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OFF-BALANCE SHEET ACTIVITIES IMPACT ON COMMERCIAL BANKS PERFORMANCE: AN EMERGING MARKET PERSPECTIVE

Bora Aktan[a], Sok-Gee Chan[b], Sasa Žiković[c], Pinar Evrim-Mandaci[d]

[a] Assistant Professor, Ph.D, University of Bahrain, College of Business Administration, Department of Economics and Finance, Isa Town Campus, Kingdom of Bahrain, e-mail: boraktan@gmail.com
[b] Senior Lecturer, Ph.D, University of Malaya, Faculty of Business and Accountancy, Department of Finance and Banking, Malaysia, e-mail: sokgee@um.edu.my
[c] Assistant Professor, Ph.D, University of Rijeka, Faculty of Economics, Croatia, e-mail: szikovic@efri.hr
[d] Professor, Ph.D, Dokuz Eylul University, Faculty of Business Kaynaklar Campus, 35160 Buca, Izmir, Turkey, e- mail: pinar.evrim@deu.edu.tr.

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ABSTRACT

This paper examines the effect of off-balance sheet (OBS) activities on performance of the banks listed on Istanbul Stock Exchange (ISE). We use four measures of performance including bank's risk exposures, profitability, leverage, and liquidity position. We find that both bank-specific risk and foreign exchange rate risk are positively related with OBS activities. This indicates that OBS activities increase bank-specific and foreign exchange risk exposures of the banks in Turkey. The positive relationship might serve as a warning to bank's speculative action using OBS transactions in the market. The results also indicate that OBS activities, due to its hedging perception, improve bank's stock returns but have a negative impact on return on equity. In addition, OBS activities do not have a statistically significant impact on leverage or liquidity.

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I. INTRODUCTION

In today's financial markets, one of the striking developments is the increasing tendency of banks to engage in off-balance sheet (OBS) activities. In recent years the development and deregulation of the financial markets, improvements in financial innovation and decreases in banks' margins, as a result of low-quality loan applicants, encourage the banks to offer new products and services to increase their profits (Jurman, 2005). Edwards and Mishkin (1995) argue that the rate of traditional banking has been decreasing while the OBS activities have been increasing. Decreasing profitability of traditional banking and increasing competitiveness of markets actually forces banks to undertake OBS activities. Ebrahim and Hasan (2004) analysed the banks' profits from traditional and non-traditional activities. They argue that improvement of non-interest earnings of the banks arose from the development of new types of financial instruments.

OBS or fee-related items such as guarantees, commitments and derivatives sometimes become the main sources of bank revenues. By engaging in OBS activities, besides providing high earnings, banks can avoid regulatory costs or taxes since reserve requirements and deposit insurance premiums are not imposed on OBS activities. However, these activities can involve risks such as market, operational and credit risks, which might affect bank's solvency and liquidity. On the other hand, significant growth in derivatives activities by commercial banks might be explained by increased interest rate, credit and foreign exchange risk exposures, which banks face in domestic and international markets. Derivatives offer a way to hedge these risks without having to make extensive changes on the balance sheet.

This paper aims to examine the effect of OBS activities on the performance of the banks listed on Istanbul Stock Exchange (ISE). We examine the effect of OBS activities on bank's risk exposures, profitability, leverage, and liquidity position. Since we could not find any study dealing with this topic in Turkey we try to fill this gap.

The paper proceeds as follows; section 2 presents the background on banking system and OBS activities in Turkey, section 3 provides a review of the literature, section 4 discusses methodology and data, section 5 presents our empirical results and analysis. Section 6 presents our conclusions.

II. TURKISH BANKING SYSTEM AND THE DEVELOPMENT OF THE OFF- BALANCE SHEET TRANSACTIONS

After 1982, in Turkey, commitments were excluded from the balance sheet and became the main item of OBS. It continued to be the major item in the following years. With the increase in public sector borrowing during 1990s the repo transactions became more attractive and their share increased within OBS items. Repo transactions were subsequently excluded from OBS items and included into balance sheet. Since 2000 the use of derivative financial instruments has become widespread and after excluding safe-custody and pledged securities, the derivatives constituted 43 percent of OBS items at the end of 2008. Safe-custody and pledged securities item which is a subaccount of OBS items includes the securities deposited in Settlement and Custody Bank of Istanbul Stock Exchange (ISE). Following the change of methodology applied in calculating and accounting of these securities, the share of safe-custody and pledged securities item within total OBS items accounts for approximately 95 percent since 2005. Figure 1 indicates that the derivative transactions experienced an increasing trend during the period of 2002-2007. As a result of the fact that banks reduced their on-balance sheet foreign exchange positions since the global crisis, derivative transactions in general experienced a decrease in 2008.

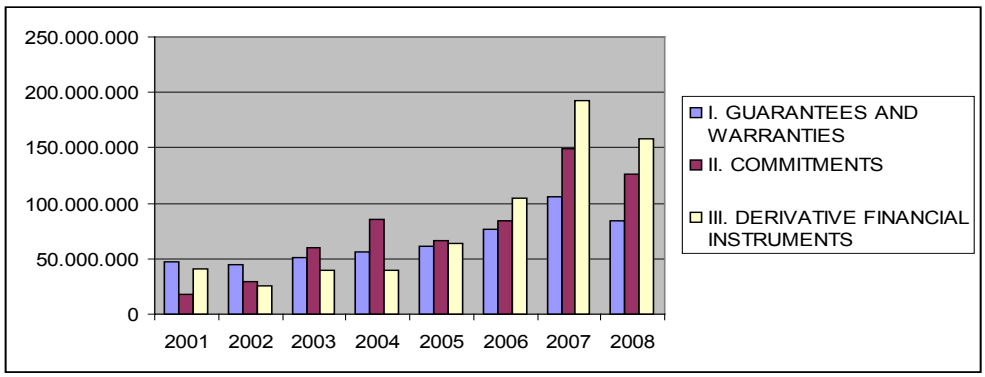


FIGURE 1. STRUCTURE OF OBS ITEMS (SAFE-CUSTODY AND PLEDGED SECURITIES EXCLUDED) (TRY THOUSANDS).

Source: Central bank of Turkey

Figure 2 shows that the share of the derivative financial instruments rose from 39 percent in 2001 to 43 percent in 2008; commitments item to 34 percent from 17 percent; while guarantees and warranties fell to 23 percent from 45 percent in the same period.

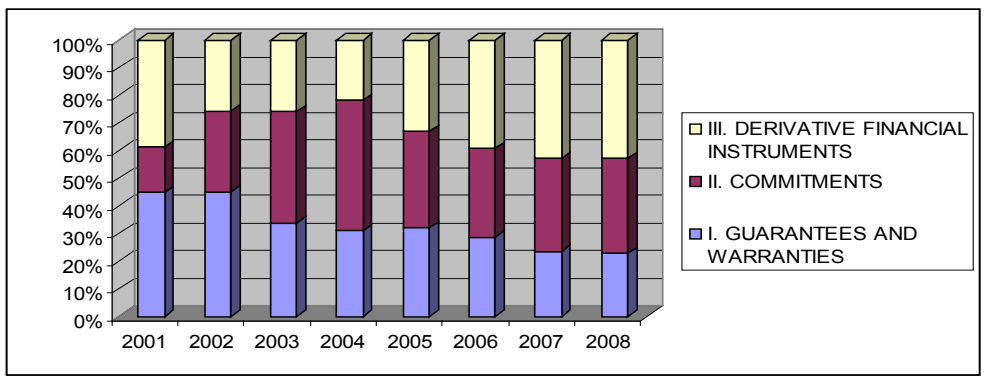


FIGURE 2. DISTRIBUTION OF OBS ITEMS (SAFE-CUSTODY AND PLEDGED SECURITIES EXCLUDED).

Source: Central bank of Turkey

Figure 3 depicts that the share of the swap transactions increased from 21 percent in 2001 to 50 percent in 2008; options to 28 percent from 0.1 percent. On the other hand forward transactions fell to 21 percent from 64 percent and futures to 2 percent from 15 percent. In 2008, options transactions increased the most within derivative transactions since these instruments were perceived by investors as the most profitable.

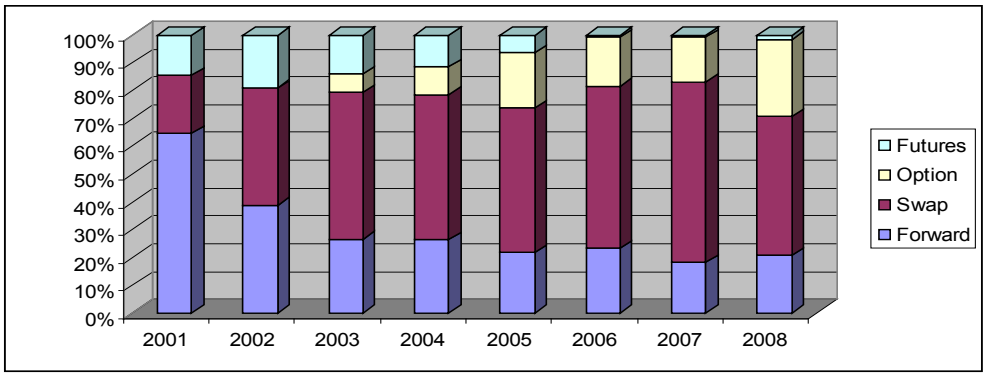


FIGURE 3. DISTRIBUTION OF THE DERIVATIVES IN TURKISH BANKS.

Source: Central bank of Turkey

III. PREVIOUS STUDIES

There are a number of studies on the changing patterns of the structure of banks' income with the inclusion of OBS activities. Among them, Rogers and Sinkey (1999: 8) investigated the relationship between the non-traditional activities and some variables by analyzing financial statements of 8.931 banks for the period 1989-1993. They found a negative and significant relationship between net interest margin and non-traditional activities. In addition, they argued that mostly the big banks focused on non-commercial activities.

Davis and Tuori (2000) analyzed the structure of banks' income in OECD countries for the period 1979-1995, using the data on bank profitability. They found evidence of changes in the income structure from interest income to non-interest income, with rapid growth of OBS activities in most of the EU countries. In addition, their results indicate that larger banks tend to maintain high levels of non-interest income. In addition to the analysis done on the changing patterns of the structure of banks' income with the inclusion of OBS activities, empirical investigation has also been done on the risks associated with these activities. Among these studies, Boyd and Graham (1986: 10) examined the risks associated with diversification of banks into non-bank activities for the period 1971-1983. They found no significant relationship between non-bank activities and risk. However, non-bank activities were positively related to the risk of the banks during the period 1971-1977. They highlighted that the level of association between risk of failure and non-bank activities increases when there is no tight regulation on non-bank activities. As a result, the positive relationship between the two variables disappears when there are more stringent regulations.

Hassan (1993: 33) examined the relationship between OBS activities and market risk of large commercial banks of the US. He found that OBS activities contribute to the overall diversification of the bank portfolio risk by reducing the total risk. Nevertheless, OBS items do not inf uence the systematic risk of banks and this may be due to the fact that OBS items are not a concern of well-diversified stockholders.

Chaudhry (1994) investigated the impact of OBS activities on commercial banks' exposure to market-based risk in the US by utilizing a two-stage model. He found that larger banks are more ef cient in interest rate risk management as compared to the smaller ones. In contrast, in their study, DeYoung and Roland, (2001) found that the banks' earnings volatility increased

when banks tilted their product mixes towards fee based activities and away from traditional intermediation activities. Lepetit et al. (2005) found that the banks which expanded into non-interest income activities, presented a higher level of risk than banks which principally supplied traditional intermediation activities.

More recently, Karim and Gee (2007: 5) examined how OBS activities of the locally owned commercial banks in Malaysia affected the performance of the banks through banks' exposure to various forms of risks, bank profit, leverage and liquidity by conducting a panel regression and indicated that only the market risk is significantly positively related with OBS activities. According to them, this might be due to the fact that OBS activities were not the main source of funds for these banks since the use of OBS items was still in its emerging phase. In addition, they found that the stock returns were negatively related to OBS activities. There was no significant relationship between return on equity, leverage and liquidity ratio with the OBS activities.

De Jonghe, Baele and Vennet (2007: 31) investigated whether functionally diversified banks have a comparative advantage in terms of long-term performance and risk profile compared to their competitors. They used market-based measures of return potential and bank risk and calculated the franchise value over time of European banks as a measure of their long-run performance potential. In addition, they measured risk as both the systematic and the unsystematic risk sensitivities derived from a bank stock return model. Finally, they analyzed the return/risk trade-off implied in different functional diversification strategies using a panel data analysis over the period 1989-2004. They found that a higher share of non-interest income in total income affected banks' franchise values positively. Diversification of revenue streams from distinct financial activities increased the systematic risk of banks while the effect on the unsystematic risk component was non-linear and predominantly downward-sloping.

As we mentioned in the previous section, although there has been an increasing trend in the OBS bank activities in Turkey, there are no studies which examine the effects of OBS activities on the bank's performance.

IV. METHODOLOGY AND DATA

This study examines the inf uence of OBS activities on the performance of Turkish commercial banks in terms of banks' risk, profitability, leverage, and liquidity. The study starts with the analysis of the effect of OBS activities on bank risk exposures. The first estimation takes into account the inf uence of OBS activities on banks' market risk, unsystematic risk, and total risk. The traditional market model which assumes that banks are subject to systematic risk and unsystematic risk will be utilized in estimating market risk, unsystematic risk, and total risk for the commercial banks studied.

Systematic risk is non-diversifiable since it resulted from changes in the market and economic environment where the bank operates and therefore, known as market risk. On the other hand, the bank-specific risk is measured by unsystematic risk and can be diversified with proper portfolio management. The traditional market model is given by Equation (1).

$$R_{i,t} = \alpha_i + \beta_i R_{M,t} + e_{i,t} \tag{1}$$

where:

$R_{i,t}$ = holding period return of bank *i*th stock over the period ending at time *t*.

$R_{M,t}$ = holding period return of market portfolio over the period ending at time t.

$e_{i,t}$ = error-term measure bank-specific factors for bank *i*th over the period ending at time *t*

and assume to be independent of $R_{M,t}$.

Banks' market returns are calculated by taking the first difference of the natural logarithm of the daily closing stock price of the bank and market index respectively. These data is obtained from ISE. β_i represents the systematic risk for bank *i*th over the period ending at time *t* will be estimated from Equation (1). The standard deviation of the error-term will be used as a proxy for bank's unsystematic risk. Total risk of the bank's return is proxied by the standard deviation of the individual stock return. To examine in detail the bank exposure towards market factors, the multi-factor market model is employed. The model is given in Equation (2).

$$R_{i,t} = \alpha_i + \beta_1 R_{M,t} + \beta_2 R_{EX,t} + \beta_3 R_{ST,t} + \beta_4 R_{LT,t} + e_{i,t} \quad (2)$$

where:

$R_{i,t}$ = holding period return of bank *i*th stock over the period ending at time *t*.

$R_{M,t}$ = holding period return of market portfolio over the period ending at time *t*.

$R_{EX,t}$ = change in foreign exchange rates over the period ending at time *t*.

$R_{ST,t}$ = change in short-term interest rates (3-month t-bills) over the period ending at time *t*.

$R_{LT,t}$ = change in long-term interest rates (government bond) over the period ending at time *t*.

$e_{i,t}$ = error-term measure bank-specific factors for bank *i*th over the period ending at time *t*

and assume to be independent of $R_{M,t}$.

β_2, β_3, and β_4 are used to measure bank's exposure in terms of foreign exchange rate and interest rate risks due to OBS activities. These variables are included since OBS activities has been widely used as a tool for banks in hedging against interest rates risk and foreign exchange rate exposures. Therefore, it is expected that the OBS activities would contribute to the changes in the interest rate risks in both the short and long-term. Besides that, the use of derivatives and foreign exchange swaps is believed to contribute further to the foreign exchange rate risk. If commercial banks are successful in hedging their interest rate and foreign exchange exposures then a negative relationship between OBS activities and the interest rate and foreign exchange rate risks is expected. Nevertheless, positive relationship is expected if banks used OBS transactions as a speculative tool rather than for risk management purposes. The empirical model given by Equation (3) is used in analyzing the effect of OBS activities on bank's risk.

$$Risk_{it} = \alpha + \beta_1 OBS_{it} + \beta_2 TLTA_{it} + \beta_3 LTA_{it} + \beta_4 EA_{it} + \beta_5 FATA_{it} + \beta_6 LIQ_{it} + \beta_7 PLTA_{it} + \varepsilon_{it} \quad (3)$$

where:

$Risk_{it}$ = risks of bank *i*th at time *t*.

OBS_{it} = off-balance sheet activities of bank *i*th at time *t*.

$TLTA_{it}$ = ratio of total loans to total assets of bank *i*th at time *t*.

LTA_{it} = natural logarithm of total assets of bank *i*th at time *t*.

EA_{it} = shareholder's equity to total assets of bank *i*th at time *t*.

$FATA_{it}$ = fixed asset to total assets of bank *i*th at time *t*.

LIQ_{it} = liquid assets to total assets of bank *i*th at time *t*.

$PLTA_{it}$ = ratio of provision for loan losses to total assets of bank *i*th at time *t*.

ε_{it} = random error-term.

The values for the risk variables are obtained from the estimation of Equations (1) and (2) while other variables are from the bank's annual reports. Besides affecting the risk exposures of commercial banks, the OBS activities are believed to affect bank's performances, leverage, and liquidity. Equation (4), (5), and (6) are manipulated for this estimation.

$$Performance_{it} = \alpha + \beta_1 OBS_{it} + \beta_2 TLTA_{it} + \beta_3 LTA_{it} + \beta_4 EA_{it} + \beta_5 FATA_{it} + \beta_6 LIQ_{it} + \beta_7 PLTA_{it} + \varepsilon_{it} \quad (4)$$

$$Leverage_{it} = \alpha + \beta_1 OBS_{it} + \beta_2 TLTA_{it} + \beta_3 LTA_{it} + \beta_4 EA_{it} + \beta_5 FATA_{it} + \beta_6 LIQ_{it} + \beta_7 PLTA_{it} + \varepsilon_{it} \quad (5)$$

$$LIQ_{it} = \alpha + \beta_1 OBS_{it} + \beta_2 TLTA_{it} + \beta_3 LTA_{it} + \beta_4 EA_{it} + \beta_5 FATA_{it} + \beta_6 PLTA_{it} + \varepsilon_{it} \quad (6)$$

where:

$Performance_{it}$ = return on equity or stock return of bank *i*th at time *t*.

$Leverage_{it}$ = ratio of total debts to total assets of bank *i*th at time *t*.

OBS_{it} = off-balance sheet activities of bank *i*th at time *t*.

$TLTA_{it}$ = ratio of total loans to total assets of bank *i*th at time *t*.

LTA_{it} = natural logarithm of total assets of bank *i*th at time *t*.

EA_{it} = shareholder's equity to total assets of bank *i*th at time *t*.

$FATA_{it}$ = fixed asset to total assets of bank *i*th at time *t*.

LIQ_{it} = liquid assets to total assets of bank *i*th at time *t*.

$PLTA_{it}$ = ratio of provision for loan losses to total assets of bank *i*th at time *t*.

ε_{it} = random error-term.

We employ stock returns and return on equity as proxies for profitability. Debt to total assets ratio is used to measure the bank's leverage position while the liquid assets to total assets ratio is used to measure the bank's liquidity position. Equations (3), (4), (5), and (6) are estimated to determine the effects of OBS activities on banking risk exposure, performance, leverage, and liquidity. The ratio of total loans to total assets and the ratio of provision for loan losses to total assets are used to control for the effect of credit risk. In addition, total assets is included in the estimation to control for bank's size since it is believed that bank's risk exposure and performance are affected by the scale of the operation. The ratio of equity to total assets is used to control for bank's leverage since the use of debts might result in better management. However, the use of debts can also expose the bank to excessive risk. Finally, the ratio of fixed assets to total assets and liquidity ratio are used to control for banks liquidity. We used the unbalanced panel data estimation with both and random effects. The fixed effect model assumes that the idiosyncratic

error ε_{it} is uncorrelated with all the explanatory variables across all time periods and this method is therefore used to remove the unobserved effect. Consequently, any time-constant explanatory variables will be removed from the model prior to the estimation. Nevertheless, this model allows for arbitrary correlation between the unobserved effects with the explanatory variables across time. On the other hand, the random effect model is estimated with the assumption that the unobserved effect is independent of the explanatory variables in the estimated model. The standard Hausman test will be employed to identify the final model to be used in the study. The null hypothesis of standard Hausman test states that the conditional mean of the disturbances given the regressors is zero. The fixed effect model will be use if the null hypothesis is rejected (Baltagi et al., 2003:79).

V. EMPIRICAL FINDINGS

A. Off-Balance Sheet Activities and the Risks of Locally-Owned Commercial Banks

The results of the Hausman test are presented in Table 1. The null hypothesis that the unobserved effect is independent from other explanatory variables cannot be rejected. Hence, the random effect model will be used to estimate the relationship between OBS activities and bank's performance.

TABLE 1. HAUSMAN TEST ESTIMATION

Variable	*Hausman Test*	*p-value*
Total risk	10.71	0.15
Market risk	9.11	0.24
Unsystematic risk	10.95	0.14
Return	0.63	0.99
ROE	1.53	0.98
Debt	0.84	0.99
Liquidity	6.05	0.42

Source: Authors' estimation

*Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level*

The results of the estimation on the effect of OBS activities on Turkish bank's total risk, market risk and unsystematic risk are presented in Table 2.

TABLE 2. PANEL DATA ESTIMATION OF THE IMPACT OF OBS ACTIVITIES ON TOTAL, MARKET AND UNSYSTEMATIC RISK OF COMMERCIAL BANKS IN TURKEY

Variable	*Total risk*	*Market risk*	*Unsystematic risk*	*Variable*	*Total risk*	*Market risk*
	Coefficient	*t-ratio*	*Coefficient*	*t-ratio*	*Coefficient*	*t-ratio*
Constant	0.055	3.31***	-0.125	-0.26	0.072	5.29***
OBS	-0.001	-1.15	0.003	0.10	0.001	1.76*
TLTA	-0.004	-0.83	0.033	0.18	0.005	1.05
LTA	-0.000	-0.31	0.065	1.89*	-0.004	-4.43***
ETA	0.023	1.88*	-0.272	-0.62	0.007	0.64
FATA	-0.005	-1.26	0.100	0.69	0.002	0.42
LIQ	-0.001	-0.63	0.047	0.57	-0.001	-0.65
PLLTA	-0.090	-2.00**	0.050	0.03	-0.021	-0.52

Source: Authors' estimation

Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level

The results show that the bank's unsystematic risk is positively correlated with the OBS activities and is significant at the 10% level. This indicates that OBS activities induce risk on individual bank's operation and management. Therefore, banks need to carefully evaluate their engagement in OBS activities in the banking operations so as to reduce bank's exposure. In addition, OBS activities are found to increase risk exposure of the banking industry as a whole. This is shown by the positive correlation between market risk and OBS activities even though it is not significant. Therefore, to further analyse the effects of market factors on OBS activities, the multi factor market model as in Equation (2) is estimated by taking into consideration the effects of OBS activities on interest rate risks and foreign exchange risk. The estimation results of Equation (2) are presented in Table 2. The results show that when more risk factors are included in the model, the OBS activities are positively correlated with all the risk factors such as market, short-term interest rate, foreign exchange rate, unsystematic and total risk. The effect of OBS on the foreign exchange rate risk is significant at the 10% level. This suggests that bank's engagement in OBS activities increases foreign exchange exposure. This is not surprise since significant amount of OBS activities in Turkish banks are precisely in foreign exchange and derivatives products.

As pointed out by Allayannis and Ofek (2001:20), positive relationship between bank exposures and OBS activities may result from speculative action by banks in generating higher earnings through the use of OBS transactions in the market. This indirectly resulted in higher risk associated with the use of OBS products. The result is consistent with Choi and Elyasiani (1997:12) which found that OBS activities are more prominent in affecting foreign exchange risk exposure of US commercial banks compared to the interest rate risk. Based on the Hausman test results for different types of risk, the random effects model is also selected in explaining the inf uence of OBS activities on risk exposures of Turkish commercial banks.

TABLE 3. PANEL DATA ESTIMATION OF THE IMPACT OF OBS ACTIVITIES ON RISK EXPOSURES OF COMMERCIAL BANKS IN TURKEY

Variable	*Market risk*		*Short term rates*		*Long-term rates*		*Forex*		*Unsystematic risk*		*Total risk*	
	Coefficient	*t-ratio*	*Coefficient*	*t-ratio*	*Coefficient*	*t-ratio*	*Coefficient*	*t-ratio*	*Coefficient*	*t-ratio*	*Coefficient*	*t-ratio*
Constant	-0.606	-1.23	-0.037	-0.81	-0.023	-1.49	-1.502	-2.95***	0.061	4.32***	0.0700	5.26***
OBS	0.039	1.56	0.002	0.71	-0.000	-0.06	0.053	1.75*	0.001	0.78	0.000	0.48
TLTA	0.209	1.20	0.000	0.02	-0.004	-0.58	0.400	1.88*	0.001	0.18	-0.003	-2.56**
LTA	0.050	1.44	0.000	0.06	0.001	1.08	0.026	0.67	-0.003	-2.84***	-0.005	-0.29
ETA	-1.764	-3.23***	-0.080	-1.29	-0.015	-0.69	-0.649	-0.99	0.016	1.06	0.018	2.83***
FATA	0.664	3.21***	-0.022	-0.98	0.007	0.87	-0.114	-0.48	0.001	0.17	0.000	0.11
LIQ	0.215	2.33**	0.012	1.12	0.009	0.22	0.124	1.11	-0.002	-0.70	-0.076	-1.16
PLLTA	2.600	1.324	0.347	1.53	0.044	0.56	1.702	0.71	-0.068	-1.26	0.000	0.48

*Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level*

TABLE 4. HAUSMAN TEST ON THE IMPACT OF OBS ACTIVITIES TOWARDS DIFFERENT TYPES OF RISK EXPOSURES

Variable	*Hausman Test*	*p-value*
Total risk	1.90	0.97
Market risk	11.94	0.10
Short-term risk	8.35	0.30
Long-term risk	5.88	0.55
FOREX	7.84	0.35
Unsystematic risk	10.32	0.17

Source: Authors' estimation

*Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level*

B. Off-Balance Sheet Activities and Bank's Profitability

To further analyze the impact of OBS activities on bank's performance, we also run the estimation with stock returns and returns on equity ratio as the dependent variables. This is because, besides risk exposures, OBS activities might also affect bank's profitability. The results of the estimation of the effect of OBS activities on bank's profitability are presented in Table 5. Based on the results, it is clear that OBS activities improve bank's stock returns, which is statistically significant even at 1% level. However, the return on equity is negatively related to OBS activities and is significant at 10% level. As suggested by Brewer et al. (1996: 20), the negative relationship might be due to the fact that stockholders expect returns to drop when OBS activities significantly reduce the risk exposure of the banks. Thus, this contributes to higher stock returns due to the perception of lower risk.

TABLE 5. RESULTS OF PANEL DATA ESTIMATION OF THE EFFECT OF OBS ACTIVITIES ON BANK'S PROFITABILITY

Variable	*Stock Return*		*ROE*	
	Coefficient	*t-ratio*	*Coefficient*	*t-ratio*
Constant	-0.0031	-0.811	-66.9294	-0.192
OBS	0.0006	2.823***	-35.8807	-1.866*
TLTA	0.0008	0.525	-246.0416	-1.890*
LTA	-0.0004	-1.359	43.4396	1.766*
ETA	-0.0028	-0.764	616.4242	1.934*
FATA	-0.0021	-1.762*	-274.7340	-2.654***
LIQ	0.0012	1.756*	-20.8669	-0.348
PLLTA	-0.0036	-0.256	-2180.3872	-1.821*

Source: Authors' estimation

*Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level*

Finally, the effects of OBS activities on bank's leverage and liquidity positions are analyzed. The results of the panel data estimation are shown in Table 6.

TABLE 6. . RESULTS OF PANEL DATA ESTIMATION OF THE EFFECT OF OBS ACTIVITIES ON BANK'S LEVERAGE AND LIQUIDITY RATIO

Variable	*Leverage*		*Liquidity*	
	Coefficient	*t-ratio*	*Coefficient*	*t-ratio*
Constant	-0.0268	-0.124	1.6573	2.824***
OBS	0.0136	1.188	-0.0478	-1.264
TLTA	0.0565	0.730	0.1769	0.688
LTA	-0.0140	-0.936	-0.0393	-0.862
ETA	2.1107	11.061***	4.1726	11.125***
FATA	0.0099	0.159	0.5031	2.709***
LIQ	0.0231	0.644	-	-
PLLTA	1.2393	1.732*	-3.7624	-1.647*

Source: Authors' estimation

*Notes: * significance at 10% level, ** significance at 5% level, *** significance at 1% level*

The results in Table 6 indicate that OBS activities do not have significant impact on liquidity and leverage position of the Turkish commercial banks. From the estimated results, one can conclude that the OBS activities by Turkish commercial banks significantly affect bank performance in terms of both stock return and profitability ratio.

VI. FINAL REMARKS

This study analyzes the effect of OBS activities on risks and performance of Turkish banks. The performance of commercial banks studied includes bank's risk exposures, bank's profitability, leverage, and liquidity position. The results show that bank's risk exposures are positively correlated with OBS. The bank-specific risk and foreign exchange rate risk are found to be positively correlated with OBS activities. This indicates that OBS activities increase bank-specific risk and foreign exchange exposures of Turkish commercial banks. The positive relationship might serve as a warning to bank's speculative action through the use of OBS transactions in the market, which is in line with Allayannis and Ofek (2001) findings.

The results also indicate that OBS activities improve bank's stock return but have a negative impact on return on equity. As suggested by Brewer et al. (1996), the negative relationship might due to the fact that stockholders expect return to drop when OBS activities significantly reduces risk exposure of the banks. The perceived lower risk contributes to higher stock returns.

We can conclude that OBS activities are more prominent in affecting bank's performance in terms of earning capability rather than directly contributing to banks risk exposure. The results of this study are consistent with Brewer et al. (1996), Lynge and Lee (1987) and Hassan (1992) in their analysis of OBS effect on the US banks' performance. Similar to Avery and Berger (1991) study, we found a modest positive relationship between OBS activities and bank's risk exposure suggesting that OBS activities create some degree of risk in Turkish commercial banks.

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UTJECAJ VANBILANČNIH AKTIVNOSTI NA POSLOVANJE KOMERCIJALNIH BANAKA: PERSPEKTIVA TRŽIŠTA U NASTAJANJU

SAŽETAK

Ovaj rad istražuje utjecaj vanbilančnih aktivnosti na poslovanje banaka koje kotiraju na Istambulskoj burzi (ISE). Istraživanje je provedeno na četiri mjere uspješnosti bankovnog poslovanja: izloženost rizicima, profitabilnost, zaduženost i likvidnost. Rezultati pokazuju da su nesistemski, bankovno-specifični rizik te valutni rizik u pozitivnoj vezi s vanbilančnim aktivnostima. Ovakvo stanje je pokazatelj da vanbilančne aktivnosti povećavaju nesistemski i valutni rizik banaka u Turskoj. Dokazana pozitivna veza može služiti kao upozorenje u slučaju špekulativnog korištenja vanbilančnih aktivnosti na tržištu. Dobiveni rezultati također pokazuju da zbog percepcije njihovog korištenja u svrhu zaštite, vanbilančne aktivnosti povećavaju prinose na bankovne dionice ali istovremeno smanjuju prinos na kapital banaka. Osim toga, vanbilančne aktivnosti nemaju statistički signifikantan utjecaj na zaduženost i likvidnost banke.

Ključne riječi: bankarstvo, vanbilančne aktivnosti, izloženost rizicima, Istambulska burza, Turska