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## Changing Face of Banks and the Evaluation of Internet Banking in Turkey

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### **Bora Aktan, Ph.D**

Assistant Professor of Finance, Faculty of Economics and Administrative Sciences,  
Yasar University, Izmir, Turkey

*Postal Address:* Selcuk Yasar Campus, 35100 Bornova, Izmir, Turkey

*Author's Email:* [bora.aktan@yasar.edu.tr](mailto:bora.aktan@yasar.edu.tr)

Prof. Aktan is Deputy Chair of International Trade and Finance Department at Yasar University, Faculty of Economics and Administrative Sciences. Prior to joining Yasar, Dr. Aktan worked as Corporate Strategy and Business Development Directors in international firms largely active in Mexico, England and Turkey. Prof. Aktan's current research activity focuses on global investing, emerging capital markets, risk-return trade-off in asset prices, e-finance, corporate governance and ethics in finance. He has published in different international journals and has served a member of editorial boards of some academic journals. He is also a member of some professional bodies such as The American Finance Association, International Institute of Forecasters, The Financial Management Association and The Society of Financial Econometrics. In addition, he serves as a board member of Current Economics and Financial Affairs Committee for the Aegean Region Chamber of Industry in Turkey.

### **Edip Teker, Ph.D**

Professor of Banking and Finance, Department of International Trade and Finance  
Faculty of Economics and Administrative Sciences, Yasar University, Izmir, Turkey

*Postal Address:* Selcuk Yasar Campus, 35100 Bornova, Izmir, Turkey

*Author's Email:* [edip.teker@yasar.edu.tr](mailto:edip.teker@yasar.edu.tr)

Prof. Teker's illustrious career spans four decades in Germany, Austria, and Turkey with numerous official and honorary appointments and awards. He was schooled at German Gymnasium, Deutsche Oberrealschule in Istanbul. Winning a scholarship from Turkish National Education Ministry, he studied in Mannheim University in the Department of Business Administration and graduated with a major in Management and Organization, Banking and Finance. After his BA study, he worked for a short time in different banks

and insurance firms in Germany. He received his PhD degree from Johannes Kepler University in Linz, Austria, in the Institute of Finance and Banking. His research interests are in commercial banking, small business management, international trade, cost accounting and operations management. Prof. Teker serves as board members of several NGOs and professional bodies such as Aegean Region Chamber of Industry, Union of Small and Medium Enterprises (KOBIDER), Union of Science for Society (TOBIDER), among others.

### **Pervin Ersoy**

Master student, Department of International Trade and Finance, Graduate School of Social Sciences, Yasar University, Izmir, Turkey

*Postal Address:* Selcuk Yasar Campus, 35100 Bornova, Izmir, Turkey

*Author's Email:* [pervin.ersoy@student.yasar.edu.tr](mailto:pervin.ersoy@student.yasar.edu.tr)

Miss Ersoy is a Master student at Yasar University, Graduate School of Social Sciences, Department of International Trade and Finance. She graduated from Ege University, Department of Statistics. Her current research interests are on financial time series analysis.

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### **Abstract**

Banking historically has been a sector based on individual or institutional client service. In today's browser-based competitive finance world, banks need to flourish this client service viewpoint with web-empowered features for keeping clients and attracting prospective ones. Internet has emerged as a key competitive field for the future of financial services. In a sense, it is almost synonymous with change. Banks, especially commercial ones, are swiftly becoming more aware of the importance of internet banking in this era. This topic was selected to dilate the current developments and implications of internet banking in Turkey, which has been repeatedly cited as an emerging market with its growing sectors, over the period 2005 and 2008.

**Keywords:** banking; financial innovations; internet banking; Turkey

JEL Classification: G21, G29, O31, O33

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### **INTRODUCTION**

The finance world has undergone major changes over the last three decades. Globalization of finance, integration, advances in information technologies and financial innovations in the last couple of decades have deeply changed banking business not only in Turkey but in also other markets and forced the state authorities to deregulate national financial systems. Deregulation allowed banks to flourish their businesses and enter into new markets with new technologies involving both individual and institutional customer interaction (DeYoung, Hunter and Udell, 2004). In addition, developments of modern computer technology have also enabled banks to lessen the cost of bank transactions by having the client interact with an e-banking facility rather than with a human being. E-banking applications, which include automated teller machine (ATM), telephone banking, mobile banking, digital television, debit and credit cards, internet

banking, etc., became one of the main battlefields of the banking industry. For instance, Hanson and Kalyanam (2007) points out that e-banking grew rapidly, ATMs made costumer visits to a branch less necessary, and then in the late 1990s the rapid growth in banking web sites made a wide range of services available from almost everywhere. The global online population is also increasing substantially that according to the internet world stats, in 2008, there was 1.6 billion internet users worldwide (Internet World Stats, 2008). Hence, internet is increasingly becoming a diverse global marketplace with global business opportunities for financial services delivery as well as challenges.

The purpose of this paper is to examine the usage of internet in Turkey to make a basic due-diligence investigation for the financial institutions, including banking, stock trading, insurance and provision of financial information. This paper is organized as follows: Section II provides a brief review of the previous studies. The Turkish banking system is summarized in Section III while internet usage in financial services is reported over the period 2005 and 2008 in Section IV. Finally, Section V addresses the conclusion and implications.

## **PREVIOUS STUDIES**

Following the boom of new technologies such as the internet and mobile phones in practice, e-banking has also been the focus of numerous academic papers. Berger (2007) argues that a sound understanding of client is required for improvement of e-banking. Thus, all relevant information about the clients should be taken into account and a client-centric strategy should be developed. Confirming Berger (2007), electronic banking research has attracted much attention from marketing researchers about client perception (e.g. Maenpa et.al. (2008)), client attitudes (e.g. Liao and Cheung (2002), Mols (1998)), client satisfaction (e.g. Gonzales 2004)) service quality (e.g. Bauer et. al., (2005)) but it attracts relatively less attention from the finance and banking researchers about the economic consequences of e-banking.

One of the papers that examine the economic outcome of e-banking is that of Parker and Parker (2008) who investigate the money velocity in Finland following wide spreading of e-banking in Finland. Their results interestingly show that money velocity has decreased despite the expectations. Durukan (2003) evaluates the impact of internet banking on the performance of Turkish commercial banks.

Adoption, perception and usage of internet banking by consumers is one of the topics heavily examined in e-banking literature. Centeno (2004) argues that speed, the convenience of remote access, 7/24 availability and price incentives are the main motivation factors for the consumers to use internet banking. Durkin et. al. (2008) notes that the simplicity of the products offered via internet banking facilitates the adoption of internet banking by consumers. Calisir and Gumussoy (2008) compare the consumer perception of internet banking and other banking channels and report that internet banking, ATM and phone banking substitute each other. Maenpaa et.al. (2008) examine the consumer perceptions of internet banking in Finland and their findings indicate that familiarity has a moderating role in the perception. Guerrero et.al. (2007) examine the usage of internet banking by Europeans and their results indicate that ownership of diverse financial products and services, attitude towards finances and trust in the internet as a banking channel influence clients' usage of internet banking. Confirming

other papers, Sohail and Shanmugham (2003) document accessibility of internet, awareness of e-banking and resistance to change are found to be influencing Malaysian's use of internet banking. Another factor that promotes clients usage of internet banking is seller support (Nilsson, 2007).

While the adoption of e-banking by clients is heavily researched there is less research on the supply side of e-banking. We can list the advantages of e-banking as the competitive advantage, member/client retention, increased revenues and reduced costs (Esser, 1999). The Woolwich Bank case study conducted by Shah and Siddiqui (2006) reveals that understanding clients, organisational flexibility, availability of resources, systems security, established brand name, having multiple integrated channels, e-channel specific marketing, systems integration, systematic change management, support from top management, and good client services are the factors critical to success in e-banking.

## **TURKISH BANKING SECTOR**

Financial system in Turkey is largely dominated by banks which many transactions and activities in both money and capital markets are carried out therefore, its banking sector is virtually synonymous with the entire system on account of the country's economic and historical development. As all the major economies of the world are reeling under the pressure of financial crisis, the banking industry in Turkey continued to grow in 2008 and foreign participation also increased. Recent economic and financial reforms providing positive atmosphere and attractiveness for growth encouraged many foreign banks enter into the sector with full banking activities while forced existing banks to restructure their organizations, operations and activities.

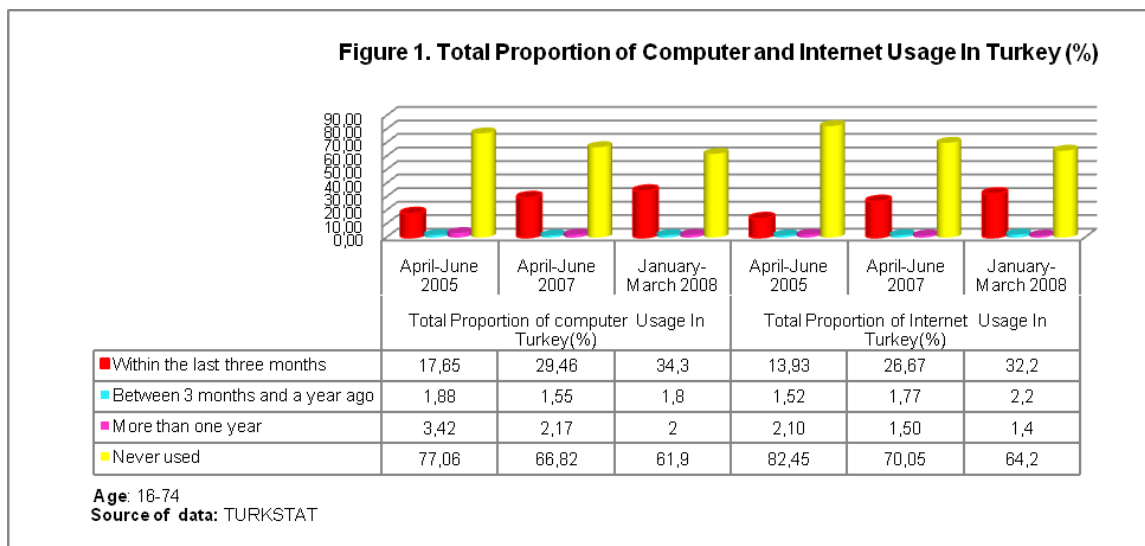
Banks operating in Turkey can be classified under three main groups as those with the permission to accept deposits (commercial or deposit banks), those not accepting deposits (non-deposit or development and investment banks) and participation banks which are based upon interest-free banking (Profit/Loss Sharing). Besides, each group can be divided into three sub-groups as state-owned, privately owned, and foreign banks according to their ownership structures. As of December 2008, the number of banks operating in Turkey was 49. 32 of them were in deposit banks group, 13 of them were non-deposit banks and 4 of them were participation banks. Among deposit banks, there were 3 state-owned banks, 11 privately-owned banks, 17 foreign banks and one bank, under the supervision of the Savings Deposit Insurance Fund (SDIF) with 8791 branches including those abroad. In addition, 17 of the banks are listed on the Istanbul Stock Exchange (BAT, 2008a).

By the end of 2008, total assets of banking sector amounted to TRY 732.7 billion (\$ 481.5 billion USD). When the asset distribution of the sector is analyzed, it is seen that 3.6% of total assets of the sector is comprised of non-current assets in the period examined. The share of cash and quasi-cash assets in total balance sheet size was realized as 12.9% level while the share of loans in total assets was 50.3% and the share of securities portfolio in total assets was realized as 26.5%. The total loans of the sector were TRY 367.6 billion (\$ 241.5 billion USD). On the other hand, total deposit of the sector amounted TRY 454.6 billion (\$ 298.7 billion USD) while net profit of the period

was TRY 13.3 billion (\$ 8.74 billion USD) (BRSA, 2009)<sup>1</sup>.

## INTERNET BANKING IN TURKEY

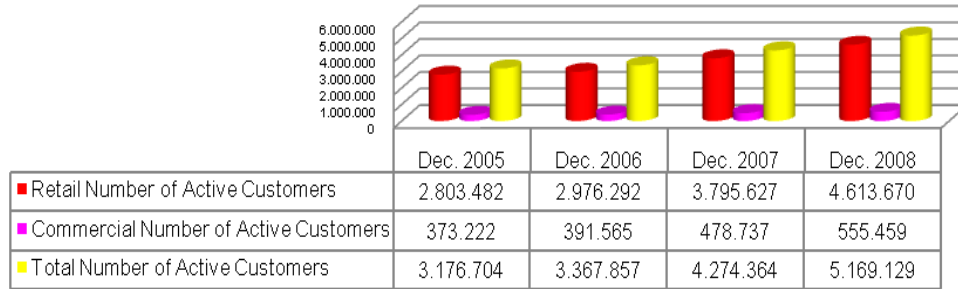
Internet usage is becoming more and more commonplace in Turkey as an emerging market. In addition, Turkey is one of the unique countries that adopt new technologies at once especially in banking sector. Paralleled to computer use, internet usage has been increasing within Turkish society as shown in Figure 1:



According to data published by Turkish Statistical Institute (TURKSTAT), the percentage of computer usage in Turkey increased by 94,3% and 16,4% as compared to April-June 2005 and 2007 respectively. In the same period, the percentage of internet usage increased by 131,2% and 20,7% as compared to April-June 2005 and 2007 respectively. As can be seen in Figure 1, the rate of internet usage increased in parallel to the rate of computer usage in the country.

According to the Banks Association of Turkey's report (BAT, 2008) which covers 25 banks that offer internet banking services to their clients, the number of active retail clients was 4,613,670 in the last quarter of 2008. The number of retail clients increased by 1,810,199, 1,637,378 and 818,043 as compared to December 2005, 2006 and 2007, respectively. On the other hand, the total number of registered commercial clients that logged in at least once during the last quarter of 2008 was 555,459. The total number of registered commercial clients that logged in at least once in December 2006 and 2007 was 478,737 and 539,587 respectively as illustrated in Figure 2:

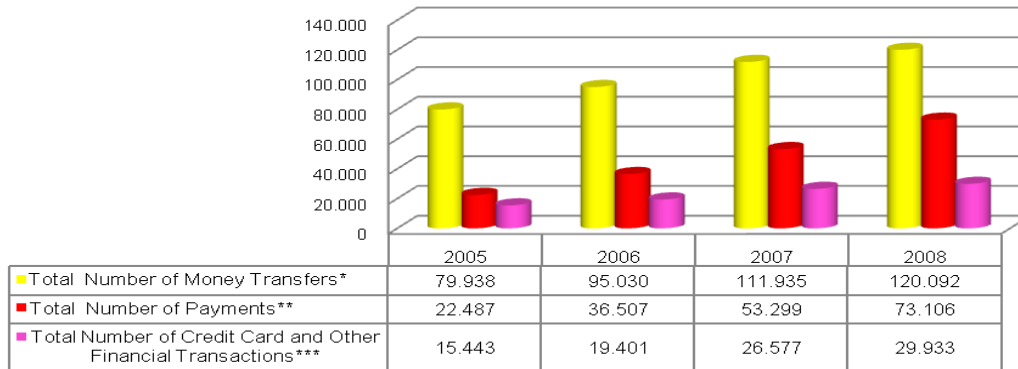
<sup>1</sup> Central Bank of the Republic of Turkey FX buying rates are used for conversion as of 31 December 2008

**Figure 2. Number of Active Customers Using Internet Banking Services**

Source of data: BAT

As can be seen in Figure 2, the number of total active clients increased by 1,992,425 (62,7%), 1,801,272 (53,5%) and 894,765 (20,9%) as compared to December 2005, 2006 and 2007 respectively.

As to the transactions, as shown in Figure 3, the total number of financial transactions (*excluding investment transactions*) performed via internet banking services, was 223,130 million in 2008. The total number of money orders, EFT and foreign currency transfers were 120,092 millions, number of payments such as invoices, taxes, social security premiums etc. were 73,107 millions and the number of other financial transactions were 6,256 millions accounting for 53,8%; 32,8%; and 13,4% of whole financial transactions respectively.

**Figure 3. Number of Financial Transactions (000)**

\* EFT, Money Orders (Turkish Currency, Foreign Currency), FX Transfers

\*\* Invoice, Tax, Social Security and other payments (university, traffic fine, cheque etc.)

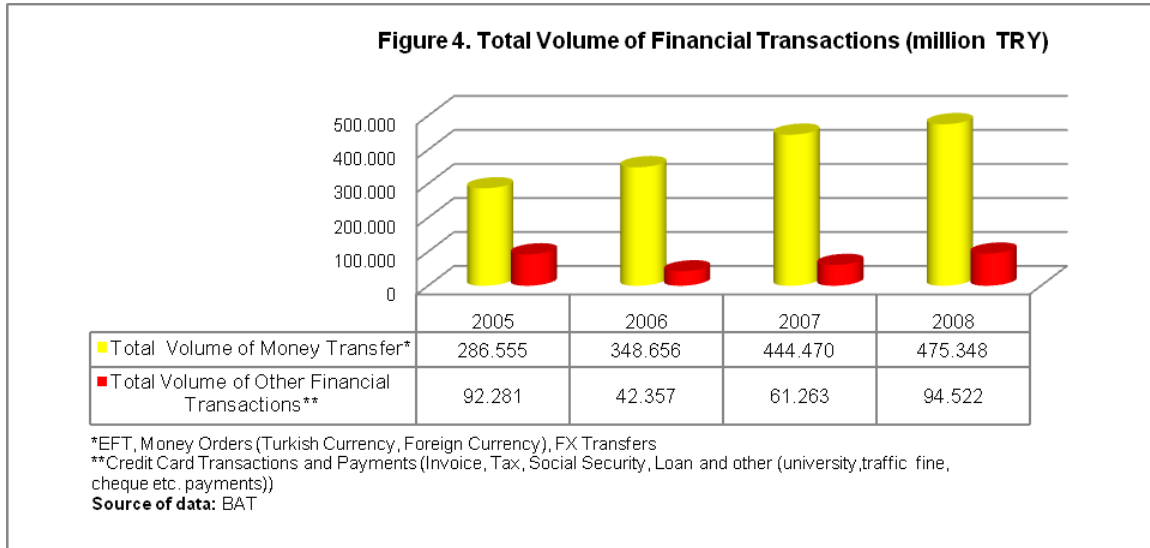
\*\*\* Money Orders from/to Investment Accounts, Time Deposit Partial Payment Transactions, Virtual Pos Transactions, File Transfers etc.

Source of data: BAT

The upwards trend in the volume and number of financial transactions executed via internet banking services continued also in 2007 and 2008. The rate of the total number of financial transactions increased by 89,3 percent, 47,8 percent and 16,3 percent as

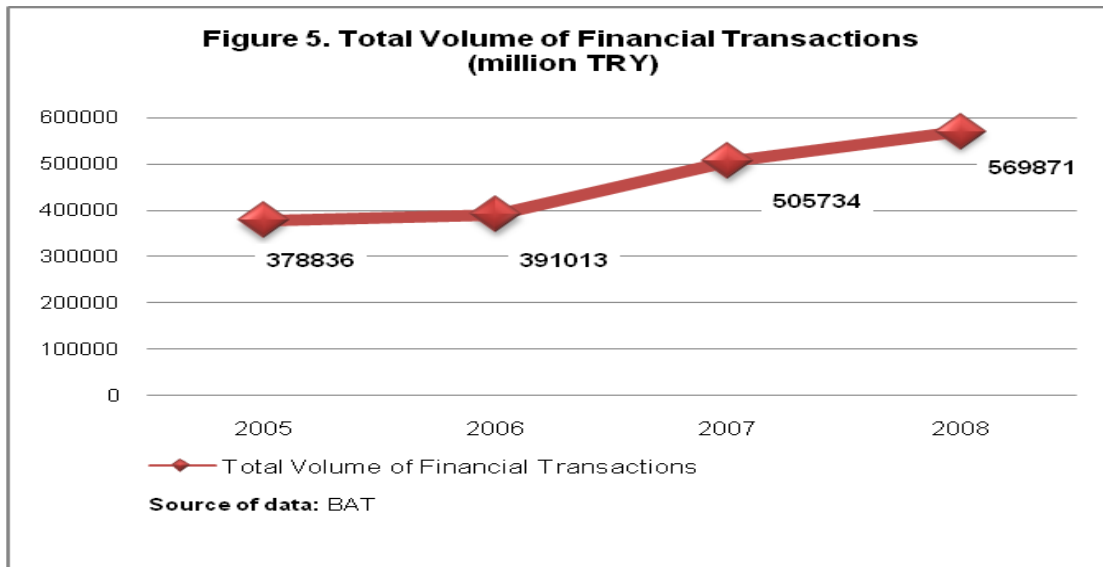
compared to 2005, 2006 and 2007, respectively.

As illustrated in both Figure 4 and 5, the total volume of financial transactions (*excluding investment transactions*) executed via internet banking services were TRY 569,871 millions in 2008.



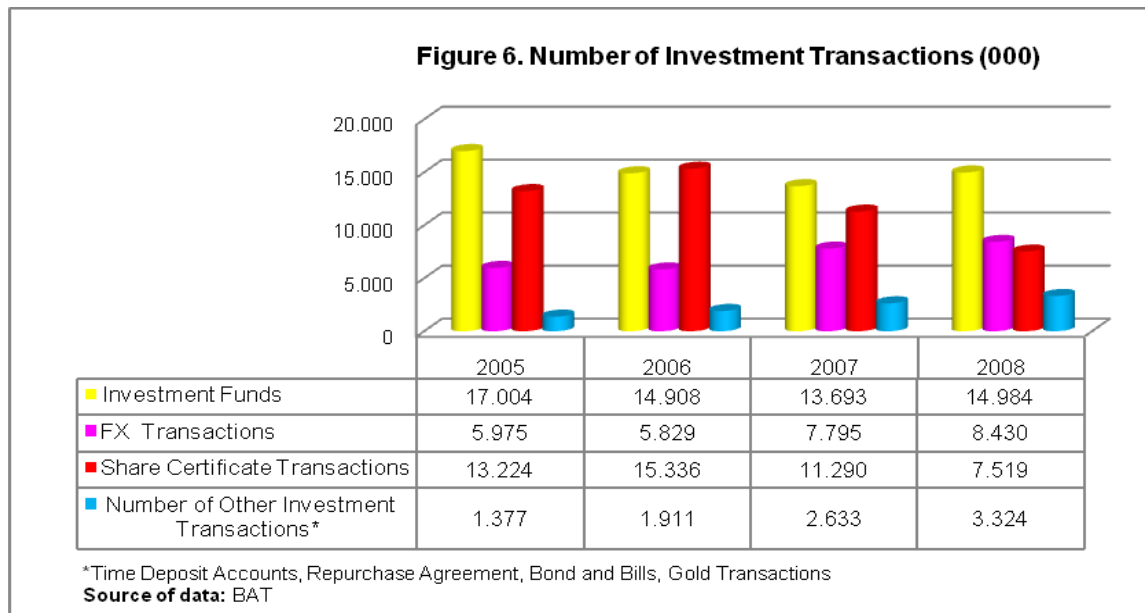
The total volume of money orders, as shown in Figure 4, EFT and foreign currency transfers accounted for 83,4% (TRY 475,348 millions) of whole financial transactions in 2008. In addition, EFT and foreign currency transfers accounted for 75,6% (TRY 286,555 millions), 89,2% (TRY 348,656 millions) and 87,9% (TRY 444,470 millions) of whole financial transactions in 2005, 2006 and 2007 respectively.

The total volume of money orders, EFT and foreign currency transfers increased by 188,793 millions (64,7%), 126,692 millions (36,3%) and 30,878 millions (6,9%) as compared to 2005, 2006 and 2007 respectively.



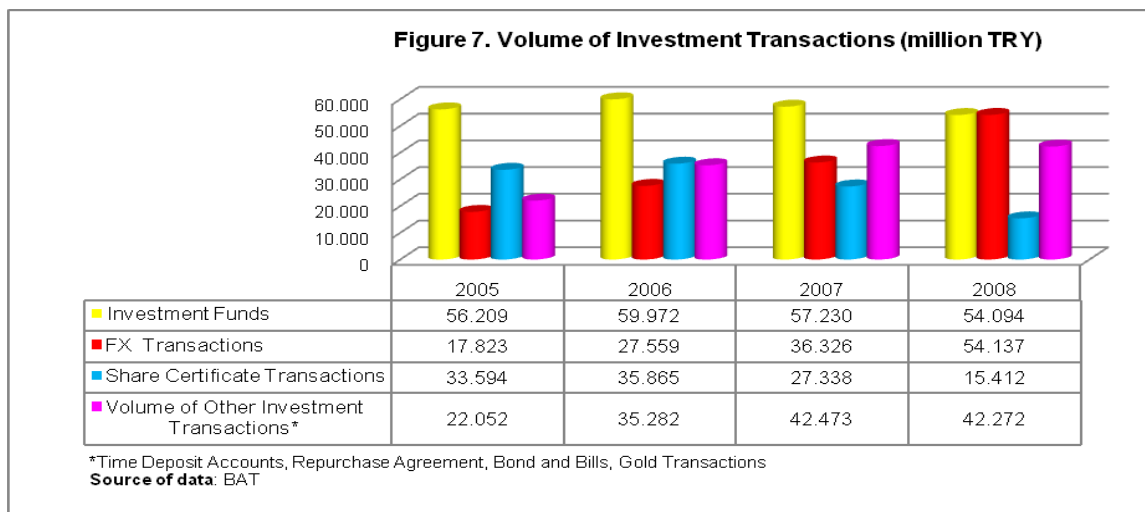
On the other hand, the total volume of financial transactions increased by TRY 191,035 million (50,4%), TRY 178,858 millions (45,7%) and TRY 64,137 millions (12,7%) as compared to 2005, 2006 and 2007, respectively.

Although the upwards trend in the number and volume of financial transactions executed via internet banking services continued in 2007 and 2008, the total number of investment transactions executed via internet banking services decreased as compared to 2005, 2006 and 2007 as illustrated in Figure 6. The total number of investment transactions decreased by 3,323 million, 3,727 million and 1,154 as compared to 2005, 2006 and 2007, respectively. The total number of investment transactions executed via internet banking services was 34,257 million in 2008.





As shown in Figure 6, the number of investment funds transactions were the largest in total number of transactions with 14,984 millions (43,7%), followed by foreign currency transactions with 8,430 million (24,6%), share certificate transactions with 7,519 million (21,9%) and other investment transactions (*time deposit accounts, repurchasing agreements, gold transactions, bond and bills*) with 3,324 million (9,7%) in 2008. The total volume of investment transactions executed via internet banking services was TRY 165,915 million in 2008. The upwards trend in the total volume of investment transactions executed via internet banking services continued in 2008. The total volume of investment transactions increased by TRY 36,237 million, TRY 7,237 million and TRY 2,549 million as compared to 2005, 2006 and 2007, respectively.



As shown in Figure 7, foreign currency transactions in 2008 were the largest in total volume of transactions with TRY 54,137 million (32,63%), followed by investment funds with TRY 54,094 million (32,60%), other investment transactions (*time deposit accounts, repurchasing agreements, gold transactions, bond and bills*) with TRY 42,272 million (25,48%) and share certificate transactions with TRY 15,419 million (9,29%).

## SUMMARY AND IMPLICATIONS

Banking historically has been a sector based on individual or institutional client service. In the last two decades, the delivery of banking services has undergone enormous changes. In today's browser-based competitive finance world, banks need to flourish this client service viewpoint with web-empowered features for keeping clients and attracting prospective ones. Thus, e-banking applications, which include automated teller machine (ATM), telephone banking, mobile banking, digital television, debit and credit cards, internet banking, etc., became one of the main battlefields of the banking industry. In short, internet has emerged as a key competitive field for the future of financial services.

The purpose of this paper is to examine the usage of internet in Turkey to make a basic due-diligence investigation for the financial institutions, including banking, stock trading,

insurance and provision of financial information within the framework of internet banking by using statistics compiled mostly from the Bank Association of Turkey over the period 2005 and 2008. The findings show that internet usage in Turkey with its young population has continued to grow dramatically in financial services.

It is no Figure however, that this study has limitations due to narrow statistical data to conduct a more robust analysis. Further research in this area could replicate the study in other focusing on comparison of, for example, emerging financial markets.

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