

## THE EFFECTS OF FOREIGN BANK PARTICIPATION ON THE TURKISH BANKING SYSTEM AND CRISIS

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### ABSTRACT

*There is an assertion that the participation of foreign banks in emerging markets is often thought to improve overall bank soundness. Therefore, if the share of foreign banks in a national banking system is large, the system will quickly overcome both financial or currency crises, and quickly recover itself. Since Turkey has been experienced mentioned crises, the aim of this study is to reveal if the assertion is valid for Turkey. Our expectation from the study using VAR method is to reach a conclusion that countries with large market share of foreign banks have safely passed the crises by virtue of foreign banks' best management policies. The test results indicate that foreign banks have more positive effect for helping TBS capital structure; foreign bank participation did not cause any decline in loans and last one, after crisis, existence of foreign banks worsens TBS' liquidity in interest and exchange rate shocks.*

### INTRODUCTION

In the second half of the 1990s, foreign banks significantly increased their ownership shares of banking systems in emerging markets. The participation [rate] of foreign banks in Turkish Banking Sector, (TBS), has increased in recent years. This tendency, in today's globalization which has been worked through capital movements, has been recently observed in both developing and old-western economies. Since June 1980, Turkish financial markets have been substantially opened up and liberalized through the capital account reform in 1989. Of the 42 banks in 1980, only four were foreign in the TBS. However, the new regulatory regime in 1980-1989 attracted a great deal of banks, both Turkish and foreign, and sectoral concentration decreased (Denizer 1999: 2-3). By 1990, there were 23 foreign banks in the system, which has 19 new entries. As of August 21, 2006, the number of foreign banks is 13 of 48 in TBS. Market share of foreign owned banks as of total assets in percentage has changed in time: while it is 2.4 % in 1996, it increases to 5.3% in 1999, and it starts to decline as far as 2.8% in 2003 and increase again to 3.4% (Hagmayr and Haiss May 2006:11 and see 4th table in the Appendices). With prospective acquisition and merger, the participation of foreign banks in the TBS seems to raise much in near future.

The aim of this study is to particularize whether the participation of foreign banks in national banking system has advantages and disadvantages in terms of both the system and economy. The claim is that when the market share of foreign banks in the banking system of developing countries expands, the system get through the financial or currency crises promptly,

or it escapes from the crises with slight injuries. To test this assertion, capital adequacy ratio, liquidity ratio, and growth rate of loans are used to the shocks of selected macroeconomic variables.

### **WHAT ARE THE REASONS OF PARTICIPATION OF FOREIGN BANKS IN THE TURKISH BANKING SYSTEM?**

In recent years, foreign banks have more willingness to increase their operations in Turkey. After the crisis of February 2001, Demirbank was sold to HSBC (see 3rd Table in the Appendices). From February 2005, fifty percent of Turkish Economy Bank, Disbank and Yapi Kredi Bank have been respectively sold, in a row, to BNP Paribas from France, Fortis (see 3rd Table in the Appendices), the consortium of Koc Financial Services and UniCredito. Additionally, Sitebank, fifty percent of Garanti Bank, C Bank, Finansbank, Tekfenbank, Denizbank, Sekerbank have respectively been sold to Novabank from Greece, Bank Hapoalim from Israil, NBG from Greece, EFG from Greece, Dexia, and Bank Turan from Kazhakistan. Oyakbank, Akbank, and state-owned banks are projected for selling to foreign financial companies or banks. According to the figures in the first table in the Appendices, foreign banks participation rate to the TBS in terms of assets, deposits and loans are between minimum rate of 2.5% and maximum rate of 7.5% that can be considered small rate. Figures in 2nd Table in the Appendices say that capital asset ratios has increased after the crises but non-performing loans has decreased and liquidity has looked up in the TBS.

The various reasons for the intentions of foreign banks to incrementally participate in the TBS as follows:

1. After applied/to be applied reforms toward remedying the economical/social/political structure, pessimistic expectation about the Turkey's future prevailed among foreigners.
2. Positive thinking about steady growth of economy, and about continuation of stability in economical and political conditions.
3. Turkey received a date for the accession into the European Union.
4. Turkey has a higher population growth rate and will gradually have higher per-capita income; consequently it will potentially be an emerging market for banking activities as it was the case in many sectors.
5. In the frame of globalized world, Turkey could not absent itself from foreign banks, because Turkey has desired to take its part in global economy.
6. Since the growth rate of European economies has been slowed down, and banks in the area of EU has a lower profit margins, Turkey has been alluring for foreign banks, by buying off either completely or partially.

In sum, last improvements in the TBS also have a deep impact on the decision of foreign investors. The consequences of re-structuring the system have increased its self- trust. Besides,

the improvement in the capital structure of banks in the TBS and increase in their profits drew the attention of foreign banks. Therefore, the attractiveness of Turkey grows rapidly for foreign banks that want to diversify their investment options and to raise their profitability. The crucial points of the discussion are: (i) in what degree foreign banks/capital will dominate in the TBS, (ii) whether or not foreign banks will seriously concern the opportunity of Turkish economy, (iii) whether or not they will supply loans to Small and Medium Enterprises, (SME's). Economists state contradictory opinions about issue in their speech and columns. As for the question of why foreign bank participation rate is higher in developing or emerging markets than developed countries<sup>1</sup>, it seems that the degree of foreign banks' participation rate to the national banking system is circumspect.

Some of the economists argue that there is no need to confinement of foreign banks' involvement to the TBS because of the conditions in perfect competitive market that allows the dominance of foreign banks throughout the whole system, if there is a demand for the existence of foreign banks in the system<sup>2</sup>. However, a number of economists who advocate some restrictions on the dominance of foreign banks in the system are not minority<sup>3</sup>. Dichotomy seems to be continuous. When we take a look at other countries experiences, different approaches and applications draw attention. For instance, despite of some differences among countries, in the old western countries' banking system, experiencing a big transition in last 25 years, dominance of foreign banks in their national banking system has reached up to 90%. However, while Italy and France support their banks to participate in other countries banking system, at the same time they do not want similar involvements to occur in their own banking system (see 4<sup>th</sup> and 5<sup>th</sup> Table in the Appendices).

Mexico, which has 90% of foreign bank dominance, has needed to design new regulations on foreign banks' activities after seeing their adverse effects especially on loan supply. Big foreign banks have densely inclined to increase in size via buying off Turkish banks, which have a wider range of branch network. If Turkey keeps up with the international standards and control foreign banks regarding these standards, both Turkish economy and people can take advantages of it.

### **ARE THERE BENEFICIAL ROLES OF FOREIGN BANKS?**

When we look at developments in the figures of balance sheet of foreign banks in developing countries and the share of foreign banks in total assets of banking system of Latin American countries, we see that in the mid of 1990s foreign banks had shared of 30% in total assets in Chili, 20% in Argentina, between 10-20% in Colombia-Peru-Brazil—it is less than 10% in other countries. At the end of 2002, foreign banks have become controlling 70% of assets in Mexico,

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<sup>1</sup> According to Yigit Bulut's article in Radikal newspaper on August 24<sup>th</sup> 2006, foreign bank participation rate currently is 82% in Mexico, 48% in Argentina, 42% in Chili, 47% in Peru, 65% in both Poland and Macaristan, 95% in Chech Republic, 93% in Slovia, 100% in Estonia while the rate is 19% in Austria and France, 17% in Denmark, 10% in Spain, 8% in Italy, 5% in Germany, and 20% in Grace.

<sup>2</sup> Secretary of State, M. Ali Babacan, can be viewed as a defender of this thought.

<sup>3</sup> Vice President, Abdullatif Sener, stated that foreign bank participation rate must be limited up to 20%.

50% percent in Chili-Peru-Argentina. This situation in Brazil increased from 10% to 26%. It is below 10% for Bolivia, Guatemala, Costa Rica.

Another point worth to mention, foreign banks has become institutions guiding the national financial system of many countries, and at the end of third quarter of 2003, foreign banks that have headquarters in developed countries have loaned about \$1.45 trillion to developing countries. While 60% of this loan in foreign exchange has been received in the form of domestic borrowing from either overseas loan or foreign financial institutions operating in national financial system, the rest of it has been loaned in national money from either foreign banks having branches in the country or foreign banks merged with domestic banks.

According to traditional view, foreign banks have followed their customers. In this view, globalized national banking system results in huge increase in non-financial foreign direct investment. However, though there is a relationship between non-financial FDI and participation of foreign banks, it seems that causality between them is not clear. When we focus on the studies on participation of foreign banks in developed and developing countries, there is a little evidence on the theory of that foreign banks has followed their customers (see Seth, Nolle, and Mohanty 1998 and Miller and Parkhe 1998). On the other hand, in an alternative view, foreign banks have been involving in countries that they see profit opportunities, well-functioning institutional structure and macroeconomic situation.

According to some studies, foreign banks have preferred to participate in countries which have (i) higher growth rate, (ii) lower inflation rate, (iii) large capitalization in capital markets, and (iv) less effective national banking system. Namely, they have preferred markets not only for following their customers but also for seeing profit advantages over national potential customers (for instance, Fortis bank wants to provide more loan to SME's) and also, for having less regulations and restrictions.

Whatever reasons of participation of foreign banks could be, we can count some beneficial roles of foreign banks, as following:

1. helping the development of national financial markets ,
2. decreasing fluctuations in loan supply,
3. causing less crowding out effect in national financial sector,
4. considering international crises more seriously,
5. increasing capital inflows and competition,
6. providing modernization and thus, increasing financial system efficiency,
7. enabling more regulations in financial system (Mexico could be a good example for it),
8. improving payment system,
9. bringing new technologies, new risk management and monitoring techniques into national financial system,
10. enabling more mobilized national savings,
11. increasing resource allocation,
12. bringing better audit firms and thus, enabling more information about firms and financial intermediaries,
13. providing positive effect on the growth of economies with the well-definition of property rights, and with well-functioning regulatory framework.

Even though there are advantages mentioned above, unfavorable sides should also be considered:

1. Leaving out country very fast in time of crisis, and therefore, causing sudden capital outflows,
2. As long as the share of foreign banks in national banking system increases:
  - a. It can increase a crowding out effect on national banking activities,
  - b. Since foreign banks mostly work with big international companies, national banks' loan supply may decrease.

Most importantly, as market share of foreign banks increases, incumbent government's management power over economy and power of direction of markets might decrease.

### **RELATIONSHIP BETWEEN FOREIGN BANKS AND THEIR EFFECTIVENESS**

Levine (1996) states that participation of foreign banks must be along with (i) becoming widespread of new technologies, (ii) better resource management, and (iii) higher financial efficiency. In this way, there are expectations that foreign banks will bring more competition to national banking system, and/or they will bring more efficiency with their imitation by national banks.

Studies related to developed countries indicate that foreign banks are generally at the same level of efficiency or at less than of it, when it is compared to the national competitors. However, this situation is different for developing countries: (i) their profit rate is higher, (ii) their interest rate margin (i.e., net interest income/total assets) is lower, and (iii) they have higher overhead cost.

In the literature, performance criteria used to measure the efficiency of banks are (i) over-head cost, (ii) net interest income, and (iii) return on assets. Based on these criteria, when we evaluate Latin American countries (such as, Brazil, Chile, Colombia, Mexico, Peru, and Honduras), foreign banks operated with lower net interest margin and hence, earned low profit rate as much same as national banks did. Foreign banks also have better risk management, lower loan reserve ratio for non-performing loans. On the other hand, Levy-Yeyati-Micco (2003) study indicates that foreign banks in Latin America have operated in a dicier way than national banks since they have higher leverage ratio, and much diversified asset returns.

As a result, findings does not reach to a certain end about whether the existence of foreign banks in national banking system has helped increasing efficiency of national banks and hence, whether they have caused improvements in whole financial system. In the study of Claessens, Demirguc-Kunt and Huizinga (1998), which is done for 7900 banks in 80 countries of developed and of developing, foreign banks' existence have decreased profit margins of national banks by increasing competition level and thus, has decreased net interest margins. In opposition, another study by Levy-Yeyati and Micco (2003) shows different results: (i) foreign bank participation decreased competition level and provided higher return per asset, (ii) earlier result has caused a decline in risk management of national banks (not for foreign banks).

## **RELATIONSHIP BETWEEN FOREIGN BANKS AND SHARP CHANGES IN NATIONAL LOAN SUPPLY**

The question of “Does foreign banks causes sharp fluctuations in national loan supply?” is important, because any increase (or decrease) in credits will affect real economy positively (or negatively). Discussions over the question is bilateral: first side defends that foreign banks have positive effects on national loan supply because they are foreign banks operating in international area, and have come from developed countries, and have to oblige their own countries’ law, and have been operating in global scope, and have more diversified assets in their balance sheets (for details see Galindo, Micco, and Powell 2004). Therefore, foreign banks have lower interest rate risk, and lower cost of funding. They lower possibility of sudden withdraws of deposits by their depositors during crisis. Second side defends that since foreign banks have lower cost of withdrawing than national banking system when foreign banks compared to domestic banks, they can be very sensitive against shocks arising during crisis and hence, can suddenly leave country. This situation, of course, can damage national economy by decreasing trust to system and thus, by capital outflows. Additionally, foreign banks can possibly transfer the influence of shocks in their own country to national economy (for supporting empirical evidences see Peek and Rosengren 2000).

As foreign banks carry lower risk than national banks because of having more diversification in their assets and liabilities, (i) foreign banks can be a guide to national competitors by showing more reliable banking activities. They help decreasing fluctuations in national loan supply in a way of providing credit at lower cost with creation of more competitive condition. (ii) From another point of view, foreign banks will mainly respond to contingent shocks in national demand for credit since they prefer working with more reliable foreign businessmen/firms. If we review a study in this topic, Galindo, Micco and Powell (2004) states that foreign banks tended to balance the shock/fluctuations in national loan supply because of a decline in deposits. But, they also states that when there was a credit demand changes due to changes in the potential opportunities of business in national economy, foreign banks possibly tended to create more fluctuations in credit supply.

## **DATA AND METHODS**

The sample ranges from 1992.04 to 2005.04. This period is chosen because: (1) quarterly data are consistently available in this period; however, 2006 and 2007 year data which covers intensive participation of foreign bank in to the TBS that might cause sharp deviation in the data of the 1992.04-2005.04, has been ignored to reach robust test results, and (2) Turkey’s financial market development strategy has efficiently influenced the Turkish economy in the 1990s. The main sources of data for the Turkish economy and the Turkish banking sector are the CBRT, the Turkish Bank Association, the Banking Regulation and Supervision Agency, BRSA.

The methodology used here has been explored by Bernanke, Gertler and Gilchrist (Feb. 1996), Bernanke and Gertler (Fall 1995), Ramey (Dec.1993), Eichenbaum and Evans (Nov.1995), Christiano, Eichenbaum, and Evans (1996), Rogers (1999), McMillin (1996), Yulek (January 1998), Alper and Saglam (March-April 2001), and Azis and Thorbecke (Sept. 2002). Because the indicators of the Turkish economy and the Turkish banking sector may be

endogenous, especially, interest and exchange rates, it is difficult to infer how changes in these variables affect other variables. To solve this simultaneous causality problem it is necessary to find components of exchange rates and interest rates that are exogenous to the state of economy. These can be obtained by employing a vector auto regression.

The tests are conducted by editing the limited data to cover whole picture of what has occurred in the TBS, as follows:

- We use the data in iterative testing for two categories of the TBS, which are (a) banking group including foreign banks, (b) banking group excluding foreignbanks.
- Two categories aimed to reveal different aspect of the responses in the TBS to the socks in regard of before and after the crises.

Each set of tests shows impulse response functions for variables selected. Variables in the VAR include the overnight (or interbank) interest rate (INTERRATE) being the proxy—FFR—for the Turkish monetary policy stance; the percentage change in nominal exchange rate (PEXCRAT) that has been an intermediate target to reach the final goal; percentage change in domestic borrowing stocks (PDBS) that indicates changes in fiscal policies [and proxies for fiscal shocks]; the growth rate of real loans of the two categories which are for whole banking system, (TGLOANS) and for whole banking system excluding foreign banking group, (T\_FGLOANS); the capital-asset ratio of the two categories which are for whole banking system, (TRAT01) and for whole banking system excluding foreign banking group, (T\_FRAT01); and the liquidity ratio of two categories which belongs to whole banking system, (TGLIQRAT01) and for whole banking system excluding foreign banking group, (T\_FLIQRAT01).

These variables, reflecting the best characteristics of the TBS performance, used in the test are chosen on the grounds of the acknowledgement in the related studies of Alper and Onis (March 2002), Berument and Gunay (December 2001), Boratav et al. (1995), Celebican (Oct. 1998), Ozatay and Sak (May 2002), and Yulek (Jan. 1998). Besides, the ordering of selected variables in the VAR test has been determined using empirical information provided from these articles.

The vector auto regression (VAR) is commonly used for forecasting systems of interrelated time series and for analyzing the dynamic impact of random disturbances on the system of variables. The VAR approach sidesteps the need for structural modeling by modeling every endogenous variable in the system as a function of the lagged values of all of the endogenous variables in the system.

The mathematical form of a VAR is:

$$y_t = A_1 y_{t-1} + \dots + A_p y_{t-p} + Bx_t + \varepsilon_t \quad (1)$$

where  $y_t$  is a  $k$  vector of endogenous variables,  $x_t$  is a  $d$  vector of exogenous variables,  $A_1, \dots, A_p$  and  $B$  are matrices of coefficients to be estimated, and  $\varepsilon_t$  is a vector of innovations that may be contemporaneously correlated with each other

but are uncorrelated with their own lagged values and uncorrelated with all of the right-hand side variables. Note that the assumption that the disturbances are not serially correlated is not restrictive because any serial correlation could be absorbed by adding more lagged y's.

In structural VAR, equations will turn to following;  $X_t = [B_0] + [B(L)] X_{t-1} + e_t$ . Thus, impulse response function will be as below:

$$\begin{bmatrix} \text{interrate} \\ \text{pexcrat} \\ \text{rpsbr\_rgnp} \\ \text{(xrat01\_yrat01} \\ \text{or} \\ \text{grxloan\_gryloan)} \\ \text{aninfrate} \end{bmatrix} = \begin{bmatrix} a11 & \dots & b15 \\ a21 & \dots & b25 \\ a31 & \dots & b35 \\ a41 & \dots & b45 \\ a51 & \dots & b55 \\ a61 & \dots & b65 \end{bmatrix} \begin{bmatrix} \varepsilon 1t \\ \varepsilon 2t \\ \varepsilon 3t \\ \varepsilon 4t \\ \varepsilon 5t \\ \varepsilon 6t \end{bmatrix}$$

To analyze the short-term relationship among the variables, non-restricted VAR is used. VAR is a regular smallest square method that is regressed up on both the lagged values of each own variable and of other variables. Impulse Response Functions, IRFs, indicate the expected response of each variable in the model to the one-unit standard shocks. In the ordering of VAR, it is assumed that each variable is affected by variables coming before itself in one-month; however, in the same time interval, it is also assumed that variables after coming itself does not have any affect on it. Each variable in the model has a four-quarter lag (see Table 1).

Before using the VAR model for an empirical analysis, it has become important to have stationary variable otherwise many econometrical problem may arise. Non-stationary time series data does not carry out the feature of returning its average values so that average and variance for this time series doe not have any econometrical meanings. To have stationary time series data, we have followed the procedure of taking first, second, third and etcetera difference to reach stationary variable. In ADF test results to indicate whether or not variables have stationary, DTRAT01, DT\_FRAT01 and DT\_FLIQRAT01 variables have been transformed to stationary variable by taking first difference (i.e., D stands for showing first difference). Following stationary test, we also run Johansen Cointegration test to determine if there is a long-term relationship among variables and the test results did not show a long run relationship among variables.

In calculating impulse-response functions, the ordering of the variables in a VAR test matters. The variables ordered prior are assumed to affect within the quarter the variables ordered later but are not themselves affected by them. With different lagged values (see Table 1) of the endogenous variables, the VAR ordering [based on the acknowledgement in the referred articles] and VAR functions over four variables for each iteration will be as follows:

|                |          |      |              |
|----------------|----------|------|--------------|
| (1) DINTERRATE | PEXCRATE | PDBS | DTRAT01      |
| (2) DINTERRATE | PEXCRATE | PDBS | TLIQRAT01    |
| (3) DINTERRATE | PEXCRATE | PDBS | TGLOANS      |
| (4) DINTERRATE | PEXCRATE | PDBS | DT_FRAT01    |
| (5) DINTERRATE | PEXCRATE | PDBS | DT_FLIQRAT01 |
| (6) DINTERRATE | PEXCRATE | PDBS | T_FGLOANS    |

**Table 1. Lag Length Selected by Information Criterion for VAR**

|     | Maximum Lag Length | LR | FPE | AIC | SC | HQ | Lag Length used for VAR |
|-----|--------------------|----|-----|-----|----|----|-------------------------|
| (1) | 0-4                | 3  | 1   | 1   | 1  | 1  | 1 3                     |
| (2) | 0-4                | 2  | 2   | 2   | 1  | 2  | 1 2                     |
| (3) | 0-4                | 2  | 2   | 2   | 1  | 2  | 1 2                     |
| (4) | 0-4                | 3  | 3   | 3   | 1  | 3  | 1 3                     |
| (5) | 0-4                | 3  | 3   | 3   | 3  | 3  | 1 3                     |
| (6) | 0-4                | 2  | 2   | 2   | 1  | 2  | 1 2                     |

When we glance at the ordering of the variables in the model, there is no clear ordering method: it is considered either the economical characteristics of analyzed country and it is made some assumptions up on economic theory or it is considered previous studies related to the topic. Besides, in general rule, we can stick to applying a method of the interaction of each variable in an economic system of a country. To do this, we also pay attention to order variables from most exogenous to most endogenous in the interaction of them. In short, the order of variables in the study bases on the empirical cases in the related studies mentioned above.

## EMPIRICAL RESULTS

For 1992.4-2001.1, Tables 2 and 3 show that foreign banks' capital is deteriorated less than domestic counterparts, in response to an increase in interest rates. In other words, excluding foreign banks from TBS worsens the situation— existence of foreign banks enables that TBS has a better capital adequacy.

### For 1992.04-2001.01 (Excluding the Crisis Period)

According to statistically significant figures in Table 2 and 3, capital adequacy ratio of whole banking system excluding foreign banks responds to shocks in interest rates more than that of whole banking system. Capital adequacy ratio of whole banking system excluding foreign banks responds to shocks in domestic borrowing stocks more than that of whole banking system.

**Table 2. The Summary of the IRFs of TBS (Including Foreign Banking Group)**

|                     | Shocks to           |           |          |               |                          |        |
|---------------------|---------------------|-----------|----------|---------------|--------------------------|--------|
|                     |                     | Interrate |          | Exchange Rate | Domestic Borrowing Stock | Itself |
| <i>Responses of</i> |                     |           |          |               |                          |        |
| <i>Trat01</i>       | Period(s)           | 1.        | 4.       | --            | 4.                       | --     |
|                     | Point Estimation(s) | -0.450013 | 0.688457 | --            | 0.779786                 | --     |
|                     | Standard Error(s)   | 0.18534   | 0.31929  | --            | 0.39445                  | --     |
| <i>Tliqrat01</i>    | Period(s)           | --        | --       | 2.            | --                       | --     |
|                     | Point Estimation(s) | --        | --       | 0.980277      | --                       | --     |
|                     | Standard Error(s)   | --        | --       | 0.57836       | --                       | --     |
| <i>Tgloans</i>      | Period(s)           | 4.        | 3.       | --            | --                       | --     |
|                     | Point Estimation(s) | 2.844390  | 2.602872 | --            | --                       | --     |
|                     | Standard Error(s)   | 1.93596   | 1.78982  | --            | --                       | --     |

**Table 3. The Summary of the IRFs of TBS (Excluding Foreign Banking Group)**

|                     | Shocks to           |           |          |               |                          |        |
|---------------------|---------------------|-----------|----------|---------------|--------------------------|--------|
|                     |                     | Interrate |          | Exchange Rate | Domestic Borrowing Stock | Itself |
| <i>Responses of</i> |                     |           |          |               |                          |        |
| <i>T_Frat01</i>     | Period(s)           | 2.        | 4.       | --            | 4.                       | --     |
|                     | Point Estimation(s) | -0.845599 | 1.121153 | --            | 0.885244                 | --     |
|                     | Standard Error(s)   | 0.38139   | 0.62230  | --            | 0.53000                  | --     |
| <i>T_Fliqrat01</i>  | Period(s)           | --        | --       | --            | 3.                       | --     |
|                     | Point Estimation(s) | --        | --       | --            | -1.186976                | --     |
|                     | Standard Error(s)   | --        | --       | --            | 0.82578                  | --     |
| <i>T_Fgloans</i>    | Period(s)           | 4.        | 3.       | --            | --                       | --     |
|                     | Point Estimation(s) | 3.025215  | 2.730997 | --            | --                       | --     |
|                     | Standard Error(s)   | 1.97837   | 1.83390  | --            | --                       | --     |

**For 1992.04-2005.03 (Including the Crisis Period)**

For 1992.4-2005.3, Table 4 and 5 show that foreign banks' liquidity deteriorates more than domestic counterparts, in response to an increase in interest rates and exchange rates. In other words, existence of foreign banks worsens TBS' liquidity. Reason is that foreign banks have been more sensitive to any interest and exchange rate risk since they do not want to burden any risk.

To figure out the behavior of banks after February 2001 crisis, we compare the period of 1992.4-2001.1 with the period of 1992.4-2005.4

i- When we excluded foreign banks from TBS, an increase in interest rates deteriorates capital structure of TBS in 1992.4-2001.1 more than in the period of 1992.4-2005.3. In a sense, foreign banks have more positive effect for helping TBS capital structure after the last crisis.

ii- When we excluded foreign banks from TBS, an increase in exchange rate (i.e., devaluation of TL) causes more decrease in the liquidity ratio of foreign

banks after the last crisis. That is, after crisis period, foreign banks are harmful for the liquidity of TBS.

For loan reaction, we could not reach statistically significant results—except 1992.4-2005.3 periods. In this period, growth rate of loan of TBS (including foreign banks) increases in contrast with a devaluation in TL. State owned banks' loans indicates a decline after the last crisis; private and foreign banks' loans indicate gradually increase after the last crisis. We can infer that slight increase in foreign bank participation did not cause any decline in loans.

In short, these might suggest that loans were issued partly on political rather economic criteria, especially for state banks, and the risk was building on the balance sheets of domestic banks, setting the stage for eventual crises in November 2000, and February 2001<sup>4</sup>.

**Table 4. The Summary of the IRFs of TBS (Including Foreign Banking Group)**

| Responses of     | Shocks to           |           |               |                          |           |    |
|------------------|---------------------|-----------|---------------|--------------------------|-----------|----|
|                  |                     | Interrate | Exchange Rate | Domestic Borrowing Stock | Itself    |    |
| <i>Trat01</i>    | Period(s)           | 1.        | 2.            | 1.                       | 3.        | -- |
|                  | Point Estimation(s) | -0.808561 | -0.417732     | 0.542826                 | -0.323912 | -- |
|                  | Standard Error(s)   | 0.21561   | 0.25805       | 0.18734                  | 0.28685   | -- |
| <i>Tliqrat01</i> | Period(s)           | 1.        | 3.            | 1.                       | 2.        | -- |
|                  | Point Estimation(s) | -1.106601 | 1.035555      | 0.567849                 | 1.045499  | -- |
|                  | Standard Error(s)   | 0.33893   | 0.51094       | 0.31478                  | 0.44393   | -- |
| <i>Tgloans</i>   | Period(s)           | 2.        | 1.            | 3.                       |           | -- |
|                  | Point Estimation(s) | -1.844146 | 2.811880      | -2.425758                |           | -- |
|                  | Standard Error(s)   | 1.51414   | 1.29968       | 1.45533                  |           | -- |

**Table 5. The Summary of the IRFs of TBS (Excluding Foreign Banking Group)**

| Responses of       | Shocks to           |           |               |           |          |                          |           |          |        |
|--------------------|---------------------|-----------|---------------|-----------|----------|--------------------------|-----------|----------|--------|
|                    |                     | Interrate | Exchange Rate |           |          | Domestic Borrowing Stock |           |          | Itself |
| <i>T_Frat01</i>    | Period(s)           | 4.        | 1.            | 3.        | 4.       | 1.                       | 2.        | 3.       | --     |
|                    | Point Estimation(s) | -0.725538 | 0.929090      | -0.684384 | 0.739846 | 0.506668                 | 0.703616  | 1.103388 | --     |
|                    | Standard Error(s)   | 0.43408   | 0.27305       | 0.36988   | 0.38704  | 0.25078                  | 0.35003   | 0.37752  | --     |
| <i>T_Fliqrat01</i> | Period(s)           | 4.        | 3.            |           |          | 2.                       | 5.        |          | --     |
|                    | Point Estimation(s) | -1.425586 | -1.860196     |           |          | 2.405162                 | -1.577950 |          | --     |
|                    | Standard Error(s)   | 0.74526   | 0.61510       |           |          | 0.64138                  | 0.59381   |          | --     |
| <i>T_Fgloans</i>   | Period(s)           | 2         | --            |           |          | 3                        |           |          | --     |
|                    | Point Estimation(s) | -1.898179 | --            |           |          | -2.469625                |           |          | --     |
|                    | Standard Error(s)   | 1.52853   | --            |           |          | 1.47266                  |           |          | --     |

<sup>4</sup> This situation of decline in capital but increase in loan has been experienced during April 1994 crises.

## CONCLUSION

As we discussed in the paper, participation of foreign banks to national banking system has pros and cons. There is a shortage of hard evidence to support either side. The participation rate of foreign banks to the TBS is now around 5 percent at the end of 2005 and when we compare national banks with foreign banks, foreign banks have more liquidity ratio, lower interest rate risk, and higher capital adequacy ratio.

Results in the Tables indicate that interest and exchange rate shocks produced many effects on the capital and liquidity structure of two categories when including and excluding crises. The responses in terms of crises, domestic banks capital and liquidity are more interest and exchange rate sensitive than are those for foreign banks, in negative manner. In another words, foreign banks help the TBS by absorbing some negative effect: therefore, foreign bank participation does not cause any negative effect on capital but liquidity: *(i) Foreign banks have more positive effect for helping TBS capital structure after the last crisis when there is an interest rate shock, (ii) after crisis period, existence of foreign banks worsens TBS' liquidity when there is an interest and exchange rate shock. Reason is that foreign banks have been more sensitive to any interest and exchange rate risk since they do not want to burden any risk.*

Considering the significant test results in Table 4 which indicates inclusion of crises period, when we included foreign bank in to TBS, while positive fiscal policy shock produces more positive effect on capital and liquidity structure, excluding foreign bank produces some negative effect on capital and liquidity in later periods. An increase in public sector borrowing due to fiscal policy shock affected, at different level, the balance sheets of banks: a decline in loans. This is crowding out effect of fiscal policy shock. However, global banks are more sensitive, during the crises, to the effect of fiscal policy shock that have kept the pace of chronic inflation inducing an increase in riskiness in the economy. For loan reaction, we could not reach statistically significant results—except 1992.4-2005.3 periods. In this period, growth rate of loan of TBS (including foreign banks) increases in response to a devaluation in TL (a positive exchange rate shock). In other words, state owned banks' loans indicates decline after the last crisis, private and foreign banks' loans indicates gradually increase after the last crisis. *We can infer that slight increase in foreign bank participation did not cause any decline in loans.*

In conclusion, the globalization of capital around the World started in the beginning of 1980 rendered everything that we have stated in the paper. In this situation there are two possible roads diverged in front of Turkey to choose: (i) Along with the defendants of the idea of that banking sector must reach its own balance with competition between domestic and foreign banks in competitive market structure supported by the incumbent government, (ii) There are also defendants of the idea of that BRSA must efficiently and effectively control banking system and the participation of foreign banks in the TBS for benefit of the sector itself and then, of the Turkish economy. Further of this study is to explore the influence of foreign bank participation on the financial strategies of SMEs.

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## APPENDIX

Table 1a. Share of Banks in TBS

| Share in %           | 2000 | 2001 | 2002 | 2003 | 2004 | Nov. 2005 |
|----------------------|------|------|------|------|------|-----------|
| <b>STATE BANKS</b>   |      |      |      |      |      |           |
| Assets               | 24.2 | 32.7 | 31.9 | 33.3 | 34.9 | 31.4      |
| Deposits             | 39.9 | 33.6 | 34.3 | 37.5 | 41.8 | 37.7      |
| Loans                | 27.5 | 22.1 | 16.6 | 18.2 | 20.9 | 20.0      |
| <b>PRIVATE BANKS</b> |      |      |      |      |      |           |
| Assets               | 46.3 | 54.6 | 56.2 | 57.0 | 57.4 | 59.0      |
| Deposits             | 44.2 | 56.7 | 58.5 | 57.2 | 55.0 | 57.0      |
| Loans                | 55.9 | 57.7 | 65.3 | 67.2 | 67.4 | 67.1      |
| <b>FOREIGN BANKS</b> |      |      |      |      |      |           |
| Assets               | 6.5  | 3.1  | 3.1  | 2.8  | 3.4  | 5.4       |
| Deposits             | 2.5  | 2.1  | 2.4  | 2.2  | 3.1  | 5.3       |
| Loans                | 3.5  | 3.1  | 4.0  | 4.0  | 4.6  | 7.5       |

Source: BAT, 2005, [www.tbb.gov.tr](http://www.tbb.gov.tr)

P.S.: Banks which belong 51 percent and more of their capital to foreign investors are classified under foreign banking group in TBS.

**Table 2a. Prudential Banking Sector Indicators**

|  | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|--|------|------|------|------|------|------|------|
| Capital Adequacy Ratio                     | --   | 17.3 | 15.3 | 25.1 | 30.9 | 28.8 | --   |
| Non-performing Loans (in % of Total Loans) | --   | 9.1  | 29.3 | 17.6 | 11.5 | 6.0  | --   |
| Liquidity Assets of Total Assets           | --   | 32.1 | 31.0 | 34.3 | 38.8 | 37.4 | --   |

**Source:** Hagmayr, B. and Peter, H. 2006. *Foreign banks in Turkey and Other EU Accession Countries - Does Minority vs. Majority Ownership Make the Difference?*. in the Proceedings of the International Finance Symposium 2006 on "Financial Integration Review and Steps Ahead", Marmara University, Istanbul, pp: 649-669.

**Table 3a. Five Largest Foreign Banks (in terms of Assets) as of Sept. 30, 2005**

|                   | Total Assets<br>(in EUR million) | Market Share<br>(in %) | Number of<br>Branches | Number of<br>Employees |
|-------------------|----------------------------------|------------------------|-----------------------|------------------------|
| HSBC Bank         | 4,596                            | 2.03                   | 159 (2.58 %)          | 3,918 (3.0 %)          |
| Fortis Bank       | 4,114                            | 1.82                   | 175 (2.84 %)          | 3,967 (3.3 %)          |
| Citibank          | 1,478                            | 0.66                   | 24 (0.39 %)           | 1,532 (1.17 %)         |
| Deutsche Bank     | 473                              | 0.21                   | 1 (0.02 %)            | 43 (0.03 %)            |
| ABN AMBRO<br>Bank | 398                              | 0.18                   | 1 (0.02 %)            | 125 (0.1 %)            |

**Source:** Hagmayr, B. and Peter, H. 2006. *Foreign banks in Turkey and Other EU Accession Countries - Does Minority vs. Majority Ownership Make the Difference?*. in the Proceedings of the International Finance Symposium 2006 on "Financial Integration Review and Steps Ahead", Marmara University, Istanbul, pp: 649-669.

**Table 4a. Market Share of Foreign Owned Banks (compared to the other Accession Countries) (Total Assets, in %)**

|               | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 |
|---------------|------|------|------|------|------|------|------|------|------|
| Bulgaria      | 9.5  | 18.0 | 32.3 | 44.7 | 67.0 | 70.0 | 72.0 | 82.3 | 82.5 |
| Croatia       | 1.0  | 4.0  | 6.7  | 39.9 | 84.1 | 89.3 | 90.2 | 91.0 | 91.3 |
| FYR Macedonia | n.a. | n.a. | n.a. | 11.5 | 53.4 | 51.1 | 44.0 | 47.0 | 47.3 |
| Romania       | 11.2 | 17.2 | 20.0 | 47.8 | 50.9 | 55.2 | 56.4 | 58.2 | 62.0 |
| Turkey        | 2.4  | 4.3  | 4.3  | 5.3  | 5.2  | 3.1  | 3.1  | 2.8  | 3.4  |

**Source:** Hagmayr, B. and Peter, H. 2006. *Foreign banks in Turkey and Other EU Accession Countries - Does Minority vs. Majority Ownership Make the Difference?.* in the Proceedings of the International Finance Symposium 2006 on "Financial Integration Review and Steps Ahead", Marmara University, Istanbul, pp: 649-669.

**Table 5a. International Banking Group in South-East European Countries Including Accession Countries, as of 2005**

|             | Total Assets in (in proportion basis EUR Billion) | Market Share (Total Assets, in %) |
|-------------|---|-----------------------------------|
| Austria     | 24.0  | 29.1                              |
| Italy       | 13.4  | 16.2                              |
| Greece      | 5.2   | 6.3                               |
| France      | 2.3   | 2.8                               |
| Hungary     | 2.8   | 3.4                               |
| Netherlands | 2.8   | 3.4                               |
| USA         | 2.6   | 3.2                               |
| Germany     | 1.8   | 2.1                               |
| Turkey      | 0.4   | 0.5                               |
| Slovenia    | 0.1   | 0.2                               |

**Source:** Hagmayr, B. and Peter, H. 2006. *Foreign banks in Turkey and Other EU Accession Countries - Does Minority vs. Majority Ownership Make the Difference?.* in the Proceedings of the International Finance Symposium 2006 on "Financial Integration Review and Steps Ahead", Marmara University, Istanbul, pp: 649-669.