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PARLIAMENTARY ELECTION CYCLES AND THE TURKISH BANKING SECTOR

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Parliamentary Election Cycles and the Turkish Banking Sector*

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Abstract

This paper analyzes the effects of parliamentary election cycles on the Turkish banking system. Using annual bank-level data representing all banks in Turkey during 1963–2005, we present evidence of meaningful differences in the structure of bank assets, liabilities and financial performance across different stages of the parliamentary election cycle. However, we find that government-owned banks' behavior does not differ from either domestic and foreign-owned private sector banks before, during or after elections. Our estimates also show that government-owned banks underperform their domestic and foreign-owned private sector counterparts.

Keywords: Elections, state banks, domestic banks, foreign-owned banks, loans, interest rate margin

JEL classification: G21, G28

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1 Introduction

Despite the observation that the role of commercial banks in market-oriented economies is shrinking, it is an undeniable fact that they retain a pivotal role in financial markets. However, when we investigate the structure of banking systems across different countries, we find substantial differences. For instance, in pure market-oriented economies such as the US and the UK, governments have traditionally only played a regulatory role in the banking sector,¹ while in many other countries governments directly control financial resources through ownership of one or more banks in addition to their regulatory functions.² Nations that contain government-owned or state banks base the existence of such institutions on the ability of state-owned banks to finance projects that would not pass scrutiny at private-sector banks. This reasoning is quite controversial as it harbors the seeds of corruption and inefficiency. For instance, state-owned banks can be misused by the governing party, who may direct state banks to channel funds to projects which will benefit those who support the government rather than those which serve the greater public interest. In that sense, actions of state-owned banks in financial markets are scrutinized very closely by the public and by international organizations such as the IMF and the World Bank. Not surprisingly, given those potential controversies embedded in a mixed financial system in which private-sector and state-owned banks coexist, researchers are keen to document the behavioral differences between state-owned and private-sector banks.

There is a rapidly developing literature that investigates the benefits and costs of state-owned banks in financial markets. The questions that researchers investigate vary from the significance of bank ownership in the promotion of economic growth to politicians' ability to influence election results through state banks' actions. At the heart of the matter, researchers are interested in finding whether state banks fulfill their functions efficiently and effectively or if they promote abuse and economic inefficiency through misallocation of capital.

¹The *de facto* nationalization of US and UK banks in the 2008 financial crisis stands in sharp contrast to those nations' historical behavior.

²For instance, 32% of Turkish banking assets were controlled by the state in 2005. A similar pattern is observed in Russia, where the state held 40.7% of bank assets in 2006 Vernikov (2007).

1.1 Brief literature review

Recent research points out that state-owned banks in developing countries seem to have lower profitability and higher costs. La Porta et al. (2002) and Barth et al. (2000) provide evidence that state banks are associated with lower economic growth. Yet an earlier study which uses a sample of European banks during 1986–1989 by Molyneux and Thornton (1992) finds that government ownership has a positive impact on bank profitability. A subsequent study by Micco et al. (2007) points out that the performance of state owned banks worsens during election years as it is driven by political concerns. Dinç (2005) investigates the effects of politicians’ influence on state-owned banks, concentrating on bank lending behavior. Using a large cross-country dataset, he finds evidence that state-owned banks increase their lending in election years relative to private sector banks. In a similar vein, Brown and Dinç (2005) show that prior to elections failing banks are less likely to be taken into administration. Similarly, Bongini et al. (2002) suggest that political connections may determine governments’ intervention to rescue failing banks.

Studies that concentrate on country-specific data on the behavior of lenders and borrowers also reveal that firms that have political ties with politicians are favored by state-owned banks. Fraser et al. (2006) suggest that Malaysian banks’ leverage is affected by the share of government ownership, informal ties to politicians, and the ownership share held by “institutional investors”, *de facto* controlled by the government or government-sponsored agencies. Baum et al. (2008) find that politically affiliated banks in Ukraine have significantly lower interest rate margins and that the level of activity of affiliated deputies in parliament has a positive impact on linked banks’ capitalization ratios. Using data from Pakistan, Khwaja and Mian (2005) provide evidence that low-quality borrowers with political connections borrow from state banks. Cole (2009), using data from India, shows that state bank credit is 5–10% higher in election years and even more so in heavily contested electoral districts. He also indicates that state bank loans are less likely to be repaid. Sapienza (2004) shows the effect of political connections on state-owned banks in Italy. Concentrating on Italian firms, he provides evidence that

state-owned banks charge lower interest rates than do private sector banks. He also shows that firms pay lower rates in areas where the head of the local state-owned bank has the same party affiliation as the ruling political party.

1.2 Overview of the paper

In this paper, we study the behavior of private sector and state-owned banks in Turkey throughout parliamentary election cycles. Our dataset covers the period between 1963 and 2005, during which Turkey conducted 10 parliamentary elections. Our sample consists of about 2,080 bank-year observations pertaining to 86 banks over a 40 year period. It should be noted that since the establishment of the republic in the 1920s, Turkish financial markets benefited from state-owned banks as well as domestic and foreign private-sector banks. Hence, the data, collected and made available by the Banks Association of Turkey, are rich and consistent throughout the period of interest. We carry out our empirical analysis using the system dynamic panel data (DPD) estimator which combines equations in differences of the variables with equations in levels of the variables (see Blundell and Bond (1998)).

Our study differs from the earlier literature on several dimensions. First, our study provides a thorough investigation of all types of banks in Turkey over election cycles rather than a knife-edge comparison of banks' behavior between election versus non-election years. Next, we also concentrate on the behavior of a number of bank finance ratios, their growth rates and performance measures rather than a single factor. Finally, by concentrating on a single country's entire banking sector, we scrutinize a consistent dataset which is not prone to sample selection bias or accounting problems that might have affected the results presented in earlier research.

Several findings emerge in a setting where confounding factors are taken into account within the framework of a dynamic model. We can summarize our results as follows. Election cycles significantly affect bank behavior, but these effects do not differ meaningfully across state, domestic and foreign-owned private sector banks. In particular, there is no evidence that state-owned banks increase their lending in comparison to other bank categories during, before or after elections. This is an interesting find-

ing and differs from the earlier research that has used cross-country or country-specific data which points out that state-owned banks behave differently during election years. Furthermore, our regression results also show that election cycles do not lead to a differential impact on other key financial ratios across banks. The second set of results, in line with earlier research, indicate that state banks are less efficient in comparison to both domestic and foreign owned private-sector banks.

The rest of this paper is organized as follows. In the next section we describe parliamentary elections in Turkey followed by a short summary of developments in Turkish banking sector. Section 3 presents the data. Section 4 lays out the econometric model and estimation results. Finally, Section 5 concludes.

2 Parliamentary Elections and Banking in Turkey

Prior to discussing the empirical model and results, it is useful to provide some information about the parliamentary system and the banking system in Turkey. In the next two subsections, we first discuss the parliamentary system in Turkey and then present some information on the banking sector.

2.1 Parliamentary Elections in Turkey

The Turkish Republic is a secular, democratic and pluralistic parliamentary system. The unicameral Grand National Assembly is elected by popular vote and the country is governed by the Council of Ministers headed by the Prime Minister. Members of the Grand National Assembly are elected for a certain period of time, and may be reelected.

Over the period of our investigation, 10 national parliamentary elections took place in Turkey, in the years 1965, 1969, 1973, 1977, 1983, 1987, 1991, 1995, 2000 and 2002. In 1980, the Turkish parliamentary system experienced a military intervention. The intervention was in response to an unstable political situation that the elected government and the Grand National Assembly seemed powerless to remedy. The military leaders declared that their intention is to restore public order and to prepare the country for a transition to a functioning democratic system which would avoid the impasses experienced in prior years. The next parliamentary elections took place in 1983, prior to

which all pre-1980 parties were abolished and a two-party system was envisioned. During the campaign, the pre-1980 leaders were deprived of their political rights and some of the newly-formed parties were denied access to the ballot. When civilian control was restored with the 1983 elections, the pre-1980 parties gradually reemerged to replace those somewhat artificial parties which had been established under military rule, as some older parties dissolved into oblivion.

Prior to the 1983 elections, members of the National Assembly were elected for a four-year term through universal suffrage. Since 1983, members are elected for a five-year term, but Parliament may determine the timing of elections. Over the period of our study, parliamentary elections took place every other four years except for the last two terms. Unlike a number of other parliamentary democracies, by-elections in the Turkish system are not common as the criteria to hold a by-election are quite restricted. To call for by-elections, at least 5% (or 28) of the 550 seats of the National Assembly must be empty. Furthermore, by-elections cannot take place in the two years following a parliamentary election, or within the year before a general election.³

2.2 The Banking Sector in Turkey

The financial sector in Turkey is traditionally dominated by banking activities. The Central Bank of Turkey, founded in the early 1930s, regulates and supervises the banking system while carrying out other responsibilities such as the issuance of banknotes and protecting the value of the currency. The Central Bank also finances the government's budget deficits and makes loans to public and private banks.

Banking activities have been carried out both by state-owned banks and private-sector banks since the early years of the republic. Most of the private-sector banks are locally owned; some are foreign owned while a few are jointly owned by domestic and foreign banks. Although the state banks' numbers declined due to mergers or acquisitions following the financial liberalization programme of the 1980s, those that are in operation today have a very prominent role in the functioning of the financial

³See Turan (2003) and the references therein for more information on the Turkish parliamentary system.

markets. To avoid speculative motivations, banks operating in Turkey are not allowed to engage in trading of goods or real estate for commercial purposes.

The major domestically owned private banks are closely linked to industrial groups. For instance, Yapı ve Kredi Bankası, Pamukbank, and Interbank are owned by the Çukurova Group conglomerate. Akbank, the most profitable private bank in Turkey, is owned by the Sabancı Group, one of the largest conglomerates. Partially publicly traded Koçbank is owned by another powerful group, Koç Holding Company.⁴ The number of foreign-owned private sector banks increased substantially after the country went through a programme of financial liberalization in the early 1980s (Figure 1). Currently, banks from various countries including the US, UK, Netherlands, Germany, and Greece operate in Turkey.⁵ Also, during this period, several joint ventures were created, and two Islamic banks started trading in the financial markets. As foreign banks increased their share in Turkish financial markets, they brought in new concepts and financial practices and help raise the country's banking standards. Overall, the entrance of foreign banks into the Turkish banking system is perceived by bankers and investors throughout the world as a reflection of the progressive internationalization of Turkey's financial system.

When we investigate the state of the financial markets throughout the period of interest, we see that capital markets were highly underdeveloped in the 1960s and 1970s. Financial markets only began to thrive after the implementation of the financial liberalization and restructuring programme that started in the 1980s. In this period, fierce competition amongst banks led to closure of some banks while the total number of banks increased. Interest rates and exchange rates were freed and new banking and capital market laws were introduced. Furthermore, all restrictions on foreign exchange trading and capital movement were removed. During this period, the Özal administration took steps to revive Istanbul's stock market, which had closed down in the late 1970s. The Istanbul Stock Exchange (ISE) reopened in December 1985. Trading on the ISE

⁴Yapı ve Kredi Bankası and Koçbank merged in 2008.

⁵It is interesting to note that despite the disputes between Greece and Turkey over sovereignty in the Aegean Sea or Cyprus, there is no objection to a Greek-owned bank offering financial services in Turkey.

expanded rapidly in the early 1990s and it became one of the best performing emerging markets among its peers. Not surprisingly, during this period we observe the emergence and collapse of many brokerage houses. The restructuring of the Turkish economy in the 1980's led to legislative changes and strengthened the Central Bank's role in supervising the markets. Following this period, capital inflows began to rise continuously, and the financial system became increasingly linked with external markets.⁶

3 Data description

Our dataset contains detailed information on all Turkish banks' balance sheets as published on the Banks Association of Turkey website.⁷ The original data set has 2,242 observations from 1961 to 2005. In order to alleviate the influence of extreme observations, bank-level variables are denoted as missing at the most extreme (top and bottom) one percent level of the distribution on an annual basis. We also do not use the data on banks which have gone into administration. Finally, we exclude banks with fewer than five years of available data as they are either newly-chartered banks or banks that have been liquidated. After all screenings our sample size consists of about 2,080 bank-year observations pertaining to 86 banks over the full sample period. Additionally, our dataset contains indicator variables indicating type of bank (state-owned or foreign-owned), recession years, and parliamentary election years.

Tables 1 and 2 summarize the variables that we examine in our analysis. Table 1 gives the definitions of variables as well as the basic descriptive statistics for the entire sample. Most banks are domestic private sector commercial banks. Foreign banks constitute 22.6 percent of the sample, and state banks represent 21.9 percent of bank-years. We specifically examine some of the banks' financial ratios including loan-to-asset, deposit-to-asset and securities-to-asset ratios. We also investigate the growth rates of loans, deposits and government securities as well as bank performance measures such as interest expenditures, interest revenues and the interest margin. Descriptive

⁶For more detail on the Turkish banking system, see Denizer (2000), Mercan et al. (2003), and Matousek et al. (2008).

⁷As of December 2008, available at <http://www.tbb.org.tr/english/>

statistics show that banks earn 3.9 percent interest margin ($Margin_t$) and lend 28.2 percent of assets ($Loan_t/TA_t$) over the entire sample. Furthermore, we observe that banks enjoy positive growth rates (in real terms) of deposits ($DepositGrowth_t$), loans ($LoanGrowth_t$) and government securities holdings ($BondGrowth_t$).

Table 2 presents the basic descriptive statistics of our variables to give a flavor of the evolution of our variables over different stages of the election cycle. The table is composed of four panels to provide information on the variables over four different periods in an election cycle. These periods are the year before the election, the election year, the year after the election, and the year that is non-adjacent to those three years (the most remote year from the election), which we call the benchmark year. The data indicate that Turkish banks exhibit a higher mean share of government securities to assets (0.044) in non-adjacent (benchmark) years. The averages of deposit-to-asset and loan-to-asset ratios are highest in the benchmark years as well: 0.466 and 0.295, respectively. Interestingly, Turkish banks decrease their loan growth rate in pre-election years (-0.012). In line with the growth rate of loans, banks' loan-to-asset ratios are lowest in pre-election years. The behavior of loan dynamics over election cycles could be explained by more cautious lending behavior of the bank managers in pre-election years. Also, compared with the election periods, the growth of government securities holdings in pre-election years is significantly higher, as the government, in need of funds to finance pre-election activities, issues attractive securities. To sum up, there is some evidence that election cycles may have an impact on banks' behavior.

We next present a visual inspection of the evolution of some of these variables across bank types, as our aim is to understand the behavior of different bank types over election cycles. In Figure 2 we plot the average loan-to-asset ratio for three types of banks: domestic commercial, foreign, and state. From 1963–1994, we find that state-owned banks had the lowest lending share with respect to their total assets. However, as of 1988 the loan-to-asset ratio of state-owned banks starts to increase: after 1998, to around 0.38. Since then, on average, state banks' loan-to-asset ratios have been higher than those of the other type of banks in most years. This is understandable as state-owned banks played an important role in the development of various industries

and small businesses starting with the implementation of financial restructuring in the 1990s. The 1978–1992 period was also characterized by an increase in the number of foreign banks with a presence in the Turkish banking sector (see also Figure 1). State bank lending held steady until the financial crises and recession of 2001.

Figure 3 plots the evolution of average deposit-to-asset ratios for each type of bank. We see that domestic commercial banks have a higher average deposit ratio compared to their state-owned and foreign counterparts. This is mainly due to the fact that local commercial banks have extended their branches throughout the country⁸ and they offer several services that are competitive with state banks’ offerings. In contrast, foreign-owned banks’ presence is confined to the largest cities, with a much lower emphasis on retail banking. Figure 4 depicts the behavior of the average interest margin for all banks. Notice that there is almost no difference in the interest margin between local commercial and foreign banks in the 1960–70s, during which this measure was very low at times for all banks. This is not surprising. Prior to 1980, bank activity in financial markets was very limited. There was little competition between banks as interest rates were controlled by the government. Furthermore, the 1973–74 oil crises had quite negative effects in Turkey. With the implementation of a financial reform programme in the 1980s, competition amongst banks became more common. Given their expertise and knowledge in financial markets, foreign-owned banks were able to improve their interest margin substantially, and their competing domestic commercial banks followed suit. As expected, state banks’ performance trailed that of private-sector banks.⁹ The latter facts are in line with Bonin et al. (2005) who show that foreign banks provide better service and are more cost-efficient.

While providing interesting insights, the descriptive analysis of these figures and the statistics presented in Tables 1–2 alone cannot provide a full account of Turkish banks’ behavior over election cycles, as we cannot control for several confounding factors. Hence, we subject the data to a rigorous empirical investigation to understand how different bank types’ behavior may have differed over election cycles. In the next section,

⁸State banks also have a wide presence throughout the country.

⁹It is this observation that state banks substantially underperform private-sector bank performance prompt many researchers to advocate privatization programmes.

we describe the econometric strategy that we employ to investigate the effects of election cycles on state versus private-sector bank behavior.

4 Empirical Model and Results

As documented in the previous section, Turkish banks' financial ratios and their growth rates appear to differ around the dates of parliamentary elections. Graphs of some of these ratios also give the impression of the presence of differences across bank types. Some of the cyclical movements visible in Figures 3 and 4 could be due to electoral cycles. To quantify the presence of differences between bank types and to determine whether election cycles have an impact on bank behavior across bank types, we use a variant of a dynamic empirical specification proposed by earlier researchers. The main difference in our approach is the introduction of a set of election dummies to capture differences in bank behavior over the election cycles, rather than merely focusing on election years. We also interact these dummies with bank type to observe potential differences across bank types. Our model takes the following form:

$$Y_{it} = \alpha_0 + \alpha_1 Y_{i,t-1} + \mathbf{E}_t \beta + \zeta_1 State_{it} + \zeta_2 Foreign_{it} + State_{it} \mathbf{E}_t \xi_1 + Foreign_{it} \mathbf{E}_t \xi_2 + \mathbf{Z}_{it} \gamma + \lambda_t + \nu_i + \varepsilon_{it}$$

where i and t denote bank and time indices, respectively and β , ξ_1 and ξ_2 are vectors of coefficients on the election timing indicators and their interactions with bank type. Bank and time fixed effects are captured by ν_i and λ_t , respectively, and ε_{it} denotes the error term. In our investigation, we use a set of bank finance ratios, the growth rates of several variables and bank performance measures as dependent variables, Y_{it} . These include the loan-to-asset ($Loan_{it}/TA_{it}$), deposit-to-asset ($Deposit_{it}/TA_{it}$) and securities-to-asset ($Bond_{it}/TA_{it}$) ratios to model the changes in the asset and the liability sides of the banks' balance sheet. Next, we investigate several performance measures including the interest margin ($Margin_{it}$), interest revenues ($IntRevenue_{it}$) and interest expenditures ($IntExpend_{it}$). We also scrutinize loan growth rates ($LoanGrowth_{it}$) as well as deposit and securities growth rates ($DepositGrowth_{it}$, and $BondGrowth_{it}$, respectively). To allow for persistence in the behavior of the dependent variable, reflecting continuity

in banks’ financial policies, we include the lagged dependent variable, $Y_{i,t-1}$ in our regression model. We control for the effects of other factors, including a vector of bank-level and country level variables (denoted by \mathbf{Z}), as described below. Finally, $State_{it}$ ($Foreign_{it}$) is an indicator variable which equals one if the bank is state (foreign) owned at time t and zero otherwise.

The key variables of interest are a set of election dummies, denoted as \mathbf{E} , which include three dichotomous variables: $Election_t$, $Election_{t-1}$, and $Election_{t+1}$. The first dummy variable is equal to one if parliamentary elections took place at time t and zero otherwise. Similarly, years before the elections and after the elections are captured by $Election_{t-1}$ and $Election_{t+1}$ dummies, respectively. The coefficients of these variables allow us to compare the effects of election cycles on the dependent variables of interest. The interactions of these variables with $State_{it}$ and $Foreign_{it}$ allow us to test whether election cycles’ effects are related to the bank types, as reflected in the magnitudes and significance of the ξ_1 and ξ_2 coefficients.

The elements of vector \mathbf{Z} control for bank-specific and macroeconomic characteristics that influence banks’ policies. The choice of our control variables is motivated by earlier research which investigate bank lending and performance in time series or panel data settings.¹⁰ To control for economies of scale, we include the natural log of real total assets ($\log(TA_{it})$). The financial strength of a bank is measured by its net worth normalized by total assets ($Equity_{it}/TA_t$). In addition, we introduce a set of variables to control for macroeconomic factors that may affect bank behavior such as recession and coup dummies $Recession_t$ and $Coup_t$, respectively.¹¹

We estimate the model with the one-step system dynamic panel data (DPD) estimator. System DPD combines equations in differences of the variables with equations in levels of the variables. In this system GMM approach (see Blundell and Bond (1998)), lagged levels are used as instruments for differenced equations and lagged differences are used as instruments for level equations. The models are estimated using a first

¹⁰See for instance Demirgüç-Kunt and Huizinga (1999) or Saunders and Schumacher (2000).

¹¹Throughout the sample period, Turkey experienced recessions in 1979, 1980, 1994, 1999, and 2001 years, while a military coup took place in 1980–1982. Thanks to remittances from Turkish “guest workers” (gastarbeiters) who began to work in Germany and other European countries in 1961, the Turkish economy did not experience a downturn in the 1960s or early 1970s.

difference transformation to remove the individual firm effect. The set of instruments includes from second to fourth lags of levels of bank-specific variables for difference equations, and second lags of differences of bank-specific variables for level equations. Country level characteristics are treated as exogenous.

The reliability of our econometric methodology depends crucially on the validity of the instruments, which can be evaluated with Sargan’s test of overidentifying restrictions, asymptotically distributed as χ^2 in the number of restrictions. A rejection of the null hypothesis that instruments are orthogonal to errors would indicate that the estimates are not consistent. We also present test statistics for first-order and second-order serial correlation in the error process. In a dynamic panel data context, we expect first-order serial correlation, but should not be able to detect second-order serial correlation if the instruments are appropriately uncorrelated with the errors.

4.1 Empirical findings

We present our results in three sets of tables. Our first set of results considers the effects of elections on bank financial variables. The second table depicts our results on how growth rates of loans, deposits and bond holdings evolve through election cycles. The last set of results concentrate on the relationship between election cycles and bank performance. Our main focus, throughout the discussion, will be on the sign, size and significance of the coefficients associated with the election dummies and their interactions with bank type dummies. For all models discussed in the following subsection, the Hansen statistic for overidentifying restrictions and the Arellano–Bond $AR(2)$ tests shows that, at the 5% significance level, our instruments are appropriately orthogonal to the error and no second order serial correlation is detected, respectively. Hence, we do not make additional comments on those aspects of the estimates.

4.1.1 Bank financial ratios

Table 3 evaluates the impact of the election cycle on the loan-to-asset, deposit-to-asset and securities-to-assets ratio. The first column gives the regression results for the loan-to-asset ratio. In this column we see that the *State* dummy is negative and significant.

This indicates that state-owned banks have lower loan-to-asset ratios. The election dummies are negative and more so during the year before the election than in the election year. One year after the election, the election dummy is also negative, and the magnitude of its effect is comparable to that of the pre-election period. This implies that banks reduce their loan-to-asset ratios during and around the election year which may be due to a perception of an increased risk to lending. When we consider whether banks' behavior over the election cycle differ from one another, data reveal that there is no difference in the behavior of loan-to-asset ratios across bank types over the cycle. During the post-election year, foreign banks' ratios increase slightly in comparison to those of state banks and domestic private-sector banks, which can be explained by the desire of foreign banks to expand operations after the elections. However, neither the size nor the significance level of the relevant coefficient is high enough to imply a significant divergence across bank types.

The lack of differences in the loan-to-asset ratio across bank types over the election cycle is an interesting finding due to the fact that the banking literature generally has claimed that state bank loans grow more than those of other bank types, suggesting the existence of politically motivated lending. Although our results consider the level of the loan-to-asset ratio rather than its growth, we find that state banks' ratios do not differ from those of domestic commercial or foreign-owned banks. This is an interesting observation which we will come back when we investigate the behavior of loan growth over the election cycle. Finally, the coefficient of the *Recession* dummy is negative as one would expect, signaling that during downturns bank loans decline.

The next column presents results for the deposit-to-asset ratio. We find that foreign banks' ratios are lower than those of state banks and domestic private-sector banks, but not significantly so. Next we investigate the interaction coefficients to see whether the ratio differs across bank types over the election cycle. However, no significant differences are found between domestic private-sector, foreign-owned and state-owned banks' ratios. While banks' deposit-to-asset ratio does not change in the year before the election and the election year, this ratio increases a year after the election year. Although we do not have the data to further our claim, it seems that the public put their savings in other

instruments such as foreign currencies or gold, both of which are traditional savings instruments in Turkey, in the period prior to and during the election year. This claim can be rationalized by savers' desire to lessen the impact of potential economic volatility due to uncertainties about the elected governments' economic programme. The impact of election cycles on the deposit-to-asset ratio also seems to be similar across bank types. The only difference is that the increase in the deposit ratio is significantly smaller for state-owned banks in the year after the election. Finally, the *Coup* dummy is insignificant indicating that bank deposits are not necessarily affected by these events. The coefficient of the *Recession* dummy is positive signalling that the public deposit their savings in safe havens during recessions.

The last column considers the behavior of the bond-to-asset ratio over the election cycle. State banks' ratio exceeds that of the other types of banks. The ratio does not differ significantly between domestic and foreign-owned private-sector banks. During the pre-election year banks seem to increase their government bond holdings, but we find no difference between domestic private-sector and state banks over any point in the election cycle. However, the bond-to-asset ratios of foreign-owned banks increases during the post-election year. Finally, we see that banks reduced their bond-to-asset ratio during the coup years, when banks were first allowed to broaden their asset holdings during financial liberalization, and increased it during the recessionary episodes.

4.1.2 Growth in loans, deposits and bond holdings

We next investigate how the growth rates of loans, deposits and bond holdings evolve around the parliamentary election years. The literature concentrates on loan growth regressions to compare the differences in lending behavior of state versus private-sector banks across election and nonelection years. The first column of Table 4 shows that loan growth is lower for state banks. We do not detect any differences in loan growth rates between private-sector domestic and foreign owned banks. Yet, a year before the election, the loan growth rate declines for all banks. This decline is further observed for foreign banks during the election year. However, state-owned banks and domestic private sector banks do not alter their loan growth rate over the election cycles. In par-

ticular, state-owned banks do not systematically increase their lending during elections in comparison to other banks in the financial system. This result is in sharp contrast to that of Dinç (2005) who shows that state banks increase their loans during election years and claim that political motivations influence this behavior.

Given that Dinç's results are based on cross-country panel regression, it is possible that some influential outliers or the presence of accounting differences in reporting across countries may have played a role in those findings. It is also possible that his results are driven by the banks included in the regressions.¹² Equally, the time period during which he studied the phenomena may have an impact on his findings. In our case, by concentrating on a single country, we can clearly observe that Turkish state-owned banks do not change their lending behavior vis-à-vis that of private-sector banks. As expected we find that during recessionary episodes loan growth was reduced and during the period of military rule it increased substantially as discussed above.

Column two of the same table provides regression results for the deposit growth rate. We see that the growth rate of state- and foreign-owned banks does not differ from that of domestic commercial banks. Deposit growth rates a year after elections are higher for all banks. However, our regression model does not point out to any differences in the deposit growth rate across different bank types over election cycles.

The third column of Table 4 depicts our findings for the bond growth rate. While foreign banks' bond growth rate is slower than that of domestic banks, we find no difference between local private and state bank bond growth rates. During the election years all banks seem to decrease their holding of government bonds. However, the bond growth rate of foreign-owned banks declines during the pre-election and increases in the post-election year. The reduction of growth of bond holdings during the pre-election period can be rationalized as the desire to reduce exposure to government debt.

¹²Although the panel data Dinç uses includes a large number of countries, it does not necessarily cover all banks that play an important role in each country.

4.1.3 Bank performance indicators

Table 5 presents the effects of elections on interest rate margin and its two components: interest revenue and interest expense ratios. The first column of the table presents our results for the interest margin. We can observe that the coefficient associated with state-owned banks is negative. This implies that the state banks' interest rate margin is the lowest. In fact the literature has pointed out the inefficiencies of state banks and recommended privatization of state banks. Inspecting the effect of elections on banks, we do not see significant differences across different election stages, as none of the coefficients are statistically significant. We also see little difference across bank types over election cycles, except that a year after the election foreign banks' margin is significantly higher than that of the local commercial and state-owned banks. This is another testament to the relative efficiency (inefficiency) of foreign-owned (state-owned) banks.

Column two of the table presents the behavior of the interest revenue-to-asset ratio. As in the case of interest margin, state-owned banks' interest revenue ratios are lower than those of domestic private-sector or foreign banks. In the year of the election, interest revenues fall for all banks. We also find some differences across the category of banks' interest revenues over election cycles. For instance, foreign banks have lower interest revenues in the pre-election year, which might be explained by a decrease in lending activities. Finally, column three depicts the impact of election cycles on the interest expense-to-asset ratio of the banks. Interestingly, we find that the interest expenses of all three groups of banks are similar. Given this finding, it is evident that the state banks' interest margin is lowest among all bank types due to the fact that their interest revenues are very low. It is likely to be the case that state banks are allowed to lend at a loss to potential borrowers. When we try to examine whether there are any differences across banks over the election cycles, we see only one instance of differing behavior: foreign bank interest expenses are lower than those of the other types of banks during the post-election year.

For all three sets of regressions, we observe that the coefficient of the *Recession*

dummy is always positive and the *Coup* dummy is insignificant except for the first model. These results are intuitive and we do not elaborate further.

4.2 Robustness Checks

We extend our analysis by examining whether our key results are robust to changes in instrument set and sub-periods. As explained in Section 3, our set of instruments includes the second and third lags of levels of bank-specific variables (including ownership) for difference equations, and the second and fourth lags of differences of bank-specific variables for level equations. We also experimented with instrument sets which include up to six lags of bank-dependent variables in both level and difference equations, but this did not affect our main results.

Furthermore, we checked the consistency of our results by concentrating on the 1980–2005 period. These 25 years include the 1980–1982 coup period, during which the military was in control of the country, as well as a substantial increase in the number of foreign banks and the financial crisis of 2002. Our results for this period are similar to those reported in Tables 3–5 and are not reported for the sake of brevity.¹³

5 Conclusions

The recent literature has investigated state versus private-sector banks' lending activities to scrutinize the impact of elections on banks' behavior. This paper extends the question and asks if bank behavior changes meaningfully over the full election cycle, rather than focusing on election versus non-election years. If so, is there a difference between state-owned versus private-sector (domestically or foreign owned) banks' reactions to election cycles? In our investigation we specifically concentrate on several bank financial ratios and performance measures. To carry out our analysis, we utilize a bank panel data collected from Turkey over 1963–2005 including all banks in the financial sector.

The key variables of interest are a set of election dummies, which capture the effects of the election year and pre- and post-election years on bank behavior. Inspecting the

¹³These estimates are available upon request.

coefficients of election dummies as well as the interaction between election and bank type dummies, we investigate the impact of election cycles on banks and test for differences across different type of banks. A simple model is constructed to capture the effects of election cycles on banks' loan, deposit and bond-to-asset ratios, the growth rates of these variables, and the changes in bank performance indicators in relation to election cycles.

Our results can be summarized as follows. We observe that election cycles significantly affect bank behavior. However, we do not find conclusive evidence that bank behavior differs across bank types as claimed in earlier research. In particular, we find no evidence that state-owned banks change their lending activities in comparison to other bank categories before, during or after elections. This is an interesting result on its own as several country-specific studies have found that state-owned banks behave differently during elections. Furthermore, we detect no effect of election cycles on deposit-to-asset and bond-to-asset ratios or their growth rates across banks.

The second set of results that we gather from our study points out that state-owned banks are less efficient than both domestic and foreign-owned private-sector banks. Although our regression results point out that the state bank interest expense ratio is lower than that of both domestic and foreign private-sector banks, the interest revenue ratios of state banks are the lowest among all bank categories. Given this finding, one may be tempted to recommend privatization of state banks as Clarke et al. (2005) suggest. However, while world financial markets go through hardships that have not been experienced since the great depression and while many private enterprises are nationalized throughout the world, privatization of state banks is not something that one would recommend at this time.¹⁴ Yet it is advisable that state banks should operate in a more transparent mode so as not to be subject to accusations or criticism related to funds being channeled towards projects that benefit the governments or those related to government officials.

Although we arrive at similar conclusions to earlier research on the relative ineffi-

¹⁴We must note that, over the last 50 years, several state banks in Turkey were privatized with the premise that funds will be allocated to potential investors much effectively and efficiently. Those state banks that currently operate in Turkey fulfill specific roles that are not satisfied by private-sector banks.

ciency of state-owned banks, one may ask why our results differ regarding the behavior of state-owned banks over electoral cycles. There are a few possible reasons. First, our empirical model differs from those proposed in earlier research as we consider whether electoral *cycles* affect bank behavior rather than the narrower question of whether bank behavior differs between election and non-election years. Second, earlier research that uses panel data has employed a smaller subset of country-specific bank data. If many banks are omitted from the analysis, this can lead to misleading results as the data suffer from sample selection bias. The possibility of accounting differences across countries may be another potential problem leading to biased results. Alternatively, in Turkey, while state-owned banks are prone to common problems of inefficiency, they may not be receiving directives from the government to channel more funds into the economy during election cycles as may be more common in other developing countries. Given our evidence on the behavior of state-owned banks versus private-sector banks in Turkey, we think that a more detailed analysis would be useful to evaluate the impact of election cycles on bank lending in other developed or developing economies.

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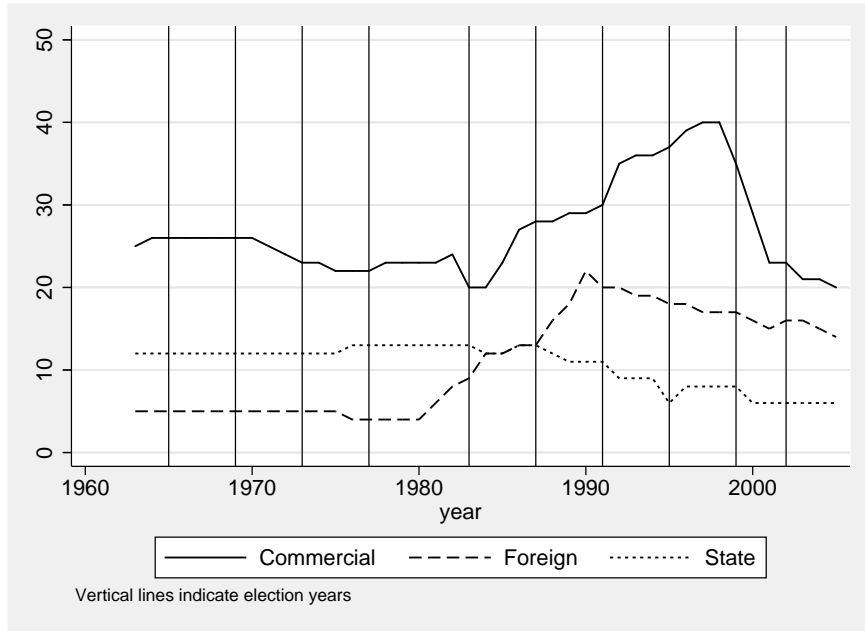


Figure 1: Number of banks

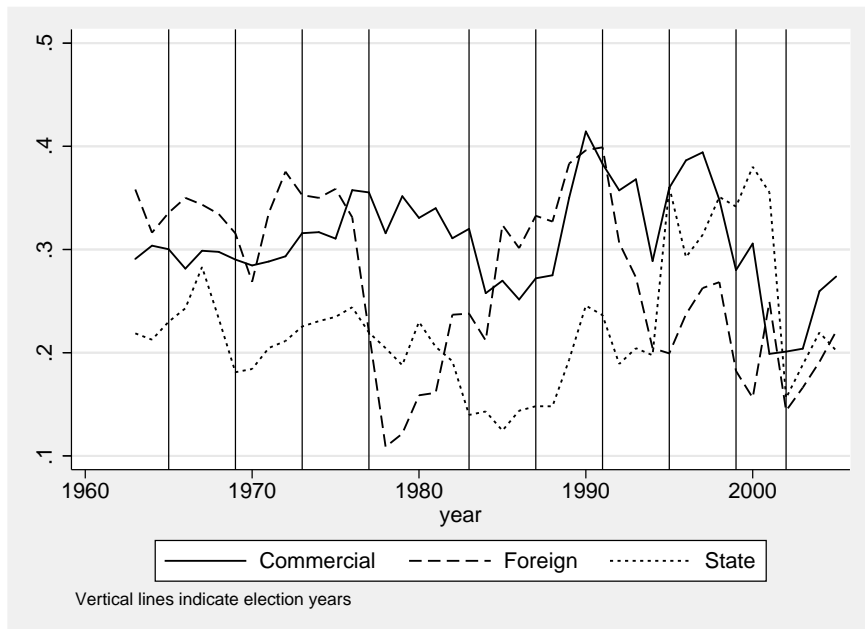


Figure 2: Dynamics of Loan/TA

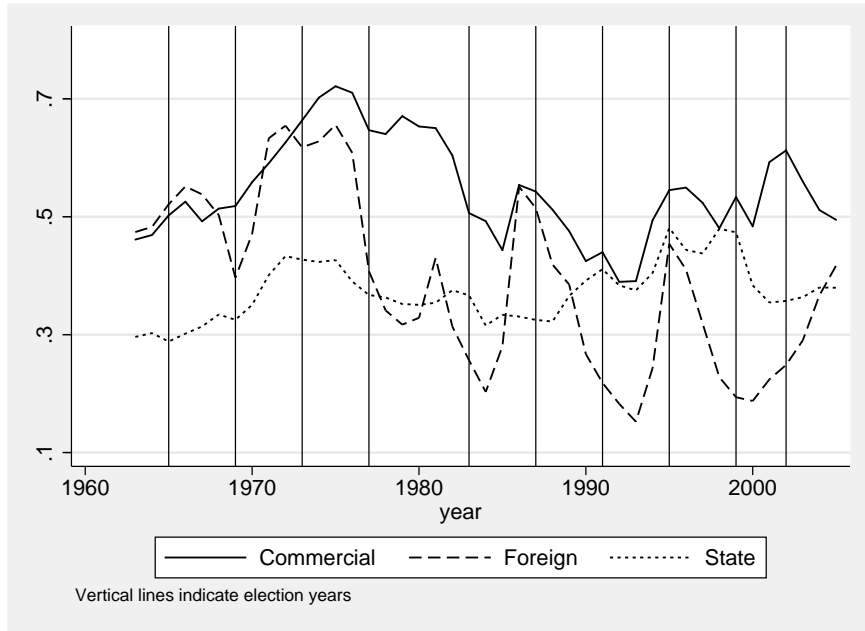


Figure 3: Dynamics of Deposit/TA

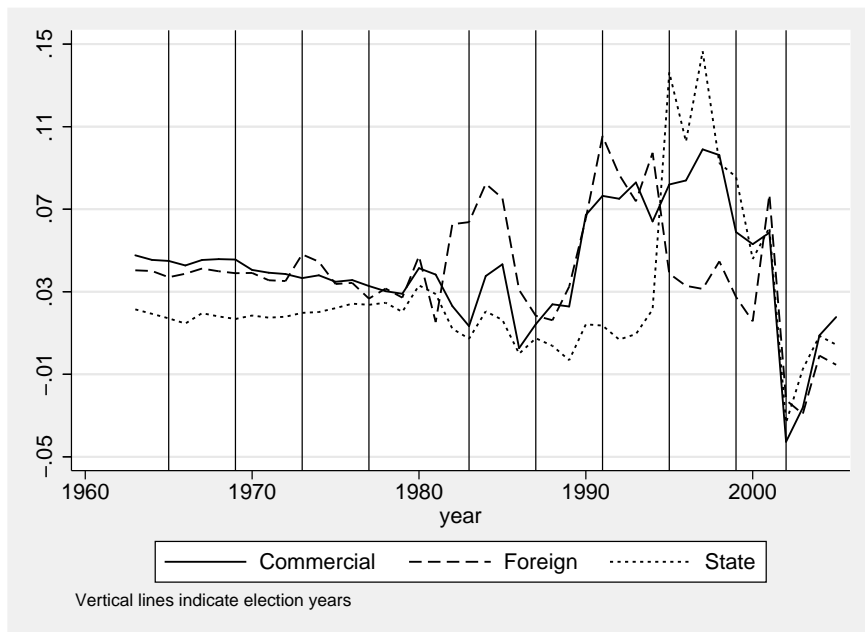


Figure 4: Dynamics of Interest Margin

Table 1: Descriptive statistics: Turkish banks, 1963–2005.

	Definition	μ	σ	N
$Deposit_t/TA_t$	deposits over total assets	0.456	0.282	2,077
$Loan_t/TA_t$	loans over total assets	0.282	0.179	1,988
$Bond_t/TA_t$	government securities over total assets	0.039	0.066	2,076
$Margin_t$	interest margin over total assets	0.039	0.060	1,941
$IntExp_t/TA_t$	interest expenditures over total assets	0.048	0.049	1,941
$IntRev_t/TA_t$	interest revenues over total assets	0.084	0.058	2,077
$DepositGrowth_t$	deposits growth	0.139	0.536	1,755
$LoanGrowth_t$	loan growth	0.112	0.916	1,893
$BondGrowth_t$	governement securities growth	0.109	1.456	1,779
$Equity_t/TA_t$	net worth over total assets	0.169	0.183	2,077
$\log(TA_t)$	log of total assets	14.159	2.333	2,077
$State_t$	one if state banks and zero otherwise	0.219	0.414	2,080
$Foreign_t$	one if foreign bank and zero otherwise	0.226	0.419	2,080
$Election_t$	one if election year and zero otherwise	0.235	0.424	2,080
$Recession_t$	one if recession year and zero otherwise	0.119	0.324	2,080
$Coup_t$	one if coup 1980-1982 and zero otherwise	0.061	0.239	2,080

Note: N is the number of bank-years, while μ and σ represent mean and standard deviation respectively.

Table 2: Descriptive statistics: Bank variables over election cycles.

	<i>Pre-Election Year</i>			<i>Election Year</i>		
	μ	σ	N	μ	σ	N
$Deposit_t/TA_t$	0.456	0.281	470	0.461	0.277	487
$Loan_t/TA_t$	0.272	0.176	453	0.279	0.178	468
$Bond_t/TA_t$	0.040	0.070	470	0.038	0.069	487
$Margin_t$	0.036	0.059	442	0.035	0.060	456
$IntExp_t/TA_t$	0.047	0.050	442	0.047	0.049	456
$IntRev_t/TA_t$	0.081	0.059	470	0.081	0.056	487
$DepositGrowth_t$	0.038	0.486	414	0.176	0.501	428
$LoanGrowth_t$	-0.012	0.902	449	0.127	0.911	459
$BondGrowth_t$	0.171	1.463	429	-0.037	1.466	428
$Equity_t/TA_t$	0.157	0.165	470	0.162	0.176	487
$\log(TA_t)$	14.268	2.312	470	14.239	2.323	487
$State_t$	0.211	0.408	470	0.217	0.413	488
$Foreign_t$	0.232	0.423	470	0.230	0.421	488
	<i>Post-Election Year</i>			<i>Benchmark Year</i>		
	μ	σ	N	μ	σ	N
$Deposit_t/TA_t$	0.456	0.282	482	0.466	0.283	506
$Loan_t/TA_t$	0.287	0.181	460	0.295	0.176	487
$Bond_t/TA_t$	0.038	0.060	482	0.044	0.071	506
$Margin_t$	0.046	0.069	445	0.040	0.051	475
$IntExp_t/TA_t$	0.052	0.051	445	0.050	0.049	475
$IntRev_t/TA_t$	0.094	0.064	482	0.087	0.055	506
$DepositGrowth_t$	0.231	0.618	413	0.116	0.509	452
$LoanGrowth_t$	0.088	0.923	444	0.239	0.937	481
$BondGrowth_t$	0.219	1.482	408	0.072	1.360	455
$Equity_t/TA_t$	0.173	0.182	482	0.153	0.174	506
$\log(TA_t)$	14.108	2.333	482	14.205	2.267	506
$State_t$	0.222	0.416	482	0.239	0.427	506
$Foreign_t$	0.228	0.420	482	0.208	0.406	506

Note: N is the number of bank-years, while μ and σ represent mean and standard deviation respectively. See notes to Table 1 for variables' definitions.

Table 3: Models of $Loan/TA$, $Deposit/TA$ and $Bond/TA$, 1963–2005.

	$Loan_t/TA_t$	$Deposit_t/TA_t$	$Bond_t/TA_t$
$Equity_t/TA_t$	-0.051*	-0.136***	-0.057***
	(0.030)	(0.044)	(0.016)
$\log(TA)_t$	0.003	-0.005	-0.005***
	(0.003)	(0.004)	(0.001)
$Recession_t$	-0.042***	0.028***	0.008***
	(0.011)	(0.007)	(0.003)
$Coupt$	0.000	-0.013	-0.026***
	(0.013)	(0.011)	(0.005)
$State_t$	-0.038***	-0.019	0.013*
	(0.014)	(0.026)	(0.007)
$Foreign_t$	-0.013	-0.049	-0.006
	(0.014)	(0.035)	(0.009)
$Election_{t-1}$	-0.030***	0.009	0.005*
	(0.007)	(0.007)	(0.003)
$Election_t$	-0.014*	0.010	0.001
	(0.008)	(0.009)	(0.003)
$Election_{t+1}$	-0.030***	0.033***	0.002
	(0.008)	(0.007)	(0.003)
$Election_{t-1} \times State_t$	0.014	-0.008	-0.005
	(0.012)	(0.009)	(0.005)
$Election_t \times State_t$	-0.015	-0.014	0.000
	(0.013)	(0.011)	(0.005)
$Election_{t+1} \times State_t$	0.024	-0.021**	-0.003
	(0.015)	(0.009)	(0.004)
$Election_{t-1} \times Foreign_t$	-0.018	-0.026	-0.006
	(0.019)	(0.020)	(0.007)
$Election_t \times Foreign_t$	-0.020	-0.004	0.000
	(0.016)	(0.024)	(0.011)
$Election_{t+1} \times Foreign_t$	0.033*	-0.026	0.014*
	(0.020)	(0.019)	(0.008)
$Loan_{t-1}/TA_{t-1}$	0.724***		
	(0.037)		
$Deposit_{t-1}/TA_{t-1}$		0.730***	
		(0.037)	
$Bonds_{t-1}/TA_{t-1}$			0.702***
			(0.035)
Bank-years	1,801	1,893	1,892
Banks	84	86	86
Hansen p-val	1.000	1.000	1.000
Hansen d.f.	470	364	364
AR(2) p-val	0.076	0.387	0.343

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Variable definitions are given in Table 1. The constant term is not reported. Instruments include 2-4 lags of bank variables for difference equations and two lags for level equations.

Table 4: Models of *GrowthLoan*, *GrowthDeposit* and *GrowthBond*, 1963–2005.

	<i>GrowthLoan_t</i>	<i>GrowthDeposit_t</i>	<i>GrowthBond_t</i>
<i>Equity_t/TA_t</i>	0.236 (0.649)	-0.743* (0.380)	-0.965* (0.508)
$\log(TA)_t$	-0.038 (0.041)	0.019 (0.014)	-0.091 (0.068)
<i>Recession_t</i>	-0.369*** (0.091)	-0.016 (0.046)	0.267** (0.107)
<i>Coup_t</i>	0.306** (0.133)	0.091* (0.051)	-0.719*** (0.112)
<i>State_t</i>	-0.613** (0.304)	-0.111 (0.073)	-0.065 (0.287)
<i>Foreign_t</i>	-0.401 (0.278)	0.005 (0.142)	-0.605* (0.331)
<i>Election_{t-1}</i>	-0.170*** (0.045)	0.007 (0.031)	0.182 (0.129)
<i>Election_t</i>	0.008 (0.067)	0.102** (0.041)	-0.319** (0.131)
<i>Election_{t+1}</i>	-0.073 (0.072)	0.144*** (0.046)	-0.154 (0.161)
<i>Election_{t-1} × State_t</i>	0.052 (0.112)	-0.031 (0.054)	-0.232 (0.210)
<i>Election_t × State_t</i>	-0.111 (0.142)	-0.034 (0.057)	0.350* (0.207)
<i>Election_{t+1} × State_t</i>	0.150 (0.142)	0.051 (0.077)	0.304 (0.263)
<i>Election_{t-1} × Foreign_t</i>	-0.243 (0.176)	-0.181 (0.120)	-0.419* (0.238)
<i>Election_t × Foreign_t</i>	-0.297** (0.141)	-0.010 (0.099)	0.047 (0.222)
<i>Election_{t+1} × Foreign_t</i>	-0.049 (0.139)	-0.035 (0.126)	0.472* (0.242)
<i>GrowthLoan_{t-1}</i>	-0.257*** (0.053)		
<i>GrowthDeposit_{t-1}</i>		-0.066 (0.057)	
<i>GrowthBonds_{t-1}</i>			-0.177*** (0.043)
Bank-years	1,710	1,600	1,594
Banks	84	74	81
Hansen p-val	1.000	1.000	1.000
Hansen d.f.	347	344	347
AR(2) p-val	0.654	0.371	0.122

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Variable definitions are given in Table 1. The constant term is not reported. Instruments include 2-4 lags of bank variables for difference equations and two lags for level equations.

Table 5: Models of *Margin*, *IntRevenue/TA* and *IntExpenditure/TA*, 1963–2005.

	<i>Margin_t</i>	<i>IntRevenue_t/TA_t</i>	<i>IntExpenditure_t/TA_t</i>
<i>Equity_t/TA_t</i>	0.013 (0.020)	0.034** (0.017)	0.031** (0.013)
$\log(TA)_t$	0.002 (0.002)	0.003** (0.001)	0.002* (0.001)
<i>Recession_t</i>	0.001 (0.005)	0.005 (0.003)	0.008*** (0.002)
<i>Coupt</i>	-0.002 (0.003)	0.015*** (0.004)	0.018*** (0.004)
<i>State_t</i>	-0.029*** (0.011)	-0.026*** (0.007)	-0.004 (0.006)
<i>Foreign_t</i>	-0.001 (0.009)	-0.008 (0.008)	-0.000 (0.008)
<i>Election_{t-1}</i>	-0.002 (0.002)	-0.001 (0.003)	0.004** (0.002)
<i>Election_t</i>	-0.006 (0.003)	-0.015*** (0.003)	-0.006** (0.003)
<i>Election_{t+1}</i>	-0.004 (0.003)	0.004 (0.004)	0.007*** (0.002)
<i>Election_{t-1} × State_t</i>	-0.001 (0.005)	0.000 (0.004)	0.001 (0.003)
<i>Election_t × State_t</i>	0.001 (0.006)	0.008* (0.004)	0.006 (0.004)
<i>Election_{t+1} × State_t</i>	-0.001 (0.005)	-0.006 (0.006)	-0.005 (0.004)
<i>Election_{t-1} × Foreign_t</i>	-0.011 (0.008)	-0.011** (0.004)	-0.007 (0.004)
<i>Election_t × Foreign_t</i>	-0.003 (0.007)	0.002 (0.005)	0.002 (0.005)
<i>Election_{t+1} × Foreign_t</i>	0.020* (0.012)	0.005 (0.008)	-0.015*** (0.006)
<i>Margin_{t-1}</i>	0.625*** (0.036)		
<i>IntRev_{t-1}/TA_{t-1}</i>		0.627*** (0.037)	
<i>IntExp_{t-1}/TA_{t-1}</i>			0.699*** (0.038)
Bank-years	1,733	1,893	1,733
Banks	85	86	85
Hansen p-val	1.000	1.000	1.000
Hansen d.f.	354	364	354
AR(2) p-val	0.278	0.405	0.070

Notes: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. Variable definitions are given in Table 1. The constant term is not reported. Instruments include 2-4 lags of bank variables for difference equations and two lags for level equations.