The changing role of state banks in Türkiye: an assessment of recent trends[1]

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Abstract

The challenging experiences in the past few years have changed the way individuals behave, markets operate and states govern. These changes are evident in fiscal policies as well as in the role state banks have in the financial sector. In this paper, we use rich data that include publicly available banking statistics and firm loan-level micro data sourced from the Central Bank of the Republic of Türkiye. We uncover four main trends in the Turkish banking sector. First, we find that the share of state banks providing firm loans has seen a consistent increase, exceeding 50% as of 2023. Second, in line with this rising share, the role of state banks in investment and export loans is also expanding. Third, state banks increasingly facilitate financial access for relatively credit-constrained firms based on observable characteristics. As such, compared with private banks, they (i) have a higher share of loans to small and medium-sized enterprises (SMEs), (ii) have a loan portfolio with less concentration on the largest firms, and (iii) are more likely to lend to first-time borrowers and firms with a single-bank relationship. Finally, we examine the relative asset quality and profitability of state banks in comparison to their private counterparts. We find that, despite their lower profitability, state banks demonstrate a comparable asset quality.

1 The views expressed in this study are those of the authors and do not necessarily represent the official views of the Central Bank of the Republic of Türkiye.

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1. Introduction

Challenging times lead economic agents to reconsider their decision mechanisms and often change their market behaviour. In recent years, societies around the world have faced a variety of challenges, with the most impactful being the Covid-19 pandemic, which rapidly spread across the globe and caused a human tragedy. The global economy has suffered greatly as a result of the pandemic. During much of 2020, global demand weakened, the supply chain was disrupted, world trade shrank, thousands of firms closed, and global gross domestic product (GDP) contracted. In this environment, rising unemployment and inflation deteriorated income distributions. Two years after the onset of the pandemic, the war between Russia and Ukraine shook the world, which was still recovering from the tragedy and cost of the pandemic. The war led to a massive shock to the global economy, worsened supply conditions in food and energy markets, and led to a dramatic increase in global inflation, with higher pressure in neighbouring countries, including Türkiye. The war, combined with the pandemic, uncertainties in China and tight financial conditions worldwide, caused the world economy to lose momentum, and the GDP growth rate remained at 3.5% in 2022. The growth rate in emerging market and developing economies fell from 6.9% to 4.1% in 2022; and in advanced economies, it dropped from 5.6% to 2.6%.[2]

Despite the resilience of the public health infrastructure in the face of the pandemic, Türkiye was affected by the tragedy and felt its economic impact, contracting in the second quarter of 2020. While economic activity began to recover in the second half of that year, with partial normalization, annual GDP growth was 1.8% in 2020, significantly lower than the long-term average. Türkiye was also directly affected by the Russia–Ukraine war due to its strong trade links with both countries, and headline inflation increased dramatically, driven by escalating food and energy prices. In fact, these global shocks were preceded by domestic economic challenges faced in earlier years. Just a few years prior to the pandemic, Türkiye had experienced economic downturns in the third quarter of 2016 following the coup attempt and in the third and fourth quarters of 2018 following the August exchange rate shock. As a result, there were noticeable job losses in the quarters that followed. The overall employment level declined from 28.7 million in June 2018 to 28.1 million in June 2019. Accordingly, the unemployment rate increased from 10.7% to 13.7% in the same period. A slow recovery in 2019 led to a relatively limited annual GDP growth of 0.8%.

The difficult experiences of the last few years have altered the way people behave, markets operate and states govern. Although the pandemic was contained within a year or two, its global impact appears to have lasted much longer. Covid-19 and the Russia–Ukraine war revived protectionist policies in many countries, and self-sufficiency in strategic industries such as health, defence and transportation gained attention within policy circles. Countries re-evaluated their economic

[2] According to the International Monetary Fund (IMF) *World Economic Outlook*, advanced economies (41) include Andorra, Australia, Canada, Czech Republic, Denmark, euro area, Hong Kong SAR, Iceland, Israel, Japan, Korea, Macao SAR, New Zealand, Norway, Puerto Rico, San Marino, Singapore, Sweden, Switzerland, Taiwan Province of China, United Kingdom and United States. The group of emerging market and developing economies (155) comprises all those that are not classified as advanced economies.

(inter)dependence and sought to identify their vulnerabilities to disruptions in global value chains. Societies have also reconsidered the role of the state in the economy. The difficult circumstances raised societal expectations about the services that state entities should provide. This shift was first seen in state spending and the expansion of fiscal space. According to October 2023 data from the IMF *Fiscal Monitor*, government spending averaged 43.8% of GDP in advanced economies during the 2020–22 period as a result of large budget increases for education, healthcare and defence, as opposed to the 2017–19 period average of 38.5%. As for emerging market and developing economies, the average was 32.8% in the 2020–22period compared with the 2017–19 period average of 31.8%. Additionally, the role of state banks in the financial sector has accelerated over the past decade, and countries worldwide adopted them as a toolkit to mitigate unexpected and harsh economic shocks since the 2008 Great Financial Crisis (World Bank (2013), EBRD (2020)).

The role of the state in both the overall economy and the banking sector in Türkiye has undergone changes in the past few years. While private consumption and external demand aided the recovery from economic downturns, policy responses such as fiscal and monetary policy also played a role in these episodes. The Turkish government increased the use of expansionary policies and financial assistance instruments, such as the Credit Guarantee Fund, tax relief measures (foregone tax revenues), loan disbursements to firms and households, loan service deferrals and deferrals of tax and social security premiums. Consequently, the role and share of state banks have grown over the last decade. The state banks' share of the banking sector assets in Türkiye increased from 30% to 45.7% between 2010 and 2023.

In this paper, we examine extensively the changing nature of the banking system in Türkiye, with a particular focus on the role of state-owned banks. To that end, we use a rich data set, including publicly available banking statistics and micro data at the firm loan level sourced from the Central Bank of the Republic of Türkiye (CBRT). Banking statistics enable us to observe broad trends in the sector and the growing role of state banks, while loan-level data allow us to understand the client structures of state-owned banks in comparison to private banks.

We highlight four main trends in the Turkish banking sector, some of which appear to overlap with trends in other emerging economies. First, state banks have a greater share than private banks in firm loans, which represent the loans extended to non-financial businesses. Second, as the share of state banks in total firm loans grows, so does their role in investment and export loans. Third, state banks facilitate financial access for agents that are relatively less advantaged in observable characteristics. State banks (i) have a higher share in SME loans, (ii) are less likely to concentrate on the largest firms (top 10 percentiles), and (iii) are more likely to lend to first-time borrowers. Considering that these three findings might lead to a concern regarding the profitability and asset quality of state banks, we also examine the relative profitability of state banks compared to private banks, leading to our fourth finding: (iv) state banks have a lower profit margin than private banks, yet they do not exhibit a higher non-performing loan (NPL) ratio.

The rest of the paper is organized as follows: Section 2 discusses the rising role of the state banks around the world and in Türkiye. Section 3 analyses the compositional patterns of state bank loans in detail, with a particular focus on four major trends regarding the role of state banks. Section 4 concludes by discussing the potential implications of the recent changes in the banking sector for long-term growth.

2. The increasing role of state banks: across the world and Türkiye

Parallel to the rising role of the state in national economies, the significance of state banks in financial sectors has been growing globally. In fact, state-owned banks had been increasing their share in the banking sector since the mid-2000s. The importance of state-owned banks heightened notably following the 2008 Great Financial Crisis, prompting countries across the world to adopt them to expand their toolkits in mitigating sudden and harsh economic shocks (World Bank (2013), EBRD (2020)). According to the most recent World Bank Regulation and Supervision Survey, which was released in 2019, the share of state-owned banks in the total assets of the banking sector, weighted by their respective GDP, increased from around 27% to around 33% across the European Bank for Reconstruction and Development (EBRD) member states between 2001 and 2016. By the end of 2016, compared with the average for the 2011–16 period, the share of state-owned banks in the national banking systems had risen in 58 out of 148 countries.[3] According to more recent research, bank nationalization led to a surge in state ownership, encompassing both development and commercial banks, in the wake of the Great Financial Crisis (Panizza (2023)).[4] Considering the most recent data from 2020, the author concludes that state-ownership of banks tends to be more prevalent in developing economies, with a similar ratio of state-owned banking assets in both middle-income and low-income economies.[5]

Türkiye is among the major developing countries where state banks play an extensive role in the financial system. As of 2010, state banks held a 33% share in the total assets of the banking sector, and this share increased to 45% by 2023. Similarly, since 2010, the state-owned banks have continuously increased their share in the total loan volume of Türkiye's banking sector. In 2010, state-owned banks held less than 30% of aggregate loans in Türkiye, and this share increased moderately until 2016, reaching 33%. Since 2016, state-owned banks' share has accelerated in the loan market, and prior to the pandemic, it reached 45% in 2020. The pandemic further boosted the role of state banks, with their share in the loan market hovering around 50% as of February 2024 (Graph 1).

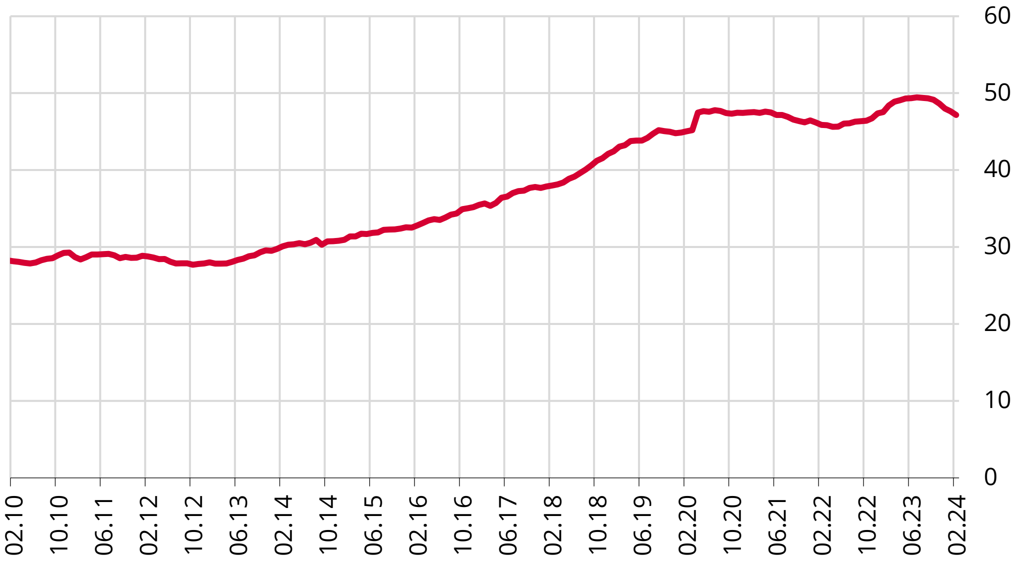
[3] During the same period, the share of state-owned banks in national banking systems had increased from 40.2% to 43.7% for Argentina, from 42.7% to 46.7% for Brazil, from 4.3% to 9.8% for Hungary, and from 36.4% to 39.6% for Indonesia.

[4] Panizza (2023) builds and describes a data set on bank ownership covering more than 6,500 banks in 181 countries (50 high-income economies, 72 middle-income economies and 59 low-income economies) over the 1995–2020 period, mainly based on Fitch Connect data.

[5] Regarding the regional dispersion, it was found that among emerging and developing regions, state-ownership was particularly large in South Asia (47%) and in East Asia and the Pacific region (29%), while it was relatively low in Sub-Saharan Africa, Latin America and the Caribbean.

Share of state-owned banks in total loans (%)

Graph 1



Note: Shares are with respect to the whole banking sector. Latest observation: 02.24.

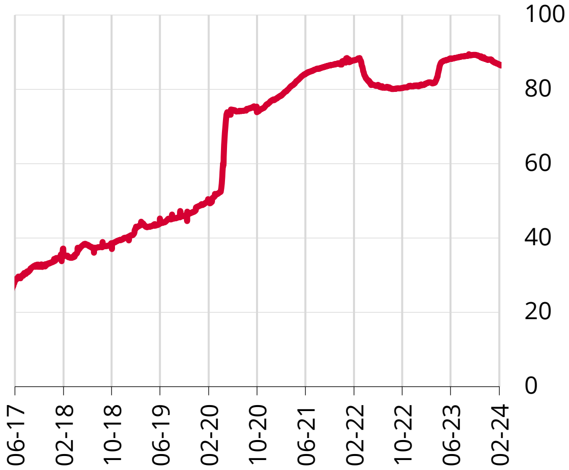
Source: BRSA.

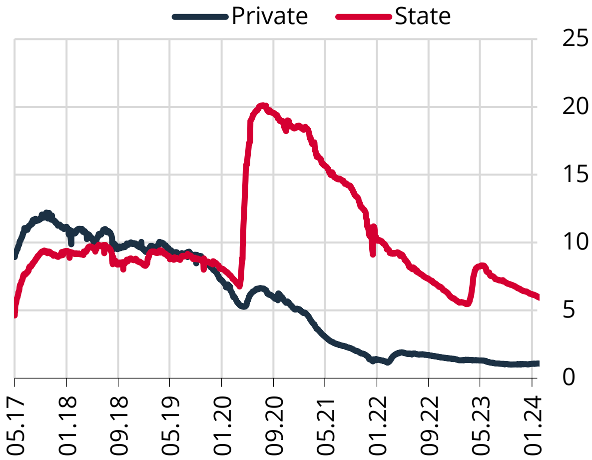
Two factors stand out as the drivers of the rise in the role of state banks in recent years. First, the Turkish government intensified the use of certain financial support instruments in the period between 2016 and 2023. The Ministry of Treasury and Finance introduced a substantial Credit Guarantee Fund (CGF) in 2017 to stimulate the economy after the 2016 coup attempt and the ensuing macroeconomic instabilities. The aim was to provide guarantees for firms, mostly SMEs, facing collateral issues and to induce banks to ease credit conditions for these firms.[6] In the initial phase of the subsidized loan program, private banks seemed to be more active in intermediating these loans, with the share of CGF loans disbursed by private banks standing at 70% in 2017 (Graph 2). However, over time, the role of state banks significantly increased in facilitating government-backed loan packages.

After the start of the pandemic, the size of the fund saw another increase, rising from TRY 250 billion in 2019 (valued at USD 44.1 billion at the time) to TRY 500 billion in 2020 (valued at USD 71.3 billion). During the pandemic, the share of state-owned banks in government-backed loans exceeded 70%. In addition, subsidized loans reached around 20% of the entire firm loan portfolio of state banks (Graph 3). Since 2020, state-owned banks have emerged as the main player in government-subsidized loans, as private banks avoided these loans due to their low interest margins. Currently, almost 90% of CGF loans are intermediated by state banks (Graph 2).

6 The size of the fund was raised from TRY 20 billion in 2016 (USD 6.6 billion at the time) to TRY 250 billion in 2017 (USD 68.5 billion at the time), and the related guaranteed loan disbursements reached TRY 208.1 billion in 2017.

Graph 2: Share of state banks in CGF loans (%)	Graph 3: Share of CGF loans in total firm loans (%)





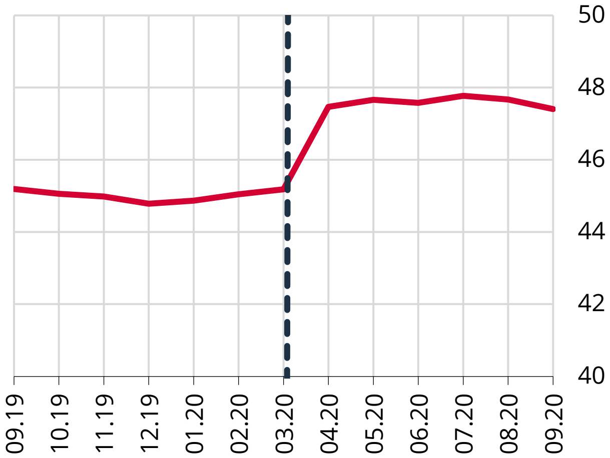
Latest observation: 02.24.

Source: CBRT

The second and related factor contributing to the increased role of state banks has been the implementation of countercyclical policies in response to major shocks. The liquidity support provided during the pandemic played a pivotal role in the rising share of state-owned banks (Graph 4). A recent example of countercyclical lending by state-owned banks can be observed in the aftermath of the 2023 earthquake, where the share of state-owned banks in the earthquake-hit region rose sharply (Graph 5).

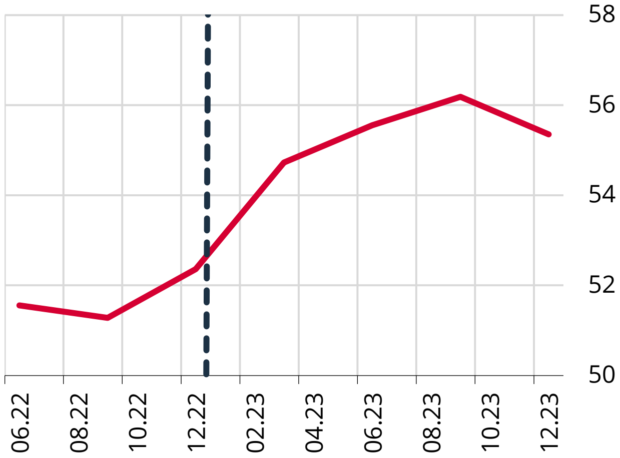
The shock-smoothing role of state banks in major episodes raises the question of whether these banks maintain this role during the usual uptrends or downtrends of the business cycle. The evidence suggests that lending by banks is, in general, procyclical. Due to their business models and institutional aspects, nonetheless, some banks may exhibit unique lending patterns (Bertay et al (2015), Aysan and Ozturk (2018), Çolak and Şenol (2021)). To analyse this question, we employ an empirical strategy to test the countercyclical nature of state banks in Türkiye using data from a longer period of time. We estimate a simple loan growth model to reveal the bank-level relationship between economic growth and bank lending. The regression results in Table 1 present how lending in the Turkish banking system responds to changes in GDP. The analysis differentiates the effects on personal and firm loans, under the assumption that firm loans have been a priority for policy support, whereas personal loans have often been curbed by macroprudential policies. We control for bank-specific indicators that represent liquidity, capital and profitability. The standard errors are clustered at the bank level, and bank and fixed effects are considered.

Graph 4:
Share of state-owned banks before and after the start of the pandemic (%)



Latest observation: 09.20.

Graph 5:
Share of state-owned banks in the earthquake-hit region (%)



Latest observation: 12.23.

Note: The earthquake-affected region incorporates 16 provinces, constituting around 20% of Türkiye's population. The dashed line in Graph 4 shows the official declaration of the start of the pandemic in Türkiye. Data in Graph 5 are quarterly. The dashed line shows the end of December, corresponding to the period before the earthquake. Shares show the share of state bank loans in all loans extended by the banking sector.

Source: BRSA.

Regression results for the lending cycle — Table 1

Loan type:	Total	Personal	Firm	Total	Personal	Firm
GDP_Growth	1.2518***	5.2038	1.0764***			
	(5.139)	(1.376)	(3.542)			
GDP_Growth#StateBank	-1.2995***	-4.8785	-1.4023***	-1.1940***	-5.0167	-1.3098***
	(-4.472)	(-1.350)	(-3.152)	(-4.276)	(-1.251)	(-3.135)
Bank controls	Yes	Yes	Yes	Yes	Yes	Yes
Time fixed effects	Year	Year	Year	Quarter	Quarter	Quarter
Bank fixed effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,067	1,067	911	1,067	1,067	911
Adjusted R-squared	0.312	0.122	0.230	0.526	0.109	0.521

Note: We estimate a loan growth equation. The dependent variable is the quarterly change of related loans, and explanatory variable is the quarterly change of GDP. StateBank is a dummy that takes the value of unity if a bank is a state-owned bank and is zero otherwise. Bank controls are Basel indicators representing liquidity, capital and profitability. Robust t-statistics in parentheses

*** p<0.01, ** p<0.05, * p<0.1

We infer cycles from the signs of coefficients of GDP growth and the interaction between GDP growth and state-owned bank variables. A positive/negative sign of the former coefficient would indicate that the banking system, as a whole, exhibits a procyclical/countercyclical lending pattern. Our main findings suggest that the lending behaviour of Turkish banks during the period between the first quarter of 2002 and the second quarter of 2023 is procyclical, as the coefficient estimate for GDP growth is positive. This evidence is valid for all loan segments. However, state-owned banks exhibit a countercyclical nature, as the coefficient estimates for the interaction between GDP growth and state-owned banks are negative and larger in magnitude. In line with government policies aiming to support the production capacity of the economy, the interaction effect is negative and statistically significant for firm loans and total loans. Overall, these findings imply that state-owned banks play a role in smoothing the lending cycle for both firm loans and total loans. This aligns with the observed immediate jumps in the share of state bank lending after exogenous shocks like the pandemic and the earthquake, as presented in Graph 4 and Graph 5.

3. An analysis of state bank loan composition in Türkiye

Given this rise in the role of state-owned banks, it is important to understand whether and how they differ from privately owned banks in their lending patterns. To that end, we use a rich data set, including publicly available banking statistics from the Banking Regulation and Supervision Agency (BRSA) and firm-loan-level micro data sourced from the CBRT. The former data set enables us to observe the aggregate trends over the period spanning from 2010 to 2023, and the latter allows us to understand the compositional patterns within the bank groups for the period between 2017 and 2023.[7] We identify several key trends that shed light on the changing role of state banks in the Turkish economy. We find that state-owned banks:

- have an increasing share in firm loans across all industries and a decreasing share in consumer loans
- have a rising share in export and investment loans
- facilitate financial access for firms that are relatively disadvantaged as these banks have:
    - a higher market share in SME loans
    - a less concentrated loan portfolio
    - a higher tendency to lend to first-time borrowers and financially constrained firms
- have a relatively better asset quality outlook and a lower profitability

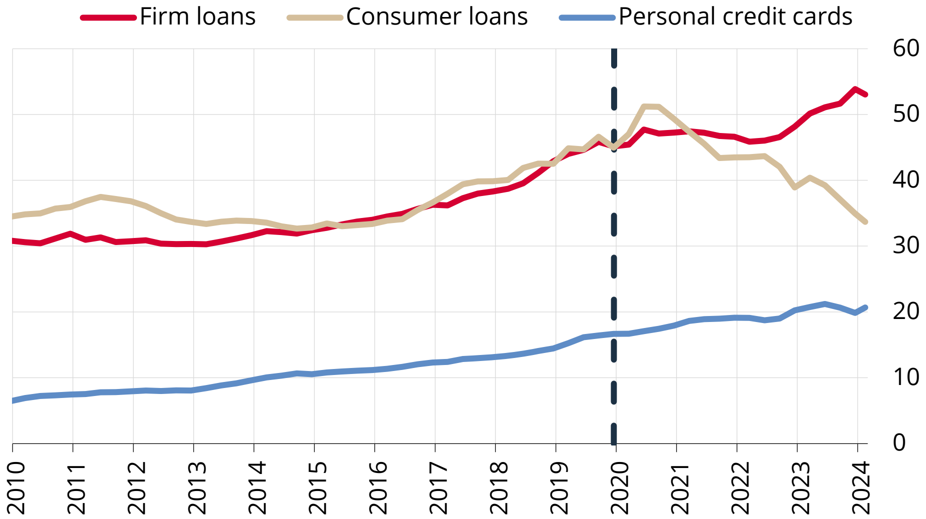
3.1. The role of state banks in firm loans

As mentioned above, the loan share of state-owned banks in Türkiye has substantially risen in the past decade. This increase was primarily driven by firm loans, as the state bank share in total firm loans approached 55% in 2023 (Graph 6). In contrast, although

[7] The micro data consist of 168 million firm-month-level observations. Firms are categorized as having borrowed from either of the two bank groups (ie state or private) or both. For the examined period, there are more than 50 banks in the data set, nine of which are defined as state banks. Among these nine state banks, three are deposit, three are participation and three are development and investment banks. The remaining banks are defined as private banks.

the share of state banks in consumer loans was higher than that of private banks at the outbreak of pandemic, they have gradually lost market share since then. As of August 2023, the state-owned banks' share in consumer loans fell below 40%. In case of loans used through personal credit cards, while state-owned banks have increased their share over the recent decade, it remains limited, hovering around 20%.

Share of state-owned banks in firm and consumer loans (%) Graph 6



Latest observation: 02.24.

Note: Consumer loans consist of housing, vehicle and general-purpose loans. General-purpose loans are unsecured consumer loans. The dashed line shows the official declaration of the start of the pandemic in Türkiye. All shares are with respect to the total volume of that loan type in the banking sector.

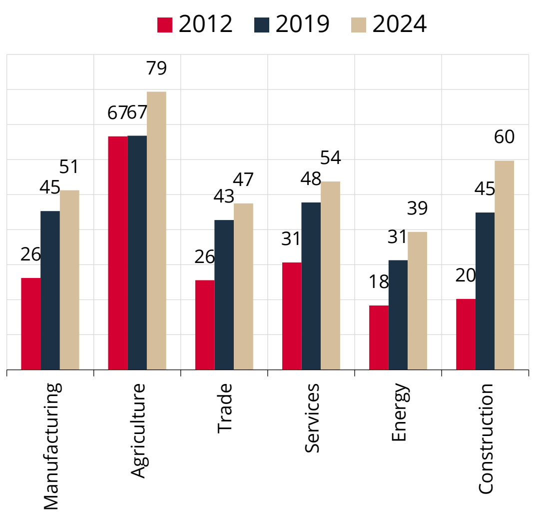
Source: BRSA

The sectoral breakdown of loans suggests that the share of state banks, which ranged between 18% and 31% across sectors (excluding agriculture) in 2012, increased to over 50% in all sectors except energy by 2023 (Graph 7). Notably, the share of state banks in agricultural loans has historically been high, given the explicit role of the largest state bank in supporting the agriculture sector. This share has further increased to over 80% in 2023. In the energy sector, the share of state banks has remained relatively low, partially due to the effect of exchange rate movements, since energy sector loans in private banks' portfolios are mainly denominated in foreign currency.

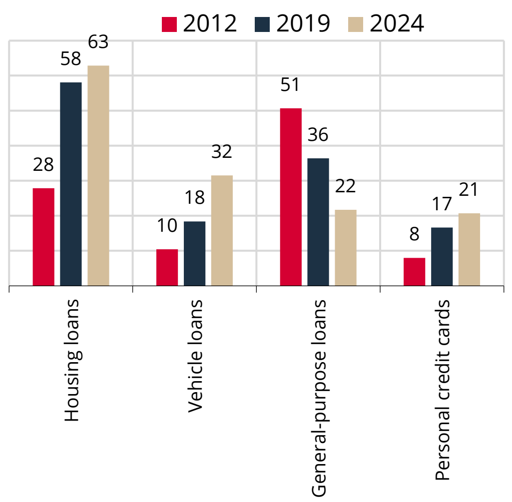
When compared throughout the years, the highest increase in state banks' share is observed in the manufacturing and construction sectors. This share increased from 26% in 2012 to 55% in 2023. The manufacturing industry constitutes a significant share of the value-added in the overall economy and accounts for the majority of Türkiye's exports. Thus, the state banks' rising loan share reflects an intention to contribute to growth and current account dynamics. In addition, the centrality of the construction sector in terms of its spillover effects to various industries (such as cement, wood, plastic, furniture, chemical, housing, services, etc) led state banks to further provide financing to the construction sector. Accordingly, the share of state banks in construction sector loans increased from 20% to 59% during the same period.

Graph 8 shows that the share of state banks in housing loans has risen in accordance with the growing share of construction sector loans. Although the share of state banks in the overall consumer loans has decreased, the share in housing loans has been on the rise, increasing from 28% in 2012 to 66% in 2023.

Graph 7: Share of state bank loans across industries (%)



Graph 8: Share of state bank loans by consumer loan type (%)



Latest observation: 02.24

Note: General-purpose loans are unsecured consumer loans. Shares are with respect to the overall banking sector.

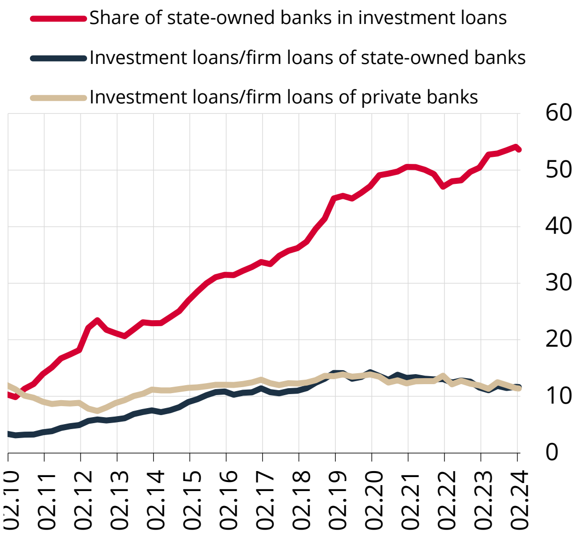
Source: BRSA

3.2. The role of state banks in investment and export loans

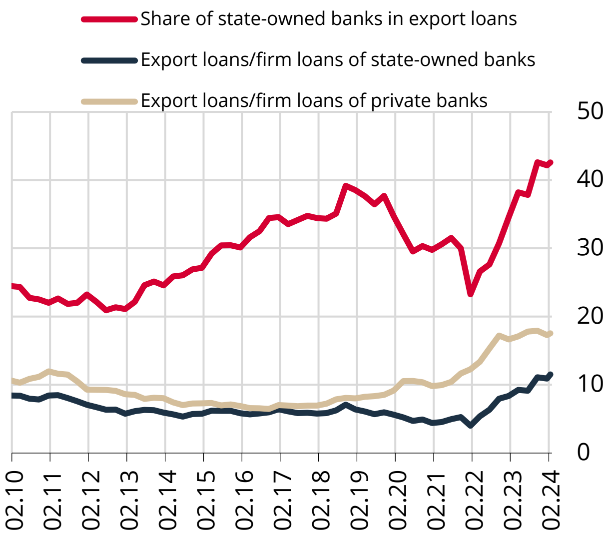
The rising role of state-owned banks in the credit market is also visible in their extension of investment and export loans. Graph 9 and Graph 10 show that the share of state-owned banks in these loan segments has increased significantly over the last decade. Between 2010 and 2023, the shares of state banks in investment loans and export loans increased from 10% to over 50% and from 25% to 43%, respectively. Nevertheless, within the firm loans of state banks, although a mild increase was observed in the share of investment loans since 2010, the share has been rather stagnant in recent years. Therefore, state banks' consistently rising contribution to the overall investment loans of the banking sector might be best described as compensating for the fading role of private banks.

As for the share of state-owned banks in export loans, there was a rising trend between 2013 and 2019, following a stable period between 2010 and 2013. Their share declined later, as private banks began to allocate a greater share of their loans towards exporters, given that exporters tend to be large and profitable firms. However, since 2021, state banks' share in the export loan market has once again increased, due mainly to subsidized export loan packages and trade finance loans provided by the Turkish Eximbank.

Graph 9: Investment loans: state vs private banks (%)



Graph 10: Export loans: state vs private banks (%)



Latest observation: 02.24

Note: Private banks are all banks other than state-owned banks.

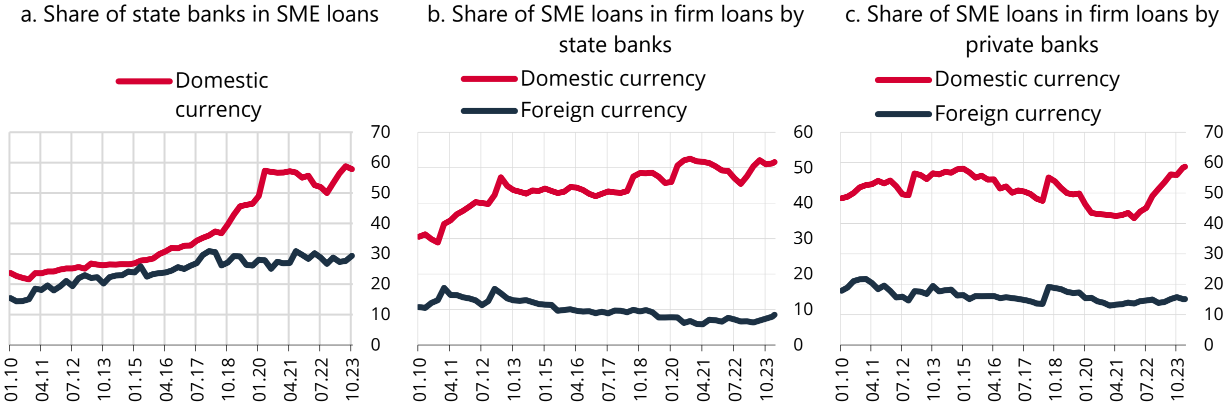
Source: BRSA

3.3 The role of state banks in access to finance

Graph 11 shows that the share of state banks in the overall SME loan stock has increased over the period between 2010 and 2023. Specifically, the share of state banks in domestic currency SME loans increased from 23% in 2010 to 59% in 2023, with most of this increase occurring up to 2019. Accordingly, the share of private banks fell from 77% to 41% over the same period. It is worth noting that unlike typical crisis episodes where banks have historically reduced their exposure to SMEs due to credit risk concerns, state banks continued to allocate a significant portion of their credit lines to them during the pandemic. As for private banks, the recent increase in the share of SME loans in their overall firm credits was mainly triggered by the macroprudential policies that also encouraged lending to SMEs after the second quarter of 2022 (Graph 11, panel c).

Share of SME loans in state-owned banks by currency (%)

Graph 11



Latest observation: 02.24

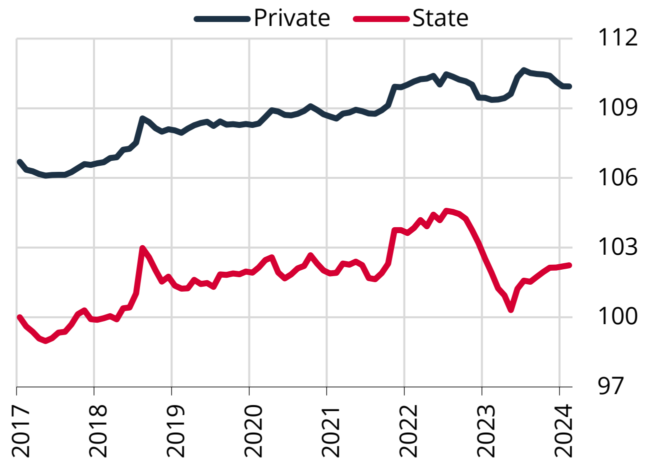
Note: Private banks are all banks other than state-owned banks. Shares are with respect to the overall banking sector.

Source: BRSA

State banks' inclusive loan policies for SMEs may also be reflected in the concentration of the firm loan portfolios. To analyse this, we exploit the loan-level data for the period between 2017 and 2023, which enables us to observe the monthly bank-firm loan stock. Specifically, we derive the evolution of the index showing the share of the top decile of firms in total firm loans for both banking groups during the sample period (Graph 12). The graph shows that state banks have a less concentrated loan portfolio throughout the period. The loan allocation has become even less concentrated after the implementation of macroprudential policies and loan programmes that incentivised lending to SMEs.[8]

[8] Diversification of loans raises another important question about whether SME loans are well distributed over the size of SMEs. When SMEs are classified as micro, small and medium, we observe comparable shares within these three segments. As of September 2023, the shares of micro, small and medium-sized enterprises in total SME loans were roughly 37%, 31% and 32%, respectively. These figures have been almost flat within the course of last decade, as the average shares for micro, small and medium-sized enterprises are roughly 38%, 31% and 32%, respectively.

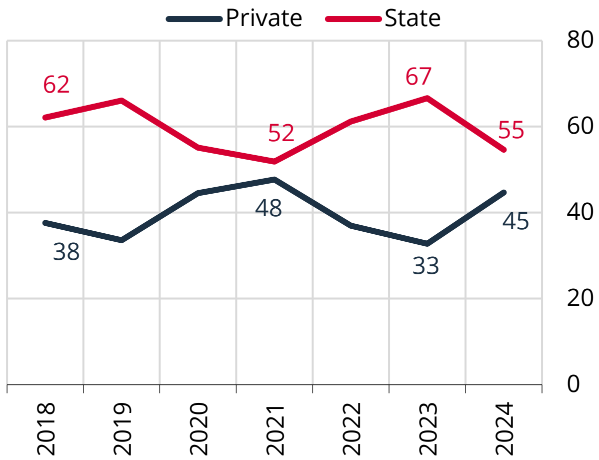
Graph 12: Loan concentration: share of the top decile of firms (index, 2017 = 100)



Note: For each bank group, firms with loan balances greater than zero for the corresponding month are considered in the percentile calculations. The share of the top decile of firms shows the total of the loan balance of the top decile firms in the total firm loan portfolio of the bank group. January 2017 is taken as the base period for state banks and indexed to 100.

Source: CBRT Latest observation: 02.24

Graph 13: Access to finance: first bank loan (number of firms) (%)



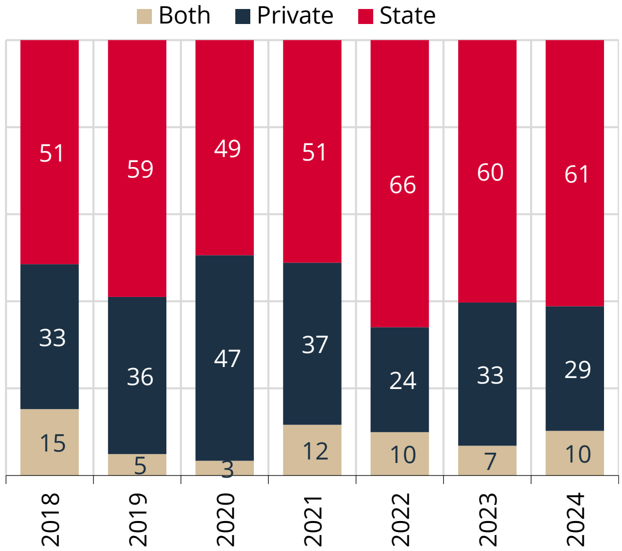
Note: The calculations are based on the firm set that does not have any loan balance in 2017 and has accessed finance during 2018–23. The graph shows the share of the number of firms obtaining their initial access to finance in the given year. Standard (stage 1) loans are included.

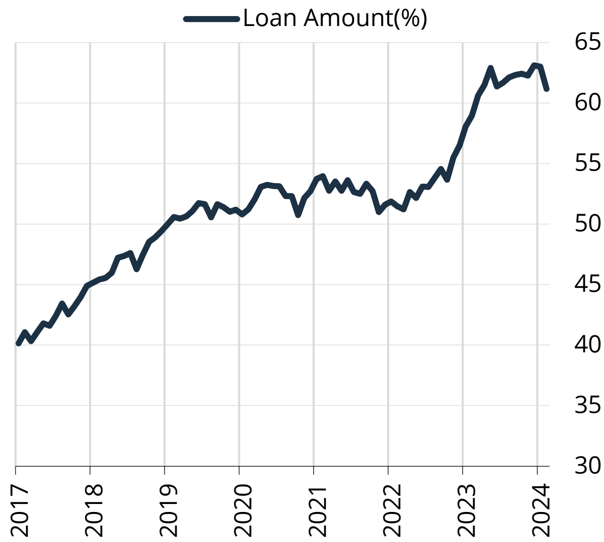
Source: CBRT Latest observation: 02.24

As proxies for credit-constrained firms, we further look at two measures: (i) allocation to firms that accessed bank loans for the first time and (ii) allocation to firms that have a single-bank relationship. An analysis of the banking groups financing first-time loan users between 2018 and 2023 demonstrates that state banks lend more to first-time borrowers, both in terms of the number of firms and the amount of loans (Graph 13 and Graph 14). With regard to the number of first-time borrowers, while the share of the state banks was slightly higher than that of the private banks in 2021, by 2023, state banks had widened the gap with a significant majority of 67%.[9] When evaluated in terms of the loan amount share, the gap between state banks and private banks widened further in 2022, standing at 66% versus 34%. Following 2022, the state banks' share dropped, though it is still hovering above 60% as of 2024.

[9] Since the ratio of the firms financed by both bank groups was negligible (1%), it is not shown in the graphs.

Graph 14: Access to finance: first bank loan (loan amount) (%)	Graph 15: Measure of credit constraint: state banks' share in loans of single-bank borrowers (%)





Note: The calculations are based on the firm set that does not have any loan balance in 2017 and has accessed finance during 2018–24. The graph shows the first access to finance. Standard (stage 1) loans are included.

Source: CBRT Latest observation: 02.24

Note: Among the firms lent to by a single bank in the corresponding month, the graph shows the percentage of the amount lent by the state banks. Only performing loans are considered.

Source: CBRT Latest observation: 02.24

As a second proxy for credit-constrained firms, we analyse firms with a single bank relationship, excluding from the sample those with multiple bank relationships. When examining the share of state banks in loans to firms with a single-bank relationship, we find a larger and rising role for state banks (Graph 15). The graph shows that state-owned banks hold a significant majority share in loans to firms with a single-bank relationship. In the same period, the loan amount among firms with a single-bank relationship with state banks has been increasing. As of September 2023, the loan balance for single-bank firms that borrowed from state banks corresponded to more than 60% of the respective balance.

3.4. Implications on asset quality and profitability

Up to this section, we have presented the rising role of state banks in the banking sector and their changing loan portfolio. A natural concern that might arise here is whether state-owned banks have more risky loan portfolios, as they appear to have a higher tendency to offer credit lines to financially constrained firms. To address this question, we take a closer look at the loan portfolio of state banks and compare the credit risk with that of private banks.[10] For this analysis, we combine our bank firm-

[10] Sümer and Şahan (2023) examine the divergence of NPL ratios and stage 2 (close monitoring) loan ratios by comparing the loan portfolios of state banks and other banks for three data points:

level loan data with micro-level balance sheet data. Specifically, we match loan data with detailed annual data of financial indicators derived from balance sheets of firms to explore the asset quality of firms in state and private banks' portfolios.[11] Using firm-level monthly loan data, we distinguish between firms based on the loan balance they have with each bank and classify firms in one of the three portfolio groups: (i) firms working with state banks only, (ii) firms working with private banks only, and (iii) firms working with both state and private banks. Based on this categorization, we investigate whether there is any significant divergence among these portfolio groups with regard to credit risk and financial performance. This analysis enables us to observe whether the inclusive loan allocation policies of state banks lead to greater asset riskiness.

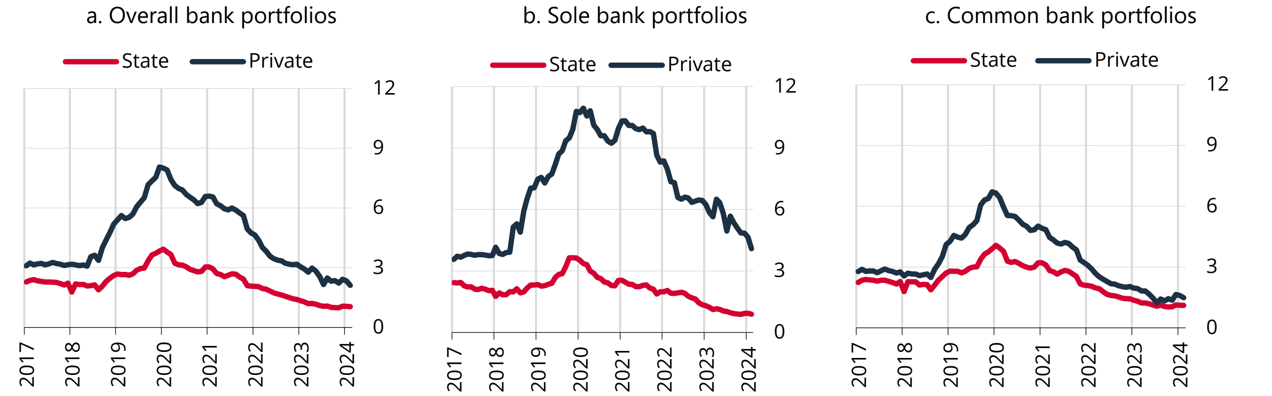
With regard to asset quality indicators such as non-performing and close monitoring loans, overall state banks seem to perform better than private banks (Graph 16 and Graph 17). Graph 16 below depicts the evolution of NPL ratios for state and private banks based on their overall portfolios (panel a) as well as firms that have a loan from only one type of bank (panel b) and firms that have a loan from both bank types (panel c). An assessment of the overall portfolio of banking groups clearly indicates that the NPL ratio of state banks is lower than that of private banks. While these ratios were similar until the third quarter of 2018, when a sharp depreciation occurred in the Turkish lira, they started to diverge mainly due to the larger foreign exchange (FX) loan portfolio of private banks. As of February 2024, the NPL ratios have started to converge again, reflecting an overall improvement in the asset quality of the financial sector.

December 2017, December 2019 and August 2022. The study shows that the differences in the loan portfolios of the banks are effective in the divergence of NPL ratios and stage 2 loans.

11 The balance sheet data are provided by the Revenue Administration and cover 5.8 million firm-level observations over the 2017–22 period.

NPL ratio by portfolio type (%)

Graph 16



Note: The ratio of non-performing loans is defined as the ratio of stage 3 loans to the sum of stage 1, stage 2 and stage 3 loans. Panel (b) shows the aforementioned ratio among firms only in the portfolio of either state banks or private banks for the corresponding month. Panel (c) shows the ratio among the firms that exist in the portfolio of both the state and the private banks. For panel (c), only the loans classified in stage 3 by both bank groups are included in the calculations.

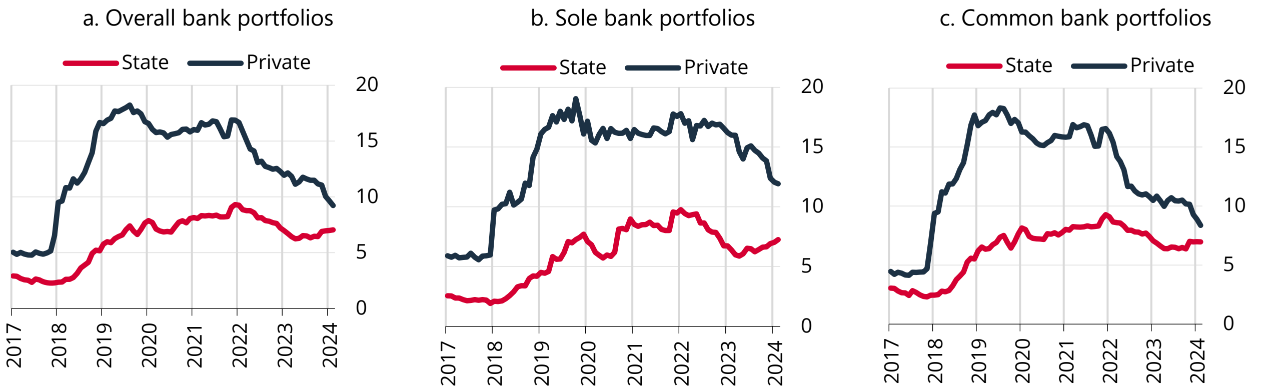
Source: CBRT

Latest observation: 02.24

A similar analysis is applied to close monitoring loan ratios within different bank portfolios. Graph 17 illustrates the development of close monitoring loans for state banks and private banks based on the three categories. The graph suggests that the ratio of closely monitored loans in state banks is lower than that in private banks over the whole period. Data on both NPL and closely monitored loans suggest that the state bank portfolios exhibit limited risk, despite their growing share in SME loans, tendency to provide access to credit, and countercyclical lending behaviour.

NPL ratio by portfolio type (%)

Graph 17



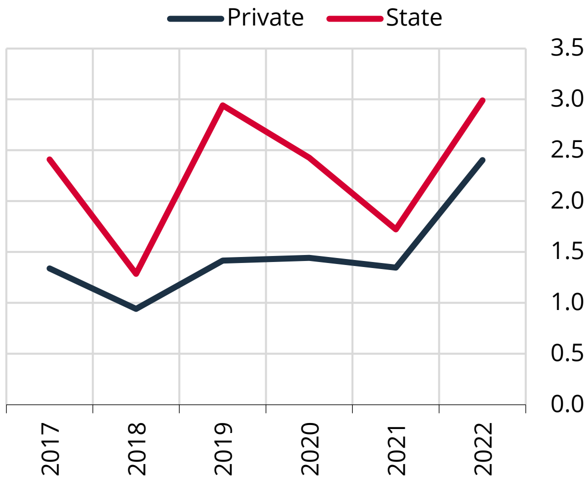
Note: "Closely monitored loans" is defined as the ratio of stage 2 loans to the sum of stage 1, stage 2 and stage 3 loans. Panel (b) shows the aforementioned ratio among firms only in the portfolio of either state banks or private banks for the corresponding month. Panel (c) shows the ratio among the firms that exist in the portfolio of both the state and the private banks. For panel (c), only the loans classified in stage 2 by both bank groups are included in the calculations.

Source: BRSA

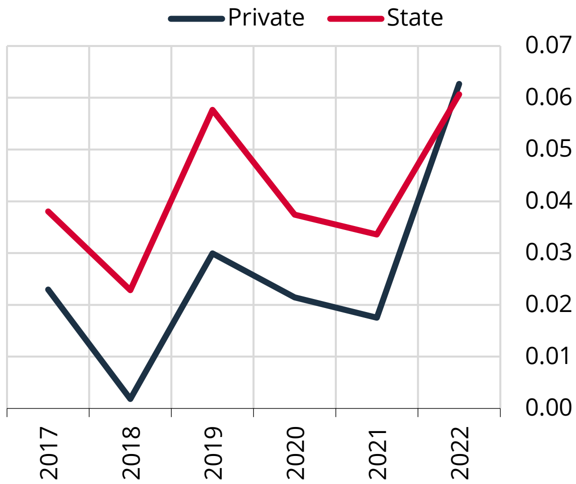
Latest Observation: 02.24

As final indicators of loan riskiness, we examine two financial performance indicators of firms falling into one of the three categories. We first analyse the financial expenses coverage ratio (FECR), which measures firms' capacity to repay their financial expenses with their operating income (EBITDA, or earnings before interest, taxes, depreciation and amortization), and find that firms solely in state banks' portfolios have a higher FECR throughout the period from 2017 to 2022 (Graph 18). As of 2022, while firms in state banks' portfolios can cover their interest expenses for 2.99 years with their annual operating income, the corresponding length of time for firms in the private banks' portfolios is 2.40 years. Second, we examine the ratio of net profits to assets and discover that firms borrowing from state banks have higher profitability (Graph 19). It is evident that profit ratios in both groups escalated following the expansionary policies implemented during the pandemic.

Graph 18: Financial expenses coverage ratio (FECR) (ratio)



Graph 19: Net profit/assets ratio (ratio)



Note: The financial expenses coverage ratio (FECR) is defined as the ratio of EBITDA to financial expenses. Calculations cover the performing loans only in private banks' portfolios or state banks' portfolios. Firms in the joint (common) portfolios are excluded.

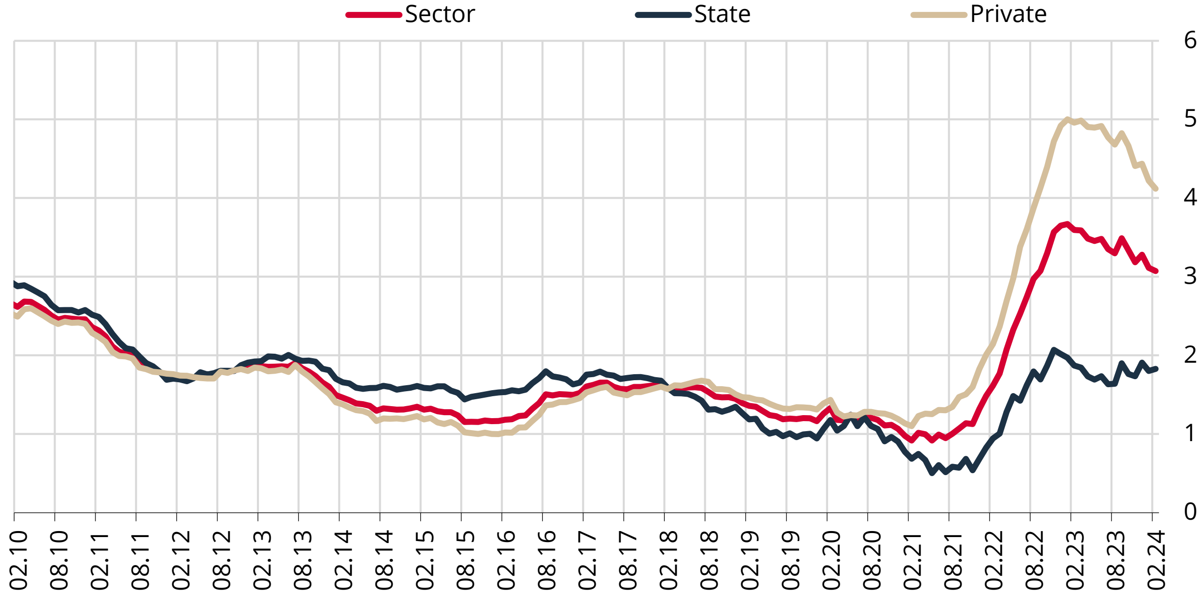
Source: CBRT, Turkstat Latest observation: 2022

Source: CBRT, Turkstat Latest observation: 2022

Finally, we investigate the implications of the rising role of state banks in the banking sector on their profitability. We observe that until the pandemic, state banks managed to obtain comparable returns with their private peers. However, after the pandemic, the return on assets (ROA) of state banks, while still positive, fell behind the rising ROA of private banks, as state banks continued to finance firms with favourable loans, despite the resulting lower profit margins (Graph 20).

Return on assets by bank types (%)

Graph 20



Note: Return on assets is the share of annual net profit/loss in the annual average of total assets. Private banks are all banks in the banking sector other than state-owned banks.

Source: BRSA

Latest observation: 02.24

4. Concluding remarks and implications for economic activity

In this study, we examine extensively the changing nature of the banking system in Türkiye as an emerging market economy, using rich data that include publicly available banking statistics and firm-loan-level micro data sourced from the Central Bank of the Republic of Türkiye. We highlight four major trends regarding the role of state-owned banks in the Turkish banking sector. We find that the share of state banks in firm loans has been increasing. We also uncover that the role of state banks in investment and export loans is expanding. In addition, state banks play an increasingly pivotal role in enhancing financial access for relatively credit-constrained firms, including SMEs, first-time borrowers and firms with a single-bank relationship. Finally, our findings reveal that, despite their lower profitability, state banks maintain a comparable asset quality. Below, we briefly discuss the potential implications of these trends for economic activity in Türkiye in light of previous literature.

Banks extend credit lines for export activities, investment purchases, raw material and intermediary input imports etc, in addition to basic firm credits. While the benefits of the financial system for economic growth have been well-established in the literature (eg Levine (2005)), recent research finds that the sectoral allocation of credit flows also matters for economic outcomes and long-term growth. Müller and Verner (2023), using a novel data set covering 117 countries since 1940, study the relationship between credit expansions and macroeconomic outcomes and conclude that, contrary to non-tradable sectors, credit expansion to tradable sectors leads to sustained output and productivity growth.

The loan portfolio of Turkish state banks appears connected to their commitment to supporting overall economic policy and development objectives. The growing emphasis of state banks on *investment* and *export* financing in Türkiye seems to be a conscious strategy aimed at boosting productivity and promoting growth. Cross-country studies examining GDP growth consistently identify investments, and in particular technological investments, as an important determinant of growth and productivity (Sala-i-Martin et al (2004), Van Ark et al (2008), Lee and Kim (2009), Vedia and Jerez (2016)). Similarly, exports are widely recognized as drivers of economic growth, particularly in emerging economies, and the literature suggests that credit constraints often hamper export growth (Feder (1983), Manova (2013)).

Financing SMEs and other credit-constrained firms as well as the countercyclical lending practices of state banks are also consistent with the objectives of promoting growth and development. Empirical literature on financial access has demonstrated that borrowing constraints have a significant impact on firm performance, and the availability of banking loans has a crucial impact on employment, investment and growth outcomes (Fazzari et al (1988), Amiti and Weinstein (2011), Chodorow-Reich (2014)). There is also a substantial body of literature highlighting the role of SMEs in a country's firm dynamism and output levels. Stiglitz (2016) identifies the financial sector's failure to provide sufficient funds to SMEs as an issue for the US economy and calls for financial sector reform. Using a firm-level data set covering 54 countries, Beck et al (2005) find that smaller firms are more sensitive to structural problems in financial and legal systems because of their challenges in offering corporate collateral. Bahaj et al (2020) confirm that SMEs frequently lack corporate collateral for their investments and therefore pledge their private real estate as collateral to finance their ongoing businesses. It is also claimed that SMEs are more responsive to policy actions and cost incentives. Criscuolo et al (2019) investigate the causal effect of European industrial policy on employment outcomes and discover that areas eligible for higher subsidies experienced increased employment, with the impact driven by small businesses. Considering the findings of the literature, the emphasis of state banks on supporting SMEs and first-time borrowers has the potential to enhance financial access for disadvantaged businesses, thereby fostering firm dynamism.

On one hand, the state-owned banks' focus on export and investment loans, as well as access to credit, may yield positive effects on economic growth in Türkiye. On the other hand, the growing role of the state banks comes with potential risks in the allocation of resources. A body of literature emphasizes the adverse effects of centralized or state-owned financing, with the majority focusing on its impact on financial development. Dewatripont and Maskin (1995) investigate a credit model with adverse selection and argue that credit decentralization provides creditors with financial discipline but may lead to putting too much weight on short-term returns. Similarly, Panizza and Yanez (2007) examine the state ownership effect on bank profitability and find that state-owned banks in developing countries tend to have lower profitability than private banks. In addition, Sapienza (2004) finds that government ownership of banks has a distorting allocative impact on the financial sector.

Making a judgment on the long-term impact of the role of state banks in the financial sector is beyond the scope of this study. In light of the literature on determinants of economic growth, the focus of Turkish state banks on investment, exports and financial access may well contribute to long-term growth. On the other hand, the arguments and evidence pointing to the potential side effects of increased state ownership in the sector necessitate further research into the impact of state banks on financial development.

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