Bank Ownership and Margins of Trade: Evidence from a Firm-Bank Matched Dataset

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5th South Asia Economic Network Conference
WB–CAFRAL, 26-27th Feb, 2020

Overview

- Role of banks on economic activities long been debated by policymakers and academics (Friedman and Schwarz, 1963; Bernake, 1983)
- How credit affect firm activities, such as exports (Chor and Manova, 2010; Manova, 2013; Buono and Formai, 2018), investment (Amiti and Weinstein, 2018), financial performance (Iyer et al., 2014)
  - bank health (Amiti and Weinstein, 2011; Paravisini et el., 2014)
- How differential exposure to international financial shocks of different types of banks may have acted as a propagation mechanism during global financial crisis (Peek and Rosengren, 1997, 2000; Cetorelli and Goldberg, 2012; Acharya et al. 2013; Ivashina et al., 2015)
  - bank funding (Ongena et al., 2015)
- Effect on *firm performance due to variation in banks' ownership pattern*, especially during a crisis, has not been studied in detail and the underlying mechanisms behind this effect are still not well understood
  - bank ownership (Coleman and Feler, 2015)

What do I do?

- Does a bank's ownership matter for the firm's performance to which it is connected? Especially, in the event of a crisis?
  - **interaction between bank ownership and crisis of 2008-09 on firm-level export margins**
    - Coleman and Feler (2015) and Acharya and Kulkarni (2016)
- Findings:
  - firms connected to private and/or foreign banks earned 7.7–39% less from their export earnings relative to firms connected to public-sector banks
  - at the absolute level (using a triple difference): firms connected to private and/or foreign banks see a drop of about 8% in their export earnings
    - happened as the public-sector banks were differentially impacted (due to the explicit and implict guarantee)
  - effect is concentrated only on the intensive margin of trade
- Contribution(s):
  - first paper to show how firms got differentially affected (in terms of their performance, especially exports) due to their banking relationships

Motivation: Credit Market – India

- India, like Brazil, China, etc. was relatively immune to the slowdown of the international credit flows
  - Primary Reason: **Indian banking system did not have any direct exposure to subprime mortgage assets**
- Witnessed a heavy sell-off by Foreign Institutional Investors (FIIs) to provide the much-needed liquidity to their parents in the US or Europe
  - result: **a net expulsion of around $13.3 billion in 2008 through equity disinvestment**
  - capital inflows under external commercial borrowings, short-term trade credit, and external borrowing by banks also declined

Motivation: India's Capital Account, 2008-09

	2007-08	2008-09	H1 2008-09	H2 2008-09
Foreign Direct Investment	15401	17496	13867	3629
Portfolio Investment	29556	-14034	-5521	-8513
External Commercial Borrowings	22633	8158	3157	5001
Short-term Trade Credit	17183	-5795	3689	-9484
Other Banking Capital	11578	-7687	3747	-11434
Other Flows	10554	4671	-1849	6520

Notes: Figures are in INR million. Source: Reserve Bank of India.

Motivation: Credit Market – India

- Withdrawal of significant amount of capital led to
  - fall in Stock Exchange (BSE) Index
  - loss of access to funds from abroad (by banks), as inter-bank borrowing seized up in the US and Europe
  - call money rate rose by nearly 20% (in October and early November 2008)
    - **all these happened despite the fact that a majority ($>$ 65%) of the Indian banking system is owned by the public-sector**
- Could not escape a liquidity crisis and a credit crunch
  - the RBI intervened proactively with **policy measures** to mitigate the adverse impact on the Indian economy

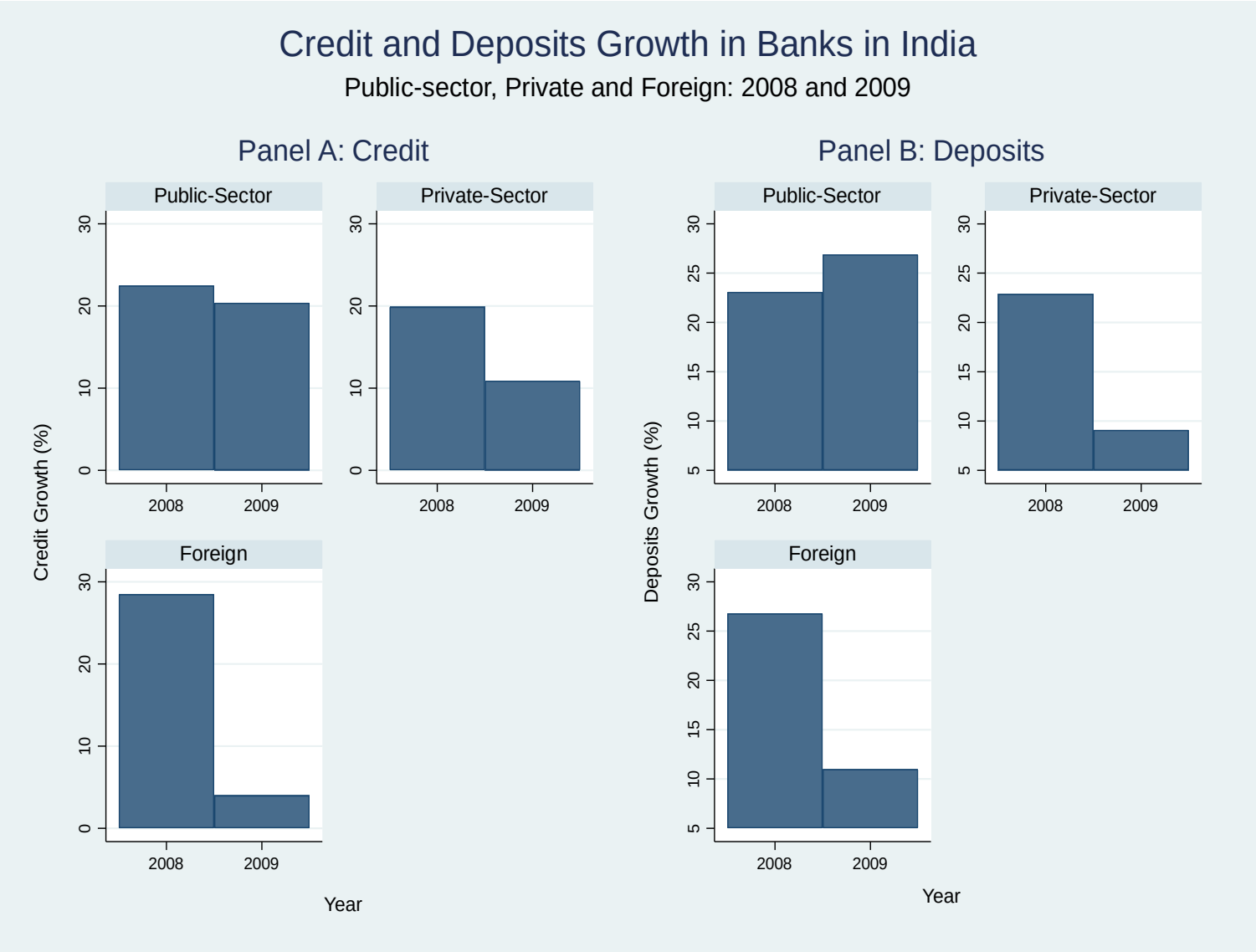
Public-sector vs. Other Banks

How does borrowing from public-sector banks or sources can help a firm (when the firm is a client to the public-sector bank) to mitigate the partial effects of the crisis?

Primarily, 2 reasons

- **public-sector banks themselves are differentially affected (by the crisis) as compared to other banks** (Micco and Panizza, 2006; Bertray et al., 2012; Cull and Martinez-Peria, 2012; Coleman and Feler, 2015; Acharya and Kulkarni, 2016; Acharya et al., 2019)
  - credit-lending by public-sector banks tend to be less responsive to macroeconomic shocks than by private banks
    - may have better access to deposit financing (Eichengreen and Gupta, 2013)
  - differences in investor confidence (e.g., consider the credit default swap (CDS) spreads)

Public-sector vs. Other Banks (Credit and Deposits Growth)



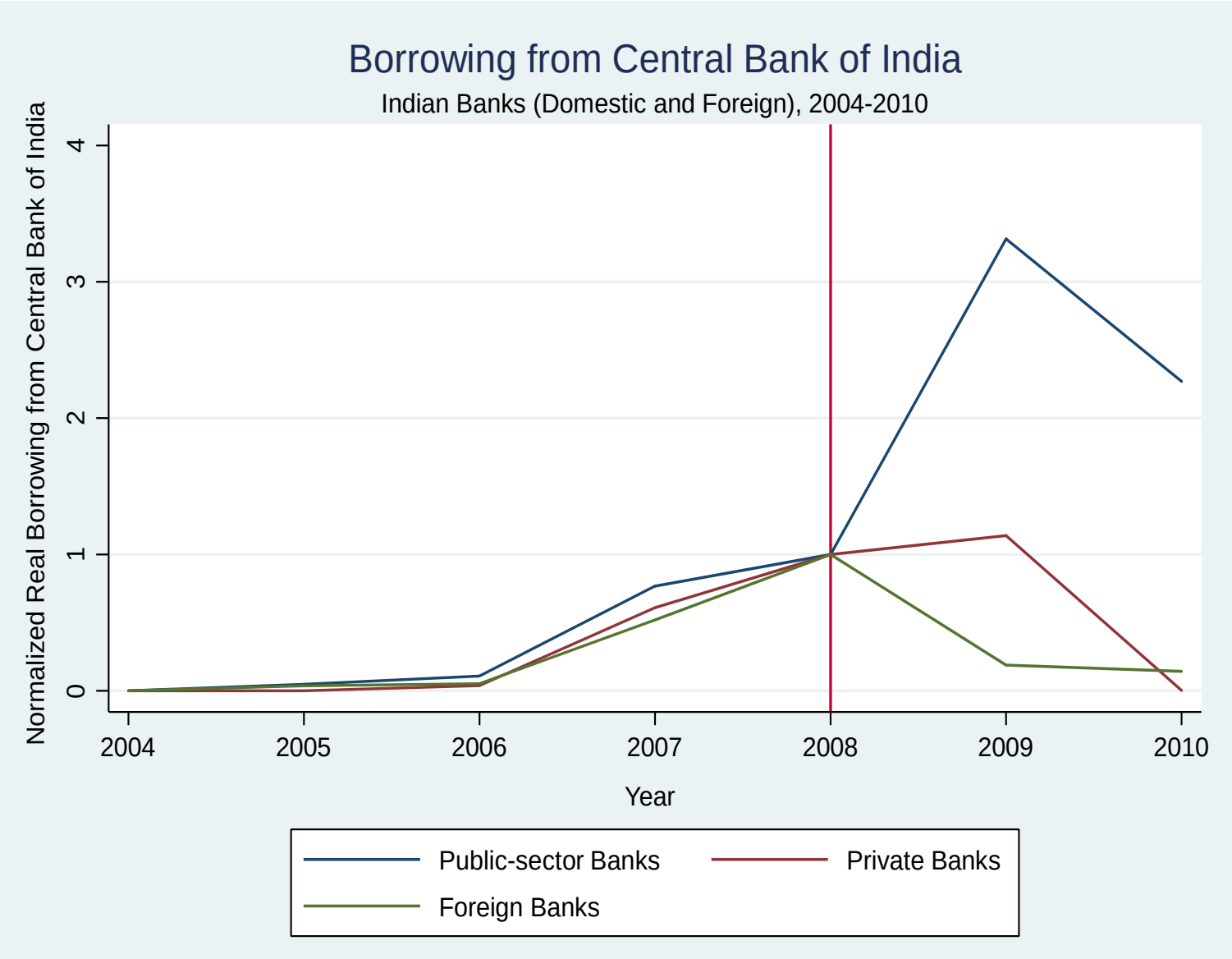
Public-sector vs. Other Banks

- **due to political pressure** (Dinc (2005) for cross-country; Cole (2009) for India; Khwaja and Mian (2005) for Pakistan; Carvalho (2014) for Brazil; and Sapienza (2004) for Italy)

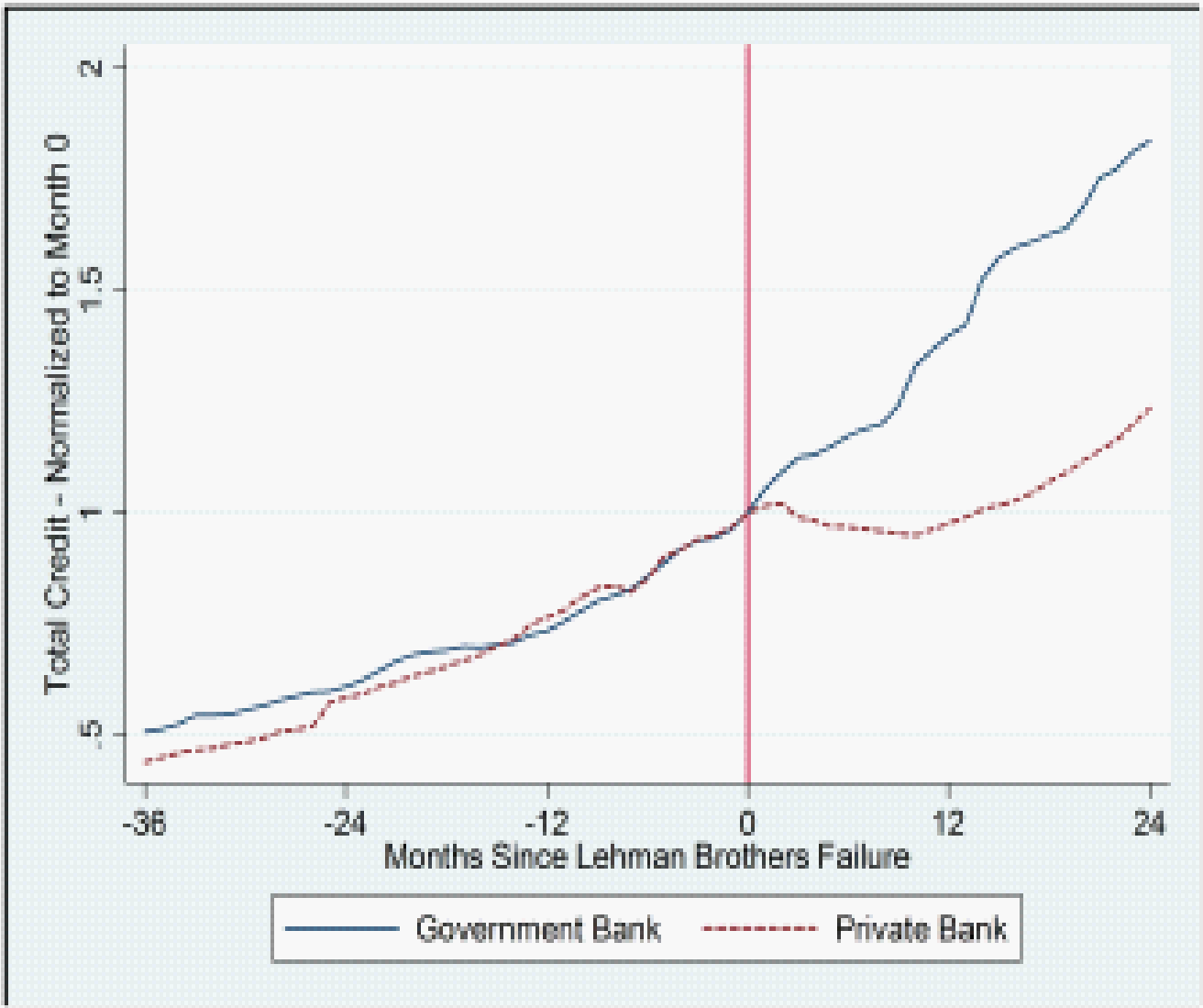
Indian Bank Nationalization Act

- **Indian Bank Nationalization Act (1969):** provides an explicit guarantee that all obligations of public-sector banks will be fulfilled by the Indian Govt. in the event of a crisis

Borrowing by Banks from Central Bank



Evidence from Banks of Other Countries (Brazil)



Why exports?

- Linkages between **financial sector and firms' performance, especially export activities have attracted significant attention in recent years** (Berman and Hericourt, 2010; Chor and Manova, 2011; Amiti and Weinstein, 2011, 2018; Minetti and Zhu, 2011; Bricongne et al., 2012; Caggese and Cunat, 2012; Feenstra et al., 2014; Paravisini et al., 2014; Manova et al., 2015; Muuls, 2015; Bronzini and D'Ignazio, 2017; Buono and Formai, 2018)
- During a crisis, the demand for liquidity by the exporters goes up significantly as there could be
  - payment for their sales gets delayed;
  - fall in demand for their products in crisis-ridden countries;
  - the need to find new destinations for their products;
  - inventories piling up; and
  - a need to continue their production activities even with a drop in their sales
- In these situations, firms resort to banks for additional credit supply. If the banks are also simultaneously hit by the crisis and fails to increase the lending, the real economy output falls

Literature Review

- Role of Banks
  - Iyer et al. (2013) - Portugese banks; Coleman and Feler (2015) - Brazilian private and govt-owned banks; Onegna et al. (2015) - bank funding of 14 East European countries
- Trade and Finance
  - Amiti and Weinstein (2011, 2017) - Japanese firm-bank data; Paravisini et al. (2014) - Peruvian firm-bank data; Buono and Formai (2018) - Italian firm-bank data
- Bank lending channel as an instrument for credit shocks
  - Carvalho et al. (2015); Chodorow-Reich (2014); Jimenez et al. (2011); Kalemli-Ozcan et al. (2010); Muûls (2015)

Dataset – PROWESS

- Contains information primarily from the income statements and balance sheets
  - of all the listed companies and publicly traded firms
  - panel of firms
  - provides information on important variables such as sales, exports, and imports apart from other specific firm- and industry-level indicators
- Also gives detailed information on the banking relationships of each firm
  - provides the names and the details (balance sheets) of all the bankers for each individual firm over time
    - e.g, if a firm is a client of multiple banks or a single bank for every year
    - loans and advances by banks
    - borrowing from Central Bank of India (or RBI) by banks
    - information on financial health of the banks
  - provides information on credit situation at the firm-level: firm's borrowings according to sources and the type of borrowings
    - e.g., it gives how much a firm has borrowed from domestic banks, foreign banks, etc

Banking Relationship of Firms

	Banking Relationships				
	Mean	Median	Std. Dev.	Min	Max
Panel A					
Aggregate	5.21	4	4.45	1	38
Panel B: Dividing by Ownership					
Public-sector	7.87	6	6.32	1	38
Domestic Private	5.08	4	4.39	1	36
Foreign	5.03	5	2.64	1	16
Panel C: Dividing by Size					
1st Quartile	2.27	2	1.49	1	12
2nd Quartile	3.51	3	2.27	1	19
3rd Quartile	5.45	5	2.68	1	18
4th Quartile	9.75	9	5.73	1	38
Panel C: Dividing by Export Orientation					
Non-Exporters	3.42	3	2.74	1	20
Exporters	6.07	5	4.83	1	38

Bank Ownership and Exports – Utilizing Banking Relationships (Firm-Bank level regressions)

Utilize the firm-bank relations to estimate the causal effect of bank ownership on firm-level exports (during the crisis) using the following equation:

$$x_{ijt} = \gamma_1 (D_{crisis} \times PSB_{fb,<2008}) + bankcontrols_{t-1} + \alpha_{jt} + \delta_i + \epsilon_{it}$$

- x_{ijt} is either the intensive or extensive margin of trade for an Indian manufacturing firm
- D_{crisis} is an indicator of the financial crisis. It takes value 1 if the year $\geq$ 2008
- $PSB_{fb,<08}$ takes a value 1 if a firm is client to a public-sector bank in any year before the crisis
- α_{jt} - industry-year fixed effects

- Key assumption: cross-sectional differences in the explicit and implicit guarantee are due to their ownership patterns, but uncorrelated with unobserved firm characteristics that can affect credit demand and exports during the same period

Problems with estimation

- Relationship between a firm and a bank even before the crisis is not random
- Multiple banking relationships
  - δ_j - firm fixed effects
  - cluster standard errors at the bank level

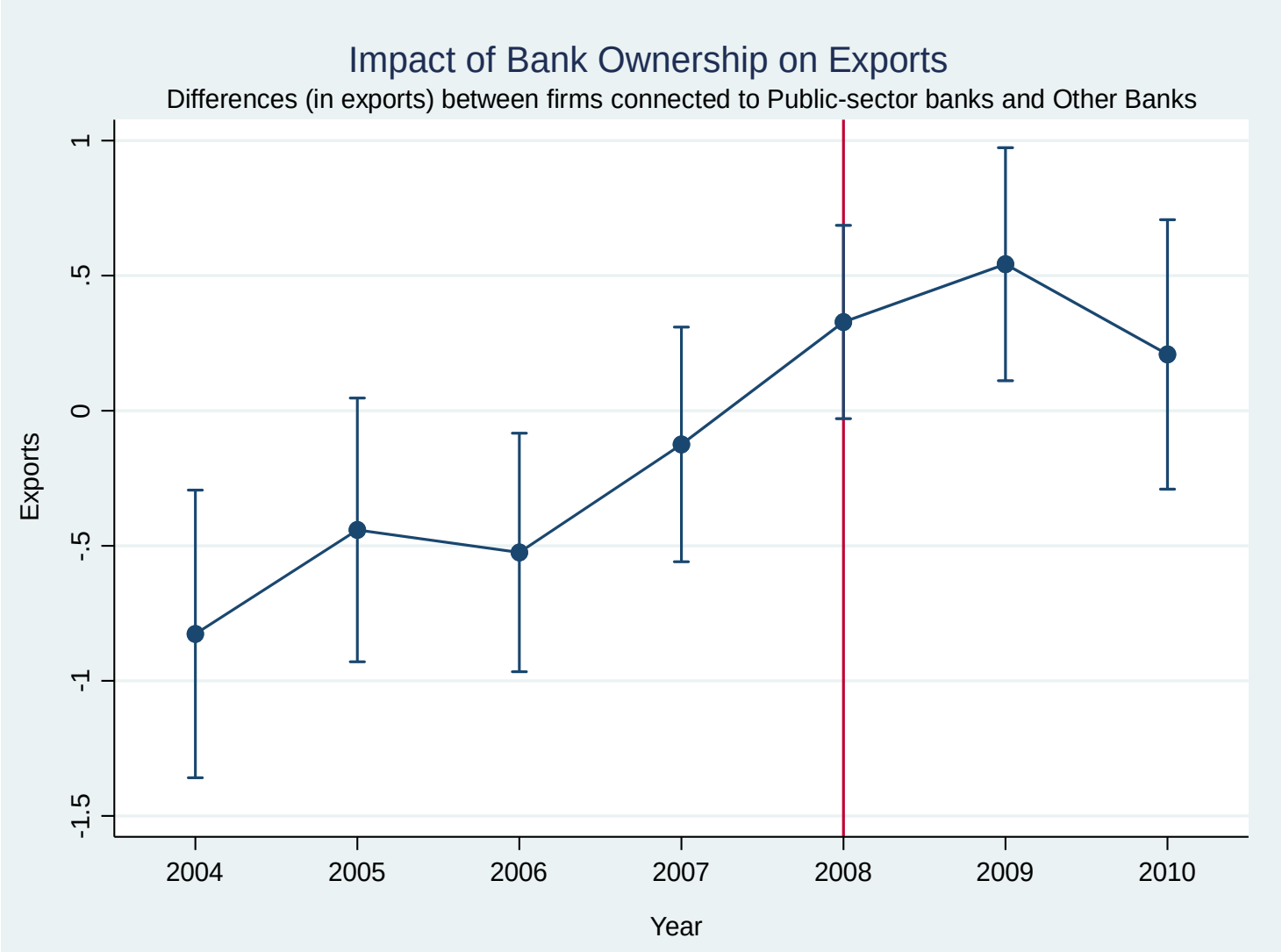
Were the Firms on Different Time Trends?

	Ln(Exports)			Exporter = 1		
$PSB_{fb,<2008} \times$ *Time Trend*	−0.137			−0.007		
	(0.115)			(0.008)		
Time Trend	−0.0002			−0.0006		
	(0.012)			(0.021)		
$PSB_{fb,<2008} \times$ *Year*2001		−0.177			−0.026	
		(0.224)			(0.017)	
$PSB_{fb,<2008} \times$ *Year*2002		−0.363			−0.025	
		(0.317)			(0.017)	
$PSB_{fb,<2008} \times$ *Year*2003		−0.143			−0.005	
		(0.147)			(0.014)	
$PSB_{fb,<2008} \times$ *Year*2004		−0.097			−0.015	
		(0.143)			(0.013)	
$PSB_{fb,<2008} \times$ *Year*2005		−0.040			0.003	
		(0.163)			(0.011)	
$PSB_{fb,<2008} \times$ *Year*2006		−0.113			−0.013	
		(0.127)			(0.009)	
$PSB_{fb,<2008} \times$ *Year*2007		−0.126			−0.002	
		(0.134)			(0.007)	
$D_{crisis-2} \times PSB_{fb,<2008}$			−0.116			−0.014
			(0.096)			(0.012)
$D_{crisis-1} \times PSB_{fb,<2008}$			−0.196			−0.011
			(0.156)			(0.008)
$D_{crisis+1} \times PSB_{fb,<2008}$			0.080**			0.003
			(0.041)			(0.007)
$D_{crisis+2} \times PSB_{fb,<2008}$			0.143**			−0.007
			(0.072)			(0.007)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.92	0.92	0.92	0.82	0.82	0.82
N	51,195	51,195	51,195	51,195	51,195	51,195
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE (4-digit)*Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Results – Utilizing Banking Relationships (Firm-Bank level regressions)

	Ln(Exports)						Exporter = 1	
					Year FE× *PSB*	High Fin Dependence		High Fin Dependence
$D_{crisis} \times PSB_{fb,<2008}$	0.080**	0.078*	0.077*	0.078**	0.078**	0.080*	0.004	0.007
	(0.041)	(0.040)	(0.040)	(0.039)	(0.039)	(0.049)	(0.007)	(0.009)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.91	0.91	0.91	0.92	0.92	0.92	0.82	0.81
N	51,224	51,224	51,210	51,195	51,195	31,968	51,195	31,968
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	No	No	No	No	No
Industry FE(5-digit)*Year Trend	Yes	No	No	No	No	No	No	No
Industry FE(2-digit)*Year FE	No	Yes	No	No	No	No	No	No
Industry FE(3-digit)*Year FE	No	No	Yes	No	No	No	No	No
Industry FE(4-digit)*Year FE	No	No	No	Yes	Yes	Yes	Yes	Yes

Results – Plotting the Coefficients



Results – Robustness Checks

	Ln(Exports)					
	ATT	Firm Charac× *PSB*	Firm FE× *PSB*	Substitutability of Credit	Only 1 Type of Bank	Demand Shock
$D_{crisis} \times PSB_{fb,<2008}$	0.469***	0.094**	0.078*	0.078**	0.057**	0.083**
	(0.129)	(0.037)	(0.040)	(0.039)	(0.029)	(0.039)
$D_{crisis} \times DemandShock_j^{US}$						−0.741***
						(0.238)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	n/a	0.93	0.92	0.92	0.78	0.81
N	78,648	49,215	51,195	51,195	12,924	51,195
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	No	No	No	No	No	Yes
Firm-Bank FE*Year Trends	No	No	No	Yes	No	No
Industry FE(5-digit)*Year Trend	No	No	No	No	No	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes	Yes	No

Results – Utilizing Balance Sheets of Banks: Borrowing from Central Bank

Utilizing banking relationships is important especially to establish a causal effect, but it does not clearly say about the exact channel of the effect. For example, (a) bank lending channel, and (b) financial health of banks

$$x_{ijt} = \gamma_1(D_{crisis} \times B^{CB}_{b,<08}) + \gamma_2(D_{crisis} \times B^{CB}_{b,<08} \times PSB_{fb,<08}) + bankcontrols_{t-1} + \alpha_{jt} + \delta_i + \epsilon_{it}$$

- $B^{CB}_{b,<08} \longrightarrow$ borrowing done by a commercial bank b before 2008 from the Central Bank of India (CB)
- $D_{crisis} \times B^{CB}_{b,<08} \longrightarrow$ estimates the effect of borrowing by a bank (from the Central Bank) during the crisis on a firm's exports given that the firm is not connected to a public-sector bank(s), i.e., connected to other types of banks, such as the private and/or foreign banks; $\gamma_1 < 0$
- $D_{crisis} \times B^{CB}_{b,<08} \times PSB_{fb,<08} \longrightarrow$ estimates the effect of the crisis of 2008-09 on a firm's export flows when a firm banks with a public-sector bank

Results – Utilizing Balance Sheets of Banks: Borrowing from Central Bank

	Ln(Exports)					
						High Fin Dependence
$D_{crisis} \times B^{CB}_{b,<2008}$	-0.166^{**}	-0.153^{**}	-0.167^{**}	-0.163^{**}	-0.082^{*}	-0.158^{**}
	(0.070)	(0.069)	(0.069)	(0.066)	(0.045)	(0.073)
$D_{crisis} \times B^{CB}_{b,<2008} \times PSB_{fb,<2008}$	0.107	0.086	0.047	0.010	0.101	0.088
	(0.143)	(0.139)	(0.138)	(0.136)	(0.086)	(0.143)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.91	0.92	0.92	0.92	0.92	0.92
N	43,984	43,984	43,984	43,984	51,910	41,134
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	No	No	No
Bank FE*Year Trend	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE(5-digit)*Year Trend	Yes	No	No	No	No	No
Industry FE(2-digit)*Year FE	No	Yes	No	No	No	No
Industry FE(3-digit)*Year FE	No	No	Yes	No	No	No
Industry FE(4-digit)*Year FE	No	No	No	Yes	Yes	Yes

Results – Utilizing Balance Sheets of Banks: Borrowing from Central Bank

	Exporter = 1		Ln(Domestic Sales)	
		High Fin Dependence	Exporters	Non-Exporters
$D_{crisis} \times B^{CB}_{b,<2008}$	−0.005	−0.008	−0.038*	0.057
	(0.012)	(0.013)	(0.022)	(0.130)
$D_{crisis} \times B^{CB}_{b,<2008} \times PSB_{fb,<2008}$	−0.030	−0.030	0.001	0.152
	(0.029)	(0.030)	(0.068)	(0.283)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes
R-Square	0.82	0.83	0.94	0.94
N	43,984	41,134	32,090	11,831
Firm FE	Yes	Yes	Yes	Yes
Year FE	No	No	No	No
Bank FE*Year Trend	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes

Placebo – Bank Health: Operating Profits/Working Funds

	Ln(Exports)		Exporter = 1		Ln(Domestic Sales)	
		High Fin Dependence		High Fin Dependence	Exporters	Non-Exporters
$D_{crisis} \times OPWF_{b,<2008}$	−0.061	−0.061	0.011	0.012	−0.014	−0.036
	(0.090)	(0.093)	(0.018)	(0.019)	(0.032)	(0.124)
$D_{crisis} \times OPWF_{b,<2008} \times PSB_{fb,<2008}$	−0.227	−0.323	0.038	0.002	−0.050	0.111
	(0.313)	(0.320)	(0.069)	(0.070)	(0.134)	(0.498)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.92	092	0.82	0.82	0.98	0.93
N	52,340	49,092	52,340	49,092	35,527	12,360
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE*Year Trend	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes	Yes	Yes

Heterogeneity Across Banks

	Ln(Exports)						
	Foreign Banks					Domestic Private Banks	
	All	US Banks	EU Banks	Japan Banks	Other Banks	All	Major Private Banks
$D_{crisis} \times B^{CB}_{b,<2008}$	−0.118*	−0.172*	−0.116	0.012	−0.208*	−0.044	−0.099*
	(0.066)	(0.102)	(0.128)	(0.129)	(0.123)	(0.060)	(0.057)
$D_{crisis} \times B^{CB}_{b,<2008} \times PSB_{fb,<2008}$	0.019	0.036	−0.007	−0.142	0.078	0.015	0.067
	(0.123)	(0.169)	(0.166)	(0.131)	(0.172)	(0.093)	(0.098)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.92	0.92	0.92	0.92	0.92	0.92	0.92
N	32,270	29,344	29,099	27,082	27,149	42,647	29,662
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bank FE*Year Trend	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Other Effects

	Factors of Production				
	Labour Compensation			Capital Employed	Raw Mat Expenditure
	Total	Man Comp	Non-Man Comp		
$D_{crisis} \times B^{CB}_{b,<2008}$	−0.078*	−0.055*	−0.077*	−0.155**	−0.076
	(0.047)	(0.028)	(0.038)	(0.069)	(0.070)
$D_{crisis} \times B^{CB}_{b,<2008} \times PSB_{fb,<2008}$	0.020	−0.011	0.004	0.028	−0.022
	(0.087)	(0.053)	(0.089)	(0.140)	(0.136)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes
R-Square	0.20	0.16	0.21	0.13	0.16
N	51,260	51,260	50,956	50,482	51,256
Firm FE	Yes	Yes	Yes	Yes	Yes
Bank FE*Year Trend	Yes	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes	Yes

Other Effects

	Imports			
	Cap Goods	Raw Materials	Stores & Spares	Fin Goods
$D_{crisis} \times B^{CB}_{b,<2008}$	−0.027	−0.159**	−0.046	0.050
	(0.053)	(0.066)	(0.046)	(0.059)
$D_{crisis} \times B^{CB}_{b,<2008} \times PSB_{fb,<2008}$	0.051	0.069	−0.024	0.004
	(0.096)	(0.127)	(0.079)	(0.036)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes
R-Square	0.19	0.22	0.20	0.17
N	51,260	51,260	51,260	51,260
Firm FE	Yes	Yes	Yes	Yes
Bank FE*Year Trend	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes

Which type of firms were affected?

- **Size**: Firms below the half of the size distribution
- **Ownership**: Both domestic and foreign firms, with the latter being about 70% more
- **End-Use**: Firms exporting intermediate inputs and capital goods

Credit (Mis)-Allocation: Empirical Strategy

Exploit the following reduced form using OLS fixed effects type of estimation

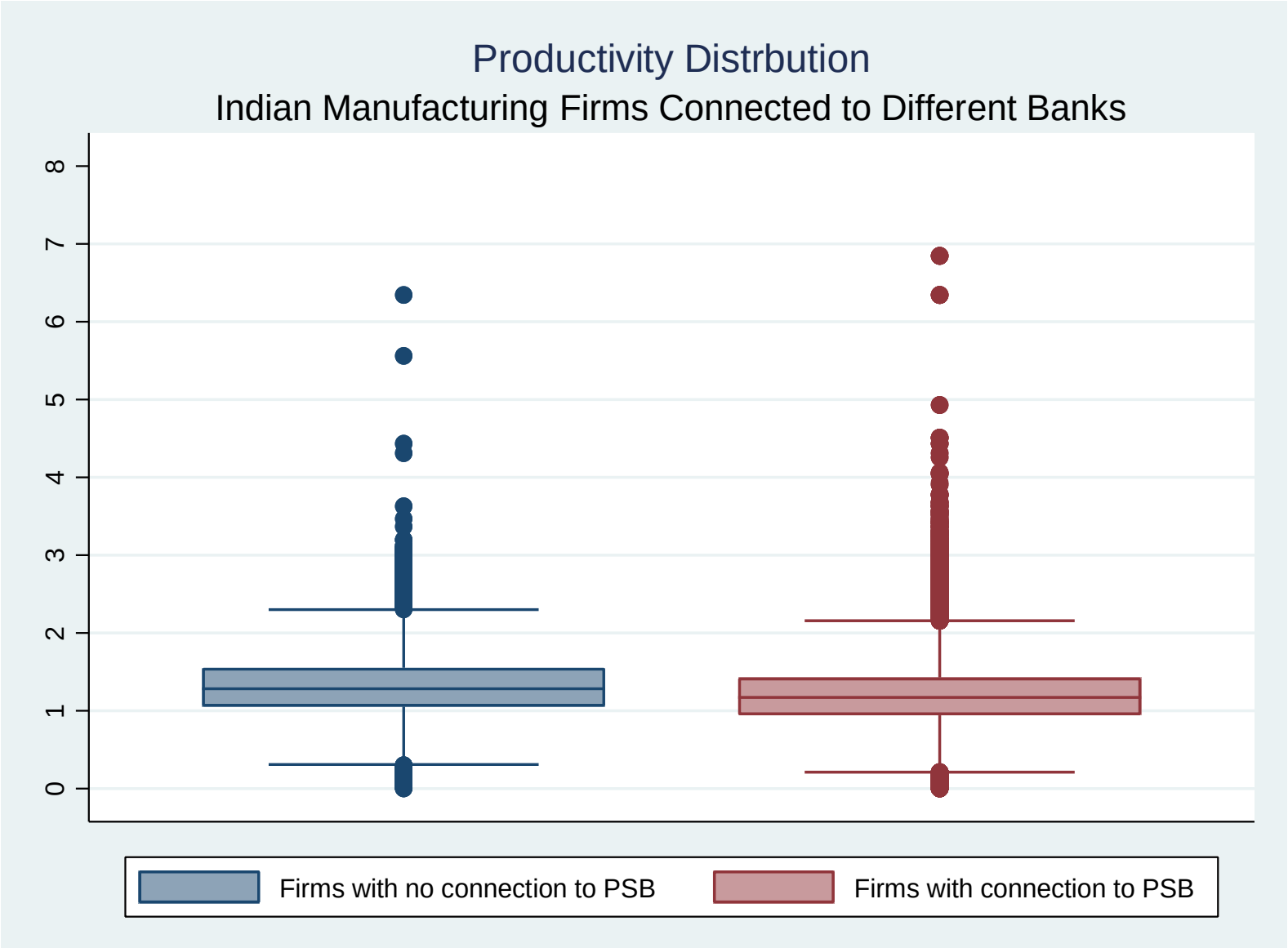
$$\ln(y_{it}) = \beta_1(D_{crisis} \times HighAPK_{i,00-07}) + firmcontrols_{t-1} + \theta_i + \alpha_{jt} + \epsilon_{it}$$

- y_{it} = types of borrowing by a firm - total, from public-sector sources, other sources (private and foreign)
- $HighAPK_{i,00-07}$ takes a value 1 for firms which has average product of capital (APK) greater than the median average product of capital for the corresponding industry, but before the years of the crisis, i.e., between 2000 and 2007
  - APK is defined as the log of value added divided by fixed assets
- $firmcontrols_{t-1}$ = age, age squared, size (assets) and technology expenditure/GVA of a firm
- θ_i = firm fixed effects
- α_{jt} = interaction of industry and year fixed effects
  - standard errors are clustered at the firm level

Credit (Mis)-Allocation: Results

	Total Borrowing		Domestic Borrowing		Other Borrowing	
$D_{crisis} \times HighAPK_{i,00-07}$	-0.377^{***}	-0.382^{***}	-0.517^{***}	-0.508^{***}	-0.188	-0.139
	(0.109)	(0.101)	(0.156)	(0.145)	(0.280)	(0.257)
Firm Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes	Yes
R-Square	0.88	0.88	0.83	0.83	0.85	0.85
N	9,111	9,111	6,722	6,722	2,389	2,389
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No
Industry FE(5-digit)*Year Trend	Yes	No	Yes	No	Yes	No
Industry FE(2-digit)*Year FE	No	Yes	No	Yes	No	Yes

Credit (Mis)-Allocation: Productivity Distributions



Concluding Remarks

- Significant evidence of differential effect of bank ownership on firm level export earnings (intensive margin)
  - firms which are connected to the state-owned banks vs. private and/or foreign banks saw a difference of 8–40% in their export earnings
  - no effect on extensive margin of trade
- Firms with lower average product of capital (than the median) received about 50% more loans from the public-sector sources
  - suggesting a possible re-inforcement of inefficiency in the Indian economy due to misallocation of credit

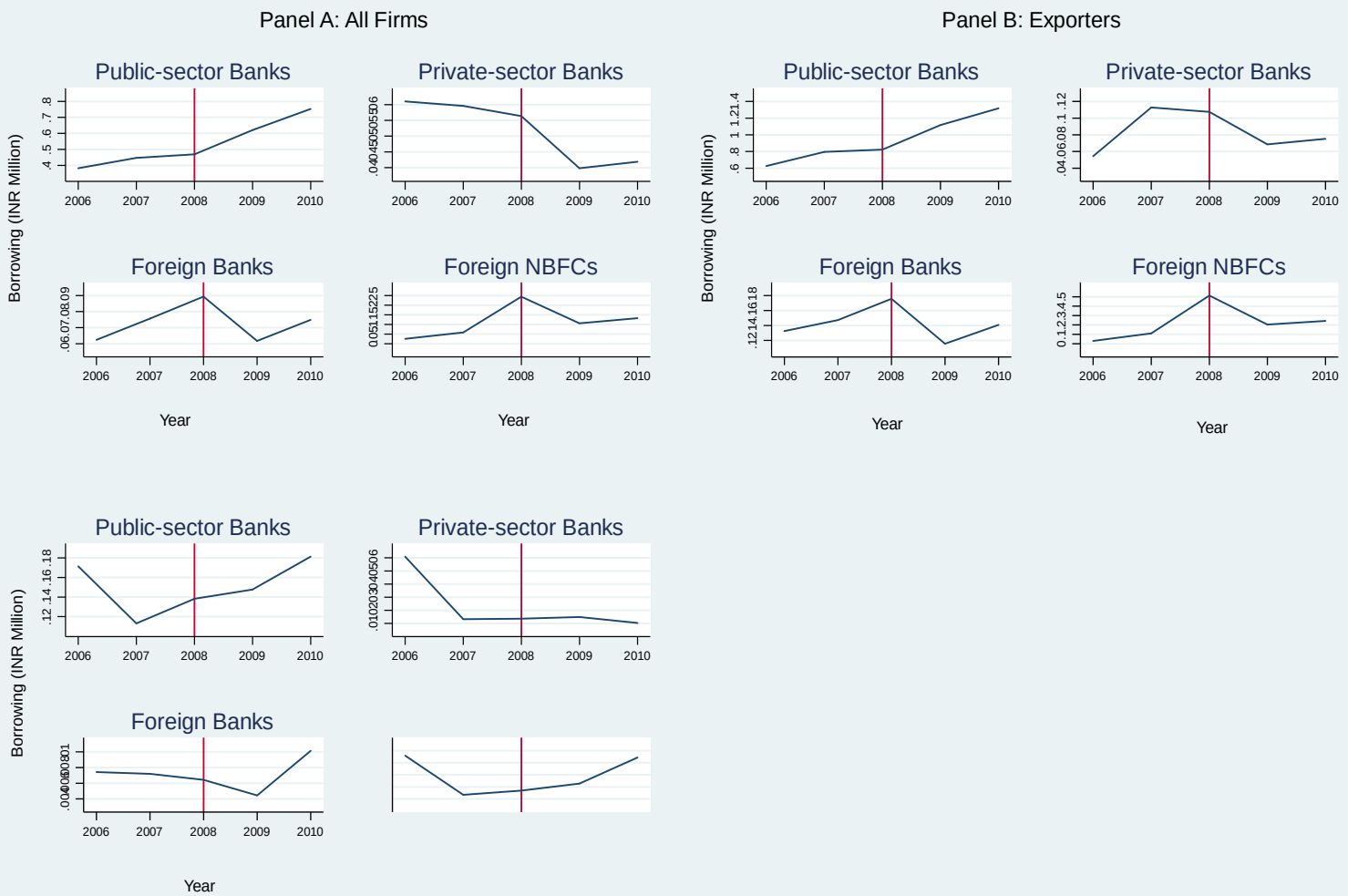
Thank you for your kind attention

Public-sector vs. Other Banks (Credit Growth)

	4 January 2008	28 March 2008	4 January 2009	28 March 2009
Public-Sector Banks	19.8	22.5	28.6	20.4
Private Banks	24.2	19.9	11.8	10.9
Foreign Banks	30.7	28.5	16.9	4.0

Notes: Values are expressed in %, year-on-year changes. Source: Macroeconomic and Monetary Development, Various Issues, Reserve Bank of India.

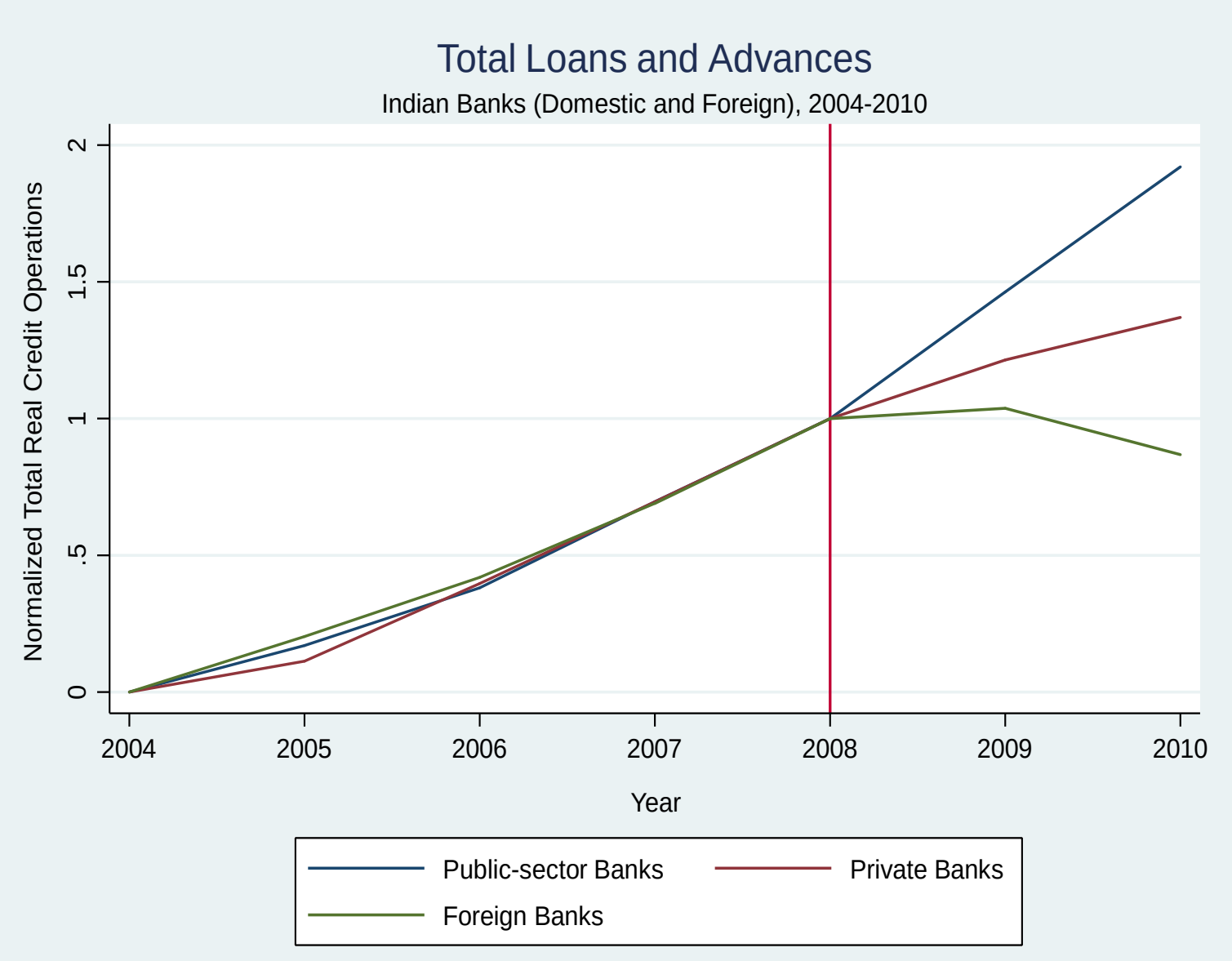
What happened to borrowing by firms?



Firm-level Borrowing and Exports – Results: Firm level regressions

	Ln(Exports)		Exporter = 1	
		High Fin Dependence		High Fin Dependence
	(1)	(2)	(3)	(4)
$D_{crisis} \times Borr_{i,PSB,00-01}$	1.038***	1.105***	−0.211	−0.200
	(0.190)	(0.206)	(0.200)	(0.195)
Firm Controls$_{t-1}$	Yes	Yes	Yes	Yes
R-Square	0.89	0.89	0.76	0.76
N	28,409	18,433	28,409	18,433
Firm FE	Yes	Yes	Yes	Yes
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes

Loans and Advances by Banks



Results – Utilizing Balance Sheets of Banks: Loans and Advances

	Ln(Exports)				
					High Fin Dependence
$D_{crisis} \times LA_{b,<2008}$	-0.153^{**}	-0.140^{**}	-0.148^{**}	-0.159^{***}	-0.146^{**}
	(0.063)	(0.062)	(0.062)	(0.055)	(0.066)
$D_{crisis} \times LA_{b,<2008} \times PSB_{fb,<2008}$	0.198^{**}	0.195^{**}	0.165^{*}	0.166^{*}	0.209^{**}
	(0.099)	(0.097)	(0.096)	(0.09)	(0.100)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes	Yes
R-Square	0.91	0.92	0.92	0.92	0.92
N	53,936	53,936	53,936	53,936	50,564
Firm FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	No	No	No
Bank FE*Year Trend	Yes	Yes	Yes	Yes	Yes
Industry FE(5-digit)*Year Trend	Yes	No	No	No	No
Industry FE(2-digit)*Year FE	No	Yes	No	No	No
Industry FE(3-digit)*Year FE	No	No	Yes	No	No
Industry FE(4-digit)*Year FE	No	No	No	Yes	Yes

Results – Utilizing Balance Sheets of Banks: Loans and Advances

	Exporter = 1		Ln(Domestic Sales)	
		High Fin Dependence	Exporters	Non-Exporters
$D_{crisis} \times LA_{b,<2008}$	−0.016	−0.017	−0.047**	0.042
	(0.013)	(0.014)	(0.024)	(0.128)
$D_{crisis} \times LA_{b,<2008} \times PSB_{fb,<2008}$	0.010	0.008	−0.033	0.082
	(0.020)	(0.021)	(0.043)	(0.199)
Bank Controls$_{t-1}$	Yes	Yes	Yes	Yes
R-Square	0.82	0.82	0.87	0.93
N	53,936	50,564	38,799	15,060
Firm FE	Yes	Yes	Yes	Yes
Year FE	No	No	No	No
Bank FE*Year Trend	Yes	Yes	Yes	Yes
Industry FE(5-digit)*Year Trend	No	No	No	No
Industry FE(2-digit)*Year FE	No	No	No	No
Industry FE(3-digit)*Year FE	No	No	No	No
Industry FE(4-digit)*Year FE	Yes	Yes	Yes	Yes