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Privatization and Bank Liquidity Creation

Allen N. Berger, Narjess Boubakri, Ruiyuan Chen, Omrane Guedhami, Xinming Li*

Abstract

Building on existing views of state ownership, we examine the impact of banks' privatization on their liquidity creation, a comprehensive measure of net bank output from all portfolio items shown to have favorable economic outcomes. We apply a difference-in-differences approach to over 4,000 banks from 56 countries over 14 years. We find significant increases in liquidity creation post-privatization, consistent with expected changes in incentives, with the impact shaped by the institutional environment. However, privatization reduces liquidity creation during the global financial crisis and other banking crises. Results remain robust to a battery of robustness tests.

Keywords: State-owned Banks; Privatization; Liquidity Creation; Financial Stability

JEL Classification: G21, G23, G28, H13, H81

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* Berger, aberger@moore.sc.edu, University of South Carolina Darla Moore School of Business, Wharton Financial Institutions Center, European Banking Center; Boubakri, nboubakri@aus.edu, American University of Sharjah; Chen, ruiyuan.chen@mail.wvu.edu, University of West Virginia John Chambers College of Business and Economics; Guedhami, omrane.guedhami@moore.sc.edu, University of South Carolina Darla Moore School of Business; Li (corresponding author), xinming@nankai.edu.cn, Nankai University School of Finance, Nankai University Institute of National Innovation and Finance. Xinming Li gratefully acknowledges financial support from the National Natural Science Foundation of China, Grant No. 72495155, 72103106, 72573088, and the Ministry of Education of China, Grant No. 21YJC790067. We thank Hendrik Bessembinder (Editor), an anonymous reviewer, Sadok El Ghoul, Dongxu Li, Yuning Li, Sattar Mansi, Jun Yang, and seminar participants at the University of Sydney, Shanghai University of Finance and Economics School of Finance, Renmin University of China National Academy of Development and Strategy, Central University of Finance and Economics School of Finance, Capital University of Economics and Business School of Finance, Shandong University School of Economics, Nanchang University School of Economics and Management, Jilin University School of Economics, Wuhan University Economics and Management School, China School of Banking and Finance of UIBE, and New York University Shanghai Stern School of Business, and conference participants at the Fixed Income and Financial Institutions (FIFI) conference at the Darla Moore School of Business for their valuable comments, and Xinze Li and Yixuan Wang for excellent research assistance.

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I. Introduction

Privatization is a reform in which governments transfer ownership and control of state-owned enterprises (SOEs) to private-sector investors (Megginson and Netter (2001)). Governments across different ideologies, geographical regions, and development levels have embraced privatization reforms, which remain to this day on the agenda of several governments around the world (Megginson and Netter (2001), Megginson (2017a), Olsson and Tag (2025)). The central rationale for privatization is to realign firms' economic objectives with profit maximization and efficiency. By shifting ownership and control to private owners, the reform aims to increase economic efficiency, decrease political interference and the grabbing hand of the government, encourage popular capitalism by spreading ownership, improve corporate governance, and foster competition in typically regulated industries (Megginson and Netter (2001), Nash (2017)). Consistent with these objectives, an extensive literature has documented post-privatization improvements in firm performance, efficiency, and corporate governance (Megginson and Netter (2001), Boubakri, Cosset, and Guedhami (2008), Estrin, Hanousek, Kočenda, and Svejnar (2009), Megginson (2017a)).[2]

[2] Studies have documented the effects of privatization and residual state ownership on the cost of debt (Borisova and Megginson (2011), Borisova, Fotak, Holland, and Megginson (2015)), corporate risk-taking (Boubakri, Cosset, and Saffar (2013)), cash holdings (Chen, El Ghoul, Guedhami, and Nash (2018)), investment efficiency (Chen, El Ghoul, Guedhami, and Wang (2017)), corporate governance and corporate social responsibility (Borisova, Brockman, Salas, and Zagorchev (2012), Boubakri, Guedhami, Kwok, and Wang (2019)), CEO compensation (Borisova, Salas, and Zagorchev (2019)), and productivity and profitability (Olsson and Tag (2025)).

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Despite this extensive literature, the effects of privatization on state-owned banks have received comparatively limited attention (Megginson (2005a)). This gap is surprising, given the pervasive government ownership of banks around the world (La Porta, Lopez-de-Silanes, and Shleifer (2002)) and their central role in the economy. In this paper, we examine an internationally diversified sample of privatized and non-privatized banks to assess the impact of privatization reform on bank liquidity creation, a comprehensive measure of bank output with significant implications for financial stability (Berger, Boubakri, Guedhami, and Li (2019)).

The importance of bank liquidity creation to capital allocation in the economy and to overall economic growth is well documented (e.g., Bencivenga and Smith (1991), Levine and Zervos (1998)). Banks create liquidity by funding illiquid, long-maturity assets with liquid, short-maturity liabilities, simultaneously satisfying depositors' demand for liquid funds and firms' demand for longer-term financing commitments (Diamond and Dybvig (1983), Kashyap, Rajan, and Stein (2002)). Throughout this process, banks deliver credit to informationally opaque borrowers who lack capital market alternatives, they supply loans to support long-run investment strategies, and they provide essential payment services to the broader economy (Holmstrom and Tirole (1998), Kashyap et al. (2002)).

The liquidity creation measure is the only measure of bank output that comprehensively includes contributions from the asset-, liability-, and off-balance sheet sides of the bank portfolio (Berger and Bouwman (2009)). Empirical evidence suggests that liquidity creation is positively associated with GDP per capita and real economic output (Berger and Sedunov (2017)), as well

as increased tangible investments and growth in sectors that are more reliant on external financing (Beck, Döttling, Lambert, and Van Dijk (2023)). Beyond its role in the real economy, liquidity creation also shapes financial markets: abnormally high levels of liquidity creation signal a financial crisis as excess liquidity creation can fuel asset price bubbles and amplify systemic fragility, and contractions in liquidity creation can rapidly propagate financial instability across institutions and markets (Berger and Bouwman (2017)). Given these wide-ranging consequences for both the real economy and financial markets, understanding the impact of privatization on bank liquidity creation is important for policymakers, regulators, and researchers.

The privatization literature, in which our analysis is grounded, presents two views of government ownership of banks. The ***agency/political view*** of state ownership (or political benefits of control) holds that state-owned banks are characterized by weak managerial incentives due to the separation of ownership (public) and control (politicians), and used by governments to maximize political votes and extract political rents (Sapienza (2004), Boubakri et al. (2008)). Profit maximization and efficiency are thus lower-priority objectives under government ownership (La Porta et al. (2002), Boubakri, Cosset, and Guedhami (2005), Boubakri et al. (2013), Chen, El Ghoul, Guedhami, and Nash (2018)). Shleifer and Vishny (1994) provide several illustrations of such cases, including moving SOEs to remote, hard-to-access locations or overstaffing to maximize employment. Agency problems further exacerbate these inefficiencies, with bureaucrats and politicians serving as managers who are not monitored

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and "rarely punished individually for poor performance" (Megginson (2005a), p. 1941). Without incentives to restructure and maximize profits, these managers may instead seek to further the political agenda of the state to secure their positions. This combination of political interference and weak managerial incentives associated with government ownership leads to inefficiency and poor performance. Consistent with this view, Iannotta, Nocera, and Sironi (2007), using a sample of European banks, find that compared to private banks, state-owned counterparts are less profitable and have poorer loan quality and higher insolvency risk. These factors can result in distorted bank lending decisions and credit allocation.

On the other hand, the ***soft budget constraint view*** holds that state-owned banks may benefit from implicit guarantees, preferential access to financing, and expectations of public support (Nash (2017), Borisova and Megginson (2011), Boubakri, El Ghoul, Guedhami, and Megginson (2018)). These features can reduce financial constraints and enhance banks' risk taking activities, especially during downturns (e.g., Micco and Panizza (2006), Cull and Martinez-Peria (2013), Bertay, Demirgüç-Kunt, and Huizinga (2015), Coleman and Feler (2015), Panizza (2023)). Consequently, state-owned banks can sustain or even expand lending during downturns (Brei and Schclarek (2013)). Megginson (2005a, p. 1936) argues that "the politicians who oversee SOE operations cannot credibly commit to bankrupting poorly-performing SOEs" or punish managers and bureaucrats for bank poor performance. Privatization eliminates this soft budget constraint and realigns firms' objectives from socially and politically oriented ones to

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those aimed at profit maximization (Shleifer and Vishny (1994), Boycko, Shleifer, and Vishny (1996)).

These alternative views of government ownership of banks provide an informative setting in which privatization, by altering the incentives and constraints under which banks operate, affects bank liquidity creation. They yield two opposing predictions. Under the agency view, privatization can increase liquidity creation by mitigating the agency problems generally associated with state ownership. By transferring control to private shareholders, privatization typically strengthens governance, enhances managerial accountability, and aligns decision-making more closely with profitability and efficiency objectives (Shleifer and Vishny (1997), Megginson and Netter (2001), Boubakri et al. (2005b)). These changes can improve screening and monitoring, encourage more efficient allocation of credit, and increase banks' willingness to engage in liquidity-creating activities. In addition, privatization often exposes banks to greater competitive and market discipline, further reinforcing incentives to expand intermediation and improve operational performance. Through these channels, privatization may lead to higher liquidity creation.

Under the soft budget constraint view, privatization may reduce liquidity creation by removing the implicit support associated with state ownership. When ownership is transferred to the private sector, this implicit safety net is weakened or eliminated. Without government backing, privatized banks may behave more conservatively, internalize funding and solvency risks more fully, and scale back liquidity creation and countercyclical lending.

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Taken together, these arguments imply that the effect of privatization on bank liquidity creation is theoretically ambiguous. Privatization may either enhance liquidity creation by improving incentives and efficiency or reduce liquidity creation by tightening financial constraints and limiting risk-taking. We formalize these predictions in the following hypotheses:

H1a: ***All else being equal, privatization is associated with significant increases in bank liquidity creation.***

H1b: ***All else being equal, privatization is associated with significant decreases in bank liquidity creation.***

We apply a difference-in-differences (DID) design to analyze data on more than 4,000 banks from 56 countries/regions over 14 years. We find significant increases in bank liquidity creation post-privatization, consistent with the hypothesis that privatization enhances bank incentives and efficiency. Economically, following privatization, liquidity creation increases by 8.084, or a 22.1% rise, relative to the sample mean. Our hypothesis tests and other findings are subject to caveats, however. We acknowledge that privatization is a dynamic and potentially endogenous process that can distort and bias our empirical results. Nevertheless, our results are robust to alternative specifications, alternative samples, additional controls, and different fixed-effects structures, as well as to using alternative DID approaches.

One concern with the above analysis involves potential endogeneity, as the documented link between privatization and bank liquidity creation may be driven by omitted variables that affect both outcomes. In addition, governments may retain higher (lower) stakes in better (more poorly) governed banks (Megginson and Netter (2001)), which could introduce selection bias. To address the endogeneity concern, we use propensity score matching (PSM) and the Heckman

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selection model. Our results remain unchanged. Our results also are robust to a placebo test using a random privatization year from the simulation and to re-estimating our regression results 100 times.

Next, we examine whether the quality of the institutional environment affects how privatization influences bank liquidity creation. Prior studies show that the prevailing institutional environment affects privatization outcomes, government action, and ultimately the tradeoff between the benefits and costs of state ownership (e.g., Boubakri et al. (2005b), Guedhami, Pittman, and Saffar (2009), Boubakri et al. (2013), Chen et al. (2018), Chen, El Ghoul, Guedhami, Kwok, and Nash (2021)). Consistent with this literature, we find that institutional environments characterized by increased government quality, regulatory frameworks, and competition enhance the positive impact of bank privatization on liquidity creation.

One often-cited benefit of state-owned banks is their ability to provide countercyclical lending and liquidity creation, especially during times of financial distress and reduced lending by private banks (Micco and Panizza (2006), Cull and Martinez-Peria (2013), Bertay et al. (2015), Coleman and Feler (2015), Panizza (2023)). This perspective aligns with the "implicit soft budget constraint" view of state ownership (Kornai, Maskin, and Roland (2003)), which holds that governments can relax financial constraints via subsidies, tax concessions, preferential access to finance, and other forms of indirect support (Boubakri et al. (2018), Chen et al. (2021)). This support allows government-owned banks to sustain or even expand lending during downturns (Brei and Schclarek (2013)). Building on this literature, we analyze whether this countercyclical function extends to liquidity creation during the global financial crisis of 2008–

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2009 and other banking crises. In contrast to our baseline findings, we find that the outcomes during these crises reverse, suggesting that soft-budget constraints prevail in crisis periods.

Our main findings on the effects of privatization on bank liquidity creation are novel yet consistent with three broader strands of the literature. The first is the privatization literature, which mainly assesses the benefits of divestiture programs and the underlying economic, institutional, and governance conditions for success (Boubakri et al. (2005b), Boubakri et al. (2008)). This research has expanded significantly since Megginson, Nash, and Van Randenborgh's (1994) seminal work on the operating performance of privatized firms, providing three major insights. First, SOEs generally underperform their privately owned and controlled counterparts, reflecting differences in objectives and incentive structures, with evidence spanning countries with both developed and developing economies (Boubakri and Cosset (1998), Boubakri et al. (2005b)). Second, the benefits of privatization depend on post-privatization ownership structure (e.g., ownership concentration, residual state stakes, and foreign ownership), as well as the prevailing quality of corporate governance and broader institutional environment (Boubakri et al. (2008)). Third, in countries with stronger institutions, the benefits of state ownership in addressing market failures can outweigh the costs associated with weaker incentives, implying that full privatizations may not be necessary. In some cases, when the state retains partial ownership, firm performance improves (Boubakri et al. (2005b), Gupta (2005)).[3] We extend this literature by examining an important banking outcome, namely liquidity creation, and document a significant increase following privatization.

[3] Another study on partial privatization of banks shows consistent findings on efficiency but does not investigate liquidity creation (Berger, Hasan, and Zhou (2009)).

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The second strand of literature focuses on bank ownership and bank privatization. Comparative evidence across different ownership types, including foreign versus state-owned versus private domestic banks, generally shows that state-owned banks underperform in terms of profitability and efficiency, especially in countries with developing economies (Boubakri, Cosset, Fischer, and Guedhami (2005), Iannotta et al. (2007), Berger, Klapper, Martinez Peria, and Zaidi (2008)). The "political view" of banking explains much of this underperformance: state-owned banks often allocate credit for political purposes, leading to inefficient lending and resource misallocation (e.g., Sapienza (2004), Dinç (2005), Englmaier and Stowasser (2017)). Privatization can mitigate these distortions, but the performance gains are often modest because governments frequently retain some control (Boubakri et al. (2005a)). This research relates to a larger literature and policy agenda on the relation between government ownership of banks and financial and economic development outcomes (e.g., La Porta et al. (2002)). Cross-country research finds that the adverse association between government ownership of banks and development outcomes weakens and can even turn positive when institutional quality is high (Andrianova, Demetriades, and Shortland (2012)). Our findings contribute to this ongoing policy debate by showing how the institutional environment shapes the liquidity creation effects of bank privatization and by identifying when and how privatization is most likely to strengthen the financial intermediation role of banks.

The third strand is the modern literature on bank liquidity creation. These studies test the effects of equity capital input on bank liquidity creation, with mixed results (Berger and Bouwman (2009), Horváth, Seidler, and Weill (2014), Berger, Bouwman, Kick, and Schaeck (2016), Fungáčová, Weill, and Zhou (2017), Gupta, Kashiramka, Ly, and Pham (2023)).

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However, none compares state- and privately owned banks or investigates privatization outcomes.

Several studies document other determinants of bank liquidity creation, namely governance structure (Díaz and Huang (2017)), CEO optimism (Huang, Chen, and Chen (2018)), market competition (Jiang, Levine, and Lin (2019)), peer influence (Silva (2019)), regulatory frameworks (Distinguin, Roulet, and Tarazi (2013), Nguyen, Ahmed, Chevapatrakul, and Onali (2020)), and universal banking powers (Berger, Guedhami, Kirimhan, Li, and Zhao, 2024). However, to our knowledge, none has investigated privatization as a determinant. Our study links privatization to net liquidity creation, an output measure with established macro relevance, rather than to standard efficiency ratios. This angle is new to both the privatization and liquidity-creation literatures.

II. Empirical Design

We use a DID approach for privatization effects, focusing on the DID term to examine effects of the privatization treatment on different outcomes. We estimate the following regression model for the main hypothesis tests:

(1) $$LC(total)/GTA_{i,t} = \alpha_i + \alpha_t + \beta_1 Treated_i \times Post_{i,t} + \beta_2 Controls_{i,t-1} + \varepsilon_{i,t},$$

where $LC(total)/GTA_{i,t}$ is the liquidity creation of bank *i* in year *t*, and α_i and α_t are bank and year fixed effects, respectively. The DID term is $Treated_i \times Post_{i,t}$, and the coefficient β_1 captures the change in bank liquidity creation following privatization, relative to the control group. $Controls_{i,t-1}$ are lagged bank and country control variables. We drop the standalone dummy variables *Treated* and *Post* due to collinearity with bank and year fixed effects. Table 1 defines all regression variables. We cluster standard errors by bank.

A positive coefficient estimate for β_1 that is statistically and economically significant would be consistent with the empirical domination of **Hypothesis H1a**, rather than **H1b**. Increased bank liquidity creation would be consistent with the view that privatization improves incentives and efficiency of banks. Conversely, a significant negative β_1 estimate would suggest dominance of **Hypothesis H1b**, decreases in bank liquidity creation after exiting "government soft-budget constraints" that limit banks' financial constraints and risk-taking.

As noted, our regression results are subject to caveats. First, privatization is a dynamic process with multiple steps, so it is unlikely to fully replace all effects of state ownership and control with private-sector effects. The bank merger literature demonstrates that changes in ownership and control occur over time, with gestation periods and other constraints (Berger, Saunders, Scalise, and Udell (1998), Focarelli and Panetta (2003)). Second, privatization outcomes reflect government choices over which banks to privatize and when, which creates endogeneity and other issues. Our robustness and additional tests address these caveats.

III. Sample and Variables

We compile a list of privatized banks from the Privatization Barometer, LSEG SDC Platinum Global New Issues, LSEG SDC Platinum Mergers & Acquisitions, and LSEG Refinitiv Workspace databases. We manually verify the accuracy of the list and collect information on the year of privatization. Financial information and liquidity creation data for these banks are from BankScope. We supplement these datasets with country-level control variables, such as economic performance, financial development, and regulatory frameworks, sourced from IMF International Financial Statistics, The Economist Intelligence Unit, Demirgüç-Kunt, Kane, and Laeven (2015), and the World Bank Global Financial Development Database.

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Table 1 shows variable definitions and sources. In Panel A, the dependent variables begin with *LC (total)/GTA*, which measures net bank output (i.e., bank output minus input) from all portfolio items.[4] It is defined as the ratio of total bank liquidity creation to gross total assets (GTA), how much liquidity a bank creates per dollar of assets, and is based on Berger and Bouwman's (2009) method.[5] To illustrate, in our sample, the average liquidity creation per dollar of net output is about 37 cents. Better-performing (worse-performing) banks have more (less) than 37 cents of net output per dollar of assets.

In Table 1, Panel B, the key independent variable is the DID term *Treated* × *Post.* *Treated* is a dummy for privatized banks, and $Post$ is a dummy that equals 1 if bank *i* is privatized after year *t*, and 0 otherwise. As noted, *Treated* and *Post* are dropped from all regressions due to collinearity with fixed effects. *Years since Privatization* is used in an alternative specification to measure the time elapsed after the treatment (*Post*) period.

Table 1, Panel C shows lagged controls for a broad set of bank and country determinants of bank liquidity creation documented in prior literature. Specifically, *L. Total Assets*, our measure of bank size, is the natural logarithm of GTA. *L. Capital* is the ratio of a bank's total capital to its gross total assets. *Overhead* is the overhead ratio, measuring bank efficiency. For country-level determinants, we include *L. Growth*, the percentage change in real GDP, *L. Interest,* the lending interest rate, and *L. Inflation*, the percentage change in the deflator index. We also include other country-level financial structure variables to control for funding supply from both stock and bond markets: *L. Stock*, the ratio of the total value of traded stocks to GDP,

[4] We define the liquidity creation measure following Berger and Bouwman's (2009) preferred "cat fat" measure.

[5] GTA equals total assets plus the allowance for loan and lease losses, which are added back in to include all liquidity created on the asset side of the balance sheet that is financed on the liability side.

and *L. Bond*, the ratio of outstanding domestic private and public debt securities to GDP. We further include banking regulation and structure variables, deposit insurance, and bank concentration. *L. Deposit Insurance* is a dummy for an explicit deposit insurance scheme. *L. Concentration* is the asset share of the three largest banks.

In addition to our main specifications, Panel D reports several lagged country-level political, institutional, and regulatory variables used in this paper, including in PSM, Heckman selection models, and supplementary regressions that account for the broader institutional environment. These variables capture political conditions (election, executive ideology, and international financial assistance), institutional quality (corruption control, bureaucracy quality, and government effectiveness), banking regulatory characteristics (supervisory power, restrictions on bank ownership of nonfinancial firms, and external audit strength), and financial market competition (equity financing prevalence, bank concentration, and foreign bank presence). All controls are lagged one year to mitigate potential reverse causality.

Table 2 presents summary statistics of the key variables. On average, the ratio of total bank liquidity creation to gross total assets (*LC (total)/GTA*) is 36.52%, with a standard deviation of 32.87%. As noted, banks on average create liquidity of 37 cents per dollar of assets. There is a wide dispersion across banks, with the 25th and 75th percentile values at 13.72% and 61.00%, respectively. Table 2 also reports the main control variables at both country and bank levels.

Table 3 illustrates our sample distribution by country and by year in Panels A and B, respectively. Panel A shows the distribution across 56 countries or regions, including 29,580 observations from 4,632 (315 privatized and 4,317 non-privatized) banks. Russia and Jordan have the most and least observations, respectively. Russia also has the most privatized banks (47). Panel B presents the number of observations by year.

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Our sample period concludes in 2014 due to data availability issues. After 2014, the BankFocus database is no longer fully comparable with earlier BankScope data. We have confidence in our 14 years of quality data spanning a variety of banks, countries, and economic conditions. As shown below, we find highly significant results that demonstrate a clear reversal of a large crisis.

IV. Empirical Results

IV.A. Main Evidence

Table 4 reports the baseline results. In column 1, we regress *LC (total)/GTA* on *Treated* × *Post* with only the bank and year fixed effects. We subsequently include the macroeconomic variables, regulatory and market structure variables, and bank-level controls in columns 2–4, respectively. Column 4 is the full baseline specification. In all four specifications, the estimated coefficient on *Treated* × *Post* is positive and statistically significant at the 1% level. In the full specification in column 4, the coefficient indicates that after privatization, *LC (total)/GTA* increases by 8.084, a 22.1% increase relative to its average value, all else equal. The findings suggest that banks increase liquidity post-privatization, consistent with the empirical domination proposed in **Hypothesis H1a**.

In column 5, we specify *Years since Privatization*, and the coefficient is again positive and statistically significant at the 1% level, suggesting that the main benefit of increased bank liquidity creation intensifies over the years after privatization. In column 6, we test the parallel trends of bank privatization on liquidity creation by splitting the samples into the two years before (t = -2), one year before (t = -1), and year of (t = 0) privatization, in contrast to our main *Post* specification, which includes all years after privatization (t > 0). We also include the interaction terms between *Treated* and these variables for completeness. None of the coefficients

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of *Treated × Post (t=-2), Treated × Post (t=-1),* or *Treated × Post (t=0)* is statistically significant. However, the coefficient of *Treated × Post* remains positive, significant, and of comparable magnitude. The evidence does not suggest any important pre-trend effects.

In addition to the parallel trend test, we plot the dynamic impact of privatization on bank liquidity creation in Figure 1. The analysis covers a 15-year window of privatization, from 5 years before to 10 years after privatization. As shown, the interaction coefficients for the pre-privatization period are statistically indistinguishable from 0, indicating no pre-trends in liquidity creation. In contrast, liquidity creation increases steadily following privatization, suggesting a positive dynamic impact.

In Table 4, the estimated coefficients on the controls are generally consistent with expectations. *L. Total Assets* is positively significantly related to bank liquidity creation at the 5% level, indicating that large banks tend to create more liquidity per dollar of assets. *L. Capital* is negatively and significantly related to bank liquidity creation at the 1% level, consistent with prior findings (e.g., Gorton and Winton (2017)). *L. Overhead* is negatively significantly related to bank liquidity creation at the 1% level, suggesting that banks with lower efficiency create less liquidity for the public. *L. Growth* is positively significantly related to bank liquidity creation. *L. Stock* is negatively significantly related to bank liquidity creation at the 1% level, which indicates that equity-based financing and bank-based financing are substitutes for each other. *L. Bond* is mostly positively and significantly related to bank liquidity creation at the 5% level, which indicates that bank and bond market are complementary. Overall, these results support the view that privatization leads to more liquidity creation per unit of assets, owing to the change in ownership structure and managerial incentives. New shareholders may pressure managers to maximize profit margins and bank value, leading to more liquidity creation.

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IV.B. Robustness Checks

Table 5 presents robustness checks relating to bank privatization and liquidity creation. Specifically, one may argue that using country, industry, and year fixed effects instead of bank-year panel regression might allow us to retain more cross-sectional variation (Breuer and DeHaan (2024)). To address this issue, in column 1, we use an alternative specification of the equation, adding country-fixed effects instead of bank-fixed effects. The coefficient on *Treated* × *Post* remains positive and statistically significant at the 5% level.[6] In column 2, we exclude observations from Russia, Japan, and Switzerland, countries with the most observations, to avoid any disproportionate influence of country-specific factors and ensure our main results are driven by broader economic relationships. We find a positive and significant coefficient for *Treated* × *Post*, suggesting our findings are not driven by sample composition. In column 3, we exclude countries with fewer than five privatized banks, as privatization dynamics may vary significantly, and countries with few privatized banks might not provide a reliable representation of broader trends. The coefficient for *Treated* × *Post* remains positive and significant at the 1% level, confirming that the observed relationship is not driven by countries with only a few privatized banks.

In Table 5, column 4, we add additional country-level controls such as lagged GDP per capita and lagged trade to account for macroeconomic and trade-related factors that could influence the relations between bank privatization and liquidity creation. Economic development and trade openness can systematically affect banking sector dynamics, financial stability, and privatization outcomes. By incorporating these controls, we mitigate concerns that our findings

[6] In unreported results, we include bank, year, and country-year fixed effects. Our results remain statistically the same.

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are driven by broader country-level economic conditions, rather than the underlying mechanisms of interest. The *Treated* × *Post* coefficient continues to be positive and significant, suggesting that the impact of privatization on liquidity creation persists even when accounting for these additional macroeconomic factors. Finally, in column 5, we address the potential influence of time-varying country-level factors, incorporating country-year fixed effects to absorb national shocks that may vary over time, such as public-sector reform waves. The coefficient on *Treated* × *Post* remains positive and statistically significant, suggesting that our findings are robust to the inclusion of country-year fixed effects and are not driven by contemporaneous national events.

We also re-estimate our regression using alternative DID approaches. Specifically, in Panel A of Table 6, we report results of a DID design using multiple time periods, as proposed by Callaway and Sant'Anna (2021), and the dynamic treatment effects from the corresponding event study. We find that the average effect in the pre-privatization period is 0.58, with a *p*-value of 0.53, indicating no statistically significant change prior to privatization. In contrast, the average effect in the post-privatization period is 10.85, with a p-value of 0.00, suggesting a significant increase in bank liquidity creation following privatization. These findings are consistent with our main results.[7]

[7] In this test, the effect of privatization on liquidity creation becomes significant after the first few years of privatization, which can occur due to the restructuring effect of privatization triggering gradual transformation. This result is consistent with the restructuring effects widely documented in the privatization literature. Early post-privatization years are often consumed by internal reorganization, including the replacement of management teams, the implementation of new risk management systems, and the "cleaning up" of non-performing loans (NPLs) inherited from the state era (e.g., Berger et al. (2009), Bonin, Hasan, and Wachtel, (2005)). Megginson (2005b) also notes that privatization generally improves bank performance by considerably less than in non-financial industries, suggesting that adjustment costs and restructuring delays are particularly pronounced in the banking sector. Similarly, Cragg and Dyck (1999) provide direct evidence that privatized firms in their first four years after divestiture exhibit no meaningful relationship between managerial turnover and financial performance, suggesting that the efficiency-driving internal governance mechanisms take several years to become operational after ownership transfer. Consistent with this, Boubakri et al. (2005a) also find that although profitability increases in the post-privatization period, improvements in economic efficiency take time to emerge.

In Panel B of Table 6, we implement a two-stage DID approach following Gardner, Thakral, Tô, and Yap (2025) to further examine the effect of privatization on bank liquidity creation. In the first stage, we regress bank liquidity creation on all control variables other than liquidity creation variables.[8] In the second stage, we regress the residuals from the first stage on the interaction term *Treated* × *Post*. We include bank and year fixed effects in all regressions. The coefficient on *Treated* × *Post* is 16.765 and statistically significant at the 1% level, indicating a substantial increase in liquidity creation following privatization.[9] These results are consistent with our baseline findings and further support the positive effect of privatization on bank liquidity creation.

Overall, these robustness checks validate the main findings by showing consistent positive and significant effects of bank privatization on liquidity creation across various alternative specifications and samples.

IV.C. Endogeneity and Selection Concerns

Potential endogeneity and selection bias could be issues if bank privatization decisions are not random but instead influenced by pre-existing bank characteristics, such as financial health, size, or profitability. These characteristics also may affect liquidity creation directly, making it difficult to disentangle the causal effect of privatization from underlying differences between privatized and non-privatized banks. If banks already positioned for higher liquidity creation were more likely to be privatized, our estimates could suffer from selection bias, potentially overstating the impact of privatization.

[8] Treatment observations (post-privatization banks) are explicitly excluded from this first stage, which has fewer observations than the second stage, consistent with Gardner et al.'s (2025) two-stage DID approach.
[9] The coefficient on *Treated* × *Post* exceeds our baseline estimate (8.084), likely due to the presence of heterogeneous treatment effects and the "negative weighting" problem inherent in standard two-way fixed effects specifications with staggered adoption (Goodman-Bacon (2021), De Chaisemartin and D'Haultfoeuille (2020)).

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In Panel A of Table 7, we present the summary statistics and t-tests comparing liquidity creation and other covariates between privatized and non-privatized banks, before matching. The results reveal significant differences across multiple dimensions, supporting the relevance of these covariates for modeling the selection process into privatization. To address this concern, we employ PSM and the Heckman two-stage selection model, as shown in Table 7, to mitigate selection bias and strengthen our causal inferences. We also incorporate two political economy variables, elections and government orientation, which may influence privatization decisions at the national level (e.g., Bortolotti and Pinotti (2003)). Specifically, *L. Election* is a dummy variable equal to 1 if the country held a presidential election in the current or prior year, 0 otherwise. We focus on presidential elections as they most directly signal shifts in executive policy direction regarding privatization. *L. Left-wing* is a dummy variable equal to 1 if the country's chief executive belongs to a party classified as left-wing in the current or prior year, 0 otherwise. Left-leaning executives are generally associated with greater preference for state intervention in the economy, including in the banking sector. Both variables are obtained from the Database of Political Institutions.

Panel B of Table 7 presents the regression results using PSM. For these tests, privatized banks are matched with non-privatized counterparts based on observed bank- and country-level characteristics and using the closest propensity scores in three different sample configurations: 1:1, 1:5, and 1:10. This approach reduces the risk that differences in liquidity creation are driven by pre-existing characteristics, rather than privatization itself. The coefficient on *Treated* × *Post* remains positive and statistically significant across all specifications, indicating that privatization continues to have a positive effect on liquidity creation, even after accounting for selection bias. As shown, although PSM controls for observable selection bias, it does not fully account for

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unobserved factors such as government motives for privatization, management quality, or regulatory pressure, which could influence both privatization decisions and liquidity creation.

To further address this concern, we apply the Heckman two-stage selection model and report the results in Panel C of Table 7. In the first stage, we estimate a selection equation modeling the probability of a bank being privatized, based on all bank- and country-level control variables, along with political economy variables (i.e., election and government orientation) and year fixed effects. The results are reported in column 1 of Panel C in Table 7. Consistent with Bortolotti and Faccio (2009), we find that governments tend to retain control of privatized firms in countries dominated by left-wing political majorities. We also find that privatization is significantly more likely during election years, consistent with the political economy logic that incumbent governments use divestiture strategically to signal fiscal discipline ahead of electoral contests (Bortolotti, Fantini, and Siniscalco (2004)). Regarding bank-level determinants, we find that governments tend to divest larger banks and those with higher overhead costs, consistent with prior literature (Bortolotti et al. (2004), Micco, Panizza, and Yañez (2007)).

In the second stage, we include the inverse Mills ratio from the first-stage selection equation in the main regression to correct for selection bias arising from unobserved factors. The *Treated* × *Post* coefficient in this model is also positive and statistically significant at the 1% level, reinforcing the robustness of our findings. Moreover, we implement the Heckman two-stage selection model using an alternative political economy instrument, namely *World Bank/IMF Loans,*[10] because World Bank and IMF lending programs often require SOEs to privatize (Estrin and Pelletier (2018)). Our results, reported in Online Appendix Table OA1, continue to hold.

[10] We thank an anonymous reviewer for suggesting this alternative instrument.

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In Table 8, we conduct placebo tests by randomizing the years of privatization to each privatized bank in our sample and constructing *POST_PSEUDO*, a dummy variable that equals 1 in the pseudo-privatization year for each bank, and 0 otherwise. We then replace *Treated* × *Post* in our baseline specification with *POST_PSEUDO,* rerun the regression with control variables, as in column 4 of Table 4, and repeat the process 100 times, obtaining coefficient estimates. We find that *POST_PSEUDO* is neither statistically nor economically significant, providing support for our main findings.

Overall, the results from the PSM, Heckman, and placebo tests confirm the positive relation between bank privatization and liquidity creation, strengthening the credibility of our conclusions.

V. Institutional Environments and the Effects of Privatization

We next evaluate whether the impact of privatization on bank liquidity creation is influenced by institutional environments, specifically national characteristics such as government quality, regulatory quality, and competition. Table 9 presents the results. Panels A, B, and C focus on government quality, regulation quality, and competition, respectively. We include the interactions of the *Treated* × *Post* × *Institutional Environment Feature* term for several indicators in each category.[11] We estimate the following regression model:

[11] In our regression specifications, certain constituent terms are mechanically omitted due to our fixed-effects structure and nature of our event timeline. First, the time-invariant *Treated* indicator is absorbed by bank fixed effects. Second, because privatization applies exclusively to the treated group, our *Post* indicator equals 1 only for treated banks in the post-privatization window, and 0 otherwise. Because *Post* already inherently embeds the treatment condition, the two-way interaction *Post* × *Institutional Feature* and triple interaction *Treated* × *Post* × *Institutional Feature* yield the exact same vector. The regressions mechanically omit redundant terms because of perfect multicollinearity.

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$$(2)\quad \frac{LC(total)}{GTA}_{i,t} = \alpha_i + \alpha_t + \beta_1 Treated_i \times Post_{i,t} + \beta_2 Institutional\ Environment\ Feature_{c,t-1} + \beta_3 Treated_i \times Post_{i,t} \times Institutional\ Environment\ Feature_{c,t-1} + \beta_4 Controls_{i,t-1} + \varepsilon_{i,t}$$

In Table 9, Panel A, column 1, we investigate the role of corruption (*Corruption Control*), capturing the extent of corruption in the political system based on the International Country Risk Guide. Higher values mean better corruption control. The interaction term *Treated* × *Post* × *Corruption Control* yields more bank liquidity creation from privatization. In column 2, we investigate the role of *Bureaucracy Quality*. Higher values are given to countries better equipped to govern without drastic changes in policy or interruptions in government services. We find that the effect of *Treated* × *Post* × *Bureaucracy Quality* is positive and statistically significant at the 5% level, suggesting that privatized banks under a stable government create more liquidity. In column 3, we investigate *Government Effectiveness*, which reflects perceptions of public and civil service quality, independence from political pressure, policy formulation and implementation, and government's commitment to such policies, based on Worldwide Governance Indicators. Higher values mean better government effectiveness. We find that the interaction term of *Treated* × *Post* × *Government Effectiveness* is positive and significant at the 5% level, indicating that privatized banks under an effective government create more liquidity. Overall, the results in Panel A indicate that higher government quality amplifies privatization benefits.

Table 9, Panel B presents the regression results related to regulation. In column 1, we investigate the role of *Supervisory Power*, an index sourced from World Bank Surveys on Bank Regulation and Supervision capturing whether supervisory authorities can prevent and address issues. Higher values indicate greater power. In column 2, we investigate *Own Firms*, a measure

of the extent to which banks may own and control nonfinancial firms; higher values mean more restrictions. In column 3, we investigate the role of *Strength of External Audit*, a measure of the effectiveness of external audits of banks; higher values indicate stronger audits. We find that *Treated* × *Post* × *Supervisory Power*, *Treated* × *Post* × *Own Firms*, and *Treated* × *Post* × *Strength of External Audit* all load positively and significantly, suggesting that better regulation amplifies the liquidity creation benefits of bank privatization.

Table 9, Panel C presents the regression results of how banking competition affects the liquidity creation benefits of bank privatization. In column 1, we investigate the role of *Investments financed by equity or stock sales (%)*, which measures the extent to which corporate investments are financed by equity or stock sales. We find that *Treated* × *Post* × *Investments financed by equity or stock sales (%)* loads negatively and significantly at the 10% level, indicating that privatized banks in countries where corporate investments are largely financed by equity or stock sales create less liquidity for the public. In columns 2 and 3, we use the top three banks with the largest asset share of all commercial banks (*Bank concentration (%)*) and foreign banks ratio (*Foreign banks among total banks (%)*) to measure competition, respectively. In column 2, the coefficient on *Treated* × *Post* × *Bank concentration (%)* is negative and significant at the 5% level, suggesting that privatized banks operating in more concentrated banking markets experience smaller gains in liquidity creation following privatization. In column 3, the coefficient on *Treated* × *Post* × *Foreign banks among total banks (%)* is positive and significant at the 1% level, indicating that a greater presence of foreign banks enhances the liquidity creation benefits of privatization. Overall, the results in Panel C are consistent with the view that competition incentivizes privatized banks to improve their performance and expand their lending activities.

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VI. Additional Analysis

VI.A. Z-score Tests

A likely channel through which banks provide more liquidity to the economy is by managing their risks effectively and reducing their likelihood of financial distress, which can adversely affect both the broader economy and the banks themselves. The Z-score offers a straightforward way to examine this potential risk management channel. Although risk is an ex-ante concept, it is relatively straightforward to assess whether the Z-score increases or decreases ex-post in a manner consistent with our liquidity creation findings.

Specifically, we re-estimate our main regression using the Z-score as the dependent variable. The results reported in Online Appendix Table OA2 show that the coefficient for *Treated* × *Post* is consistently positive and statistically significant at the 5% level across all model specifications. These findings suggest that bank privatization significantly reduces bank risk, thereby improving bank stability and performance. Overall, the evidence for the main result supports a risk management channel through which banks become safer after privatization.

VI.B. Equity Capital and Liquid Funds: Input and Output Tests

We also examine how privatization affects the equity capital and liquid funds input and output. Specifically, we replace our main dependent variable with *Equity/GTA* (equity capital input); *Cash/GTA* and *Securities/GTA* (liquid funds input); and *Deposits/GTA*, *Net Loans/GTA*, and *Loan Commitment/GTA* (approximate measures of the three main liquidity creation outputs). As shown in Online Appendix Table OA3, the coefficient on *Treated* × *Post* in the *Equity/GTA* regression is statistically insignificant, and those in the *Net Loans/GTA* and *Loan Commitment/GTA* equations that require equity to absorb credit risks are large and statistically significant. The coefficient in the *Deposits/GTA* equation is not statistically significant.

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In terms of economic significance, the coefficient on *Treated* × *Post* is 0.055 for *Net Loans/GTA*, suggesting that after privatization, banks' net loans increase by 0.055, a 10.8% increase relative to their average value (0.510). For loan commitments, the coefficient on *Treated* × *Post* is 0.015. In terms of requirements for equity capital, net loans generally require more equity capital input per dollar because loan commitments are often not fully drawn down and thus carry lower credit risk. These findings are consistent with a risk management channel for the main results in which privatized banks manage their credit risks better using the equity capital input after privatization.

As shown in Online Appendix Table OA3, the coefficient on *Treated* × *Post* in the *Cash/GTA* is positive and statistically significant at the 10% level. For *Securities/GTA,* the coefficient is significantly negative. Both cash and securities provide liquid funds input to meet liquidity needs of output customers, so we focus on the securities findings. For economic significance, the coefficient on *Treated* × *Post* in the *Securities/GTA* equation is -0.051, a 30.2% decrease relative to its average value (0.169).

In terms of requirements of the outputs for liquid funds inputs, the order of need is the same as for equity capital needs. Net loans require a full dollar of liquid funds input, and loan commitments require less liquid funds input because commitments are often not drawn down, again suggesting a risk management efficiency effect of privatization. Thus, the liquid funds input and output results shown above are again consistent with a risk management channel through which privatized banks manage their liquidity risks more efficiently after privatization.

VI.C. Tests of Crisis Years Versus Other Periods[12]

[12] We thank an anonymous reviewer for suggesting this analysis.

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We further examine whether the impact of privatization on bank liquidity creation varies between crisis and non-crisis periods. Specifically, we assess whether and how government-owned banks provide countercyclical lending and liquidity provision. We consider two crisis contexts,[13] the global financial crisis of 2008–2009 and a broader context of banking crisis years identified in the Behavioral Finance & Financial Stability database.[14] We split the sample into a 2008–2009 subsample and a subsample of other crisis years, using the full set of control variables in all cases.

Table 10, Panel A reports the results, columns 1–3 for the global financial crisis (2008–2009) and columns 4–6 for other banking crisis years. The dependent variables are liquidity creation (*LC (total)/GTA*), net loans (*Net Loans/GTA*), and loan commitments (*Loan Commitment/GTA*). The key variable of interest, *Treated* × *Post*, is a dummy equal to 1 if a bank is privatized in a given year, and 0 otherwise. In the global financial crisis (2008–2009) columns, we find large and significantly negative coefficients for liquidity creation and net loans, indicating that privatization is associated with a contraction in lending and liquidity provision during this period.[15] In the other crisis years, the negative coefficients are smaller in magnitude but still significant for liquidity creation, with weaker or insignificant results for net loans and loan commitments.

[13] In unreported tests, we also explore the effect of the currency crisis and find similar results.

[14] See https://www.hbs.edu/behavioral-finance-and-financial-stability/data/Pages/global.aspx.

[15] We acknowledge that the global financial crisis is a period of significant turmoil. To address the possibility that changes in sample composition (e.g., the exit of failed banks or re-nationalizations) could drive our results, we repeat our tests using a constant sample of banks. Specifically, we restrict the sample to banks that are active and present in our dataset continuously throughout 2007–2014. This approach removes the influence of failed, merged, or nationalized banks during 2008–2009. The results, reported in Online Appendix Table OA4, continue to hold.

Table 10, Panel B reports the corresponding results for non-crisis periods. Columns 1–3 exclude the global financial crisis years, and columns 4–6 exclude other banking crisis years. The *Treated* × *Post* coefficients for liquidity creation and net loans are positive and significant, suggesting that privatization enhances liquidity creation and lending capacity in more stable periods. Loan commitments generally show smaller and statistically weaker effects.

These results suggest that although privatization tends to bolster bank liquidity creation and lending in normal times, government ownership may play a stabilizing role during systemic stress by supporting countercyclical credit supply. The findings are consistent with the view that state-owned banks are more inclined to maintain or even expand lending in downturns, thereby mitigating the adverse effects of financial crises.

VII. Concluding Remarks

Bank privatization remains relatively understudied, despite extensive state ownership of banks worldwide and the central role of banking in the economy. In this paper, we examine how privatization affects bank liquidity creation, a comprehensive measure of net bank output that has been linked to favorable economic outcomes. Based on existing perspectives of state ownership, we argue that privatization may increase or decrease liquidity creation. Using a DID approach applied to over 4,000 banks from 56 countries/regions over 14 years, we find significant increases in liquidity creation post-privatization. These results are robust to addressing endogeneity and selection bias. Moreover, institutional environments characterized by higher government quality, stronger regulatory frameworks, and greater competition amplify privatization benefits. We also find that during financial turmoil, such as the global financial crisis and other banking emergencies, state ownership and control increase liquidity creation.

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Our findings are comprehensive and provide new evidence on some of the economic and financial benefits and societal costs of bank privatization. Our use of liquidity creation in this regard also contributes to the banking literature, where bank privatization has been a neglected topic. In several cases, banking data and methodologies may be advantageous for privatization research more generally. Bank liquidity creation as a measure of net output may be calculated and employed at the industry and country levels, and liquidity creation may be applied to accounting data for any financial institution, intermediary, or market. Dollar magnitudes are comparable across nations as well. The approach of using net outputs or values of outputs minus inputs may also be applicable to nonfinancial industries.

In terms of specific policies, our findings confirm the countercyclical role of government ownership. We show that during crises, government-owned banks tend to provide more liquidity than privatized banks do. However, these results do not imply that privatization is undesirable in crisis times. Instead, they imply that governments must ensure sufficient countercyclical support to the banking system in downturns. Such support can take various forms, such as explicit government guarantees, capital and liquidity support, or even temporary government ownership, depending on the nature and magnitude of the economic shock. Importantly, this support can be provided through government-owned banks or well-designed support to private banks.

Finally, given that both private- and public-sector ownership and control offer distinct benefits, researchers and policymakers might benefit from more serious consideration of partial privatization. Existing studies on this middle ground find some benefits in terms of efficiency and other performance metrics. Further research, particularly on the effect of partial privatization on bank liquidity creation, could be useful.

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Figure 1. Dynamic Impact of Privatization on Bank Liquidity Creation

This figure illustrates the dynamic impact of privatization on bank liquidity creation. The analysis covers a 15-year window, from 5 years before privatization to 10 years after. The dashed lines in the figure represent 95% confidence intervals, with standard errors clustered at the bank level. Specifically, we report the estimated coefficients from the following regression:

$$LC(total)/GTA_{i,t} = \alpha_i + \alpha_t + \beta_1 Treated_t \times Post_{i,t}^{-5} + \beta_2 Treated_t \times Post_{i,t}^{-4} + \ldots + \beta_{15} Treated_t \times Post_{i,t}^{+10} + \beta_{16} Controls_{i,t-1} + \varepsilon_{i,t}$$

$Post^{-j}$ equals one for banks in the jth year before privatization, and $Post^{+j}$ equals one for banks in the jth year after privatization. We exclude the year before privatization, thus estimating the dynamic effect of privatization on bank liquidity creation relative to the year before privatization.

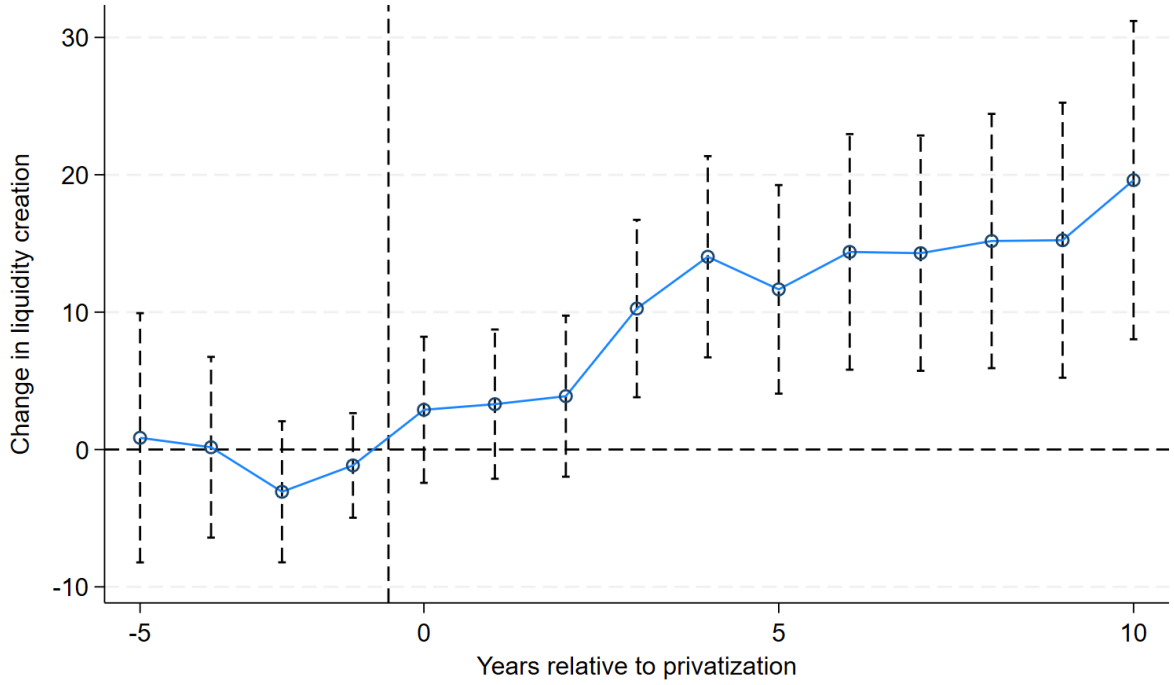


Table 1. Variable Definitions and Sources

Variables	Definition
Panel A. Dependent Variables	
LC (total)/GTA	Total bank liquidity creation including asset-side, liability-side, and off–balance sheet side components, normalized by gross total assets and winsorized at the 1% level. Sources: BankScope and authors' calculation
Z-Score	Bank measure of financial risk calculated as [Avg. (ROA) + Avg. (Equity / GTA)] / St. dv. ROA. A larger value indicates lower overall bank risk. The means of ROA and Equity/GTA and standard deviation of ROA are computed over a 5-year rolling period (t_0 to t_4). Sources: BankScope and authors' calculation
Equity/GTA	Total equity normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Cash/GTA	Total cash normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Securities/GTA	Total securities normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Deposits/GTA	Total deposits normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Net Loans/GTA	Total net loans normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Loan Commitment/GTA	Total loan commitments normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
Panel B. Independent Variables	
Treated × Post	Dummy variable that equals 1 if bank is privatized and observed in the post-privatization period, and 0 otherwise. Sources: Authors' hand-collected data
Treated	Dummy variable that equals 1 if bank undergoes privatization during our sample period, and 0 otherwise. Sources: Authors' hand-collected data
Post	Dummy variable that equals 1 (0) for observations in years subsequent (prior) to bank's privatization. Sources: Authors' hand-collected data
Years since Privatization	Number of years since privatization year. It is set to 0 for non-privatized banks. Sources: Authors' hand-collected data
Panel C. Control Variables	
L. Total Assets	Natural logarithm of bank gross total assets, winsorized at the 1% level (*t*-1). Sources: BankScope and authors' calculation
L. Capital	Ratio of total capital to gross total assets of each individual bank, winsorized at the 1% level (*t*-1). Sources:BankScope and authors' calculation
L. Overhead	Overhead cost normalized by gross total assets, winsorized at the 1% level. Sources: BankScope and authors' calculation
L. Growth	Percentage change in real GDP, over previous year, winsorized at the 1% level (*t*-1). Sources: International Financial Statistics
L. Interest	Lending interest rate (%), winsorized at the 1% level (*t*-1). Sources: Economist Intelligence Unit
L. Inflation	Percentage change in GDP deflator index in local currency (2005 = 100), winsorized at the 1% level (*t*-1). Sources: Economist Intelligence Unit
L. Stock	Ratio of total value of traded stocks to GDP, winsorized at the 1% level (*t*-1). Sources: Global Financial Development Database
L. Bond	Ratio of outstanding domestic private and public debt securities to GDP, winsorized at the 1% level (*t*-1). Sources: Global Financial Development Database
L. Deposit Insurance	Dummy variable that equals 1 if country has explicit deposit insurance scheme (*t*-1). Sources: Demirgüç -Kunt et al. (2015)

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L. Concentration	Asset shares of three largest banks, winsorized at the 1% level (*t*-1). Sources: Global Financial Development Database

Panel D. Other Variables

L. Election	Dummy variable that equals 1 if the country held a presidential election in the current or prior year, 0 otherwise. Sources: Database of Political Institutions
L. Left-wing	Dummy variable that equals 1 if the country's chief executive is classified as left-wing oriented in the current or prior year, 0 otherwise. Sources: Database of Political Institutions
L. World Bank/IMF Loans	Dummy variable that equals 1 if a bank's home country obtains an Extended Fund Facility *loan* or a Standby Arrangement loan from the IMF, or a loan from the World Bank, 0 otherwise. Sources: International Monetary Fund (IMF) and World Bank (WB)
L. Corruption Control	The extent of corruption control within the political system. Corruption can hinder business and may force withdrawal or withholding of investment. Higher values mean better control of corruption. Sources: International Country Risk Guide
L. Bureaucracy Quality	Index of bureaucracy quality within the political system. Higher values are given to countries where bureaucracy has strength and expertise to govern without drastic changes in policy or interruptions in government services. Sources: International Country Risk Guide
L. Government Effectiveness	Index capturing quality of public and civil services and their degree of independence from political pressures, the quality of their policy formulations and implementations, and the credibility of government's commitment to such policies. Sources: World Governance Indicators
L. Supervisory Power	Index capturing whether supervisory authorities can prevent and correct problems. Higher values indicate greater power to do so. Sources: World Bank Surveys on Banking Regulation.
L. Own Firms	Measure of the extent to which banks may own and control nonfinancial firms. Higher values indicate more restrictiveness. Sources: World Bank Surveys on Banking Regulation
L. Strength of External Audit	Measure of effectiveness of external audits of banks. Higher values indicate stronger audits. Sources: World Bank Surveys on Banking Regulation
L. Investments financed by equity or stock sales (%)	Measure of the extent to which corporate investments are financed by equity or stock sales (%). Sources: Global Financial Development Database
L. Bank concentration (%)	Measure of assets of three largest banks as a share of assets of all commercial banks. Sources: Global Financial Development Database
L. Foreign banks among total banks (%)	Percentage of foreign-owned banks, relative to total number of banks in economy. A foreign bank is one with 50% or more of its shares owned by foreigners. Sources: Global Financial Development Database

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Table 2. Summary Statistics of Key Variables

This table presents summary statistics for key variables used in the regressions. All financial variables are winsorized at the 1% and 99% levels.

Variables	Obs.	Mean	SD	P25	Median	P75
Panel A. Dependent Variables						
LC (total)/GTA	29,580	36.52	32.87	13.72	39.40	61.01
Panel B. Independent Variables						
Treated × Post	29,580	0.05	0.21	0.00	0.00	0.00
Years since Privatization	1,862[a]	6.82	8.15	1.00	8.00	13.00
Panel C. Control Variables						
L. Total Assets	29,580	6.62	2.41	4.82	6.55	8.40
L. Capital	29,580	0.16	0.16	0.06	0.11	0.19
L. Overhead	29,580	0.07	0.11	0.01	0.03	0.08
L. Growth	29,580	3.30	3.62	1.26	3.59	5.50
L. Interest	29,580	8.67	5.67	4.31	8.01	10.82
L. Inflation	29,580	6.30	6.34	1.58	3.53	11.26
L. Stock	29,580	70.94	50.45	38.64	61.58	96.40
L. Bond	29,580	1.69	1.07	0.98	1.54	2.25
L. Deposit Insurance	29,580	0.92	0.27	1.00	1.00	1.00
L. Concentration	29,580	62.54	21.45	39.49	62.22	81.91

[a] *Years since Privatization* is for privatized banks only and has fewer observations than other variables.

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Table 3. Sample Distribution by Country and by Year

This table presents sample distribution by country (Panel A) and by year (Panel B). Our sample includes 29,580 observations from 4,632 banks from 2001 to 2014.

Panel A. Distribution by Country

Country/Region	Obs.	Percent	Total Banks	Percent	Privatized Banks	Percent	Non-Privatized Banks	Percent
Argentina	749	2.53	74	1.60	3	0.95	71	1.64
Australia	263	0.89	59	1.27	6	1.90	53	1.23
Austria	736	2.49	88	1.90	3	0.95	85	1.97
Belgium	325	1.1	39	0.84	3	0.95	36	0.83
Brazil	1,189	4.02	159	3.43	3	0.95	156	3.61
Bulgaria	52	0.18	26	0.56	9	2.86	17	0.39
China	1,199	4.05	205	4.43	17	5.40	188	4.35
Colombia	163	0.55	34	0.73	2	0.63	32	0.74
Croatia	318	1.08	44	0.95	5	1.59	39	0.90
Czech Republic	181	0.61	29	0.63	8	2.54	21	0.49
Denmark	422	1.43	65	1.40	4	1.27	61	1.41
Egypt	88	0.3	25	0.54	10	3.17	15	0.35
Estonia	26	0.09	7	0.15	2	0.63	5	0.12
France	1,100	3.72	145	3.13	10	3.17	135	3.13
Germany	1,554	5.25	180	3.89	9	2.86	171	3.96
Greece	108	0.37	19	0.41	4	1.27	15	0.35
Hong Kong	112	0.38	29	0.63	1	0.32	28	0.65
Hungary	122	0.41	32	0.69	10	3.17	22	0.51
India	808	2.73	78	1.68	3	0.95	75	1.74
Indonesia	677	2.29	87	1.88	7	2.22	80	1.85
Israel	105	0.35	15	0.32	6	1.90	9	0.21
Italy	1,318	4.46	288	6.22	16	5.08	272	6.30
Jamaica	30	0.1	7	0.15	1	0.32	6	0.14
Japan	1,906	6.44	187	4.04	3	0.95	184	4.26
Jordan	3	0.01	3	0.06	1	0.32	2	0.05
Kazakhstan	152	0.51	27	0.58	5	1.59	22	0.51
Kenya	21	0.07	21	0.45	1	0.32	20	0.46
Kuwait	5	0.02	3	0.06	2	0.63	1	0.02
Latvia	71	0.24	20	0.43	2	0.63	18	0.42
Lithuania	20	0.07	10	0.22	4	1.27	6	0.14
Luxembourg	922	3.12	120	2.59	4	1.27	116	2.69
Mexico	246	0.83	46	0.99	3	0.95	43	1.00
Netherlands	156	0.53	33	0.71	1	0.32	32	0.74
Nigeria	48	0.16	30	0.65	2	0.63	28	0.65
Norway	176	0.59	34	0.73	5	1.59	29	0.67
Oman	10	0.03	5	0.11	1	0.32	4	0.09
Pakistan	140	0.47	43	0.93	12	3.81	31	0.72
Peru	123	0.42	27	0.58	4	1.27	23	0.53
Philippines	179	0.61	52	1.12	8	2.54	44	1.02
Poland	390	1.32	90	1.94	17	5.40	73	1.69
Portugal	244	0.82	46	0.99	6	1.90	40	0.93
South Korea	71	0.24	20	0.43	5	1.59	15	0.35
Russia	8,322	28.13	1,209	26.10	47	14.92	1,162	26.92
Slovakia	60	0.2	20	0.43	4	1.27	16	0.37
Slovenia	34	0.11	17	0.37	5	1.59	12	0.28
Spain	579	1.96	138	2.98	2	0.63	136	3.15
Sri Lanka	12	0.04	12	0.26	1	0.32	11	0.25

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Sweden	247	0.84	35	0.76	2	0.63	33	0.76
Switzerland	1,801	6.09	209	4.51	1	0.32	208	4.82
Thailand	280	0.95	27	0.58	5	1.59	22	0.51
Turkey	130	0.44	39	0.84	8	2.54	31	0.72
Ukraine	348	1.18	106	2.29	2	0.63	104	2.41
United Kingdom	882	2.98	166	3.58	1	0.32	165	3.82
Uruguay	17	0.06	17	0.37	1	0.32	16	0.37
Venezuela	183	0.62	44	0.95	5	1.59	39	0.90
Vietnam	157	0.53	42	0.91	3	0.95	39	0.90
Total	**29,580**	**100.00**	**4,632**	**100.00**	**315**	**100.00**	**4,317**	**100.00**

Panel B. Distribution by Year

Year	Obs.	Percent
2001	1,401	4.74
2002	1,429	4.83
2003	1,437	4.86
2004	1,516	5.13
2005	2,084	7.05
2006	2,262	7.65
2007	2,519	8.52
2008	2,464	8.33
2009	2,462	8.32
2010	2,535	8.57
2011	2,574	8.7
2012	2,483	8.39
2013	2,370	8.01
2014	2,044	6.91
Total	**29,580**	**100.00**

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Table 4. Main Evidence: Privatization and Liquidity Creation

This table presents regression results relating bank privatization and liquidity creation using a difference-in-differences approach. The dependent variable is *LC (total)/GTA*, defined as a bank's liquidity creation divided by gross total assets in a given year. The independent variable in columns 1–4 and 6 is *Treated* × *Post*, a dummy variable indicating whether a bank is privatized in a given year. The independent variable in column 5 is the number of years since privatization. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. In all regressions, we include bank fixed effects and year fixed effects. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: LC (total)/GTA					
	1	2	3	4	5	6
Treated × *Post*	7.023***	7.271***	7.843***	8.084***		8.114**
	(2.702)	(2.822)	(2.883)	(3.034)		(2.437)
Years since Privatization					1.071***	
					(3.433)	
Treated × *Post* (*t* = -2)						-2.158
						(-0.831)
Treated × *Post* (*t* = -1)						-0.709
						(-0.252)
Treated × *Post* (*t* = 0)						2.285
						(0.767)
L. Total Assets				0.956**	-2.875*	0.959**
				(2.084)	(-1.656)	(2.089)
L. Capital				-26.620***	-21.274*	-26.632***
				(-9.665)	(-1.957)	(-9.670)
L. Overhead				-6.370***	-18.158**	-6.339***
				(-3.340)	(-2.063)	(-3.322)
L. Growth		0.337***	0.316***	0.287***	0.624**	0.287***
		(4.249)	(4.052)	(3.778)	(2.095)	(3.785)
L. Interest		0.000	-0.098	0.035	-0.002	0.035
		(0.003)	(-1.035)	(0.379)	(-0.005)	(0.376)
L. Inflation		0.084*	0.076*	0.067	0.023	0.067
		(1.923)	(1.749)	(1.584)	(0.170)	(1.586)
L. Stock		-0.024***	-0.024***	-0.024***	-0.017	-0.024***
		(-5.181)	(-5.336)	(-5.393)	(-1.260)	(-5.400)
L. Bond		0.454**	0.549***	0.406**	-0.867	0.407**
		(2.260)	(2.773)	(2.097)	(-1.344)	(2.098)
L. Deposit Insurance			-5.864***	-6.142***	-4.158	-6.148***
			(-2.775)	(-3.007)	(-0.907)	(-3.010)
L. Concentration			0.020	0.016	-0.292***	0.016
			(0.756)	(0.620)	(-3.341)	(0.618)
Constant	36.982***	36.257***	41.093***	39.899***	86.136***	39.898***
	(57.426)	(23.023)	(12.839)	(9.103)	(4.180)	(9.102)
Bank Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	29,580	29,580	29,580	29,580	1,862	29,580
Adjusted R^2	0.015	0.019	0.021	0.049	0.047	0.049

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Table 5. Robustness Checks

This table presents robustness check regression results relating bank privatization and liquidity creation using a difference-in-differences approach. The dependent variable is *LC (total)/GTA*, defined as a bank's liquidity creation divided by gross total assets in a given year. The independent variable is *Treated* × *Post*, a dummy variable indicating whether a bank is privatized in a given year. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

	Dependent Variable: LC (total)/GTA				
	1 Alternative Equation Specification Adding Country Fixed Effects	2 Exclude Russia, Japan, and Switzerland	3 Exclude Countries with Fewer than 5 Privatized Banks	4 Additional Country-level Controls	5 Controlling for Country-Year Fixed Effects
Treated × *Post*	6.616** (2.526)	8.873*** (3.441)	7.327*** (2.670)	7.877*** (2.849)	6.058*** (2.621)
Treated	-7.405*** (-3.028)				
L. GDP per Capita				1.320 (1.201)	
L. Trade				0.044 (0.537)	
Controls	Yes	Yes	Yes	Yes	Yes
Country Fixed Effects	Yes	No	No	No	No
Bank Fixed Effects	No	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes
Country-Year Fixed Effects	No	No	No	No	Yes
Observations	29,580	17,551	17,278	28,798	29,580
Adjusted R^2	0.466	0.067	0.055	0.050	0.139

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Table 6. Privatization and Liquidity Creation: Alternative Difference-in-Differences Approaches

This table presents results of alternative DID approach. Panel A reports results with multiple time periods, following Callaway and Sant'Anna (2021). Specifically, it relies on a conditional inverse-probability-weighted DID design using the not-yet-treated as the comparison group, with standard errors estimated via a multiplicative Wild Bootstrap procedure. Panel B presents results of two-stage DiD approach. The dependent variable is *LC (total)/GTA*, defined as a bank's liquidity creation divided by gross total assets in a given year. The independent variable is *Treated* × *Post*, a dummy variable indicating whether a bank is privatized in a given year. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. In all regressions, we include bank fixed effects and year fixed effects. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Callaway and Sant'Anna's (2021) Difference-in-Differences Approach

	Coefficient	Std. errors.	z	P>z	95% confidence interval	
Pre-Privatization Average	0.58	0.92	0.64	0.53	-1.22	2.39
Post-Privatization Average	10.85	3.03	3.58	0.00	4.90	16.79
T-5	0.43	2.21	0.19	0.85	-3.91	4.77
T-4	2.42	2.97	0.81	0.42	-3.41	8.25
T-3	-1.84	1.72	-1.07	0.28	-5.21	1.52
T-2	2.20	1.66	1.32	0.19	-1.06	5.45
T-1	-0.28	1.42	-0.20	0.84	-3.06	2.50
T-0	2.06	2.40	0.86	0.39	-2.64	6.76
T+1	0.08	2.60	0.03	0.98	-5.03	5.18
T+2	0.80	2.80	0.29	0.78	-4.68	6.29
T+3	3.95	3.18	1.24	0.22	-2.29	10.18
T+4	9.10	2.71	3.36	0.00	3.78	14.41
T+5	13.95	3.63	3.85	0.00	6.84	21.06
T+6	12.72	4.25	2.99	0.00	4.39	21.05
T+7	14.62	3.96	3.69	0.00	6.85	22.39
T+8	18.25	4.90	3.73	0.00	8.65	27.85
T+9	18.80	7.23	2.60	0.01	4.63	32.98
T+10	24.99	8.05	3.11	0.00	9.22	40.76

Panel B. Two-Stage Difference-in-Differences Approach		
Dependent Variable: LC (total)/GTA		
	1	2
2nd Stage:		
Treated × Post		16.765***
		(9.610)
1st Stage:		
L. Total Assets	2.237***	
	(9.410)	
L. Capital	-37.967***	
	(-15.948)	
L. Overhead	-8.536***	
	(-4.596)	
L. Growth	0.282***	
	(4.009)	
L. Interest	-0.078	
	(-1.190)	
L. Inflation	-0.008	
	(-0.189)	
L. Stock	-0.019***	
	(-4.660)	
L. Bond	-0.343*	
	(-1.815)	
L. Deposit Insurance	-5.883***	
	(-3.814)	
L. Concentration	0.203***	
	(11.173)	
Constant	25.761***	
	(9.201)	
Bank Fixed Effects	Yes	Yes
Year Fixed Effects	Yes	Yes
Observations	28,170	29,580

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Table 7. Propensity Score Matching and Heckman Selection Model

Panel A presents summary statistics of liquidity creation, key bank, macroeconomic, regulatory, and market structure variables, before matching. Panel B presents regression results relating bank privatization and liquidity creation, using propensity score matching (PSM) in columns 1–3. The dependent variable is *LC (total)/GTA*, defined as a bank's liquidity creation divided by gross total assets in a given year. The independent variable is *Treated* × *Post*, a dummy variable indicating whether a bank is privatized in a given year. Panel C presents regression results using Heckman's two-stage selection model. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Differences between Privatized and Non-Privatized Banks before Matching

Variables	Non-privatized banks	Privatized banks	t-statistics for differences
LC (total)/GTA	35.98	44.57	-10.93
L. Total Assets	6.51	8.39	-33.27
L. Capital	0.17	0.11	13.44
L. Overhead	0.08	0.05	9.85
L. Growth	3.26	3.83	-6.56
L. Interest	8.64	9.14	-3.65
L. Inflation	6.30	6.25	0.38
L. Stock	71.21	66.96	3.52
L. Bond	1.71	1.38	12.73
L. Deposit Insurance	0.93	0.80	20.41
L. Concentration	62.14	68.55	-12.54

Panel B. Matching by All Control Variables along with Elections and Government Orientation

	Dependent Variable: *LC (total)/GTA*		
	1	2	3
	PSM 1:1	PSM 1:5	PSM 1:10
Treated × *Post*	5.557**	7.297***	8.300***
	(2.314)	(2.855)	(3.174)
Controls	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	3,724	7,149	10,239
Adjusted R2	0.037	0.040	0.045

Panel C. Heckman Selection Model

Dependent Variable:	*Treated*	*LC (total)/GTA*
	1	2
2nd Stage:		
Treated × *Post*		7.753***
		(2.913)
1st Stage:		
L. Total Assets	0.213***	2.414***
	(11.671)	(3.020)
L. Capital	0.120	-10.915
	(0.538)	(-1.524)
L. Overhead	0.281***	-0.673

	(2.612)	(-0.791)
L. Growth	0.013*	0.203***
	(1.654)	(2.755)
L. Interest	-0.003	-0.278***
	(-0.951)	(-3.986)
L. Inflation	0.024***	0.210***
	(5.471)	(4.014)
L. Stock	-0.004***	-0.030***
	(-5.385)	(-5.314)
L. Bond	-0.065**	0.117
	(-2.564)	(0.940)
L. Deposit Insurance	-0.474***	-8.014***
	(-4.656)	(-3.631)
L. Concentration	0.005***	0.029
	(2.824)	(1.088)
L. Election	0.153***	
	(3.875)	
L. Left-wing	-0.157**	
	(-2.482)	
Lambda		30.613**
		(2.483)
Constant	-2.823***	56.031***
	(-11.561)	(6.711)
Bank Fixed Effects	No	Yes
Year Fixed Effects	Yes	Yes
Observations	29,580	29,580
Pseudo/Adjusted R2	0.138	0.042

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Table 8. Placebo Test

This table reports the regression results of a placebo test by randomizing the years of privatization to each privatized bank in our sample and constructing *POST_PSEUDO*, a dummy variable that equals 1 beginning in the pseudo-*privatization* year in each bank, and 0 otherwise. We then replace *Post* in our baseline specification with *POST_PSEUDO*, rerun the regression with control variables, as in column 4 of Table 4, and repeat the process 100 times. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels.

	Actual	Mean	1%	5%	10%	25%	50%	75%	90%	95%	99%
Coefficients of *POST_PSEUDO*	8.084	0.164	-5.403	-4.141	-3.497	-2.018	0.086	1.858	4.899	5.572	7.685
t-statistic of *POST_PSEUDO*	3.034	-0.190	-3.464	-2.611	-2.448	-1.320	0.051	0.787	1.682	2.194	2.785

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Table 9. Institutional Environment Features: Privatization and Liquidity Creation

Panel A presents regression results relating to institutional environment features, bank privatization, and liquidity creation using a difference-in-differences approach. The dependent variable is *LC (total)/GTA*, defined as a bank's liquidity creation divided by gross total assets in a given year. The independent variable is *Treated* × *Post* × *Institutional Environment Feature*. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. In all regressions, we include bank fixed effects and year fixed effects. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A. Privatization and Governmental Quality

	Dependent Variable: *LC (total)/GTA*		
	1	2	3
Treated × *Post*	-3.645	-4.231	6.538**
	(-1.034)	(-0.815)	(2.231)
L. Corruption Control	-1.162***		
	(-2.717)		
Treated × *Post* × *L. Corruption Control*	4.294***		
	(3.892)		
L. *Bureaucracy Quality*		-9.936***	
		(-3.525)	
Treated × *Post* × *L. Bureaucracy Quality*		5.290**	
		(2.557)	
L. Government Effectiveness			-4.836***
			(-3.840)
Treated × *Post* × *L. Government Effectiveness*			5.841**
			(2.087)
Controls	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	29,580	29,580	29,580
Adjusted R^2	0.051	0.051	0.051

Panel B. Privatization and Regulatory Quality

	Dependent Variable: *LC (total)/GTA*		
	1	2	3
Treated × *Post*	-2.585	-0.979	-11.042**
	(-0.469)	(-0.258)	(-2.285)
L. Supervisory Power	0.287**		
	(2.103)		
Treated × *Post* × *L. Supervisory Power*	1.245***		
	(2.608)		
L. Own Firms		-0.624	
		(-1.630)	
Treated × *Post* × *L. Own Firms*		2.799**	
		(2.474)	
L. Strength of External Audit			0.838***
			(4.272)
Treated × *Post* × *L. Strength of External Audit*			3.310***
			(3.747)
Controls	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	23,578	26,558	27,652
Adjusted R^2	0.046	0.043	0.047

Panel C. Privatization and Competition

	Dependent Variable: *LC (total)/GTA*		
	1	2	3
Treated × Post	1.599	18.566***	-1.162
	(0.279)	(3.308)	(-0.435)
L. Investments financed by equity or stock sales (%)	-0.960		
	(-1.546)		
Treated × Post × L. Investments financed by equity or stock sales (%)	-1.086*		
	(-1.804)		
L. Bank concentration (%)		-0.399***	
		(-6.367)	
Treated × Post × L. Bank concentration (%)		-0.176**	
		(-2.448)	
L. Foreign banks among total banks (%)			0.078
			(1.387)
Treated × Post × L. Foreign banks among total banks (%)			0.289***
			(4.023)
Controls	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes
Observations	3,907	29,580	29,580
Adjusted R^2	0.168	0.054	0.051

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Table 10. Crisis and Non-Crisis: Privatization and Liquidity Creation

This table presents regression results relating to global financial crisis and banking crisis, privatization, and liquidity creation. Panel A columns 1–3 (4–6) present regression results for the sample period during the global financial crisis (banking crisis). The dependent variables are liquidity creation (*LC (total)/GTA*), net loans (*Net Loans/GTA*), and loan commitment (*Loan Commitment/GTA*). We define the global financial crisis as 2008 to 2009 and obtain banking crisis data from the Behavioral Finance & Financial Stability database. The independent variable is *Treated* × *Post*, a dummy variable indicating whether a bank is privatized in a given year. In Panel B, we use a sample of years outside 2008 to 2009 (i.e., the global financial crisis) in columns 1–3 and outside the banking crisis in columns 4–6. All variables are defined in Table 1. All financial variables are winsorized at the 1% and 99% levels. In all regressions, we include bank fixed effects and year fixed effects. The *t*-statistics in parentheses are reported based on standard errors clustered at the bank level. *, **, and *** denote statistical significance at the 10%, 5%, and 1% levels, respectively.

Panel A.	**Global Financial Crisis (2008–2009)**			**Other Banking Crisis Years**		
	1	2	3	4	5	6
Variables	***LC (total)/GTA***	***Net Loans/GTA***	***Loan Commitment /GTA***	***LC (total)/GTA***	***Net Loans/GTA***	***Loan Commitment /GTA***
Treated × *Post*	-16.280***	-0.019**	-0.004	-5.821**	-0.025*	0.020
	(-12.240)	(-2.367)	(-1.298)	(-2.442)	(-1.818)	(1.449)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,926	4,926	4,926	9,573	9,573	9,573
Adjusted R^2	0.065	0.111	0.013	0.058	0.055	0.008

Panel B.	**Non-Global Financial Crisis**			**Non-Banking Crisis**		
	1	2	3	4	5	6
Variables	***LC (total)/GTA***	***Net Loans/GTA***	***Loan Commitment /GTA***	***LC (total)/GTA***	***Net Loans/GTA***	***Loan Commitment /GTA***
Treated × *Post*	9.239***	0.064***	0.016***	7.736***	0.060***	0.012*
	(3.355)	(3.321)	(2.762)	(2.887)	(3.158)	(1.662)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes
Observations	24,654	24,654	24,654	20,007	20,007	20,007
Adjusted R^2	0.053	0.036	0.014	0.055	0.049	0.020