial decision makers. Decision matrix is shown as follows:

$$A_{ij} = \begin{bmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{bmatrix}$$

The second step as; Standard Decision Matrix, utilizing the matrix A of elements and is calculated using the following formula.

$$r_{ij} = \frac{a_{ij}}{\sqrt{\sum_{k=1}^m a_{kj}^2}}$$

Accordingly, the matrix R is obtained as follows:

$$R_{ij} = \begin{bmatrix} r_{11} & r_{12} & \dots & r_{1n} \\ r_{21} & r_{22} & \dots & r_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ r_{m1} & r_{m2} & \dots & r_{mn} \end{bmatrix}$$

Firstly, assessment factors related to weight values ( $w_i$ ) determined ( $\sum_{i=1}^n w_i = 1$ ). Than, R matrix is elements and in each column related value multiples, and creates V matrix. Vmatrix shown below:

$$V_{ij} = \begin{bmatrix} w_1 r_{11} & w_2 r_{12} & \dots & w_n r_{1n} \\ w_1 r_{21} & w_2 r_{22} & \dots & w_n r_{2n} \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ \cdot & & & \cdot \\ w_1 r_{m1} & w_2 r_{m2} & \dots & w_n r_{mn} \end{bmatrix}$$

In order to establish the ideal solution set weighted assessment factors in the V matrix, namely top of column values (assessment factors related minimization of the smallest way) selected. Finding the ideal set of solutions shown in the following formula.

$$A^* = \left\{ (\max_i v_{ij} | j \in J), (\min_i v_{ij} | j \in J') \right\}$$

The negative ideal solution set is, The smallest of the column values of the weighted assessment factors in the V matrix (related assessment factor maximization way is the largest) is created by selecting. The presence of negative ideal solution set shown in the following formula.

$$A^- = \left\{ (\min_i v_{ij} | j \in J), (\max_i v_{ij} | j \in J') \right\}$$

The deviation values related to decision points obtained here Ideally Discrimination ( $S_i^*$ ) and negative ideal Discrimination ( $S_i^-$ ) is called the measure.

$$S_i^* = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^*)^2}$$

$$S_i^- = \sqrt{\sum_{j=1}^n (v_{ij} - v_j^-)^2}$$

$$C_i^* = \frac{S_i^-}{S_i^- + S_i^*}$$

Here ( $C_i^*$ ) value ( $0 \leq C_i^* \leq 1$ )  
 $C_i^* = 0$

Each decision point is the ideal solution to the relative proximity of ( $C_i^*$ ) is utilized in the calculation of the ideal and negative ideal measure of separation. Measure used here is the share of total separation ideal measure of negative discrimination measure. Calculation of an ideal solution to the relative proximity values are shown in the following formula.

) takes values in the range of ( $C_i^* = 1$ ) about the ideal solution to the decision point, ( ) indicates the absolute proximity to the negative ideal solution of the relevant decision points.

#### 4. Application

10 banks in the study was evaluated by 16 criteria TOPSIS method based on the financial performance of the 2003-2013 year were measured. Received by the base and the distribution is as follows:

	Financial Ratio	%
K1	Equity/ ((Credit+ Market + Operational Risk For Capital Adequacy)*12.5)*100	6,25%
K2	Equity/ Total Assests	6,25%
K3	(Equity-Fixed Assests) / Total Assests	6,25%
K4	Credits and Receivables (Turkish Lira) / Total Credits and Receivables	6,25%
K5	Total Deposits/ Total Assests	6,25%
K6	Credits / Total Assests	6,25%
K7	Total Credits and Receivables / Total Assests	6,25%
K8	Non Performing Loan (Gross) / Total Credits and Receivables	6,25%
K9	Liquid Assests/ Total Assests	6,25%
K10	Liquid Assests / (Deposits + Non-Deposit Resources)	6,25%
K11	Liquid Assests (Foreign Currency)/ Liabilities (Foreign Currency)/	6,25%
K12	Net Period Profit (Loss) / Total Assests	6,25%
K13	Pretax Profit / Total Assests	6,25%
K14	Net Period Profit (Loss) / Paid-in Capital	6,25%
K15	Net Interest Income After Specific Provisions / Total Assests	6,25%
K16	Interest Income/ Interest Expense	6,25%

The study consists of many mathematical calculations. Because of the importance of the plurality of rows of data and process to illustrate the practice of TOPSIS method will determine the study.

In this regard, for example, data of 2003 TOPSIS method according to how the process operation shown by step 10 is done. Accordingly, the sequence of the transaction is as follows:

The data of the 10 banks in the specified direction of 16 criteria was collected. (Table 1) These data are converted into standardized decision matrix. (Table 2)

**Table 1: The 2003 Year Data of the 10 Foreign Banks Established in Turkey**

	K1	K2	K3	K4	K5	K6	K7	K8
Alternatif Bank	0,166	0,095	0,055	0,668	0,620	0,143	0,337	0,118
Arab Turkish Bank	0,580	0,205	0,096	0,657	0,120	0,569	0,133	0,292
Burgan Bank	0,267	0,131	0,061	0,451	0,718	0,068	0,272	0,044
Citibank	0,308	0,225	0,183	0,567	0,640	0,085	0,466	0,063
Denizbank	0,182	0,108	0,043	0,467	0,649	0,075	0,319	0,061
Deutsche Bank	0,689	0,463	0,454	0,866	0,000	0,338	0,092	0,000
Finans Bank	0,127	0,134	0,054	0,440	0,634	0,166	0,459	0,035
HSBC Bank	0,326	0,248	0,184	0,541	0,588	0,050	0,512	0,020
ING Bank	0,163	0,118	0,048	0,645	0,781	0,058	0,485	0,010
Turkland Bank	0,320	0,233	0,167	0,765	0,612	0,038	0,496	0,075
	K9	K10	K11	K12	K13	K14	K15	K16
Alternatif Bank	0,219	0,287	0,112	0,011	0,015	0,057	-0,042	0,7
Arab Turkish Bank	0,300	0,436	0,299	0,021	0,037	0,313	0,075	6,3
Burgan Bank	0,453	0,575	0,412	0,013	0,023	0,153	0,057	1,5
Citibank	0,465	0,642	0,523	0,030	0,053	1,128	0,082	2,0
Denizbank	0,567	0,784	0,619	0,020	0,027	0,469	0,023	1,3
Deutsche Bank	0,752	2,225	4,513	0,215	0,326	15,043	-0,156	0,6
Finans Bank	0,251	0,313	0,302	0,027	0,040	0,360	0,043	1,6
HSBC Bank	0,372	0,584	0,418	0,027	0,051	0,342	0,103	3,9
ING Bank	0,201	0,240	0,224	0,014	0,014	0,281	0,051	1,4
Turkland Bank	0,320	0,492	0,389	0,016	0,036	0,101	0,067	2,1

**Table 2: Standardized Decision Matrix of Table 1 Data**

	K1	K2	K3	K4	K5	K6	K7	K8
Alternatif Bank	0,1101	0,1415	0,1186	0,1654	0,1669	0,2622	0,1940	0,6376
Arab Turkish Bank	0,3848	0,3054	0,2080	0,1627	0,0323	1,0392	0,0765	1,5733
Burgan Bank	0,1771	0,1952	0,1310	0,1116	0,1934	0,1247	0,1568	0,2364
Citibank	0,2045	0,3352	0,3957	0,1403	0,1723	0,1554	0,2684	0,3407
Denizbank	0,1209	0,1609	0,0927	0,1157	0,1746	0,1363	0,1836	0,3303
Deutsche Bank	0,4571	0,6898	0,9798	0,2143	0,0000	0,6176	0,0530	0,0000
Finans Bank	0,0845	0,1996	0,1171	0,1090	0,1707	0,3037	0,2646	0,1879
HSBC Bank	0,2162	0,3695	0,3982	0,1340	0,1582	0,0909	0,2949	0,1070
ING Bank	0,1079	0,1758	0,1034	0,1598	0,2102	0,1062	0,2791	0,0545
Turkland Bank	0,2123	0,3471	0,3600	0,1894	0,1648	0,0699	0,2856	0,4036
	K9	K10	K11	K12	K13	K14	K15	K16
Alternatif Bank	0,1090	0,0379	0,0051	0,1681	0,1002	0,0002	-0,3401	0,0107
Arab Turkish Bank	0,1493	0,0576	0,0136	0,3229	0,2421	0,0014	0,5985	0,0901
Burgan Bank	0,2254	0,0760	0,0187	0,1940	0,1535	0,0007	0,4589	0,0209
Citibank	0,2317	0,0848	0,0238	0,4521	0,3477	0,0049	0,6553	0,0289
Denizbank	0,2825	0,1036	0,0281	0,3039	0,1777	0,0021	0,1814	0,0191
Deutsche Bank	0,3743	0,2940	0,2051	3,2890	2,1338	0,0659	-1,2555	0,0085
Finans Bank	0,1249	0,0413	0,0137	0,4081	0,2628	0,0016	0,3421	0,0231
HSBC Bank	0,1853	0,0771	0,0190	0,4056	0,3325	0,0015	0,8240	0,0555
ING Bank	0,1003	0,0317	0,0102	0,2143	0,0918	0,0012	0,4109	0,0201
Turkland Bank	0,1592	0,0649	0,0177	0,2369	0,2380	0,0004	0,5409	0,0308

Standardized decide the outcome of the matrix "negative ideal solution set" Conversion of what has been done. The multiplication process through the 10 banks with the minimum weights of the criteria are made for. (Table 3)

**Table 3: Negative Ideal Solution Set**

	K1	K2	K3	K4	K5	K6	K7	K8
Weight Value Specified	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Min	0,0845	0,1415	0,0927	0,1090	0,0360	0,0699	0,0530	0,0590
Negative Ideal Solution Set	0,5280	0,8845	0,5796	0,6810	0,2250	0,4368	0,3310	0,3688
	K9	K10	K11	K12	K13	K14	K15	K16
Weight Value Specified	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Min	0,1003	0,0317	0,0051	0,1681	0,0918	0,0002	0,1840	0,0085
Negative Ideal Solution Set	0,6268	0,1982	0,0317	1,0506	0,5736	0,0016	1,1500	0,0529

Standardized decision matrix and the weight value specified criteria decisions are reached by multiplying matrix data. (Table 4)

**Table 4: The Weight Value Specified Criteria Decisions**

	K1	K2	K3	K4	K5	K6	K7	K8
Alternatif Bank	0,6880	0,8845	0,7413	1,0334	1,0429	1,6389	1,2123	3,9851
Arab Turkish Bank	2,4048	1,9087	1,2998	1,0170	0,2018	6,4951	0,4781	9,8329
Burgan Bank	1,1071	1,2197	0,8188	0,6973	1,2086	0,7793	0,9799	1,4773
Citibank	1,2782	2,0950	2,4729	0,8772	1,0766	0,9710	1,6773	2,1295
Denizbank	0,7558	1,0056	0,5796	0,7232	1,0915	0,8521	1,1473	2,0644
Deutsche Bank	2,8566	4,3110	6,1239	1,3395	0,0000	3,8600	0,3310	0,0000
Finans Bank	0,5280	1,2477	0,7320	0,6810	1,0667	1,8983	1,6535	1,1741
HSBC Bank	1,3510	2,3091	2,4889	0,8374	0,9889	0,5680	1,8433	0,6687
ING Bank	0,6742	1,0987	0,6462	0,9986	1,3135	0,6639	1,7442	0,3408
Turkland Bank	1,3268	2,1695	2,2498	1,1838	1,0300	0,4368	1,7849	2,5224
	K9	K10	K11	K12	K13	K14	K15	K16
Alternatif Bank	0,6814	0,2367	0,0317	1,0506	0,6265	0,0016	-2,1255	0,0667
Arab Turkish Bank	0,9334	0,3597	0,0849	2,0181	1,5130	0,0086	3,7404	0,5632
Burgan Bank	1,4085	0,4750	0,1170	1,2128	0,9594	0,0042	2,8678	0,1307
Citibank	1,4483	0,5300	0,1487	2,8255	2,1730	0,0309	4,0954	0,1808
Denizbank	1,7655	0,6475	0,1759	1,8993	1,1108	0,0128	1,1336	0,1194
Deutsche Bank	2,3395	1,8372	1,2819	20,5564	13,3361	0,4118	-7,8468	0,0529
Finans Bank	0,7806	0,2582	0,0859	2,5506	1,6428	0,0099	2,1380	0,1447
HSBC Bank	1,1581	0,4819	0,1189	2,5347	2,0779	0,0094	5,1501	0,3471
ING Bank	0,6268	0,1982	0,0635	1,3397	0,5736	0,0077	2,5683	0,1257
Turkland Bank	0,9953	0,4059	0,1105	1,4806	1,4877	0,0028	3,3806	0,1925

The maximum value of each criterion weighted decision matrix, criteria for the "ideal solution sets" and provide what the achievement. (Table 5)



**Table 5: Ideal Solution Set**

	K1	K2	K3	K4	K5	K6	K7	K8
<b>Weight Value Specified</b>	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Min	0,0845	0,1415	0,0927	0,1090	0,0360	0,0699	0,0530	0,0590
<b>Negative Ideal Solution Set</b>	<b>0,5280</b>	<b>0,8845</b>	<b>0,5796</b>	<b>0,6810</b>	<b>0,2250</b>	<b>0,4368</b>	<b>0,3310</b>	<b>0,3688</b>
	K9	K10	K11	K12	K13	K14	K15	K16
<b>Weight Value Specified</b>	6,25	6,25	6,25	6,25	6,25	6,25	6,25	6,25
Min	0,1003	0,0317	0,0051	0,1681	0,0918	0,0002	0,1840	0,0085
<b>Negative Ideal Solution Set</b>	0,6268	0,1982	0,0317	1,0506	0,5736	0,0016	1,1500	0,0529

Weighted decision matrix values, the ideal solution is removed from the set value. The squared of those values. (Table 6)

**Table 6: (Weighted Decision Matrix Values - Ideal Solution Set)<sup>2</sup>**

	K1	K2	K3	K4	K5	K6	K7	K8
Alternatif Bank	4,703	11,740	28,973	0,094	0,073	23,582	0,398	34,196
Arab Turkish Bank	0,204	5,771	23,272	0,104	1,236	0,000	1,864	0,000
Burgan Bank	3,061	9,556	28,145	0,412	0,011	32,670	0,745	69,815
Citibank	2,491	4,911	13,330	0,214	0,056	30,516	0,028	59,342
Denizbank	4,413	10,926	30,740	0,380	0,049	31,844	0,484	60,350
Deutsche Bank	0,000	0,000	0,000	0,000	1,725	6,944	2,287	96,686
Finans Bank	5,422	9,384	29,072	0,434	0,061	21,130	0,036	74,974
HSBC Bank	2,267	4,007	13,214	0,252	0,105	35,130	0,000	83,983
ING Bank	4,763	10,319	30,006	0,116	0,000	34,003	0,010	90,100
Turkland Bank	2,340	4,586	15,009	0,024	0,080	36,702	0,003	53,443
	K9	K10	K11	K12	K13	K14	K15	K16
Alternatif Bank	2,749	2,562	1,563	380,477	161,534	0,168	52,934	0,247
Arab Turkish Bank	1,977	2,183	1,433	343,669	139,786	0,163	1,987	0,000
Burgan Bank	0,867	1,856	1,357	374,177	153,184	0,166	5,209	0,187
Citibank	0,794	1,709	1,284	314,385	124,616	0,145	1,112	0,146
Denizbank	0,329	1,415	1,223	348,088	149,460	0,159	16,132	0,197
Deutsche Bank	0,000	0,000	0,000	0,000	0,000	0,000	168,919	0,260
Finans Bank	2,430	2,493	1,430	324,209	136,735	0,162	9,072	0,175
HSBC Bank	1,396	1,837	1,353	324,782	126,748	0,162	0,000	0,047
ING Bank	2,933	2,686	1,484	369,284	162,882	0,163	6,666	0,191
Turkland Bank	1,807	2,049	1,372	363,888	140,385	0,167	3,131	0,137

Collected on the basis of found and taken root of the square root value of the bank. Thus, the ideal would be to have the square root value. (Table 7)

**Table 7: Ideal Square Values**

	Total Ideal	Total Square
Alternatif Bank	705,99	26,57
Arab Turkish Bank	523,65	22,88
Burgan Bank	681,42	26,10
Citibank	555,08	23,56
Denizbank	656,19	25,62
Deutsche Bank	276,82	16,64
Finans Bank	617,22	24,84
HSBC Bank	595,28	24,40
ING Bank	715,61	26,75
Turkland Bank	625,12	25,00

Negative ideal set value measurements made in the article is removed from the weighted decision matrix and the squared value of the transaction. In other words, the "f" ideal square root values in the matter, where the ideal set of measurements made with negative values. (Table 8)

**Table 8: Negative Ideal Square Values**

	Total Negative Ideal	Total Negative Square
Alternatif Bank	30,19	5,49
Arab Turkish Bank	160,06	12,65
Burgan Bank	8,01	2,83
Citibank	28,69	5,36
Denizbank	8,21	2,86
Deutsche Bank	698,65	26,43
Finans Bank	10,84	3,29
HSBC Bank	31,82	5,64
ING Bank	6,45	2,54
Turkland Bank	21,03	4,59

Ideal found negative square root values, divided by the square root of the sum of the negative ideal value by the square root of the ideal value. As a result, the bank's performance score is reached. (Table 9)

**Table 9: Performance Point**

Negative Ideal Square	Ideal Square	Name of Bank	Performance Point
5,49	26,57	Alternatif Bank	0,17
12,65	22,88	Arab Turkish Bank	0,36
2,83	26,10	Burgan Bank	0,10
5,36	23,56	Citibank	0,19
2,86	25,62	Denizbank	0,10
26,43	16,64	Deutsche Bank	0,61
3,29	24,84	Finans Bank	0,12
5,64	24,40	HSBC Bank	0,19
2,54	26,75	ING Bank	0,09
4,59	25,00	Turkland Bank	0,15

Performance with minor rank greater than the value of the banks with the highest score measured performance ranking is done according to the TOPSIS method by showing the best performance. (Table 10)

**Table 10: Ranking by Performance Point of 2003 Year**

Bank Name	Performance Point	Ranking
Deutsche Bank	0,61	1
Arab Turkish Bank	0,36	2
HSBC Bank	0,19	3
Citibank	0,19	4
Alternatif Bank	0,17	5
Turkland Bank	0,15	6
Finans Bank	0,12	7
Denizbank	0,10	8
Burgan Bank	0,10	9
ING Bank	0,09	10

**Table 11: Ranking of Financial Performance According To the TOPSIS Method for Foreign Banks of Established in Turkey between 2003-2013 Years**

	2003		2004		2005		2006	
	Point	Ranking	Point	Ranking	Point	Ranking	Point	Ranking
Alternatif Bank	0,17	5	0,24	3	0,22	8	0,29	6
Arab Turkish Bank	0,36	2	0,48	2	0,34	3	0,38	4
Burgan Bank	0,10	9	0,11	10	0,12	10	0,27	8
Citibank	0,19	4	0,2	4	0,49	2	0,35	5
Denizbank	0,10	8	0,14	7	0,22	7	0,28	7
Deutsche Bank	0,61	1	0,55	1	0,57	1	0,52	2
Finans Bank	0,12	7	0,14	6	0,29	6	0,6	1
HSBC Bank	0,19	3	0,17	5	0,30	4	0,39	3
ING Bank	0,09	10	0,12	8	0,29	5	0,13	10
Turkland Bank	0,15	6	0,12	9	0,16	9	0,24	9
	2007		2008		2009		2010	
	Point	Ranking	Point	Ranking	Point	Ranking	Point	Ranking
Alternatif Bank	0,41	5	0,28	5	0,28	7	0,21	7
Arab Turkish Bank	0,18	8	0,09	9	0,45	2	0,69	2
Burgan Bank	0,15	9	0,09	8	0,12	9	0,18	8
Citibank	0,71	2	0,31	3	0,29	6	0,59	4
Denizbank	0,25	6	0,27	6	0,43	3	0,6	3
Deutsche Bank	0,77	1	0,87	1	0,83	1	0,17	9
Finans Bank	0,45	4	0,28	4	0,33	4	0,78	1
HSBC Bank	0,48	3	0,33	2	0,31	5	0,54	5
ING Bank	0,19	7	0,17	7	0,23	8	0,25	6
Turkland Bank	0,07	10	0,05	10	0,08	10	0,14	10
	2011		2012		2013			
	Point	Ranking	Point	Ranking	Point	Ranking		
Alternatif Bank	0,67	1	0,44	2	0,41	5		
Arab Turkish Bank	0,46	4	0,25	3	0,63	3		
Burgan Bank	0,17	8	0,11	9	0,24	9		
Citibank	0,28	6	0,20	5	0,83	1		
Denizbank	0,56	2	0,20	6	0,43	4		
Deutsche Bank	0,28	7	0,80	1	0,32	7		
Finans Bank	0,54	3	0,21	4	0,65	2		
HSBC Bank	0,31	5	0,12	8	0,24	8		
ING Bank	0,14	9	0,13	7	0,33	6		
Turkland Bank	0,07	10	0,07	10	0,22	10		

## 5. Conclusion

Turkish banking system is undergoing a process in which the foreign capital since the last period of the Ottoman Empire. Founded in 1856, this process started with the Anglo-French joint capital of the Ottoman Bank, has become the nationalization process of establishing the new Republic of Turkey. Share in the sector until the 1980s with the liberalization of the share of foreign banks, which is seen that in 10% to 35% off.

Foreign capital to host countries' banking systems, and integrated with the growing globalization is accepted as a normal situation. Banking systems, especially for developing countries to developed countries, banks are dynamic markets. Turkey comes at a particularly attractive to credit and financial fields with foreign banks is emerging in terms of foreign trade. Turkish banking system, the importance of the need with its severe crisis and inadequate legislation have not yet started a new transport sector. Therefore, further improvement of the regulatory and supervisory mechanism gradually, to avoid possible crisis with a stable economic growth is expected to result in the growth of the banking system.

Turkish banking foreign capital entering the system based on the measurement of the financial success of the banks in this study, established in Turkey, as determined by foreign banks aimed to measure the financial performance between the sixteen financial ratio based on 2003-2013 years. It should be noted that this study was conducted with 16 major and most commonly used financial ratios. These rates on the financial performance of banks in case of increasing the number of ranking livable small changes though. This study aims, between the years 2003-2013 is to analyze the overall financial performance rankings of foreign banks in Turkey. Equally effective to reduce the subjective nature of the points used in the analysis of financial ratios included in the study were given.

In this study, the financial performance was measured according to one of the multiple decision matrix TOPSIS method for doing a versatile measurements. Between the years 2003-2013 based on the measured results with 16 financial ratios financial performance; Deutsche Bank's financial performance from 2003 until 2009 was the highest in the Turkish banking system foreign banks. However, the impact of the global financial crisis in 2008, the bank has declined to the 10th in 2010. Again, according to the results of the study, Turkland Bank and Burgan Bank; Financial performance in Turkey between the years 2003-2013 were identified as the lowest foreign banks. 2008 adversely affected by foreign banks from the global financial crisis; HSBC, Deutsche Bank and Citibank; positively affected by the banks; Arab Turkish Bank has been Denizbank and Finansbank. ING Bank, Burgan Bank, the Bank Turkland and Alternatif Bank is located in the same sequence as the average financial performance after the crisis. According to these results, affected by the 2008 global financial crisis foreign banks, the bank strategy and vary according to the situation where the host country. Located in the same country as a result of analyzes, which are subject to the same legal process, and it was observed that the same systemic risks of foreign banks have different financial performance from year to year. Here, it is possible to say that the bank crisis in the strategic decisions taken by the level of financial performance and risk taking behavior.

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