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By *Ozlem Akin and S. Mehmet Ozsoy*

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Ozlem Akin **S. Mehmet Ozsoy**

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This paper compares the liquidity creation of state-owned banks in Turkey with that of private banks both in normal times and around election times. Turkey provides an excellent laboratory to explore the role of state ownership in the banking industry as it is a country with a long history of state ownership of banks. Applying Berger and Bouwman (2009) framework to measure liquidity creation and using quarterly detailed regulatory dataset for the period of 2002 – 2017, we find that state-owned banks create more liquidity per unit of assets than their private counterparts. More importantly, the documented statistically significant difference widens during the election quarters. Our findings suggest a divergence between behaviors of state and private banks because of political elections. We further show that the liquidity creation of state banks around political elections, with respect to that of private banks, seem to not increase bank risk measured by RoaVol and Z-score but dampens state banks' performance measured by Roa. We finally document that the size effect can only explain the unconditional difference but it does not explain the documented difference around election quarters.

JEL Codes: G21, G28, G32.

Keywords: liquidity creation, state-owned banks, political economy

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1. Introduction

Public banks are pervasive, with more than 900 worldwide, and powerful, having assets nearing $49 trillion (Marois, 2021). Yet, their impact on the real economy is still controversial. On the one hand, state-owned banks contribute to economic development (Stiglitz,1993). On the other hand, politicians use state-owned banks for their own interest (Shlefier and Vishny, 1994; Shlefier, 1998). More specifically, it has been argued that by lending to politically important sectors or regions (Sapienza, 2004; Khwaja and Mian, 2005; Cole, 2009a,b; Carvalho, 2014) or to firms with political ties (Khwaja and Mian, 2005; Claessens et al., 2008; Carvalho, 2014) state ownership leads to misallocation of resources. We contribute to the debate by focusing on liquidity creation of state-owned banks and comparing it with that of private banks both in normal times and around election times using data from Turkey. Turkey offers an excellent laboratory to explore the role of state ownership in the banking industry as it is a country with a long history of state ownership of banks.

Our main variable of interest is liquidity created by banks. We compute liquidity creation of individual banks following Berger and Bouwman (2009) methodology which allows us to compute liquidity created including off-balance sheet activities ("fat") or excluding them ("non-fat"). Furthermore, this methodology also allows us to disentangle the liquidity created from asset and liabilities sides.

Our analysis is based on 43 banks, private and state-owned, operating in Turkey during the period of 2002 – 2017. We obtained a quarterly detailed regulatory dataset from The Banks Association of Turkey which provides free access to financial statements of banks. Following

Berger and Bouwman (2009) we calculate liquidity creation for individual banks. Using quarterly detailed regulatory dataset, liquidity created on both sides of the balance sheet are computed. This is the first study to calculate liquidity creation measures of Berger and Bouwman (2009) for Turkish banks. We then compare the state-owned and private banks in terms of their liquidity creation both in normal times and around elections. We further investigate the source of liquidity creation as our methodology allows us to disentangle the liquidity created in the asset and liability side.

Our first set of results show that state-owned banks on average generate more liquidity than their private counterparts. More related to our research question, the observed difference between state-owned and private banks widens during election quarters. So in other words, our results indicate that state-owned banks generate more liquidity per asset during the election quarters. Furthermore, we analyze liquidity creation with and without off-balance sheet activities and observe that the off-balance sheet items are almost as important as the balance sheet items in creating liquidity, independent of election cycles. Finally, state-owned banks seem to utilize off-balance sheet sources to create additional liquidity during election quarters.

In the second set of results, we focus on the decomposition of liquidity creation and uncover the source of the liquidity created. There is no significant difference between two groups in creating liquidity with their assets. But during election times state banks seem to create more liquidity than private banks for a given amount of assets. When we look at the liabilities side, we observe that the documented higher liquidity creation by state-owned banks is driven by the liabilities side. This suggests that almost all of the excess liquidity creation of state banks, with respect to their privately-owned peers, originates in their liabilities while asset-side liquidity creation of state and private banks look similar on a typical quarter. However, this result does not relate to the elections. Hence, although state banks unconditionally create more liquidity via their liabilities the composition of liabilities does not differ from private banks any further during election quarters.

We next analyze whether the documented divergence between private and state banks around elections have any impact on bank performances. Using three different measures for bank performance (return on asset (Roa), the volatility of return on asset (RoaVol) and the Z-score), we show that the liquidity creation of state banks around political elections, with respect to that of private banks, seem to not increase bank risk measured by RoaVol and Z-score but dampens state banks' performance measured by Roa.

Finally, we explore whether the documented increase in liquidity creation of state-owned banks during the election quarters is a response to the macroeconomic fluctuations driven by election. We focus on two macroeconomic factors namely GDP growth rate and unemployment rate. In the case of GDP, we find that state banks create more liquidity as GDP growth rates decrease, only in quarters with elections but not otherwise. Hence, it is likely that state banks appeal to off-balance sheet liquidity creation during election quarters, and more so if the GDP growth is lower. When we turn to the unemployment rate, state banks seem to adjust their liquidity creation with respect to unemployment fluctuations. More importantly this adjustment does not change depending on the presence of political elections and state banks' relative behavior on election quarters do not stem from their response to election-driven macroeconomic fluctuations.

As a robustness test, we analyze whether the bank size has an impact on the documented results. To the extent that bank size matters for liquidity creation (Berger and Bouwman, 2009; Fungáčová and Weill, 2012), which is measured per one dollar of asset, this difference in size might affect our results. We show that indeed bank size can account for the unconditional liquidity creation difference between the two groups of banks. That is, bank-size difference can account for most of the unconditional liquidity creation difference between state and private banks, but not the observed divergence around elections. Therefore, our main result is robust to concerns about the impact of bank size.

We contribute to literature in several ways. One of the main contributions of this paper is to calculate liquidity creation measures proposed by Berger and Bouwman (2009) for each bank operating in Turkey, which has not been calculated before for Turkish banks. Using panel data this paper provides bank level analysis. More specifically, this paper is the first to analyze liquidity creation of banks operating in Turkey using both asset and liabilities side of the balance sheet. Previous literature that analyze liquidity aspects of banks that are operating in Turkey measure liquidity as the share of liquid assets in total assets and have not used any items from liabilities side (Akbostanci, 2012; Akıncı et al. ,2013). Alper et al. (2012) that define liquidity as the difference between liquid assets and liquid liabilities, but different from Berger and Bouwman (2009) they do not include loans and any semi-liquid items (both from asset and liability sides) in their analysis. Akin and Ozsoy (2019) use this framework but compute aggregate liquidity created in the Turkish banking industry and do not conduct bank-level analysis.

Berger and Bouwman (2009) measures are often used in subsequent empirical liquidity creation literature that analyze US banks to investigate the relationship between liquidity creation and bank merges (Pana et al., 2010), equity capital (Horváth et al., 2014), monetary policy (Berger and Bouwman, 2017), real economic output (Berger and Sedunov, 2017), bank governance (Diz and Huang, 2017), economic policy uncertainty (Berger et al. 2017), bank competition (Jiang et al., 2019). Berger and Bouwman (2009) measures are also used to measure liquidity created by banks in both developed and developing countries such as Germany (Rauch et al., 2011, Berger et al., 2016), Russia (Fungáčová and Weill, 2012; Fungáčová et al., 2015; 2017), Czech Republic (Horváth et al., 2014; 2016) and China (Lei and Song, 2013). We extend this growing literature by computing the proposed measures for Turkey for the first time.

Secondly, our work is related to the literature that discusses politically-motivated behavior of state-owned banks in general. For example, Khwaja and Mian (2005) use loan-level data from Pakistan and show that government-owned banks charge lower rates from politically connected firms. However, private banks do not provide political favors. Relatedly, we contribute to another strand in the literature that studies the change in behavior of government-owned banks relative to privately-owned banks around some particular event such as elections. For example, one strand of the literature discusses the lending behavior of state-owned banks around some political event (Dinc, 2005; Micco et al.,2007).[2] The limited literature that analyzes this issue for Turkey produced mixed results. Baum et al. (2010) study the effects of general elections on the banking system using data from Turkey. They focus on the period between 1963 and 2007 and

[2] In a recent paper Koetter and Popov (2021) analyze how political party turnover after German state elections affects bank lending to the regional government. They find that party turnover at the state level leads to a sharp decrease in lending by local savings banks to their home-state governments.

show that government-owned banks' behavior does not differ from others before, during or after elections. However, Onder and Ozyildirim (2013) find that state banks in Turkey increase their share in the credit market during local elections. In a working paper, using credit data from Turkey, Bircan and Saka (2019) find that state-owned banks (compared with private banks) either increase or reduce corporate lending, depending on whether the incumbent mayor is aligned with the ruling party or the opposition. We differ from these studies by studying the liquidity creation of state-owned banks.

Third, our paper is also related to the broader literature that is discussing the role of state-owned banks in general. La Porta et al. (2002) shows that state-ownership in the banking sector induces lower levels of financial and economic development. Barth et al. (2000) documents negative correlation between government ownership of banks and development. Recently, Beck et al. (2020) used large data from 100 countries and showed that liquidity creation is positively associated with economic growth at both country and industry levels. By analyzing the liquidity creation performance of state-owned banks, we expand the knowledge on the role played by the government in the banking industry.

Fourth, by conducting a comparative analysis we contribute to the literature that is comparing state vs private banks in several aspects such as performance (Molyneux and Thornton, 1992; Shen and Lin, 2012) and lending behavior (Sapienza, 2004). This is the first paper that compares their performance in terms of liquidity creation which is one fundamental role of financial intermediation (Bryant, 1980; Diamond and Dybvig, 1983; Holmstrom and Tirole, 1998).

Finally, our study is also related to the literature that is discussing the procyclical behavior of state-owned banks. Some studies document that lending by state-owned banks is less procyclical compared to private banks (Micco and Panizza, 2006; Onder and Ozyldirim 2013; Bertay et al. 2015) and find support for the argument that state-owned banks actually may help to stabilize the economy during the downturns. This study extends our knowledge about the changes in the behavior of state-owned banks depending on the macroeconomic fluctuations by specifically focusing on liquidity creation performance. This paper is the first to explore whether state-owned banks adjust their liquidity creation depending on the state of the economy.

Overall, our results provide new insights on the role of government ownership in the banking industry. Our analysis in the context of the Turkish banking system will provide insights into policy makers in any country with state-ownership in the banking sector.

The remainder of the paper is organized as follows. Section 2 provides details of data sources and descriptive statistics of our sample and variables used in our analysis. In section 3, we present and discuss the results, including robustness tests. In section 4, we conclude and discuss the policy implications of our findings.

2. Data and Empirical Strategy

In this section we first explain the data and sample construction. Then we describe the creation of bank liquidity measures as well as the empirical methodology we employ.

We obtain quarterly regulatory filings dataset from the Banks Association of Turkey.[3] Our sample consists of 43 commercial banks operating in Turkey from 2002Q4 to 2017Q4.[4] We exclude development, investment and participation banks and focus on the commercial banks.

[Table 1 here]

Table 1 presents the summary statistics for our sample of 43 commercial banks. There are 39 privately-owned and 4 state-owned unique banks in our sample. The number of banks change over time: 35 private and 4 state banks operate in 2002 and these numbers drop to 29 and 3 by the end of the sample. Bank level variables are converted to real values using 2017 as the base year.[5] Bank size grows significantly during the sample period. The average size of a private bank, in real terms, grows more than 400% (around 12% annually). The growth in size of state banks is also similar, although they are larger to begin with and stay larger than an average private bank throughout the sample period. The largest state bank (Ziraat Bank) is also the largest bank for eleven years in our sample and the second largest bank in the remaining five years. Furthermore, even the smallest state-owned bank is larger in size than the average private bank.

Our main variable of interest is the bank-level liquidity creation. Banks provide liquidity to public by converting liquid liabilities, such as deposits, into illiquid assets, such as business

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[3] The Banks Association of Turkey provides free access to banks' financial statements at https://www.tbb.org.tr/tr/bankacilik/banka-ve-sektor-bilgileri/istatistiki-raporlar/59

[4] After the 2000-01 financial crisis Turkish banking system went through structural reforms, and with those unconsolidated balance sheet and income statements became available since 2002Q4.

[5] Inflation adjustment is important for the summary statistics and uniform comparisons. Our main results come from panel regressions, which include quarterly time dummies and effectively remove the impact of inflation as well as any other aggregate variable. The Consumer Price Index (CPI) data used for inflation adjustment is obtained from the webpage of the Central Bank of the Republic of Turkey, under the data category "price indices" at https://evds2.tcmb.gov.tr/index.php?/evds/serieMarket.

loans. In creating liquidity banks can utilize items on their balance sheets, as in Bryant (1980) and Diamond and Dybvig (1983), as well as via off-balance sheet activities, as in Holmstrom and Tirole (1998) and Kashyap, Rajan, and Stein (2002). Hence we calculate bank-level liquidity creation measures with and without off-balance sheet activities.

To calculate bank-level liquidity creation, following Berger and Bouwman (2009), we pursue a three-step procedure: Each balance sheet item and off-balance sheet activity is classified as "liquid", "semi-liquid" and "illiquid" and is assigned a weight according to the liquidity classification. Finally, bank-variables are aggregated at the liquidity categories defined in previous steps. Now, we explain these steps in detail. The exact definitions of items are presented in Appendix Table A.

In the first step, each balance sheet and off-balance sheet item is classified as "liquid", "semi-liquid" or "illiquid". This classification is based on "the ease, cost, and time for customers to obtain liquid funds from the bank" as in Berger and Bouwman (2009). For instance, on the asset side, cash and trading assets are classified as liquid assets while commercial and industrial loans are classified as illiquid assets. Loans are classified based on their category.[6] For instance, consumer loans, credit card balances and loans to depository institutions are considered as semi-liquid and the rest of the loans are classified as illiquid. On the liabilities side, we classify deposits as liquid and total equity as illiquid. Given these weights, converting 1 dollar of deposit into 1 dollar of illiquid asset implies creation of 1 dollar of liquidity.

[6] Berger and Bouwman (2009) classify loans into liquidity classes in two separate ways, based on loan category (business loans, real estate loans, etc.) and loan maturity, such as long-term loans being illiquid and while loans with less than 1 year being classified as liquid. As we do not have details at maturity level, we classify loans based only on loan category.

In the second step, we assign the weights to each item based on its liquidity class. Illiquid assets and liquid liabilities receive positive weights (1/2) as banks create liquidity service for the public by converting liquid liabilities to illiquid assets. Liquid assets and illiquid liabilities, on the other hand, receive negative weights (-1/2) as they both imply liquidity destruction. Semi-liquid items are assigned a weight of zero.

In the third and final step, we aggregate the value of items multiplied by corresponding weights at bank-quarter level. All liquidity creation measures are normalized by gross total assets (GTA), hence they are per asset and comparable across banks with different size.

[Table 2 here]

Our benchmark liquidity creation measure excludes off-balance sheet items and is denoted as LC_nonfat. It is possible to decompose this measure into asset and liability components which would yield the liquidity created using assets and liabilities separately. Such a decomposition can be formulated as $LC\_nonfat = LC\_asset + LC\_liab$, where LC_asset is liquidity created on asset side and LC_liab is liquidity created on liability side. Our preferred liquidity creation measure LC_nonfat does not include the liquidity created off balance sheet. When both on and off-balance sheet liquidity creation considered we denote the measure as LC_fat, which can be formalized as follows: $LC\_fat = LC\_nonfat + LC\_obs$ where LC_obs denotes the liquidity creation via off balance sheet activities.

Table 2 displays summary statistics for LC measures and other variables used in the analysis. The average liquidity creation for state banks, based on LC_nonfat, is 0.25. That is, liquidity created by state banks equals 25% of their total GTA. The same figure is much smaller for private banks, 0.09.[7] This comparison yields a similar picture when LC_fat is used, rather than LC_nonfat. The average LC_fat is 0.37 for state banks and 0.06 for private banks. When median values are compared, rather than averages, private banks start looking more similar to state banks. This is related to the significant heterogeneity among private banks, which reflects itself also in the average cross-sectional standard deviations. For instance, the standard deviation of LC_nonfat is 0.35 for private banks and 0.08 for state banks. That is, privately-owned banks are a more heterogeneous group compared to state-owned banks. According to the both measures, state banks create liquidity more intensively compared to the average private bank.

The only difference between our two LC measures is while LC_fat includes off-balance sheet liquidity creation LC_nonfat does not. The magnitude of the difference between LC_fat and LC_nonfat gives us the liquidity created via off-balance sheets. When LC_nonfat and LC_fat is compared, in Table 2, we see that private banks destroys liquidity via their off-balance-sheet activities, i.e. LC_fat is less than LC_nonfat. The opposite of that is true for state banks. The average state bank seems to increase its liquidity creation by around 50% by using off-balance-sheet activities; the average LC_nonfat is 0.26 and the average LC_fat is 0.37.

The composition of both assets and liabilities in bank balance sheets matter for liquidity services a bank can provide. The measure of liquidity created on balance sheets LC_nonfat can naturally be decomposed into asset- and liability-side components; $LC\_nonfat = LC\_asset + LC\_liab$.

[7] The cross-sectional mean and median of LC_nonfat are 0.04 and 0.13 for the year 2003. For the same year Berger and Bouwman (2009) report a cross-sectional average of LC_nonfat as 0.2. Hence, in the same time period Turkish banks liquidity creation seem to be behind that of US counterparts, which is understandable given the much smaller size and less mature nature of Turkish banks, especially as of 2003.

This decomposition allows us shed light on the mechanism banks resort to when more liquidity needs to be created. In Table 2 we see that both the state- and privately-owned banks create more liquidity via assets than liabilities. That is, the principal source of Turkish bank's liquidity creation is their liquid liabilities and their assets do not particularly provide liquidity services to the public. They might be channeling funds to semi-liquid assets and liquid assets such as government securities. To dig deeper, we focus on a major item on both side on the balance sheets and compare loan to GTA and deposit to GTA ratios across the two types of banks. While loan to GTA ratios are similar, deposit ratios seem to differ between privately-owned banks and state banks. Deposits to GTA ratio is around 0.70 for mean and median state bank while those ratios for private banks are 0.50 and 0.57. It is known that state banks handle almost all of the retirement benefits and other transfers, beneficiaries of which seem not sensitive to interest rate paid on deposits. Hence, state banks tend to enjoy a lower cost of deposit which is usually short-term, hence liquid, in Turkey (Turguttopbas, 2017; Kenc 2011). Having this sizable amount of deposits state banks can and does generate significant liquidity using those.

[Figure 1 here]

The cross-sectional differences observed in Table 2 is also visible in time-series. In Figure 1 the quarterly average LC_nonfat of state and private banks are plotted. The trends are clear: While the private banks' average LC measure rise to around 0.3 from around 0.2, state banks' reaches to above 0.4 from below 0.1. The state banks' growing role is also apparent in Figure 2, in which we plot over time the share of state banks in total liquidity created in the banking system. State banks' share has been rising throughout the sample and reaches to 40% by the end of the sample. We should emphasize that the LC measures are scaled by bank assets (GTA), hence the LC increase of state banks are not driven by their size. In fact, during our sample period state banks' share in total bank-assets slightly decrease, if anything (dashed line in Figure 2). This is actually a period in which the number of foreign banks increases in Turkish banking sector, with a bit of consolidation as well. Nevertheless, state banks seem to increase the liquidity they create per asset.

[Figure 2 here]

To formally analyze and test the role of state banks in liquidity creation, in general and particularly over election cycles, we utilize the regressions such as

$$LC_{i,t} = \alpha + \beta\, StateBank_i + \theta\, StateBank_i * ElectionQrtr_t + \gamma_t + \varepsilon_{i,t}$$

where $LC_{i,t}$ is one of our liquidity creation measures, for bank i at time t (quarterly). $StateBank_i$ is a dummy variable that takes on the value of one for state-owned banks, and zero otherwise. $ElectionQrtr_t$ is also a dummy variable to denote quarters during which an election takes place.

Quarterly time fixed effects, γ_t, are also included to capture any time-varying aggregate impacts such as any macroeconomic shocks. Standard errors are clustered at bank level and our main interest of coefficient is the coefficient on the interaction term. While β would reflect the unconditional differences between state and private banks, the coefficient θ represents state vs private bank difference during election quarters.

We utilize the same regression framework also to test whether bank risk and performance differ due to political elections. In those regressions we use the following dependent variables: Roa, RoaVol and Z-score. Roa is return on assets, reflects bank profitability and is calculated as net income divided by total assets. Volatility of Roa (RoaVol) is a risk measure and calculated as the standard deviation of the bank's Roa over the previous twelve quarters (minimum eight quarters are required). Z-score is a measure of distance to default, which is defined as the number of standard deviations that a bank's Roa would need to fall to the bank to be considered insolvent (Demirgüç-Kunt and Huizinga, 2010). It is calculated as Roa plus the equity ratio divided by the standard deviation of Roa.

3. Results

This section presents and discusses our empirical findings.

[Table 3 here]

Table 3 is the main table for comparing state owned banks to privately owned banks in terms of their liquidity creation. Dependent variables are bank-level liquidity creation measures LC_nonfat and LC_fat. In all four regressions in Table 3 we have time fixed effects which turn our regressions into within estimation by removing all time-variation and leaving only the cross-sectional variation to exploit. Time fixed effects in our panel regression are included to capture common time-series variation in variables, due to aggregate factors such as business cycle variation. Hence, when time fixed effects are included they absorb the aggregate time-variation and the estimated coefficients capture the cross-sectional difference among banks as well as within bank variation. The coefficient of StateBank dummy captures the cross-sectional difference between state banks and privately-owned banks. In regressions 1 and 3 we see that state-owned banks on average generate more liquidity than private banks, and these differences are statistically significant at 5 and 1 percent. Regression 1, with LC_nonfat as the dependent variable, shows that state banks create around 16 cents more liquidity for one dollar of asset. This difference increases to 30 cents in regression 3 when the dependent variable is LC_fat which includes off-balance sheet activities. More related to our research question, the observed difference between state-owned and private banks widens during election quarters, as seen in regressions 2 and 4. In those regressions, the coefficients of the interaction terms (state bank dummy interacted with election quarter dummy) are 0.029 and 0.055, respectively. These coefficient estimates imply that election quarters are responsible for roughly 18% of liquidity creation difference between state and private banks.[8]

It is possible that state banks' divergence from private banks is not limited to election quarter only and starts before the election quarters. Similarly, state banks might continue liquidity creation after the election. If state banks in fact create more liquidity compared to private banks not only in election quarters but also before and after the election, the parameter estimates in Table 3 give us a lower bound for the role of state banks as we compare election quarters to any other quarter. To test these possibilities, we add 8 more interaction terms to the regressions 2 and 4, by interacting state-bank dummy with 8 quarter dummies, 4 from pre-election and 4 from post-election period. The estimated coefficients of interaction terms and their confidence intervals are plotted in Figure 3. In the figure, zero on the horizontal axis represents the election quarter while positive (negative) values represent post-election (pre-election) quarters. The estimated coefficients of interaction terms for each quarter are shown, together with their confidence intervals, on the vertical axis.

[8] For LC_nonfat this is given by 0.029/0.162 and for LC_fat it is 0.055 divided by 0.304.

[Figure 3 here]

As can be seen in Figure 3, the coefficient of interaction terms increases towards the election, peaks at the election quarter and decreases gradually from thereon. The coefficients are statistically significant beginning two quarters before the election quarter. Another thing to note is the level of parameter estimates compared to the one in Table 3. Here the coefficient estimate for election quarter is almost 0.07 while it was less than 0.03 in Table 3. This confirms that the result in Table 3 is a lower bound. This is because in Table 3 the quarter before and after the election are considered as non-election period despite they experience the election impact. Hence, the difference between election and non-election periods look smaller that it is, since some election impact is incorporated into non-election period by design. Thus, the current setup provides a better estimate of banks behavior around elections. To uncover the total excess liquidity creation by an average state bank we sum the statistically significant coefficients in Figure 3, from -2 to 4, seven quarters in total. When we look at the sum of all excess liquidity creation of state banks around the elections we find a figure of 36 cents per dollar. This is an economically sizeable figure given that it is equivalent to one standard deviation of LC_nonfat for private banks (Table 2) and much higher than the standard deviation of LC_nonfat for state banks (0.0778 in Table 2). To infer the aggregate liquidity creation impact of state banks we can do the following back-of-the-envelope calculation: State banks' asset share fluctuates above 30% (Figure 2) with a time-series average of 32%. The total excess liquidity figure, 36 cents per dollar, implies that Turkish state banks create an excess liquidity over a seven-quarters period at an amount equivalent of 11.5% of assets in the banking system. We can also interpret in terms of the increase in aggregate liquidity created by state banks. The average impact is a 32% increase in liquidity created by state banks, on a quarterly basis that lasts seven quarters. This is the average impact. The actual impact builds up over time before the election, as seen in Figure 3, and slowly dies out after the election.

Looking only at the liquidity created on balance sheets by not considering off balance sheet activities also underplay the impact of state banks. The only difference between LC_nonfat and LC_fat is the liquidity created off balance sheet, $LC\_fat = LC\_nonfat + LC\_obs$. Hence their comparison yields to liquidity generated via off-balance sheet activities and the results in Table 3 speaks to that as well. The coefficient of StateBank dummy almost doubles from regression 1 to 3, where the difference is purely attributable to off balance sheet liquidity creation. Moreover, state banks seem to utilize off-balance sheet sources to create additional liquidity during election quarters. While the StateBank-ElectionQrtr dummy has a coefficient of 0.029 with LC_nonfat as dependent variable, it has a coefficient of 0.055 with LC_fat as dependent variable. Again, the off balance sheet items are almost as important as the balance sheet items in creating liquidity, independent of election cycles.

We next study the decomposition of liquidity creation. Assessing the role played by the composition of asset and liability sides is possible by decomposing LC_nonfat into is asset and liability components. These components are denoted as LC_asset and LC_liab and their sum equals to LC_nonfat at the bank level, $LC\_nonfat = LC\_asset + LC\_liab$.

[Table 4 here]

In regression 1 and 4 of Table 4 we have regressions in which the dependent variables are LC_asset and LC_liab, respectively. These regressions are similar to the ones in Table 3, while the main difference is in the dependent variable. In regression 1, the coefficient of StateBank dummy is insignificant, meaning that state and private banks do not differ in terms of their asset-side liquidity creation. The StateBank dummy interacted with ElectionQrtr dummy, however, has a positive coefficient, 0.019, which is statistically significant at 1 percent. This coefficient implies that state banks create liquidity of around 2 cents more than private banks, per a dollar of asset in their books. Banks can create liquidity on the asset-side by either increasing their illiquid assets or decreasing their liquid assets. To understand which of these state banks follow we further decompose LC_asset into liquidity created by illiquid and liquid assets, i.e. Illiq_asset and Liq_asset. In regressions 2 and 3 of Table 4 we have the estimation results with these subcomponents as dependent variables. The coefficient of interaction term in regression 2 is positive and significant, implying that state banks' relative use of illiquid assets, compared to private banks, intensifies in election quarters. State banks also decrease their liquid assets, per results in regression 3, which also creates liquidity. Both coefficient estimates in regressions 2 and 3 are close to the one in regression 1, in absolute value. In regression 1 the coefficient of the interaction term is 0.019 while those in regressions 2 and 3 are 0.017 and negative 0.020, respectively. The coefficients being similar is consistent with state banks converting their liquid assets to illiquid ones. State banks, relative to privately-owned counterparts, seem to prefer more the illiquid assets than liquid assets in election quarters and provide liquidity to the public this way.

In regressions 4 through 6 of Table 4 we turn to the liability side. The dependent variables are LC_liab and its components Illiq_liab and Liq_liab. First thing to note is the important role of liabilities for state banks in creating liquidity. Above in Table 3 we have seen that state banks on average, independent of election cycles, create more liquidity than private banks. Here we see that most of this comes from the liability side. Above we have seen that, on a non-election quarter, state and private banks are not different at all in creating liquidity via assets (regression 1 in Table 4). In regression 4, however, the coefficient of StateBank is statistically significant and positive, indicating that state banks create more liquidity than private banks via liabilities. The magnitude of StateBank coefficient is large (0.17) and almost equal to the coefficient in regression 1 of Table 3. This suggests that almost all of the excess liquidity creation of state banks, with respect to their privately-owned peers, originates in their liabilities while asset-side liquidity creation of state and private banks look similar on a typical quarter. However, this picture changes in election quarters and asset- and liability-sides flip in terms of driving the adjustment in liquidity creation. We have seen in regression 1 through 3 of Table 4 that state banks change the composition of their assets in election quarters and switch from liquid to illiquid assets. Such a divergence between the liability composition of state and private banks does not exist, per Table 4. This can be seen from the coefficient of interaction term in regressions 4 through 6. These coefficients are very small compared to that of StateBank dummy and either insignificant or marginally significant. Hence, although state banks unconditionally create more liquidity via their liabilities the composition of liabilities does not differ from private banks any further during election quarters.

In sum, state and private banks are unconditionally similar in creating liquidity with their assets. This changes during election periods as state banks tend to create more liquidity than private banks for a given amount of assets. Unlike asset side, state and private banks usually differ with respect to liquidity creation via liabilities. Yet this dissimilarity does not seem to change because of election. One possible explanation can be that adjusting the liability composition is more difficult or costlier than adjusting the asset composition. Altering liability composition to provide more liquidity requires a switch from illiquid to liquid liabilities, such as demand deposits, and may not easy to adjust quickly without incurring a high cost. However, adjusting the asset composition to increase liquidity creation can be as simple as selling government bonds and extending commercial credits to firms with the receipts.

3.b State Banks' Performance around Political Elections

We next analyze whether the documented divergence between private and state banks around elections have any impact on bank performances. It is possible that the observed liquidity creation behavior of state banks is not only excessive with respect to private banks but also so in absolute sense. Such an excessive liquidity creation can be a risk factor and threaten the bank stability (Fungáčová, et al., 2015; Vazquez and Federico, 2015; Berger and Bouwman, 2017).[9] To this end we compare three performance measures of state and private banks around elections. Using the same regression methodology and replacing the dependent variable with performance measures we test if the difference in liquidity creation translates into performance differences. Our measures of bank performance are return on asset (Roa), the volatility of return on asset (RoaVol) and the Z-score. Regression results are collected in Table 5. In unconditional terms, state and private banks seem to have similar Roa and Z-score levels (columns 1-2 and 5-6) as the StateBank dummy is insignificant. State banks, however, seem to have a less volatile Roa series as implied by smaller RoaVol levels (columns 3 and 4). The RoaVol and Z-score comparisons of

[9] Fungáčová, et al. (2015) and Vazquez and Federico (2015) document that excessive liquidity creation increases bank's probability of failure while Berger and Bouwman (2017) documents that high-liquidity creation (particularly off-balance sheet liquidity creation) helps predicting crises.

state and private banks do not change during election quarters (columns 4 and 6) as the StateBank dummy interacted with ElectionQrtr dummy is statistically insignificant. Return on asset of state banks seem to fall behind that of private banks in election quarters as seen in regression 2 of Table 5. The interaction coefficient is negative and statistically significant at 1 percent level. If liquidity creation of state and private banks start diverging two quarters before election, as we find above, it is possible that the cumulative impact on Roa is observed by the end of election quarter. Overall, the liquidity creation of state banks around political elections, with respect to that of private banks, seem to not increase bank risk measured by RoaVol and Z-score but dampens state banks' performance measured by Roa.

[Table 5 here]

3.c Role of Election-driven Economic Fluctuations

We interpret our findings as a divergence between behaviors of state and private banks because of political elections. State-owned banks can be experiencing implicit or explicit political pressure to provide liquidity to the economy, especially around elections. However, as an alternative explanation, it is possible that state banks are responding to macroeconomic factors which behave differently around elections. For instance, state banks might be seeking to stimulate the slowing economy independent of whether there is an election on the horizon. Political uncertainty due to upcoming elections can cause investments to pause, economic growth to slow and risk premiums to rise in financial markets (Jens, 2017; Kelly, Pástor, and Veronesi, 2016; Julio and Yook, 2012). Hence, state banks reacting to economic slowdown in general, and political uncertainty driven slowdown around elections, would be consistent with our empirical findings. However, even if state banks respond to macroeconomic conditions they might be doing this more intensely around elections. It is also possible that state banks do both; namely, they might be feeling the political pressure to step up when macro conditions worsen in non-election times and to outdo private banks around elections times independent of macro conditions. To test these hypotheses, we modify the benchmark regressions in Table 3 by adding macroeconomic variables and their interactions with the election quarter dummy. Results are collected in Table 6 and Table 7.

[Table 6 here]

In Table 6 the macroeconomic variable is the growth rate of real GDP. Regression 1 in Table 6 is the copy of regression 1 of Table 3, which is kept here for the convenience of comparison. In regression 2 we have the real GDP growth rate interacted with StateBank dummy. A stand-alone coefficient for GDP growth is not estimated since all time-variation is subsumed by time fixed effects. The interaction term in column 2, StateBank*GDP_growth, would pick up the difference between liquidity creation of state and private banks as GDP growth rate fluctuates. However, its coefficient is almost zero and statistically insignificant, meaning that liquidity creation by state and private banks do not differ conditional on GDP growth rate. Regression 3 includes both of the interaction terms from regression 1 and 2 –interaction of StateBank with GDP growth and with ElectionQrtr – and we see that the results carry from columns 1 and 2. The interaction term with the ElectionQrtr dummy is positive and statistically significant as before while the coefficient on the interaction term with GDP growth is insignificant. Hence, the divergence in election quarters between private and state banks is not driven by different responses to GDP growth. Lastly, we test whether state banks' reaction to GDP growth differ in election quarters. Even though state banks do not react to GDP growth unconditionally they could be responding in election quarters. We introduce a double interaction term, StateBank*GDP_growth*ElectionQrtr, to capture this conditional response to GDP growth. In column 4 of Table 6, we see that the coefficient of double interaction term is statistically not different from zero. When we use the liquidity creation measure that captures both on and off-balance sheet items the results slightly differ. In regressions 5 through 8 the dependent variable is LC_fat, rather than LC_nonfat, as in Table 3. The only important change in parameter estimates is that now the double interaction term is statistically significant. Together with the coefficient estimates of StateBank*GDP_growth, the negative coefficient on the double interaction term implies that state banks create more liquidity as GDP growth rates decrease, only in quarters with elections but not otherwise. Hence, it is likely that state banks appeal to off-balance sheet liquidity creation during election quarters, and more so if the GDP growth is lower.

[Table 7 here]

We next repeat the same analysis with the unemployment rate. In Table 7 the variable tracing the macroeconomic conditions is unemployment rate, rather than GDP growth rate. In column 2 we see that state and private banks' liquidity creation react differently to unemployment. State banks seem to create more liquidity than private banks as unemployment rises. In column 3, we see that both the ElectionQrtr dummy's and unemployment's interaction with StateBank dummy are positive and statistically significant. State banks create more liquidity than private banks in response to rising unemployment as well as during election quarters, and these two seem to be two separate effects. Lastly, in column 4 we also include a double interaction term which turns out to be small in magnitude, -0.013, and marginally significant. This coefficient estimate does rule out that state banks respond to unemployment stronger in election quarters. If anything, they do respond less. In columns 5 through 8 the same regressions with a different dependent variable, LC_fat, are reported. Most important difference with respect to the first set of regressions is in the fullest model. In column 8, only one coefficient –on StateBank interacted with unemployment rate – is statistically significant. Overall, state banks seem to adjust their liquidity creation with respect to unemployment fluctuations but not to GDP growth. More importantly this adjustment does not change depending on the presence of political elections and state banks' relative behavior on election quarters do not stem from their response to election-driven macroeconomic fluctuations.

3.d Robustness checks

In our sample there is a significant size difference between state- and privately-owned commercial banks operating in Turkey. For most of our sample period the largest bank is a state-owned bank. Other state banks are large as well; even the smallest state bank is larger in size than the average private bank. As a result, by comparing an average private bank to an average state bank we end up comparing two banks with significantly different asset sizes in our benchmark regressions of Table 3. To the extent that bank size matters for liquidity creation (Berger and Bouwman, 2009; Fungáčová and Weill, 2012), which is measured per asset, this difference in size might affect our results. We should also note that the size differential can speak to the unconditional difference in liquidity creation by state and private banks, as documented in Table 3. However, our main result is a conditional divergence in liquidity creation: state banks provide more liquidity than private banks conditional on elections, on top of their normal oversupply compared to private banks. Nevertheless, to test whether bank size can play a role in this conditional divergence we keep fewer and larger private banks that are comparable to state banks in size. It could be that larger banks are more willing to expand credit and provide liquidity despite political uncertainty, which would surface in our results as a divergence between private and state banks. In Table 8, we equalize the number of state and private banks in each quarter, by keeping the largest private banks as of that quarter. That way, the bank size differential is minimized and bank numbers are equalized in two groups. A major change with respect to results in Table 3 is that now the state bank dummy is much smaller and statistically insignificant in all regressions. Meaning that indeed bank size can account for the unconditional liquidity creation difference between the two groups of banks. However, and more importantly, the interaction term is similar in magnitude to the one in Table 3 and still statistically significant. That is, bank-size difference can account for most of the unconditional liquidity creation difference between state and private banks, but not the observed divergence around elections. Simply put, our main result is robust to concerns about impact of bank size while size seems to play a role in results of unconditional comparisons. State banks' greater liquidity creation unconditionally seem to stem from their larger size relative to an average private bank. Once state banks are compared to larger private banks the difference disappears. Yet, state banks, which are larger, surpass even the largest private banks during election quarters and create more liquidity.

4. Conclusion

During both the 2007-8 financial crisis and the COVID-19 crisis governments took action in several countries to foster lending to individuals and enterprises. For instance, during the COVID-19 crisis, both developed and developing countries introduced guarantee frameworks administered by state-owned banks (e.g., Germany, France), with these banks playing a central role in facilitating lending to individuals and enterprises (e.g., Brazil, South Korea) (Mirzaei et al., 2021). Although the previous literature extensively documented that state-ownership in the banking industry leads to misallocation of resources due to political distortions, in light of these recent debates the role of the state in the banking industry has been revisited. This paper aims to contribute to the debate by conducting a comparative analysis of the behavior of state-owned versus private banks both in normal and election times.

This paper compares the liquidity creation of state-owned banks in Turkey with that of private banks both in normal times and around election times. Turkey provides an excellent laboratory to explore the role of state ownership in the banking industry as it is a country with a long history of state ownership of banks. Applying Berger and Bouwman (2009) framework to measure liquidity creation and using quarterly detailed regulatory dataset for the period of 2002 – 2017, we find that state-owned banks create more liquidity per unit of assets than their private counterparts. More importantly, the documented statistically significant difference widens during the election quarters. We interpret our findings as a divergence between behaviors of state and private banks because of political elections. State-owned banks can be experiencing implicit or explicit political pressure to provide liquidity to the economy, especially around elections. We show that the liquidity creation of state banks around political elections, with respect to that of private banks, seem to not increase bank risk measured by RoaVol and Z-score but dampens state banks' performance measured by Roa. We finally document that the size effect can only explain the unconditional difference but it does not explain the documented difference around election quarters.

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FIGURES

Figure 1: LC_nonfat over time: State vs. Private Banks

The figure displays the average liquidity created per asset by state-owned and private commercial banks in Turkey 2002Q4 to 2017Q4.

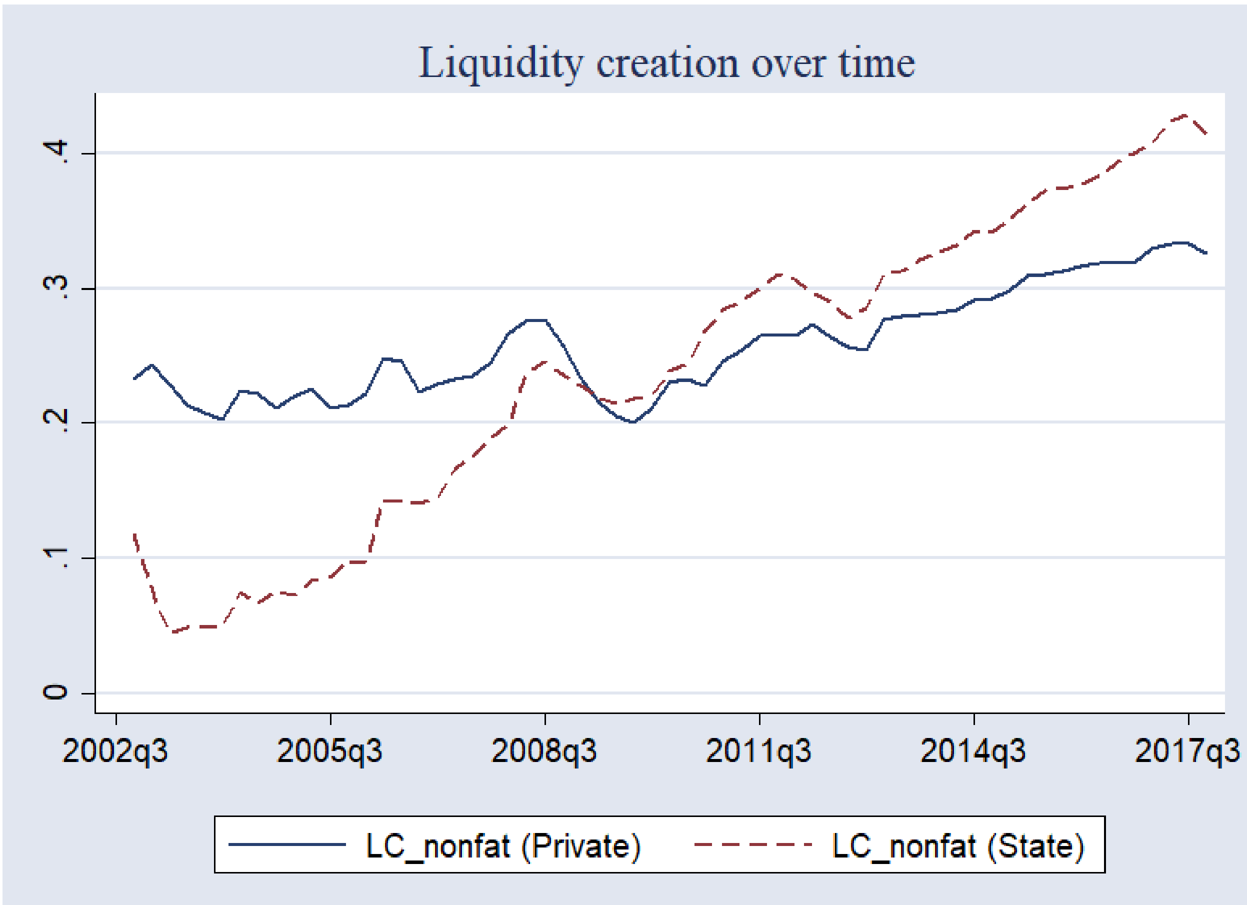


Figure 2: Share of state banks in aggregate liquidity creation over time

The figure displays the state-owned banks' share in aggregate liquidity created in the banking system and state banks market share measured by the fraction of total bank-assets. The liquidity creation measure is LC_nonfat which does not include off-balance sheet liquidity creation.

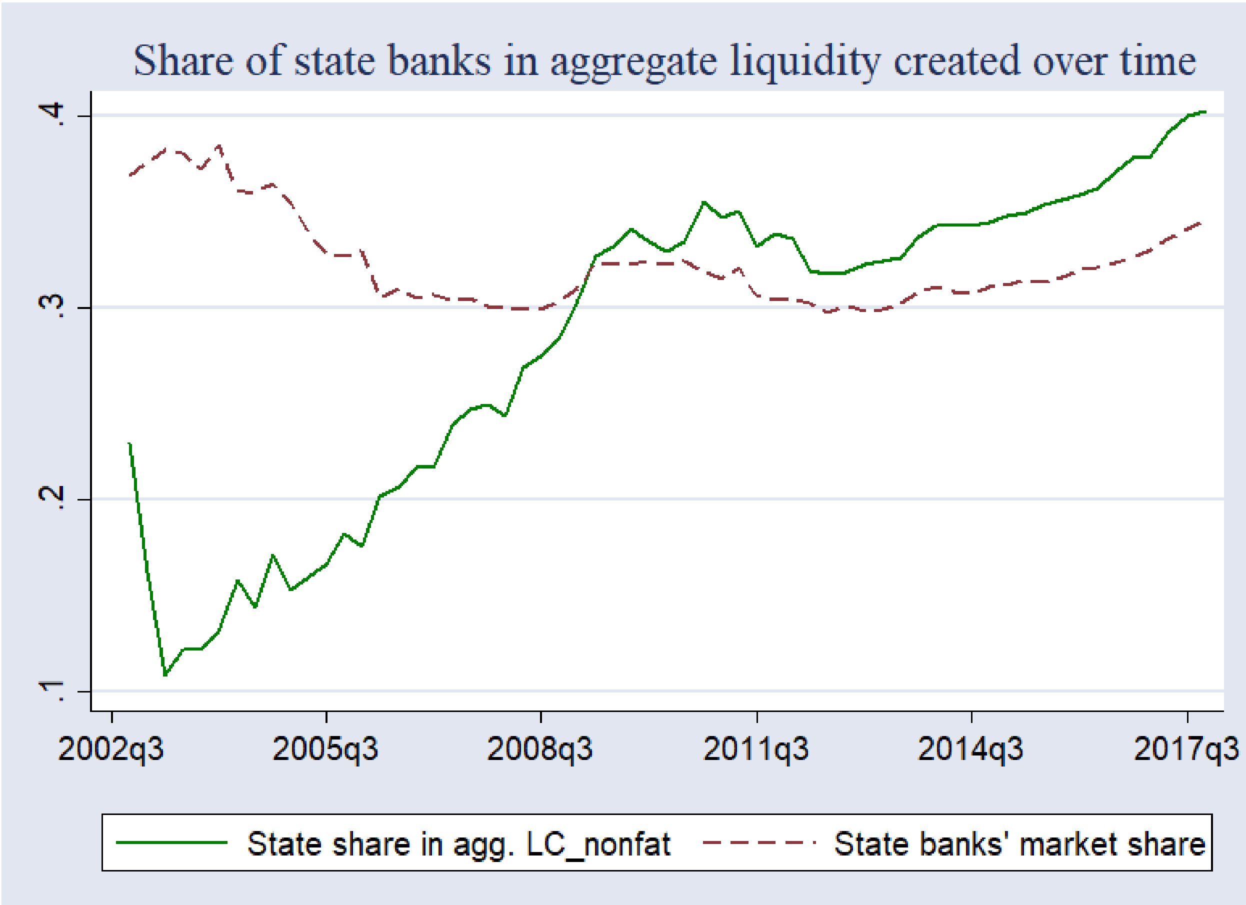
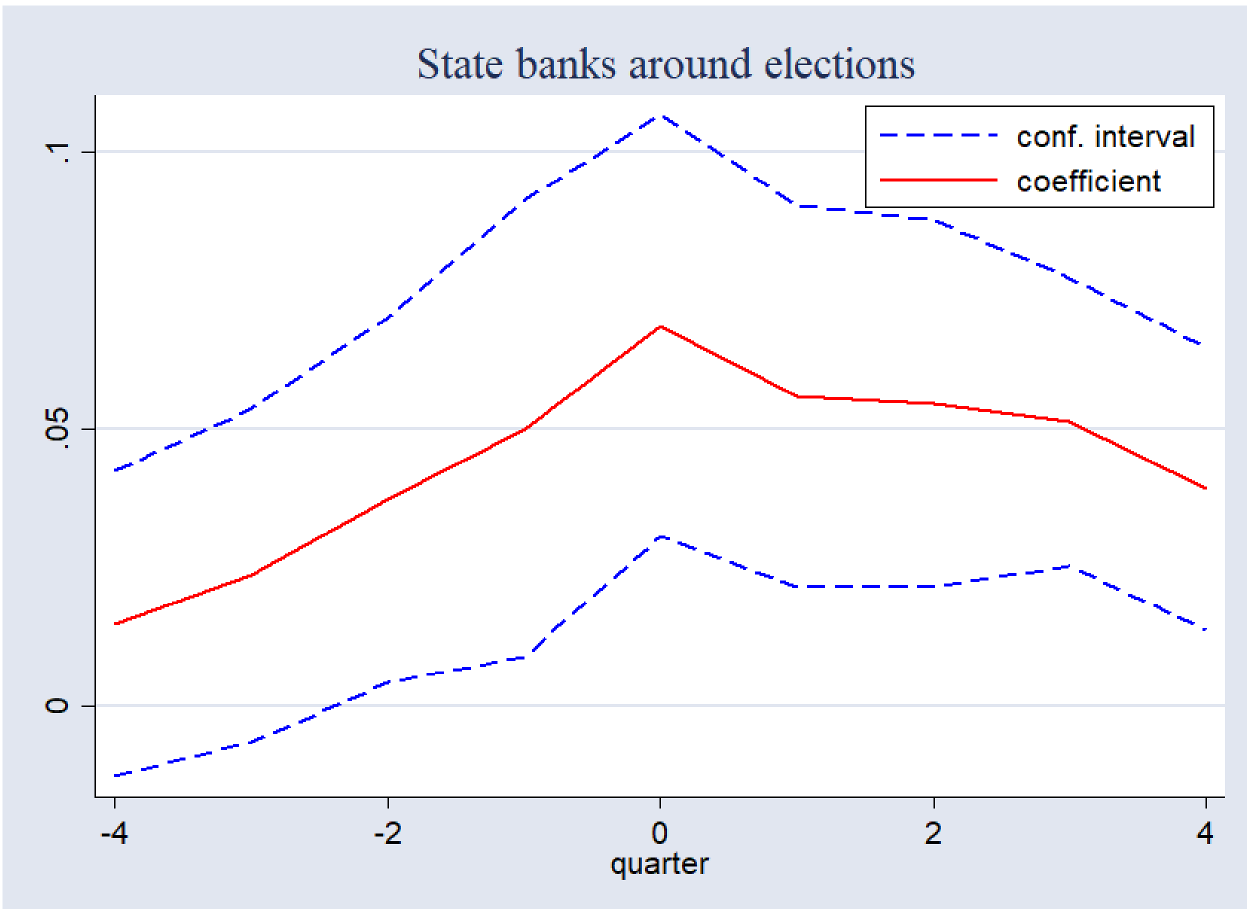


Figure 3: State banks vs. private banks around political elections

The figure displays the estimated coefficients of StateBank dummy interacted with quarter dummies around election quarters. For each quarter, the coefficient estimate captures the liquidity creation difference between state banks and privately-owned banks. The solid red line represents the coefficient estimates and the dashed blue line captures the 95% confidence interval.



TABLES

Table 1: Bank Number and Size over time

This table presents the number of observations and banks and summary statistics of asset size for private and state banks separately over the years. Asset size is the size of gross total assets, in 2017 prices, and in million Turkish Liras.

	Private Banks							State Banks					
	Number of		Real asset size, in 2017 prices					Number of		Real asset size, in 2017 prices			
	Obs.	Banks	Mean	Median	Min	Max		Obs.	Banks	Mean	Median	Min	Max
2002	35	35	12.7	2.0	< 0.1	86.5	2002	4	4	65.3	53.3	20.8	133.9
2003	131	34	14.9	2.8	< 0.1	99.3	2003	16	4	70.9	58.5	15.9	150.6
2004	124	31	17.6	3.4	0.1	114.1	2004	15	4	104.7	76.1	71.1	166.9
2005	122	31	23.4	4.6	0.1	174.5	2005	12	3	113.7	88.2	74.2	178.5
2006	119	30	27.7	4.9	0.1	187.6	2006	12	3	117.7	91.1	84.7	177.2
2007	116	29	29.9	6.2	0.1	186.3	2007	12	3	124.3	96.6	91.6	184.7
2008	115	29	35.4	7.1	0.1	206.9	2008	12	3	144.2	108.7	106.3	217.6
2009	112	28	36.0	7.2	0.1	221.8	2009	12	3	160.4	124.7	116.6	239.9
2010	112	28	41.6	7.7	0.1	245.3	2010	12	3	181.8	135.8	133.7	276.0
2011	108	27	47.9	8.2	0.1	271.6	2011	12	3	188.5	151.3	148.1	266.2
2012	109	28	48.2	6.5	0.1	275.9	2012	12	3	194.4	168.0	162.1	253.1
2013	112	29	55.7	9.7	0.1	306.4	2013	12	3	231.7	200.9	194.7	299.5
2014	116	30	55.6	10.2	0.1	322.5	2014	12	3	251.2	212.2	208.1	333.3
2015	120	30	59.4	11.6	0.1	340.8	2015	12	3	274.7	228.8	224.0	371.2
2016	120	30	61.7	11.8	0.1	352.2	2016	12	3	299.4	258.8	238.1	401.5
2017	116	29	66.9	15.3	0.1	371.2	2017	12	3	341.9	308.8	274.0	442.8
		39							4				

Table 2: Summary Statistics

This table displays time-series means of cross-sectional moments (mean, median and standard deviation) for the main variables used, separately for private and state banks. All variables are adjusted for inflation using consumer price index.

	Private banks			State banks		
	Mean	Median	Sd	Mean	Median	Sd
LC_nonfat	0.0923	0.2203	0.3513	0.2580	0.2687	0.0778
LC_fat	0.0565	0.1558	0.6751	0.3682	0.3692	0.1158
LC_asset	-0.0232	0.0074	0.1180	-0.0107	0.0028	0.0469
LC_liab	0.0819	0.1252	0.1145	0.1773	0.1779	0.0183
Loan_to_gta	0.4406	0.5205	0.2258	0.4589	0.4757	0.0919
Depo_to_gta	0.4972	0.5723	0.2187	0.7037	0.7003	0.0623
Roa	0.0037	0.0035	0.0134	0.0053	0.0053	0.0016
RoaVol	0.0052	0.0028	0.0065	0.0016	0.0015	0.0004
Z-score	145.06	59.57	393.02	89.80	81.69	29.99

Table 3: Liquidity Creation of State Banks during Election Quarters

The table collects the estimation results for the benchmark regressions, in which the dependent variable is a quarterly measure of bank-level liquidity creation. In columns 1 and 2 the dependent variable is LC_nonfat which does not include the off-balance sheet liquidity creation while in columns 3 and 4 it is the LC_fat which includes the off-balance sheet liquidity creation. $StateBank_i$ is a dummy variable that takes on the value of one for state-owned banks and $ElectionQrtr_t$ is a dummy variable to denote quarters during which an election takes place. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Dependent Variable:	LC_nonfat		LC_fat	
	(1)	(2)	(3)	(4)
StateBank	0.162	0.157	0.304	0.293
	(2.54)**	(2.44)**	(2.98)***	(2.83)***
StateBank*ElectionQrtr		0.029		0.055
		(3.01)***		(2.03)**
Constant	0.091	0.091	0.056	0.056
	(1.58)	(1.58)	(0.58)	(0.58)
Time Fixed Effects	Yes	Yes	Yes	Yes
Observations	1,978	1,978	1,978	1,978
R-squared	0.04	0.04	0.05	0.05

Table 4: Liquidity Creation of State Banks during Election Quarters: LC subcomponents

The table collects the estimation results for regressions in which the dependent variable is a subcomponent of benchmark liquidity creation measure. In columns 1 to 3 the dependent variable is from the asset side: LC_asset is the liquidity created on the asset side while Illiq_asset and Liq_asset are subcomponents of LC_asset. The decomposition can be formalized as $LC\_asset = 0.5 * Illiq\_asset - 0.5 * Liq\_asset$. Similarly, in columns 4 to 6, LC_liab is the liquidity created on the liability side and Illiq_liab and Liq_liab are subcomponents. The decomposition can be formalized as $LC\_liab = 0.5 * Liq\_liab - 0.5 * Illiq\_liab$. The independent variables are the same as in Table 3. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

	Asset Side			Liability Side		
	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable:	LC_asset	Illiq_asset	Liq_asset	LC_liab	Illiq_liab	Liq_liab
StateBank	-0.013	-0.026	0.001	0.170	-0.108	0.233
	(-0.26)	(-0.56)	(0.01)	(5.44)***	(-3.43)***	(5.36)***
StateBank*ElectionQrtr	0.019	0.017	-0.020	0.010	-0.010	0.011
	(2.77)***	(2.74)***	(-2.69)**	(1.76)*	(-1.96)*	(1.28)
Constant	-0.054	0.380	0.489	0.145	0.252	0.543
	(-1.74)*	(13.34)***	(13.75)***	(4.99)***	(8.73)***	(16.55)***
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,978	1,978	1,978	1,978	1,978	1,978
R-squared	0.06	0.05	0.07	0.08	0.04	0.10

Table 5: Performance of State Banks during Election Quarters

The table collects the estimation results for regressions in which the dependent variables are bank performance measures. These performance measures are return on assets (Roa), volatility of return on assets (RoaVol) and distance to default (Z-score). Roa is calculated as net income divided by total assets, RoaVol is measured as the standard deviation of the bank's Roa over the previous twelve (minimum eight) quarters and Z-score is measured as a bank's Roa plus the equity ratio divided by the standard deviation of Roa. The independent variables are the same as in Table 3. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Dependent Variable:	Roa		RoaVol		Z-score	
	(1)	(2)	(3)	(4)	(5)	(6)
StateBank	0.001	0.002	-0.007	-0.006	-56.484	-49.741
	(1.31)	(1.63)	(-2.05)**	(-2.21)**	(-0.81)	(-0.76)
StateBank*ElectionQrtr		-0.002		-0.002		-32.355
		(-2.78)***		(-0.80)		(-1.20)
Constant	0.004	0.004	0.008	0.008	146.894	146.893
	(4.08)***	(4.08)***	(2.54)**	(2.54)**	(2.09)**	(2.09)**
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,889	1,889	1,540	1,540	1,500	1,500
R-squared	0.04	0.04	0.02	0.02	0.04	0.04

Table 6: State Banks' response to GDP growth

The table collects the estimation results for regressions in which we test whether the benchmark results are driven by banks' response to GDP fluctuations around political elections. GDP fluctuations is measured by the growth rate of real GDP. The dependent variables are LC_nonfat and LC_fat, as in Table 3. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Dependent Variable:	LC_nonfat				LC_fat			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
StateBank	0.157	0.164	0.159	0.158	0.293	0.316	0.306	0.298
	(2.44)**	(2.52)**	(2.44)**	(2.43)**	(2.83)***	(3.12)***	(2.98)***	(2.92)***
StateBank*ElectionQrtr	0.029		0.031	0.055	0.055		0.063	0.184
	(3.01)***		(3.09)***	(2.14)**	(2.03)**		(2.36)**	(3.41)***
StateBank*GDP_growth		-0.001	-0.002	-0.001		-0.008	-0.010	-0.004
		(-0.60)	(-1.00)	(-0.49)		(-1.56)	(-1.92)*	(-0.75)
StateBank*GDP_growth*ElectionQrtr				-0.012				-0.060
				(-1.11)				(-2.76)***
Constant	0.091	0.091	0.091	0.091	0.056	0.056	0.056	0.056
	(1.58)	(1.58)	(1.58)	(1.58)	(0.58)	(0.58)	(0.58)	(0.58)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,978	1,978	1,978	1,978	1,978	1,978	1,978	1,978
R-squared	0.04	0.04	0.04	0.04	0.05	0.05	0.05	0.05

Table 7: State Banks' response to unemployment rate

The table collects the estimation results for regressions in which we test whether the benchmark results are driven by banks' response to unemployment fluctuations around political elections. Unemployment fluctuations is measured by the unemployment rate. The dependent variables are LC_nonfat and LC_fat, as in Table 3. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Dependent Variable:	LC_nonfat				LC_fat			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
StateBank	0.175	0.022	0.017	-0.018	0.335	0.026	0.015	-0.055
	(2.56)**	(0.27)	(0.21)	(-0.19)	(3.07)***	(0.12)	(0.07)	(-0.22)
StateBank*ElectionQrtr	0.031		0.031	0.167	0.071		0.070	0.338
	(2.82)***		(2.80)***	(2.05)**	(2.33)**		(2.31)**	(1.16)
StateBank*Unemp		0.016	0.016	0.019		0.032	0.032	0.039
		(2.80)***	(2.79)***	(2.78)***		(2.05)**	(2.05)**	(1.85)*
StateBank*Unemp*ElectionQrtr				-0.013				-0.027
				(-1.89)*				(-0.99)
Constant	0.103	0.103	0.103	0.103	0.043	0.043	0.043	0.043
	(1.67)	(1.67)	(1.67)	(1.67)	(0.42)	(0.42)	(0.42)	(0.42)
Time Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,653	1,653	1,653	1,653	1,653	1,653	1,653	1,653
R-squared	0.03	0.03	0.03	0.03	0.05	0.05	0.05	0.05

Table 8: Robustness check: Smaller private banks excluded

The table collects the estimation results for regressions in which we replicate the benchmark regressions in Table 3 with only the largest private banks. The number of state and private banks are the same and they are similar in size. All columns include time fixed effects. Standard errors are in parentheses and clustered at the bank level. ***, ** and * indicate statistical significance at the 1%, 5% and 10% level, respectively.

Dependent Variable:	LC_nonfat		LC_fat	
	(1)	(2)	(3)	(4)
StateBank	0.005	0.001	0.087	0.074
	(0.13)	(0.02)	(1.38)	(1.18)
StateBank*ElectionQrtr		0.021		0.062
		(2.91)**		(2.44)**
Constant	0.247	0.247	0.276	0.276
	(12.40)***	(12.37)***	(5.58)***	(5.56)***
Time Fixed Effects	Yes	Yes	Yes	Yes
Observations	382	382	382	382
R-squared	0.45	0.45	0.25	0.25

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