

Do Lenders Help Each Other Hide Losses? Evidence of Cross-Evergreening

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Abstract

Using corporate loan records, we document *cross-evergreening*: lenders extend fresh credit to each other's distressed borrowers. A lender is 8 percentage points more likely to finance another lender's distressed borrower when that lender simultaneously finances one of its distressed borrowers. This reciprocity is stronger among weak lenders and those sharing directors. Borrowers disproportionately repay more to the lender who lent to them earlier. We find evidence of contagion through cross-evergreening. After the global financial crisis (GFC), lenders with limited direct GFC exposure reduced lending to viable firms when connected to lenders that were directly hit. Reciprocal lending can defer loss recognition and transmit distress beyond supported borrowers.

1 Introduction

Lenders have incentives to conceal loan losses, often engaging in “evergreening”, the practice of extending new loans to insolvent borrowers with low chances of recovery. This practice allows lenders to temporarily mask the true extent of bad loans on their balance sheets. Evergreening is typically viewed as an individual lender’s manoeuvre to postpone loss recognition. In this paper, we ask whether lenders evergreen distressed loans in a reciprocal manner.

We know that lenders coordinate on shared information about borrowers (Hertzberg et al., 2011) and reciprocally accommodate one another in funding markets (Li, 2021). This raises the possibility that the same reciprocity extends to the concealment of bad loans. Indeed, in a recent observation, the banking regulator of India cautioned against a phenomenon of “bringing two lenders together to evergreen each other’s loans ...”⁰.

Whether this actually happens has never been tested. Prior work shows that lenders extend fresh credit to struggling firms to hide losses (Hu and Varas, 2021; Faria-e Castro et al., 2024), but always as a unilateral act; no study has established that two lenders reciprocally evergreen one another’s distressed borrowers. We provide the first such evidence. If lenders do coordinate in this way, it obscures the true health of the financial system through a new form of inter-bank linkage.

To test for cross-evergreening, we organize two decades of corporate loan records into a lender-pair-year panel. We define an “external distressed loan” as a new loan that a lender makes to a financially distressed firm with which it has no prior lending relationship. We ask whether a lender is more likely to initiate such a loan to another lender’s distressed borrower when that other lender simultaneously initiates a loan to one of its distressed borrowers. By including lender-by-year fixed effects, we hold constant everything about a lender in a given year and ask whether it directs fresh credit toward the distressed borrowers of lenders that reciprocate. Partner-lender fixed effects absorb persistent differences across the other lenders.

⁰Reserve Bank of India, speech archive, https://www.rbi.org.in/Scripts/BS_SpeechesView.aspx?Id=1364.

We find strong reciprocity. A lender is 8.29 percentage points more likely to initiate a loan to another lender’s distressed borrower when that lender reciprocates. This increase is about 4.7 times the baseline probability of 1.77 percent.

This reciprocity is not a one-off. Regressing an indicator of reciprocal external distressed lending on its lagged value, we find that lender pairs that engage in it in a given year are 14.5 percentage points more likely to do so again the following year. Reciprocal evergreening is thus a persistent, repeated practice among certain lenders.

Lending to a distressed firm is not necessarily a bad bet. A lender’s task is to distinguish between firms facing temporary distress that can recover if provided fresh funding (Bolton et al., 2016) and bad-quality firms with little chance of recovery. For a loan to qualify as “evergreening”, the borrower must fall into the latter category: currently distressed and unlikely to improve in the future. To test whether the firms that benefit from reciprocal distressed lending actually recover, we construct an event study around the year of the new loan sanction.

We define the year in which the new loan is received as $time = 0$ and track firm-level financial performance for three years before and after this event. We compare two groups of firms: first, distressed firms that receive a new loan classified as a reciprocal distressed loan; and second, other firms that receive new loans in the same year. The results show that recipients of reciprocal distressed lending perform substantially worse over the following three years. They are more indebted, less liquid, and, more importantly, loss-making than other firms that also obtained new loans simultaneously. They are also more likely to default. Yet firm-year regressions with firm and year fixed effects show that their effective interest rates are statistically indistinguishable from those of healthy firms and about 54 basis points lower than those of other distressed firms, consistent with preferential credit rather than market pricing. Their continued deterioration suggests that lenders did not make these loans on credible credit assessments, but rather engaged in cross-evergreening.

Conditional on receiving a cross-evergreened loan, we track firms’ repayment to their lenders. Borrowers are more likely to repay the cross-evergreening partner, firm’s earlier

loan, than the lender extending the new loan, and this repayment advantage persists for two years. This pattern is consistent with the new liquidity helping borrowers service the partner’s existing exposure.

Recovering the partner’s loan is one reason to cross-evergreen, but not the only one. Following Hertzberg et al. (2011), which shows that public information shapes coordination among creditors of distressed firms, a fresh loan from a lender new to the borrower may improve the borrower’s apparent creditworthiness. Consistent with this signalling channel, firms that receive a cross-evergreening loan go on to attract more new credit and repay more than the firms that got evergreened by their existing lender. These patterns suggest that routing the loan through a new lender can help preserve the borrower’s access to outside credit, although they do not directly identify signalling.

We next ask which lenders have the strongest incentive to cross-evergreen. If the practice hides losses, it should concentrate among lenders for whom an unrecognised bad loan is most costly (Peek and Rosengren, 2005; Caballero et al., 2008). Two groups stand out. First, financially weak lenders: classifying a pair as weak if both carry above-median non-performing assets, we find that the reciprocity effect is about 40% larger among such pairs. Second, in heavily regulated banks, which face strict provisioning and classification rules, cross-evergreening is far more common between two heavily regulated banks than between one heavily regulated and one lightly regulated bank. Counterintuitively, tighter supervision is associated with more cross-evergreening, not less (Blattner et al., 2023), because lenders with the most to hide have the strongest incentive to make a distressed loan look healthy.

We then turn to the mechanism by which lenders coordinate cross-evergreening and argue that board-level links provide the channel. A plausible conduit is a shared director, who can carry information between two boards and shape the decisions of both (Gopalan et al., 2021; Herrera-Caicedo et al., 2025). Consistent with this, reciprocal external distressed lending is nearly twice as likely among lender pairs that share a board member as among those that do not. The same holds for ownership links: reciprocity is higher when one lender is a subsidiary of the other, in line with evidence that affiliated lenders coordi-

nate financial support more easily (Gopalan et al., 2007). Together, the common-director and subsidiary results point to the boardroom as the place where cross-evergreening is arranged.

A further question we ask is whether regulatory oversight can curb the practice. In 2014, the Reserve Bank of India set up the Central Repository of Information on Large Credits (CRILC), a centralised database that required banks to report information on large credit exposures to borrowers. Exploiting its introduction in a triple-difference design, we find that cross-evergreening fell sharply among the lenders most exposed to the registry once their exposures became visible, mirroring evidence that supervisory scrutiny reduces zombie lending (Bonfim et al., 2023). Cross-evergreening thrives on opacity, and supervisory transparency curbs it.

Finally, we ask whether cross-evergreening transmits financial distress across lenders. Using the Global Financial Crisis (GFC) as a shock, we find that lenders with low GFC exposure but connected before the crisis through cross-evergreening to highly GFC-exposed partners reduce new lending by 7.75 percentage points relative to other low-exposure lenders after the crisis. The relative contraction is 8.33 percentage points among viable firms, consistent with distress at an exposed lender affecting the credit supplied by its pre-GFC cross-evergreening partners.

This paper builds on research examining why lenders continue financing distressed borrowers. Evidence from Japan (Peek and Rosengren, 2005; Caballero et al., 2008) and Europe (Acharya et al., 2019; Blattner et al., 2023) links such lending to incentives to postpone loss recognition and documents distortions in credit allocation. Bruche and Llobet (2014) formalise how limited liability gives insolvent banks incentives to continue lending to insolvent borrowers and gamble for recovery. Faria-e Castro et al. (2024) shows that incentives to protect existing loan exposures can sustain evergreening even among well-capitalised lenders. In India, Chari et al. (2021) shows how regulatory forbearance encourages lending to firms facing solvency problems. Kulkarni et al. (2025) find that bankruptcy reform has limited effectiveness when lenders retain discretion over recognising bad loans, and that complementary regulation improves recognition. Kashyap et al.

(2023) documents how lenders sustain distressed borrowers indirectly through loans to related parties.

We contribute to this literature by showing how reciprocal lending extends evergreening incentives across lender-borrower relationships. A lender may finance another lender's distressed borrower in exchange for help recovering its own troubled loans. The partner provides fresh credit to the lender's existing distressed borrowers, who can then repay their debts to the lender. Persistent reciprocity, repayment to the partner lender, and borrowers' subsequent deterioration together support this interpretation. Kashyap et al. (2023) document indirect evergreening through loans to a borrower's related parties, which transfer funds to the distressed firm. Our evidence concerns an arrangement in which lenders exchange support for their respective distressed borrowers. This exchange allows lenders to obtain repayment of their own troubled loans using fresh credit supplied by a partner and defer loss recognition.

Our findings also relate to research on reciprocal lending and coordination among financial institutions. Li (2021) shows that money market funds provide longer-term funding to banks that accommodate their overnight investment needs. ? shows that prohibiting shared directors increases competition in bank lending. We examine coordination over the financing of distressed borrowers. The greater prevalence of reciprocal distressed lending among lenders with common directors is consistent with governance links facilitating this form of cooperation.

The paper also contributes to work on the transmission of financial shocks to credit supply. ? shows theoretically that greater interbank connectivity can absorb small shocks but amplify contagion when shocks are sufficiently large. ? documents how liquidity shocks to international banks reduce credit to firms through bank-to-bank lending, while ? show that banks more dependent on interbank borrowing reduce lending more when that funding market freezes. We examine connections through reciprocal lending to distressed firms. Following the GFC, lenders with limited direct exposure but previously connected to highly exposed partners reduce new lending, including to viable firms. These findings are consistent with shock transmission through relationships associated with reciprocal

distressed lending. They suggest that the consequences of cross-evergreening can extend beyond the distressed borrowers it supports, by affecting credit availability at connected lenders.

Our findings also have implications for work on bank transparency and supervision. Tantri and Vishen (2025) show that mandated disclosure of banks’ cost-based lending benchmarks lowers borrowing costs by exposing relationship rents and increasing competition. Hertzberg et al. (2011) show that sharing negative borrower assessments through a credit registry changes creditor behaviour, while Bonfim et al. (2023) show that on-site inspections reduce banks’ refinancing of zombie firms. We study a different form of transparency: regulatory reporting of large credit exposures and their repayment status. Following its introduction, reciprocal distressed lending declines more among lender pairs whose portfolios are more extensively covered by the reporting requirements. This extends the evidence on supervisory discipline by showing how exposure-level reporting can constrain coordinated lending arrangements used to postpone loss recognition.

The remainder of the paper proceeds as follows. Section 2 outlines the institutional context of our study, and Section 3 describes the data and sample. Section 4 draws out the empirical research design and defines the corresponding variables. Section 5 presents the empirical results and the mechanisms. Section 6 concludes.

2 Institutional Details

2.1 Bad Loans and Regulatory Tightening in India

Cross-evergreening is best studied where banks face mounting pressure to recognise loan losses yet have strong incentives to delay doing so. India fits this description. Since the mid-2000s, Indian banks, both public and private, have accumulated large exposures to infrastructure and corporate borrowers; many of these loans soured as projects stalled and profitability eroded after the 2008 global financial crisis and the subsequent domestic slowdown, leaving the system with some of the highest non-performing asset (NPA) ratios in the world.

The regulatory response sharpened these incentives over time. To contain the fallout, the Reserve Bank of India (RBI) initially relied on forbearance, allowing restructured loans to retain their standard classification and thereby delaying the recognition of NPA. From 2014, however, the RBI reversed course, using asset-quality reviews and clean-up exercises to force lenders to recognise bad loans. As recognition became harder to avoid, banks searching for ways to keep losses off their books faced increasingly limited options.

2.2 How Cross-Bank Evergreening Works

Unlike conventional evergreening, where a lender rolls over its own troubled loan, cross-evergreening involves two lenders: Bank A lends to Bank B’s distressed borrower while Bank B simultaneously lends to one of Bank A’s. Both lenders avoid immediate loss recognition, and neither is visibly rolling over its own exposure. This makes the practice especially hard for regulators to detect, since each leg appears to be fresh lending to a new borrower rather than the restructuring of an existing loan.

Three conditions make such arrangements possible, and Indian credit markets satisfy all three. First, firms must borrow from several lenders, so that one lender’s distressed borrower is another’s prospective client; multi-bank borrowing is the norm in India. Second, the same lenders must interact repeatedly, so that an implicit “you hide mine, I hide yours” arrangement can be sustained; governance overlaps, such as directors serving on the boards of multiple banks, offer a ready channel for this coordination. Third, lenders must face pressure to defer loss recognition, which bites hardest for weakly capitalised banks, for whom recognising fresh losses would further erode already fragile capital. This environment of high stress, multi-bank lending, and regulatory tightening provides fertile ground for cross-evergreening, and our empirical design exploits precisely this context to test whether distressed lending across banks reflects independent credit decisions or systematic reciprocal arrangements intended to conceal losses.

2.3 Cross-Bank Evergreening Beyond India

Although we study India, the same three conditions arise in many banking systems, and the mechanism is neither new nor distinctively Indian. In the United States savings-and-loan crisis, thrifts ran “daisy chains,” lending to one another’s borrowers to manufacture income and postpone losses (Akerlof and Romer, 1993). In Ireland, Anglo Irish Bank and Irish Life and Permanent routed billions back and forth in 2008 so that neither bank’s books revealed its true condition, an arrangement the Irish courts later deemed fraudulent.¹ The same reciprocity is built into the architecture of some banking systems, from Japan’s keiretsu cross-support of distressed members, long linked to zombie lending (Caballero et al., 2008; Peek and Rosengren, 2005), to China’s mutual guarantee circles.² That lenders trade favours rather than transact purely at arm’s length is documented even in developed markets (Li, 2021). Cross-evergreening applies the same logic to bad loans: two lenders cooperating so that neither must disclose its true condition. What distinguishes India is not the conditions but the loan-level data that record each lender’s exposure to each borrower over time, which makes the practice measurable here.

3 Data

Our analysis combines detailed firm–lender–time loan records with information on loan amount, lender characteristics, and governance linkages to construct a comprehensive panel suitable for detecting reciprocal evergreening.

We begin with secured corporate loan data obtained from the Ministry of Corporate Affairs (MCA), which maintains a repository of all registered charges under the Companies Act, 2013. This dataset covers both banks and non-bank financial institutions (NBFCs) and captures the stock and flow of secured lending across Indian firms. From this source, we collect loan amounts, sanction dates, modifications, and repayment details for all firms in the CMIE Prowess database. We find loans of more than 25,000 firms

¹See <https://www.irishtimes.com/business/financial-services/ilp-broke-limits-in-allegedly-circular-anglo-transfers-trial-hears-1.2575858>.

²See <https://www.nature.com/articles/s41467-020-16535-8>.

between 2000 and 2019.

We restrict ourselves to firms in the CMIE Prowess database as we need to identify the financial distress of these firms. Prowess has firm-level financials over time. For a subset of these firms, CMIE CapexDx also tracks projects and their status. These data allow us to distinguish distressed from healthy borrowers and track borrower outcomes following new loans.

We then construct a lender–lender–year panel, where each observation corresponds to a pair of lenders (A and B) in a given year. An external distressed loan (EDL) is defined as a new loan that lender A makes to a financially distressed firm that is not already its borrower but is a borrower of lender B. A reciprocal distressed loan occurs when lender B extends an external distressed loan to a distressed borrower of lender A in the same year. This design allows us to test whether lender A’s decision to lend is systematically related to lender B’s reciprocal behaviour.

As shown in Table 1, the final sample spans 20,178 lender pairs, including 307 unique lenders (123 banks and 162 NBFCs mapped via prowess), yielding 423,738 lender–lender–year observations. On the borrower side, we track 25,368 firms, totalling 303,899 loans and 9,083 defaults. Summary statistics indicate that external distressed lending occurs in about 1.8 percent of lender–lender–year observations. An external distressed loan is a new loan extended by a lender to a distressed (defined by an interest coverage ratio < 1) firm with which it has no prior lending relationship. We define no relationship using the loan-level data.

Table 2 provides descriptive statistics for the lenders in our sample. On average, lenders carry large loan portfolios, with outstanding credit of roughly INR 247 billion and deposits of INR 262 billion, though these figures are highly skewed. Median outstanding credit is closer to INR 12.8 billion, and the deposit distribution is more skewed still: the median lender reports no deposits, reflecting the large share of non-deposit-taking lenders in the sample, while the seventy-fifth percentile is about INR 51 billion. Capital adequacy ratios average around 18.6 percent, but the distribution is wide, with some lenders reporting ratios as low as 6 percent, indicating considerable heterogeneity in

financial strength.

Non-performing assets (NPAs) average just over 5 percent of advances, again with a fat right tail, as some lenders report NPA ratios exceeding 17 percent. Provisions and contingencies average INR 4.2 billion annually, while profitability is weak: the average return on assets is close to zero, and a sizable fraction of lenders report losses. These patterns confirm that a significant subset of Indian banks in the period under study were undercapitalised and heavily burdened by bad loans, conditions ripe for engaging in evergreening.

We supplement these data with governance information, including records of directors serving on bank and NBFC boards. This allows us to identify lender pairs with common directors, which we use to test whether governance overlaps facilitate reciprocal lending.

4 Empirical Strategy

The central challenge in studying cross-evergreening is to distinguish between random new lending to distressed firms and systematic reciprocal arrangements between lenders. Our empirical strategy addresses this by (i) carefully defining external distressed lending, (ii) specifying how reciprocity is measured, and (iii) estimating panel regressions with appropriate fixed effects to isolate a lender’s choice to reciprocate.

We follow Li (2021) to measure reciprocity at the level of a *lender pair* rather than for a single lender. Studying shadow banking, Li (2021) identifies reciprocal accommodation from the bilateral relationship between two financial firms, asking whether one party provides more favourable terms to a counterparty that has recently fulfilled its immediate needs. We adapt this bilateral logic to distressed lending.

Our unit of analysis is the directed lender pair (say A and B), and we ask whether lender A ’s decision to extend credit to lender B ’s distressed borrower is more likely when lender B simultaneously extends credit to one of lender A ’s. Framing the problem as a relationship between two lenders (rather than as the behaviour of one lender) allows us to separate reciprocal evergreening from a lender’s independently determined credit

decisions.

Figure 1 illustrates this comparison. Lender A extends an external distressed loan to a distressed borrower of lender $B1$ when $B1$ simultaneously lends to one of A 's distressed borrowers. It does not extend such a loan to a borrower of $B2$ when $B2$ does not reciprocate.

4.1 Defining External and Reciprocal Distressed Lending

We define an *external distressed loan (EDL)* as a new loan that lender A makes to a financially distressed firm that is not already its borrower, but is currently a borrower of lender B . Distress is identified using the interest coverage ratio ($ICR < 1$) as reported in firm-level financials from CMIE Prowess. A new lending relationship is defined as one in which the firm has no prior loans with the lender. A *reciprocal distressed loan* occurs when, in the same year, lender B also extends an external distressed loan to one of lender A 's distressed borrowers.

4.2 Baseline Regression Framework

We arrange the data into a lender–lender–year panel. Our baseline regression takes the form:

$$EDL_{A \rightarrow B,ijt} = \beta EDL_{B \rightarrow A,ijt} + \gamma_{it} + \delta_j + \varepsilon_{ijt} \quad (1)$$

Here, $EDL_{A \rightarrow B,ijt}$ is an indicator equal to one if lender A (i) makes a new loan to a distressed borrower of lender B (j) in year t , given that lender A had no prior relationship with this firm. Similarly, $EDL_{B \rightarrow A,ijt}$ is an indicator equal to one if lender B (j) makes a new loan to a distressed borrower of lender A (i) in year t , given that lender B had no prior relationship with this firm. γ_{it} are Lender $A \times$ Year fixed effects that absorb all time-varying shocks to lender A , while δ_j are Lender B fixed effects that absorb time-invariant characteristics of lender B . For robustness, we use two stricter alternatives that add lender-pair fixed effects or replace Lender B fixed effects with Lender $B \times$ Year fixed effects.

This specification ensures that identification comes from comparing lender A 's decision to lend to distressed borrowers of different lenders in the same year, holding fixed all shocks to A and time-invariant differences across the other lenders in the pair. The coefficient of interest, β , captures whether lender A 's decision to lend depends on simultaneous reciprocal behavior by lender B .

4.3 Dynamic Reciprocity

To examine whether reciprocity persists over time rather than reflecting a one-off event, on lender–lender–year panel, we estimate the following specification:

$$\text{RDL}_{ijt} = \rho \text{RDL}_{ij,t-1} + \gamma_{it} + \delta_j + \varepsilon_{ijt} \quad (2)$$

Here, RDL_{ijt} is an indicator equal to one if lenders A (i) and B (j) engage in reciprocal external distressed lending in year t , and $\text{RDL}_{ij,t-1}$ is its lagged value. Fixed effects are same as in equation 1. The coefficient of interest, ρ , captures whether reciprocity today is systematically related to reciprocity in the past.

4.4 Event Studies Around the New Loan

Two of our tests follow firms in the years around the receipt of a new loan, comparing those that receive a reciprocal distressed loan with firms that receive a contemporaneous new loan. Both are stacked event studies, akin to a difference-in-differences but without claiming a causal interpretation of the event, estimated over a symmetric window of three years before ($t = -3, -2, -1$) and after ($t = 1, 2, 3$) the loan year ($t = 0$):

$$Y_{ict} = \beta (\text{Reciprocal Distressed Borrower}_{ic} \times \text{Post}_{ct}) + \alpha_{ic} + \lambda_{ct} + \varepsilon_{ict}, \quad (3)$$

where Y_{ict} is an outcome for firm i in cohort c at year t , *Reciprocal Distressed Borrower* $_{ic}$ equals one for firms that receive a reciprocal distressed loan in cohort c and zero for other firms receiving a contemporaneous new loan, Post_{ct} is a dummy that takes a value of

one for $t > 0$ within cohort c , and α_{ic} is the firm $\times$ cohort fixed effects to absorb time-invariant firm characteristics within each cohort and λ_{ct} is time $\times$ cohort fixed effects. The coefficient of interest, β , captures how a reciprocal borrower’s outcome changes after the loan, relative to the comparison group.

We estimate Equation 3 for two sets of outcomes. First, to test whether these borrowers actually recover, we examine firm performance: total debt, profitability, reserves, net worth, solvency, and liquidity. Second, to test whether a cross-evergreening loan makes a firm look creditworthy, we examine two visible signals: whether the firm repays its loans and whether it attracts new credit; for these tests, we benchmark cross-evergreened borrowers against both other distressed firms that receive a new loan and firms that receive a new loan from an existing lender, and saturate the design with firm $\times$ cohort and time $\times$ cohort fixed effects.

4.5 Repayment Around the New Loan

To examine whether repayment patterns differ across creditors after a cross-evergreening (CE) event, we analyse the repayment behaviour of cross-evergreened firms over the following years. In particular, we test whether these firms are more likely to repay the partner lender whose distressed borrower received funds in return (CE Partner) than the lender that extended the loan (CE Lender) and their other creditors.

We identify all firm-years in which a firm received a cross-evergreened loan and classify each creditor of the firm into three mutually exclusive categories as of the event year: (i) CE Lender: the lender that made the CE loan to the firm; (ii) CE Partner: the lender on the other side of the reciprocal arrangement; and (iii) Other Lender: all remaining creditors. Each creditor is assigned a single role per firm-event-year. We record each firm’s repayment activity in the event year (t) and the two following years ($t + 1$ and $t + 2$).

At each horizon, we estimate:

$$\text{Loan Repaid}_{il} = \beta_1 \text{CE Partner}_{il} + \beta_2 \text{Other Lender}_{il} + \alpha_i + \lambda_g + \varepsilon_{il}, \quad (4)$$

where $Loan\ Repaid_{il}$ equals one if firm i repays at least one loan to lender l , estimated separately for each horizon h after the CE event, where $h \in \{0, 1, 2\}$; $CE\ Partner_{il}$ is an indicator equal to one if lender l is the CE partner of firm i ; $Other\ Lender_{il}$ is an indicator equal to one for other lenders l of firm i which are neither CE Partner nor CE Lender; the omitted baseline category is the CE Lender, the lender that extended the cross-evergreened loan to firm i ; α_i are firm fixed effects that absorb all time-invariant characteristics of firm i and λ_g are event-year fixed effects that absorb aggregate shocks common to all firms receiving a CE loan in year t ; in a tighter specification we replace both fixed effects with firm $\times$ calendar-year fixed effects that absorb all shocks specific to firm i in calendar year $g + h$, the actual year of observation at horizon h . Standard errors are two-way clustered at the firm and lender level. The coefficients β_1 and β_2 measure how much more likely the partner and other lenders are to be repaid than the new lender; our interest is in β_1 and, above all, in whether it persists across horizons.

4.6 Mechanism Tests

We further examine whether the likelihood of reciprocal distressed lending varies systematically with lender characteristics. In particular, we focus on two potential mechanisms. First, we test whether such lending is more prevalent among lenders with weak balance sheets, measured by above-median ratios of non-performing assets (NPAs). Second, we investigate whether governance links facilitate reciprocity by assessing whether the presence of common directors on the boards of both lenders increases the probability of reciprocal distressed lending.

Formally, on the lender–lender–year panel, we estimate regressions of the form:

$$EDL_{A \rightarrow B,ijt} = \beta_1 EDL_{B \rightarrow A,ijt} + \beta_2 EDL_{B \rightarrow A,ijt} \times Z_{ijt} + \beta_3 Z_{ijt} + \gamma_{it} + \delta_j + \varepsilon_{ijt} \quad (5)$$

where $EDL_{A \rightarrow B,ijt}$, $EDL_{B \rightarrow A,ijt}$, γ_{it} and δ_j are the same as equation 1. The variable Z_{ijt} denotes the mechanism of interest. In separate specifications, we define Z_{ijt} as either (i) High NPA Pair $_{ijt}$, which equals one if both lenders in the pair have above-median

non-performing assets relative to their peers in year t , or (ii) $\text{Common Director}_{ijt}$, which is an indicator equal to one if lender A and lender B simultaneously share at least one common board director in year t .

The coefficient of interest is β_2 , which captures whether reciprocity in external distressed lending is disproportionately more likely among financially weak lenders or among lender pairs connected through governance links.

4.7 The CRILC Reporting Requirement

We next test whether supervisory transparency curbs cross-evergreening, exploiting the 2014 introduction of the Central Repository of Information on Large Credits (CRILC). We measure each lender's exposure to the requirement as the fraction of its total outstanding loan amount accounted for by loans at or above the reporting threshold of Rs 50 million, measured in 2013, and classify lenders as high-exposure (above median) or low-exposure (below median) on these pre-period shares. At the lender-pair level we construct two variants of $\text{High Exposure}_{ij}$: *Both High Exposure*, equal to one when both lenders in the pair are highly exposed, and *One High Exposure*, equal to one when at least one is.

On the lender–lender–year panel, we estimate the triple difference:

$$\begin{aligned} \text{EDL}_{A \rightarrow B,ijt} = & \beta_1 \text{EDL}_{B \rightarrow A,ijt} + \beta_2 \text{Post}_t + \beta_3 \text{High Exposure}_{ij} \\ & + \beta_4 (\text{EDL}_{B \rightarrow A,ijt} \times \text{Post}_t) + \beta_5 (\text{EDL}_{B \rightarrow A,ijt} \times \text{High Exposure}_{ij}) \\ & + \beta_6 (\text{Post}_t \times \text{High Exposure}_{ij}) \\ & + \beta_7 (\text{EDL}_{B \rightarrow A,ijt} \times \text{Post}_t \times \text{High Exposure}_{ij}) + \mathcal{F}_{ijt} + \varepsilon_{ijt}, \end{aligned} \quad (6)$$

where Post_t equals one for the years after CRILC came into force and $\mathcal{F}_{ijt}$ denotes the fixed effects, which are either omitted or, in the saturated specification, lender $A \times$ year and lender B . The coefficient of interest, β_7 , captures how the additional reciprocity of high-exposure pairs changes once the registry makes their large exposures visible to the supervisor. Standard errors are clustered at the lender-pair level.

4.8 Transmission during the Global Financial Crisis

We next test whether cross-evergreening relationships formed before the Global Financial Crisis transmit the shock to lenders with limited direct exposure. We classify a firm as export-oriented if its average export-to-sales ratio during 2005–2007 is above the median. A lender’s exposure is the share of its loans made to these firms in 2007, measured by loan count; high- and low-exposure lenders have values above and below the median, respectively. We restrict the sample to low-exposure lenders and define *Connected Lender* as an indicator equal to one if the lender engaged in cross-evergreening before 2008 with a high GFC-exposure lender.

Using a firm–lender–year panel covering 2005–2011, we estimate:

$$\begin{aligned} \text{New Loan}_{ilt} = & \beta_1 \text{Connected Lender}_l + \beta_2 \text{Post}_t \\ & + \beta_3 (\text{Connected Lender}_l \times \text{Post}_t) + \mu_l + \lambda_{it} + \varepsilon_{ilt}. \end{aligned} \tag{7}$$

Here, *New Loan*_{ilt} equals one if lender *l* extends a new loan to firm *i* in year *t*, and *Post*_{*t*} equals one from 2008 onward. The lender fixed effects μ_l absorb time-invariant differences across lenders, while the firm×year fixed effects λ_{it} compare connected and unconnected low-exposure lenders financing the same firm in the same year. The coefficient of interest, β_3 , captures the differential post-GFC change in new lending by connected lenders relative to other low-exposure lenders. We estimate the specification for the full sample and separately for viable firms with an interest coverage ratio above one. Standard errors are clustered at the lender level.

We also ask whether reciprocity itself rose after the crisis among the pairs most exposed to it; Equation A2 in the Appendix sets out that triple-difference specification.

5 Results

5.1 Baseline Reciprocity in External Distressed Lending

We begin by estimating the baseline specification in equation 1, which tests whether lender A 's decision to extend a new loan to a distressed borrower of lender B depends on whether lender B simultaneously lends to one of lender A 's distressed borrowers. Panel A of Table 3 presents the results. Across all specifications, the coefficient on $EDL_{B \rightarrow A}$ is positive, large, and highly significant. In our preferred specification with lender $A \times \text{year}$ and lender B fixed effects (column 3), lender A is 8.29 percentage points more likely to lend to lender B 's distressed borrower when lender B reciprocates, relative to distressed borrowers of other lenders. This increase is about 4.7 times the baseline probability of 1.77 percent that lender A initiates a new relationship with a distressed firm. Appendix Table A1 shows that the estimate remains large when we add lender-pair fixed effects or replace lender B fixed effects with lender $B \times \text{year}$ fixed effects; the latter specification yields an estimate of 6.8 percentage points. These findings suggest that distressed lending is not random but reflects systematic reciprocity between lenders.

5.2 Persistence of Reciprocal Lending

Next, we test whether this reciprocity is a one-off occurrence or a repeated practice. Panel B of Table 3 reports estimates of Equation 2, regressing current reciprocity on its lagged value. The coefficient on lagged reciprocity is large and significant across all specifications. Our preferred estimate (column 3) suggests that lender pairs that engaged in reciprocal distressed lending in the previous year are 14.5 percentage points more likely to do so again, relative to other pairs. This persistence indicates that reciprocal lending is not accidental but a repeated pattern of coordination among lenders.

5.3 Firm Outcomes: Reciprocal Lending as Evergreening

To assess whether reciprocal distressed loans are genuine attempts to rescue temporarily distressed firms or instead represent evergreening, we examine firm-level outcomes. Ap-

pendix Table A2 provides unconditional descriptive comparisons. Firms ever receiving reciprocal distressed loans are larger, more indebted, and significantly more likely to have stalled projects than other firms receiving new loans.

We then conduct a comparative event study (equation 3), tracking firm performance for three years before and after the loan. Table 4 reports the results. Firms that benefit from reciprocal distressed lending fare substantially worse afterwards. Relative to other firms that obtain a new loan in the same year, in panel A on performance outcomes, their profit after tax, free reserves, and net worth all decline (columns 1 through 3). The profit margin falls by 1.24 percentage points (column 4), and solvency weakens (column 5). Far from recovering, these borrowers keep sliding, exactly the pattern one expects when a loan is meant to postpone a loss rather than fund a turnaround.

The credit, liquidity, and operational outcomes in Table 4, panel B, tell the same story from the other side of the ledger. After the loan, these firms take on still more debt (column 1) and are 1.77 percentage points more likely to default (column 2), even as the depth of their banking relationships thins (column 3) and their projects' ineffectiveness grows (column 4). Their cash balance as a share of current assets drops by 3.70 percentage points (column 5). A firm that was supposed to be nursed back to health instead borrows more, defaults more, and completes fewer projects, reinforcing our evergreening claim rather than efficient credit reallocation.

We next ask whether cross-evergreened firms pay the financing premium normally associated with distress. Appendix Table A3 reports firm-year regressions of the effective interest rate on firm type, with firm and year fixed effects; Equation A1 in the Appendix sets out the specification. We define the effective interest rate as interest expense on long- and short-term borrowings divided by average borrowings. Columns 1 and 2 establish the distress premium: excluding cross-evergreened firm-years, distressed firms pay 31.6 to 36.8 basis points more than healthy firms. Cross-evergreened firms do not pay this premium. Their effective interest rates are statistically indistinguishable from those of healthy firms in columns 3 and 4, and are 60.3 to 54.4 basis points lower than those of other distressed firms in columns 5 and 6. The estimates are statistically significant

in both the unwinsorized and winsorized specifications. This preferential financing is consistent with the subsidized credit used to sustain zombie borrowers in Caballero et al. (2008). Because the outcome is a firm-wide effective rate, however, we interpret the evidence as describing the firm’s overall financing conditions rather than the contractual price of the cross-evergreening loan itself.

5.4 Who Gets Repaid

We have shown that the cross-evergreened borrower performs poorly in the future. We now ask whether its repayment pattern favours the lender that reciprocated. If cross-evergreening helps the partner recover its existing exposure, the borrower should be more likely to repay that partner than the lender extending the new loan.

We test this with the repayment regression of Equation 4. Table 5 reports the repayment behaviour of cross-evergreened firms toward their three categories of creditors, the CE Lender, the CE Partner, and other lenders, over the next two years following a cross-evergreening event. The omitted baseline is the CE Lender, so all coefficients are interpreted relative to the probability of repaying the lender that extended the cross-evergreened loan.

In the event year ($t = 0$), both the cross-evergreening partner (19.2 percentage points) and other existing lenders (17.9 percentage points) are substantially more likely to be repaid than the CE Lender. This is expected because a firm rarely repays a loan in the same year it takes it. The repayment advantage is more persistent for the partner. At $t + 1$, the partner is 5.1 percentage points more likely to be repaid than the new lender, compared with 2.4 percentage points for other lenders. At $t + 2$, the partner retains a significant 3.8 percentage point advantage, while the 0.9 percentage point estimate for other lenders is no longer statistically different from zero. The results are similar with firm $\times$ calendar-year fixed effects.

This pattern is consistent with the new liquidity helping the recipient firm service its existing obligations, including its exposure to the partner lender. The partner’s repayment advantage persists for two years, whereas the advantage for other existing lenders

dissipates.

This persistent repayment advantage supports the interpretation that reciprocal distressed lending benefits the partner lender by helping it recover an existing exposure.

5.5 Why Banks Do It: Signalling

One reason banks indulge in cross-evergreening is to get their money back. The lender that reciprocates is the one whose old loan is repaid, so reciprocating is, first and foremost, a way for a lender to recover its own distressed exposure.

Beyond recovering its money, a lender may also cross-evergreen to signal. Hertzberg et al. (2011) show that creditors to a near-distressed firm cut credit when they expect other creditors to do the same, so that public information about a borrower’s health determines whether lenders make new loans. This implies that a fresh loan from a new, unrelated lender (and the repayment that follows) is a public signal of creditworthiness that can keep other lenders from withdrawing. We hypothesize that lenders cross-evergreen distressed firms to send such a signal to the financial markets. When a firm’s existing lender keeps extending credit to it, outsiders might discount this as evergreening. But when a different lender steps in and the firm is seen repaying, the market may read the firm to have healthier future.

Hence, a firm that receives a cross-evergreening loan should look more creditworthy afterwards than a comparable distressed firm. We test this with the stacked event study of Equation 3, comparing cross-evergreened borrowers against two groups, distressed firms that receive a new loan and distressed firms that receive a new loan from an existing lender, on two outcomes: whether the firm repays its loans and whether it attracts new credit.

Table 6 reports the results. After receiving a cross-evergreening loan, firms repay more and borrow more than either of the comparison groups. Relative to other distressed firms that receive a new loan, cross-evergreened borrowers are 3.0 percentage points more likely to repay (column 1) and 9.2 percentage points more likely to receive a new loan (column 3). The contrast is sharper against distressed firms that receive a new loan from

an existing lender: cross-evergreened borrowers are 5.6 percentage points more likely to repay (column 2) and 10.7 percentage points more likely to get a new loan (column 4).

These findings show that a distressed firm receiving a loan from an unrelated lender is more likely to raise additional loans in the future than a distressed firm receiving a new loan from an existing lender. The increase in subsequent borrowing and repayment is consistent with fresh credit from a new lender improving the borrower’s apparent creditworthiness. Because we do not observe lenders’ intentions or outsiders’ beliefs, we treat this evidence as suggestive of signalling rather than as direct evidence of the mechanism.

5.6 Which Lenders Have the Incentive to Cross-Evergreen

We now ask which lenders have the strongest incentive to cross-evergreen. If cross-evergreening is a way to avoid recognising losses, it should be concentrated among lenders for whom an unrecognised bad loan is most costly (Peek and Rosengren, 2005; Caballero et al., 2008). We test this by interacting lender characteristics with the reciprocal-lending term in Equation 5, and find that the practice is concentrated exactly where the incentive to hide losses is greatest: among financially weak and heavily regulated banks.

The first source of incentive is financial weakness. We define a *High NPA pair* as one in which both lenders carry above-median non-performing assets relative to its peers. Table 7 shows that reciprocity is higher among high-NPA pairs. Lenders already weighed down by bad loans have the most to gain from postponing further loss recognition, and it is precisely these lenders that cross-evergreen the most. Weak lenders also accumulate more distress to begin with: Schiantarelli et al. (2020) shows that firms are more likely to default on financially weak banks, so such lenders hold more bad loans to conceal and have a correspondingly stronger incentive to cross-evergreen. This does not mean that only weak lenders cross-evergreen. Consistent with Faria-e Castro et al. (2024), who document evergreening even among well-capitalised lenders, our baseline reciprocity effect remains positive for low-NPA pairs; but high-NPA pairs do it more.

We compare several balance sheet characteristics of lenders engaged in cross-evergreening

with those of lenders not engaged in cross-evergreening. Appendix Table A4 shows that the former are substantially larger (holding more loans and deposits) but weaker (higher non-performing assets and write-offs, and less capital), despite earning similar net interest margins. The lenders that cross-evergreen are thus big but fragile, giving them stronger incentives to conceal bad loans.

The second source of incentive is regulation. We ask whether stricter supervision deters cross-evergreening or invites it. We classify the Scheduled Commercial Banks (SCB) in India as heavily regulated. These are Government-Owned or Public Sector Banks, Private Sector Banks and Foreign Banks; they fall under the Reserve Bank of India’s prudential supervision. Other lenders, such as non-bank finance companies, housing finance companies, financial institutions, and cooperative banks, are less regulated by the RBI. Replacing Z_{ijt} in equation 5 with an indicator for pairs in which both lenders are heavily regulated (HR–HR), and taking two lightly regulated lender pairs as the omitted group, Appendix Table A5 shows that cross-evergreening is far more common among heavily regulated pairs compared to pairs where even one lender is lightly regulated. The interaction between reciprocity and the HR–HR indicator is positive, large, and significant across every specification. In our most stringent specification (column 3), it more than doubles the baseline reciprocity effect, whereas mixed HR–LR pairs are similar to LR–LR pairs.

One might expect tighter supervision to deter cross-evergreening. But the incentive runs the other way as shown by Blattner et al. (2023). Heavily regulated lenders are precisely the ones for whom an unrecognised bad loan is costly, since they face strict provisioning and asset-classification rules and, hence, have the strongest incentive to keep a distressed loan looking healthy via cross-evergreening.

This regulatory pattern is also evident when we split pairs by ownership type. Appendix Table A6 interacts reciprocity with indicators for the composition of the lender pair, and shows that cross-evergreening is concentrated among bank–bank pairs of similar type. Reciprocity is strongest within private-sector pairs, where the interaction term is 0.091, roughly double the baseline reciprocity of about 0.08, confirming that this is

not just a government-bank story. However, we observe large effects within government-owned or public-sector (PSU–PSU) pairs, with an interaction of 0.049, and in mixed public–private bank pairs, at 0.030. Since public- and private-sector banks are heavily regulated, this mirrors the HR–HR result. So, it is the supervised banks, and especially those of the same kind, that cross-evergreen the most.

5.7 How They Do It: Bank Boards

A reciprocal exchange of loans requires that the two lenders trust each other to follow through, and we argue that links at the board level provide this channel. Shared directors are a plausible conduit for coordination: a person who sits on two boards can carry information between them and shape the decisions of both (Gopalan et al., 2021), a channel that the recent literature ties to collusion (Herrera-Caicedo et al., 2025) and to lending decisions (Tantri, 2025).

We define a *common-director pair* as one in which the two lenders share at least one board member in a given year. Table 8 shows that reciprocity is nearly twice as likely when two lenders share a director. A director who sits on both boards can see both lenders’ distressed exposures and is well placed to broker the exchange.

Then we take a look at the ownership links. A *subsidiary pair* is one in which one lender is a subsidiary of the other, so that the two share owners. Column 4 of Appendix Table A6 replaces Z_{ijt} with an indicator for such pairs and shows that reciprocity is higher within them. The interaction between reciprocity and the subsidiary indicator is positive and significant at the ten percent level. Lenders bound by ownership can arrange a reciprocal exchange far more easily than arm’s-length lenders, consistent with evidence that affiliated firms within a group routinely provide financial support to one another (Gopalan et al., 2007). Together, the common-director and subsidiary results point to the boardroom as the place where cross-evergreening is arranged.

5.8 Does Regulatory Oversight Curb Cross-Evergreening?

If cross-evergreening works by keeping distressed loans out of sight, then forcing those loans into the open should make it harder. Recent evidence supports this logic: on-site supervisory inspections reduce zombie lending (Bonfim et al., 2023). We test it directly using a sharp increase in regulatory oversight in India.

In 2014, the Reserve Bank of India set up the Central Repository of Information on Large Credits (CRILC), a registry to which every bank must report its large exposures (borrowers owing Rs 50 million or more) together with the loan’s classification, every quarter.³ The registry made each bank’s large distressed exposures visible to the supervisor and to the borrower’s other lenders, sharply raising the chance that a hidden bad loan would be noticed.

We exploit the introduction of CRILC in the triple-difference design of Equation 6, using data from 2008 to 2020.

The lenders most exposed to CRILC have the most to hide once reporting begins, so if oversight bites, their cross-evergreening should fall the most afterwards.

Table 9 reports the results with no fixed effects in columns 1 and 3, and lender-A $\times$ year and lender-B fixed effects in columns 2 and 4. Before CRILC, cross-evergreening is heavily concentrated among high-exposure pairs: the interaction of reciprocity with high exposure is large and positive (0.164 in column 1). After CRILC, this excess shrinks sharply. The triple interaction is negative and significant across all specifications (-0.066 in column 1, -0.065 in column 2), undoing roughly 40% of the high-exposure pairs’ extra cross-evergreening. The same pattern holds, though weaker, when only one lender in the pair is highly exposed (columns 3 and 4).

So, when the regulator made the quality of large exposures transparent, the lenders with the most to hide had to pull back the most. We infer that cross-evergreening thrives on opacity, and regulatory monitoring can curb this practice.

³Reserve Bank of India, circular dated 23 May 2014, <https://rbidocs.rbi.org.in/rdocs/notification/PDFs/CIRCRILC23052014.pdf>. The registry was set up to strengthen off-site supervision and the early recognition of distress.

5.9 Cross-Evergreening and Contagion

Cross-evergreening creates a link between the balance sheets of two lenders. We now ask whether this link transmits financial distress from one lender to another. We use the Global Financial Crisis (GFC) as an exogenous shock and measure each lender’s pre-crisis exposure using its 2007 lending to export-oriented firms, which were directly exposed to the collapse in global demand. Our main test asks whether lenders with low direct exposure nevertheless reduce credit when they were connected through cross-evergreening to highly exposed partners before the crisis.

Table 10 estimates Equation 7 for low-exposure lenders that engaged in cross-evergreening before the GFC with a partner whose 2007 export exposure was above the median. Following the GFC, these connected lenders become 7.75 percentage points less likely to extend a new loan than other low-exposure lenders in the full sample when we include lender and firm $\times$ year fixed effects (column 2). The relative decline is 8.33 percentage points among viable firms with an interest coverage ratio above one (column 4). The contraction therefore extends beyond distressed borrowers and is consistent with a shock to one lender affecting the credit supplied by its pre-GFC cross-evergreening partners.

We then examine whether reciprocity itself increased more after 2008 among lender pairs with greater pre-crisis exposure. Appendix Table A7 reports estimates of Equation A2. The coefficient of interest is the triple interaction between reciprocal distressed lending, the post-GFC period, and an indicator for pairs in which at least one lender had above-median export exposure. In our primary specification with lender A $\times$ year and lender B fixed effects (column 3), reciprocity increases by an additional 8.53 percentage points after the GFC among high-exposure pairs. Thus, the lenders more exposed to the crisis became more likely to support one another’s distressed borrowers precisely when the shock increased the losses they had to recognise.

Taken together, these results are consistent with contagion through pre-GFC cross-evergreening relationships. Reciprocal support increases among high-exposure lender pairs after the shock, while low-exposure lenders connected to highly exposed partners before the crisis contract new lending, including to viable firms. Cross-evergreening can

therefore propagate distress beyond the lenders and firms directly hit by the original shock.

Together, these results provide strong evidence that reciprocal distressed lending is not random. Instead, it reflects a systematic pattern of coordination among financially weaker, governance-linked lenders, enabling them to hide losses, delay the recognition of bad loans, and transmit the effects of financial distress through their lending relationships.

6 Conclusion

This paper provides the first systematic evidence that lenders evergreen for one another. Using a lender–lender–year panel with stringent within–lender–year fixed effects, we show that a lender is 8.29 percentage points more likely to extend a fresh loan to a distressed borrower of another lender precisely when that lender reciprocates. This increase is about 4.7 times the 1.77% baseline rate of new distressed lending. Reciprocity is persistent: lender pairs that cross-evergreen in one year are 14.5 percentage points more likely to do so again the next. It is concentrated among financially weak and heavily regulated banks linked through their boards.

Three findings support the interpretation that this is loss-hiding rather than genuine credit provision. First, the borrowers do not recover; they grow more indebted, less solvent, and less profitable, as one would expect if the loans were made to delay recognising a loss rather than to fund a turnaround. Second, borrowers are persistently more likely to repay the lender that reciprocated than the lender extending the new loan, consistent with the arrangement helping the partner recover its existing exposure. Third, cross-evergreened firms subsequently repay more and attract more new credit than comparable distressed firms, consistent with a new lender’s participation improving the borrower’s apparent creditworthiness.

The lenders that do this are big but fragile, carrying higher non-performing assets, lower capital, and greater write-offs than their peers, and so have the most to gain from keeping a bad loan off the books. It is the heavily regulated banks, those facing the

strictest provisioning and classification rules, that cross-evergreen the most, and they do so through shared boardrooms, common directors, and parent–subsidiary ties. The concealment of losses, then, need not be read off a single institution’s books; it can be a coordinated, inter-bank phenomenon that standard, arm’s-length models of bank behaviour will miss.

Cross-evergreening also creates a channel through which distress can spread across lenders. Following the GFC, reciprocity increases among high-exposure lender pairs. Lenders with limited direct exposure but connected before the crisis to highly exposed partners reduce new lending by 7.75 percentage points relative to other low-exposure lenders. The relative contraction is 8.33 percentage points among viable firms. These patterns are consistent with pre-GFC cross-evergreening relationships transmitting distress to lenders and borrowers that were not directly exposed to the original shock.

Our findings carry a direct policy lesson. Cross-evergreening thrives on opacity, and when the Reserve Bank of India required banks to report large exposures to a centralised regulatory registry in 2014, the lenders with the most to hide pulled back the most. Regulators should therefore monitor not only each bank’s own exposures but the pattern of credit flowing across banks to one another’s distressed borrowers, since a loan that looks like healthy new lending in isolation may be one half of a reciprocal exchange. More broadly, once lenders can trade favours, concealment can become harder to detect.

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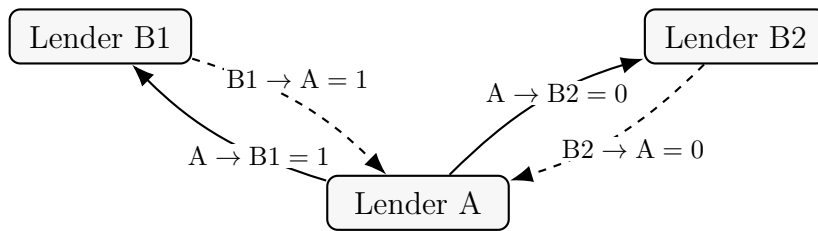


Figure 1: Empirical comparison. Lender A extends an external distressed loan to a borrower of Lender B1 when B1 reciprocates, but not to a borrower of Lender B2 when B2 does not reciprocate. $A \rightarrow B = 1$ indicates that Lender A makes a new loan to a distressed borrower of Lender B.

Table 1: SAMPLE DESCRIPTION

Time Period	2000–2019
Panel A: Lender Level	
Number of Lenders	307
Number of Banks	123
Number of Non-Bank Lenders	162
Other Lenders	22
Number of Lender Pairs	20,178
Number of Lender–Lender–Year Observations	423,738
Panel B: Firm Level	
Number of Firms	25,368
Number of Defaults	9,083
Number of Loans	303,899

This table describes the sample used in the analysis. Panel A reports summary statistics for the lender–lender–year panel, including the number of lenders (distinguishing between banks and non-bank lenders), lender pairs, and lender–lender–year observations. Panel B reports summary statistics for the firm–year panel, including the number of firms, defaults, and loans. The sample covers the period 2000–2019.

Table 2: Summary Statistics of Lenders

Panel A: Lender-Year Panel									
	N (4,507)	Unique Lender (307)	Mean	SD	Percentiles				
					5th	25th	Median	75th	95th
Loans Outstanding	4422	306	246746.5	978680	7.6	1360.7	12824.15	108743	1253214
Size	4479	306	189185	759909	45.3	2017.7	11798.7	83074	906398.7
Total Deposits	4264	306	262027.8	1181638	0	0	0	51090.25	1390170
Provisions and Contingencies	4287	304	4255.3	15323.7	1.5	51.5	394	2322.8	18603.4
Capital Adequacy Ratios (%) - Tier 1	1655	113	18.6	37.8	6.22	8.36	10.87	15.3	47.5
NPA/Advances (%)	1977	205	5.04	11.8	0.11	0.72	1.85	4.62	17.12
Profit/Avg Asset-ROA	4442	306	-0.005	1.95	-0.08	0.006	0.023	0.049	0.189

Panel B: Lender-Lender-Year Panel			
	N	Mean	SD
External Distressed Loan (A→B) Count	423,738	.0223	.1935
External Distressed Loan (A→B) Dummy	423,738	.0177	.1320
Common Directors Dummy	345,471	.0310	.1735
High NPA Lender Pair Dummy	423,738	.0143	.1190

This table reports the summary for the dataset for the period 2000–2019. Panel A reports the MCA dataset’s coverage summary at the lender–year level. Panel B reports the descriptive statistics relating to key variables at the lender–lender–year level. All monetary values are in INR million. The number of observations differs across variables because each is reported over the lender–year or lender–lender–year observations for which it is available.

Table 3: Reciprocity and Persistence in External Distressed Lending

	(1)	(2)	(3)
<i>Panel A: Reciprocity in External Distressed Lending</i>			
	External Distressed Loan (A→B)		
External Distressed Loan (B→A)	0.146*** (0.0052)	0.087*** (0.0038)	0.0829*** (0.0037)
Observations	423,738	423,738	423,171
R-squared	0.027	0.093	0.130
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	
<i>Panel B: Persistence of Reciprocal Distressed Lending</i>			
	Reciprocal Distressed Loan (A↔B, Current Year)		
Reciprocal Distressed Loan (A↔B, Previous Year)	0.194*** (0.014)	0.148*** (0.012)	0.145*** (0.012)
Observations	403,560	403,560	403,020
R-squared	0.038	0.076	0.087
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	

This table reports reciprocity in external distressed lending and its persistence over time. Panel A reports the results of Equation 1, where $EDL_{A \rightarrow B,ijt}$ is regressed on $EDL_{B \rightarrow A,ijt}$. The dependent variable equals one if lender A extends a new loan to a distressed borrower of lender B in year t , given no prior lending relationship. The coefficient on $EDL_{B \rightarrow A,ijt}$ captures whether lender A 's decision to lend systematically depends on reciprocal lending by lender B . Panel B reports the results of Equation 2, where an indicator for reciprocal distressed lending in the current year, RDL_{ijt} , is regressed on its lagged value, $RDL_{ij,t-1}$. In both panels, column 1 has no fixed effects, column 2 has lender A , lender B , and year fixed effects, and column 3 has lender $A \times \text{Year}$ and lender B fixed effects. Standard errors are clustered at the lender-pair level and are reported in parentheses.

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

Table 4: Performance of Reciprocal Distressed Loan Recipients

	(1)	(2)	(3)	(4)	(5)
<i>Panel A: Performance Outcomes</i>					
	Profit After Tax	Free Reserves	Net Worth	Profit Margin	Solvency
Reciprocal Distressed Borrower $\times$ Post	-140.5*** (18.54)	-1,523*** (77.34)	-1,011*** (113.4)	-1.239*** (0.419)	-0.214*** (0.0333)
Observations	402,801	405,247	414,250	374,325	405,086
R-squared	0.775	0.896	0.920	0.582	0.555
Firm $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes
Time $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes
<i>Panel B: Credit, Liquidity, and Operational Outcomes</i>					
	Total Debt	Default	Depth of Bank Ties	Project Ineffectiveness	Cash Bal % Current Assets
Reciprocal Distressed Borrower $\times$ Post	1,244*** (156.8)	0.0177*** (0.00372)	-0.332*** (0.0622)	0.0278* (0.0148)	-3.700*** (0.571)
Observations	394,015	517,712	517,712	63,812	414,315
R-squared	0.923	0.354	0.887	0.438	0.731
Firm $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes
Time $\times$ Cohort FE	Yes	Yes	Yes	Yes	Yes

This table reports the results of Equation 3, where firm outcomes are regressed on the interaction between Reciprocal Distressed Borrower_{ic}, an indicator equal to one for firms that receive a reciprocal distressed loan in cohort *c*, and Post_{ct}, a dummy for the years after the loan. Panel A reports performance outcomes; Panel B reports credit, liquidity, and operational outcomes. The coefficient on Reciprocal Distressed Borrower_{ic} $\times$ Post_{ct} captures how reciprocal-loan recipients perform relative to other contemporaneous loan recipients. The sample spans a ± 3 -year window around the event year, with non-overlapping event selection. The estimation sample varies across columns with the availability of each outcome; project-level outcomes are observed only for the subset of firms covered by CMIE CapexDx. All specifications include firm $\times$ cohort and event-timeline (time) $\times$ cohort fixed effects; standard errors, reported in parentheses, are clustered at the firm level. All continuous outcomes are winsorized at the 1st and 99th percentiles.

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

Table 5: Repayment of Existing Loans: Cross-Evergreening Partners vs. Other Lenders

	Loan Repaid					
	Firm & Event-year FE			Firm $\times$ Calendar-year FE		
	(1) t	(2) $t + 1$	(3) $t + 2$	(4) t	(5) $t + 1$	(6) $t + 2$
CE Partner Dummy	0.192*** (0.012)	0.051*** (0.012)	0.038*** (0.012)	0.183*** (0.013)	0.054*** (0.010)	0.040*** (0.013)
Other Lender Dummy	0.179*** (0.010)	0.024** (0.010)	0.009 (0.009)	0.166*** (0.010)	0.027*** (0.008)	0.008 (0.009)
Observations	13,227	12,768	11,800	13,227	12,745	11,780
R-squared	0.275	0.251	0.257	0.349	0.334	0.337
Firm FE	Yes	Yes	Yes			
Event-year FE	Yes	Yes	Yes			
Firm $\times$ Calendar-year FE				Yes	Yes	Yes

This table reports the results of Equation 4, a linear probability regression of an indicator for repayment of an existing loan (*repaid_dummy*) at event horizons t , $t + 1$, and $t + 2$. *CE Partner Dummy* equals one if the firm borrowed from a cross-evergreening partner lender, and *Other Lender Dummy* equals one if it borrowed from another lender that is neither CE Partner nor CE Lender. Columns 1–3 include firm and event-year fixed effects; columns 4–6 include firm $\times$ calendar-year fixed effects. Standard errors (in parentheses) are clustered at the creditor and firm levels.

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

Table 6: Repayment and New Credit after a Reciprocal Distressed Loan

	Repayment		New Loan	
	(1) All Distressed Loans	(2) Only Evergreened Loans	(3) All Distressed Loans	(4) Only Evergreened Loans
Reciprocal Distressed Borrower $\times$ Post	0.030*** (0.011)	0.056*** (0.012)	0.092*** (0.012)	0.107*** (0.012)
Observations	45,470	33,056	45,470	33,056
R-squared	0.334	0.349	0.471	0.441
Firm $\times$ Cohort FE	Yes	Yes	Yes	Yes
Time $\times$ Cohort FE	Yes	Yes	Yes	Yes

Notes: This table reports the stacked event study of Equation 3 on two outcomes for distressed firms: whether the firm repays a loan (columns 1–2) and whether it receives a new loan (columns 3–4). The comparison group differs across columns: columns 1 and 3 benchmark cross-evergreened borrowers against all other distressed firms that receive a new loan, while columns 2 and 4 benchmark them against firms that receive a new loan from an existing lender (ordinary evergreening). The reported coefficient is for the interaction between an indicator for cross-evergreened borrowers and a post-loan dummy. The sample spans a ± 3 -year window around the event year. Firm $\times$ cohort and time $\times$ cohort fixed effects are included. Standard errors are clustered at the firm level and reported in parentheses.

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

Table 7: Reciprocity among High-NPA Lender Pairs

	(1)	(2)	(3)
	External Distressed Loan (A→B)		
EDL (B→A)	0.141*** (0.0052)	0.0849*** (0.00398)	0.0802*** (0.00386)
High NPA Lender Pair	0.028*** (0.0024)	0.00671*** (0.00229)	0.00983*** (0.00227)
EDL (B→A) × High NPA Lender Pair	0.0481*** (0.0168)	0.0302* (0.0155)	0.0322** (0.0152)
Observations	423,738	423,738	423,171
R-squared	0.029	0.094	0.131
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	

This table reports the results of Equation 5, where the mechanism variable Z_{ijt} is defined as $HighNPA_{ijt}$, equal to one if both lenders in a pair have above-median NPAs. The interaction term $EDL_{B \rightarrow A,ijt} \times HighNPA_{ijt}$ captures whether reciprocity is disproportionately more likely among weak lenders. Column 1 has no fixed effects, column 2 has lender-A, lender-B, and year fixed effects, and column 3 has lender-A×year and lender-B fixed effects. Standard errors are clustered at the lender-pair level and are reported in parentheses.

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

Table 8: Reciprocity among Lenders with Common Directors

	(1)	(2)	(3)
	External Distressed Loan (A→B)		
EDL (B→A)	0.146*** (0.00564)	0.084*** (0.0042)	0.079*** (0.0041)
Common Director	0.033*** (0.00298)	0.012*** (0.0023)	0.012*** (0.0023)
EDL (B→A) × Common Director	0.083*** (0.019)	0.068*** (0.016)	0.071*** (0.0158)
Observations	345,471	345,471	344,925
R-squared	0.034	0.103	0.143
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	

This table reports the results of Equation 5, where the mechanism variable Z_{ijt} is defined as $CommonDirector_{ijt}$, equal to one if lenders A and B share at least one board member in year t . The interaction term $EDL_{B \rightarrow A,ijt} \times CommonDirector_{ijt}$ captures whether governance overlaps facilitate reciprocity. Column 1 has no fixed effects, column 2 has lender-A, lender-B, and year fixed effects, and column 3 has lender-A×year and lender-B fixed effects. Standard errors are clustered at the lender-pair level and are reported in parentheses.

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

Table 9: Reciprocal Distressed Lending after CRILC

	External Distressed Loan (A→B)			
	Both High Exposure		One High Exposure	
	(1)	(2)	(3)	(4)
EDL (B→A)	0.086*** (0.009)	0.027*** (0.008)	0.047*** (0.018)	0.020 (0.018)
Post CRILC	0.005*** (0.001)		0.009*** (0.001)	
EDL (B→A) × Post CRILC	-0.012 (0.011)	0.015 (0.010)	0.000 (0.020)	0.003 (0.020)
High Exposure	0.035*** (0.002)	0.028*** (0.002)	0.018*** (0.001)	-0.018*** (0.002)
EDL (B→A) × High Exposure	0.164*** (0.015)	0.118*** (0.013)	0.158*** (0.020)	0.084*** (0.019)
Post CRILC × High Exposure	-0.014*** (0.002)	-0.016*** (0.002)	-0.010*** (0.001)	-0.011*** (0.002)
EDL (B→A) × High Exposure × Post CRILC	-0.066*** (0.018)	-0.065*** (0.016)	-0.068*** (0.022)	-0.036* (0.022)
Observations	262,314	261,963	262,314	261,963
R-squared	0.045	0.155	0.035	0.153
LenderA×Year FE		Yes		Yes
LenderB FE		Yes		Yes

This table reports a triple-difference test of how the 2014 introduction of the Central Repository of Information on Large Credits (CRILC) affected reciprocal external distressed lending. Using the construction of the pre-CRILC exposure measure for each lender as the fraction of total outstanding loan amount that falls within the CRILC reporting threshold (loans $\geq$ Rs 50 million), measured in 2013, we classify lenders as *High Exposure* (above median) or *Low Exposure* (below median) based on these pre-period shares. *Post CRILC* equals one for years after CRILC came into force. Columns 1–2 treat a pair as high-exposure only when both lenders are highly exposed; columns 3–4 when either is. The coefficient of interest is on the triple interaction $EDL_{B \rightarrow A} \times \text{High Exposure} \times \text{Post CRILC}$, which captures how the additional reciprocity of high-exposure pairs changes after the registry. Columns 1 and 3 include no fixed effects; columns 2 and 4 include lender-A×year and lender-B fixed effects. Standard errors are clustered at the lender-pair level and reported in parentheses.

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

Table 10: Lending Contraction among Connected Lenders after the Global Financial Crisis

	New Loan Dummy			
	Full Sample		Viable Firms	
	(1)	(2)	(3)	(4)
Connected Lender	0.0594** (0.0264)		0.0763*** (0.0233)	
Post	0.0181 (0.0199)		0.0356 (0.0212)	
Connected Lender $\times$ Post	-0.0506** (0.0213)	-0.0775*** (0.0224)	-0.0677*** (0.0230)	-0.0833*** (0.0238)
Observations	130,826	71,429	66,807	44,158
R-squared	0.002	0.455	0.002	0.415
Lender FE		Yes		Yes
Firm $\times$ Year FE		Yes		Yes

This table reports firm–lender–year regressions of an indicator equal to one if lender l extends a new loan to firm i in year t . The sample is restricted to lenders with below-median exposure to the GFC. An export-oriented firm has an above-median average export-to-sales ratio during 2005–2007. A lender’s exposure is the share of its loans made to export-oriented firms in 2007, measured by loan count; high- and low-exposure lenders have values above and below the median, respectively. *Connected Lender* equals one if, before 2008, the lender engaged in cross-evergreening with a high-exposure lender. *Post* equals one from 2008 onward. The coefficient on *Connected Lender* $\times$ *Post* measures the differential post-GFC change in new lending by connected lenders relative to other low-exposure lenders. The sample covers 2005–2011. Columns 1–2 use the full sample; columns 3–4 restrict the sample to viable firms, defined as firms with an interest coverage ratio above one. Columns 1 and 3 include no fixed effects; columns 2 and 4 include lender and firm $\times$ year fixed effects. In Equation 7, μ_l and λ_{it} denote lender and firm $\times$ year fixed effects, respectively, which are included in columns 2 and 4. Standard errors are clustered at the lender level and reported in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Appendix

Effective Interest Rate Specification

To compare the price of credit across firm types, we estimate the following firm-year regression. The estimates are reported in Table A3.

$$\text{Effective Interest Rate}_{it} = \beta \text{Firm Type}_{it} + \alpha_i + \lambda_t + \varepsilon_{it}, \quad (\text{A1})$$

where *Effective Interest Rate*_{it} is interest expense on long- and short-term borrowings divided by average borrowings for firm *i* in year *t*, with average borrowings measured as the mean of borrowings outstanding at the beginning and end of the year; α_i are firm fixed effects that absorb time-invariant differences in firms' financing costs, and λ_t are year fixed effects that absorb movements in the general level of interest rates. *Firm Type*_{it} is an indicator whose definition and comparison group vary across specifications. In columns 1 and 2 it equals one for distressed firm-years (interest coverage ratio below one) and zero for healthy firm-years, with cross-evergreened observations excluded. In columns 3 and 4 it equals one for cross-evergreened firm-years and zero for healthy firm-years. In columns 5 and 6 it equals one for cross-evergreened firm-years and zero for other distressed firm-years. Odd-numbered columns use the original effective interest rate; even-numbered columns winsorize it at the 1st and 99th percentiles. The coefficient of interest, β , is the difference in effective interest rates between the two firm types being compared. Standard errors are clustered at the firm level.

Reciprocity after the Global Financial Crisis: Specification

To test whether reciprocity itself rose after the Global Financial Crisis among the lender pairs most exposed to it, we estimate the following triple difference on the lender-lender-year panel. The estimates are reported in Table A7.

$$\begin{aligned} \text{EDL}_{A \rightarrow B,ijt} = & \beta_1 \text{EDL}_{B \rightarrow A,ijt} + \beta_2 \text{Post}_t + \beta_3 H_{ij} \\ & + \beta_4 (\text{EDL}_{B \rightarrow A,ijt} \times \text{Post}_t) + \beta_5 (\text{EDL}_{B \rightarrow A,ijt} \times H_{ij}) \\ & + \beta_6 (\text{Post}_t \times H_{ij}) \\ & + \beta_7 (\text{EDL}_{B \rightarrow A,ijt} \times \text{Post}_t \times H_{ij}) + \mathcal{F}_{ijt} + \varepsilon_{ijt}. \end{aligned} \quad (\text{A2})$$

Here H_{ij} , *High Export Exposure*, equals one when at least one lender in the pair has above-median count-based export exposure in 2007, Post_t equals one from 2008 onward, and $\mathcal{F}_{ijt}$ denotes the fixed effects included in the relevant column. The coefficient of interest, β_7 , captures the differential post-GFC change in reciprocity among high-exposure pairs. Standard errors are clustered at the lender-pair level.

Table A1: Robustness of Reciprocity in External Distressed Lending

	(1)	(2)
External Distressed Loan (A→B)		
External Distressed Loan (B→A)	0.053*** (0.0035)	0.068*** (0.0037)
Observations	423,171	423,066
R-squared	0.198	0.184
LenderA×Year FE	Yes	Yes
LenderB×Year FE		Yes
LenderA×LenderB	Yes	

This table reports the results of Equation 1, where $EDL_{A \rightarrow B,ijt}$ is regressed on $EDL_{B \rightarrow A,ijt}$ with varying sets of fixed effects. The dependent variable equals one if lender A extends a new loan to a distressed borrower of lender B in year t , given no prior lending relationship. The coefficient on $EDL_{B \rightarrow A,ijt}$ captures whether lender A 's decision to lend systematically depends on reciprocal lending by lender B . Column 1 has lender-A×year and lender-pair fixed effects, and column 2 has lender-A×year and lender-B×year fixed effects. Standard errors are clustered at the lender-pair level and reported in parentheses.

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

Table A2: Firm Characteristics: Reciprocal Distressed Loan Recipients and Other New-Loan Recipients

	Mean (All New Loans)	Mean (Reciprocal Distressed Lending)	Difference	p-value
Total Assets	11632	22321	-10689	< 0.001
Total Debt	5909	12651	-6742	< 0.001
Profit Margin	-.0394	-.1436	.1041	< 0.001
Leverage	.4442	.5314	-.0872	< 0.001
Free Reserves	1519	-1174	2693	< 0.001
Solvency	.0972	-.0673	.1645	< 0.001
Profit After Tax	311	-581	893	< 0.001
Stalled Projects	.3236	.9329	-.6093	< 0.001
Project Ineffectiveness	.0691	.0809	-.0117	< 0.001

This table reports unconditional descriptive comparisons between firms ever receiving a reciprocal distressed loan and other firms receiving new loans. Firms classified as reciprocal distressed loan recipients once remain in that category throughout the sample. We report group means, differences in means, and p-values from two-sample t-tests in the firm-year panel.

Table A3: Effective Interest Rates across Firm Types

	Effective Interest Rate					
	Other Distressed Firms vs. Healthy Firms		Cross-Evergreened Firms vs. Healthy Firms		Cross-Evergreened Firms vs. Other Distressed Firms	
	Original (1)	Winsorized (2)	Original (3)	Winsorized (4)	Original (5)	Winsorized (6)
Distressed Firm	0.00316*** (0.000906)	0.00368*** (0.000726)				
Cross-Evergreened Firm			-0.00192 (0.00305)	-0.00112 (0.00273)	-0.00603** (0.00267)	-0.00544** (0.00261)
Observations	39,388	39,388	30,898	30,898	7,612	7,612
R-squared	0.477	0.585	0.479	0.594	0.595	0.659
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes

This table reports the results of Equation A1, firm-year regressions comparing effective interest rates across firm types. The effective interest rate equals interest expense on long- and short-term borrowings divided by average borrowings, where average borrowings is the mean of borrowings outstanding at the beginning and end of the year. Distressed firms have an interest coverage ratio below one; healthy firms have an interest coverage ratio above one. Columns 1–2 compare other distressed firm-years with healthy firm-years and exclude cross-evergreened observations. Columns 3–4 compare cross-evergreened firm-years with healthy firm-years. Columns 5–6 compare cross-evergreened firm-years with other distressed firm-years. Columns 1, 3, and 5 use the original effective interest rate; columns 2, 4, and 6 winsorize the rate at the 1st and 99th percentiles. All specifications include firm and year fixed effects. Standard errors are clustered at the firm level and reported in parentheses.

*** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Table A4: Comparing Lenders Involved in Cross-Evergreening with Other Lenders

	Mean (Other Lenders)	Mean (Cross- Evergreening Lender)	Difference	p-value
Loans Outstanding	101685	1084980	-983294	< 0.001
Size	76947	843131	-766183	< 0.001
Total Deposits	86414	1230502	-1144088	< 0.001
Provisions	2539	19318	-16778	< 0.001
Capital Adequacy Ratio (%) - Tier 1	22.15	10.05	12.10	< 0.001
Gross NPA	14781	82916	-68135	< 0.001
Write-Offs	474	7222	-6748	< 0.001
Total Interest Expense	8672	89965	-81293	< 0.001
Debt	50820	257210	-206390	< 0.001
Total Assets	158120	1763142	-1605022	< 0.001
Total Advances	699679	2008645	-1308966	< 0.001
Net Interest Margin	3.25	3.71	-.46	.57
Total Debt Restructuring	22766	66584	-43818	< 0.001
Total Debt Restructuring by Bank	23293	68408	-45115	< 0.001
Total Debt Restructuring by NBFC	14391	17357	-2966	.53

This table compares the characteristics of lenders engaged in cross-evergreening with those that are not in a Lender-Year panel. The analysis is based on two-sample mean comparisons of lender balance sheet characteristics. Monetary values are in INR million; ratios are in percent, as labelled. We report differences in means across groups, and the p-value from their t-tests.

Table A5: Reciprocity by Lender Regulatory Classification

	(1)	(2)	(3)
External Distressed Loan (A→B)			
EDL (B→A)	0.090*** (0.012)	0.061*** (0.010)	0.048*** (0.010)
HR-HR Dummy	0.019*** (0.001)	0.015*** (0.001)	0.015*** (0.001)
EDL (B→A) × HR-HR Dummy	0.108*** (0.015)	0.059*** (0.012)	0.069*** (0.012)
HR-LR Dummy	0.002*** (0.001)		
EDL (B→A) × HR-LR Dummy	0.015 (0.014)	0.000 (0.012)	0.008 (0.012)
Observations	394,632	394,632	394,170
R-squared	0.035	0.098	0.136
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	

This table reports the results of Equation 5, where Z_{ijt} classifies lender pairs by how heavily they are regulated. Heavily regulated (HR) lenders are public sector, private sector, and foreign banks, all under the Reserve Bank of India's list of Scheduled Commercial Banks, that have prudential supervision; all the other lenders are lightly regulated (LR), *viz.*, NBFCs, housing finance companies, financial institutions, and cooperative banks. $HR-HR$ equals one if both lenders in the pair are heavily regulated and $HR-LR$ if exactly one is; pairs of two lightly regulated lenders (LR-LR) are the omitted category. The interaction $EDL_{B \rightarrow A} \times HR-HR$ captures whether reciprocity is disproportionately more likely between two heavily regulated lenders. Column 1 has no fixed effects, column 2 has lender-A, lender-B, and year fixed effects, and column 3 has lender-A×year and lender-B fixed effects. Government firms and state government bodies are excluded. Standard errors are clustered at the lender-pair level and reported in parentheses.

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

Table A6: Reciprocity by Lender-Pair Ownership Type

	(1)	(2)	(3)	(4)
External Distressed Loan ($A \rightarrow B$)				
EDL ($B \rightarrow A$)	0.074*** (0.004)	0.077*** (0.004)	0.078*** (0.004)	0.082*** (0.004)
PSU-PSU Pair	0.034*** (0.004)			
EDL ($B \rightarrow A$) $\times$ PSU-PSU Pair	0.049*** (0.012)			
Private-Private Pair		0.007*** (0.002)		
EDL ($B \rightarrow A$) $\times$ Private-Private Pair		0.091*** (0.021)		
PSU-Private Bank Pair			0.005** (0.002)	
EDL ($B \rightarrow A$) $\times$ PSU-Private Bank Pair			0.030*** (0.012)	
Subsidiary Dummy				0.011 (0.007)
EDL ($B \rightarrow A$) $\times$ Subsidiary Dummy				0.064* (0.037)
Observations	423,171	423,171	423,171	423,171
R-squared	0.132	0.131	0.130	0.130
LenderA $\times$ Year FE	Yes	Yes	Yes	Yes
LenderB FE	Yes	Yes	Yes	Yes

This table reports the results of Equation 5, where Z_{ijt} marks the composition of the lender pair by ownership type. *PSU-PSU*, *Private-Private*, and *PSU-Private* equal one for pairs of two public-sector banks, two private-sector banks, and one of each, respectively; *Subsidiary* equals one if one lender is a subsidiary of the other. Each ownership indicator and its interaction with reciprocal lending, $EDL_{B \rightarrow A}$, enter in a separate column. All columns include lender-A $\times$ year and lender-B fixed effects. Standard errors are clustered at the lender-pair level and reported in parentheses.

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

Table A7: Reciprocal Distressed Lending after the Global Financial Crisis

	(1)	(2)	(3)
External Distressed Loan (A→B)			
EDL (B→A)	0.126*** (0.0193)	0.0327** (0.0150)	0.0372** (0.0150)
Post	0.0114*** (0.000473)		
EDL (B→A) × Post	-0.0177 (0.0181)	0.0351** (0.0159)	0.0265* (0.0157)
High Export Exposure	0.00534*** (0.000413)	-0.00624*** (0.00127)	-0.00797*** (0.00124)
EDL (B→A) × High Export Exposure	-0.0538** (0.0214)	-0.0311* (0.0175)	-0.0354** (0.0174)
Post × High Export Exposure	0.00360*** (0.000746)	0.00425*** (0.000768)	0.00709*** (0.00128)
EDL (B→A) × Post × High Export Exposure	0.122*** (0.0211)	0.0827*** (0.0193)	0.0853*** (0.0191)
Observations	423,738	423,738	423,171
R-squared	0.033	0.095	0.132
LenderA×Year FE			Yes
LenderA FE		Yes	
LenderB FE		Yes	Yes
Year FE		Yes	

This table estimates Equation A2 on the lender-pair-year panel. *Post* equals one from 2008 onward. An export-oriented firm has an above-median average export-to-sales ratio during 2005–2007. A lender’s count-based exposure equals the number of loans to export-oriented firms divided by its total number of loans in 2007. *High Export Exposure* equals one when at least one lender in the pair has above-median count-based exposure. In Equation A2, H_{ij} denotes *High Export Exposure* and $\mathcal{F}_{ijt}$ denotes the fixed effects included in the relevant column. The coefficient on the triple interaction measures the differential post-GFC change in reciprocity among high-exposure pairs. Column 1 includes no fixed effects; column 2 includes lender-A, lender-B, and year fixed effects; column 3 includes lender-A×year and lender-B fixed effects. Standard errors are clustered at the lender-pair level and reported in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.