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Centralized credit decision-making, operational efficiency, and credit risk: Evidence from Agricultural Development Bank Limited (ADBL), Nepal

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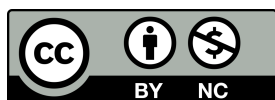
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Abstract

This paper examines policy-associated changes in operational efficiency and credit risk following a credit-centralization reform at Agricultural Development Bank Limited (ADBL), a Nepali public-sector bank. Effective 17 September 2024, ADBL extended centralized approval to standard loans across size categories. Using loan-level administrative records covering July 2020 to November 2025, the study applies a fixed-effects relative-change framework comparing more-exposed small loans with less-exposed large loans. Large loans also experienced further centralization, so the comparison group is not untreated. Mean approval time declined from 77.3 to 33.1 days for large loans and from 27.9 to 25.8 days for small loans. Adjusted estimates indicate that small loans experienced a 17.7-day smaller relative reduction in approval time, while the relative change in disbursement time was statistically insignificant. Binary NPL and WatchList indicators declined descriptively in both groups, but the relative declines were smaller for small loans and weakened under common-seasoning checks, particularly for NPL status. Parallel pre-trends are supported for approval time, NPL status, and WatchList status but not for disbursement time. The findings are therefore interpreted as institution-specific policy associations rather than causal effects and support differentiated rather than blanket centralization of credit approval.

Keywords

Centralized banking, operational efficiency, credit risk, difference-in-differences, relationship lending, Nepal

JEL Classification

G21, G28, G34, D02

1 Introduction

The way banks organize their lending operations matters for the quality and speed of the credit they extend and for how well they manage lending risk. A long-standing question in banking economics is whether credit decisions should be centralized at the head office or delegated to branches that are closer to borrowers. Centralized approval offers consistency, stronger oversight, and more uniform lending standards because decisions rely more heavily on verifiable, standardized information (Stein, 2002; Liberti & Petersen, 2019). Yet it can also slow decision-making and underuse the local knowledge that branch staff develop through repeated interaction with borrowers. Decentralized systems allow branch staff to draw on relationship-based information and local market knowledge, which can speed decisions and improve access (Berger & Udell, 2002), but they may weaken monitoring, increase discretionary variation, and create uneven practices across branches (Stein, 2002). This tension between institutional control and locally informed delivery is a genuine policy dilemma, particularly in developing economies where formal borrower information is limited and institutional capacity differs across regions.

The issue is particularly relevant for Agricultural Development Bank Limited (ADBL), where asset quality had weakened before the credit-centralization reform. ADBL's reported non-performing loan ratio increased from 1.68 percent in FY 2021/22 to 2.48 percent in FY 2022/23 and 3.44 percent in FY 2023/24, subsequently reaching 4.98 percent at Chaitra-end FY 2024/25 (Agricultural Development Bank Limited [ADBL], 2022, 2023, 2024b, 2025). Internal administrative records contain loan-level WatchList classifications, but a comparable publicly disclosed bank-wide WatchList series was not identified; WatchList patterns are therefore analysed only within the study sample. The broader deterioration in Nepal's commercial-bank asset quality is treated as supporting context rather than the primary justification for this bank-level analysis.

Nepal provides an important setting for studying credit-approval structures because banks remain a major source of formal finance for agriculture, small enterprises, rural households, and productive sectors. Within this setting, ADBL offers a relevant institutional case. Established in 1968 under the Agricultural Development Bank Act, 1967, ADBL was created to provide institutional credit for agricultural development and later expanded into commercial banking while retaining its focus on agriculture, rural communities, and productive sectors (ADBL, n.d.). Effective 17 September 2024 (Ashoj 1, 2081 BS), ADBL extended centralized approval to standard loans across size categories under an internal circular issued by the Credit Business & Treasury Department (ADBL, 2024a). The circular is held by ADBL and may be made available to the journal subject to institutional approval. Before the reform, loans below NPR 10 million were generally approved at branch level, whereas loans of NPR 10 million and above were predominantly processed centrally. After the reform, standard loans in both size categories were intended to follow centralized approval.

The study focuses on two sets of outcomes. Operational efficiency is measured by approval time, defined as the number of days from process initiation to approval, and disbursement time, defined as the number of days from approval to disbursement. Credit risk is measured by NPL and WatchList status under the applicable NRB classification framework and ADBL's internal policy. Loans overdue for 0–30 days are classified as Pass, 31–90 days as WatchList, 91–180 days as Substandard, 181–360 days as Doubtful, and more than 360 days as Loss. NPL status covers the Substandard, Doubtful, and Loss categories and may also reflect qualitative or policy-based Stage 3 triggers recorded in ADBL's administrative system (Nepal Rastra Bank, 2024a, 2024b).

Using loan-level administrative records, the study treats loans below NPR 10 million as the more-exposed group and larger loans as a less-exposed comparison group. The groups are not equivalent: they may differ in borrower type, collateral, documentation requirements, credit purpose, appraisal complexity, monitoring intensity, and repayment risk. Large loans also became more centralized after the policy

change. Accordingly, the design is used as a structured relative comparison rather than a clean untreated-control design, and the results are interpreted as policy-associated rather than causal.

The main findings are mixed and should be interpreted cautiously. Mean approval time declined from 77.3 to 33.1 days for large loans and from 27.9 to 25.8 days for small loans. The approval-time gap therefore narrowed, but this descriptive convergence should not be interpreted as reform success because large loans improved more despite already being predominantly centralized. Mean disbursement time also declined—from 153.8 to 27.7 days for large loans and from 72.0 to 14.0 days for small loans. The fixed-effects interaction indicates a 17.7-day smaller relative approval-time reduction for small loans and no statistically significant relative disbursement-time change. Binary credit-risk indicators declined in both groups, but the smaller relative declines among small loans are sensitive to unequal loan seasoning. The findings therefore describe policy-associated differences between groups rather than demonstrating a causal effect of centralization.

The paper provides an institution-specific assessment of a credit-approval reform at Agricultural Development Bank Limited. The paper's contribution lies in using loan-level administrative data to examine how operational efficiency and credit-risk indicators changed across loan sizes and loan purposes following a clearly identified organizational reform. By jointly analysing approval time, disbursement time, NPL status, and WatchList classification, the study provides practical evidence for evaluating ADBL's credit-governance and workflow arrangements. The findings may offer lessons for institutions with similar branch networks and lending structures, but should not be interpreted as representative of Nepal's banking sector as a whole. Section 2 reviews related literature. Section 3 presents the institutional background, data, and empirical strategies. Section 4 reports results and discussion. Section 5 concludes.

2 Review of Literature

Research in banking and organizational economics shows that a bank's internal structure affects how borrower information is collected, transmitted, and used in credit decisions. From a supervisory perspective, the issue extends beyond the choice between centralization and decentralization. Sound credit-risk management requires clearly defined approval authority and delegation limits, consistent credit-appraisal standards, effective credit administration, independent loan review, continuous portfolio monitoring, appropriate loan classification, and adequate internal controls. The Basel Committee identifies sound credit granting, credit administration and monitoring, and effective controls as core components of credit-risk management, while NRB's regulatory framework requires formal credit policies, classification, provisioning, and control arrangements (Basel Committee on Banking Supervision, 2025; Nepal Rastra Bank, 2024a, 2024b). Centralization may strengthen standardization and oversight, whereas decentralization may preserve branch-level and relationship-based information. The relevant question is therefore how approval authority affects both supervisory control and the effective use of borrower information.

Stein (2002) provides a key theoretical foundation for the role of hierarchy in capital allocation. In his model, decentralized organizations use soft information more effectively because decision-makers are closer to its source, whereas centralized organizations perform better when decisions can rest on hard information that is easy to verify, communicate, and compare. Applied to lending, this implies that centralized approval may suit loans backed by financial statements, collateral values, and standardized risk metrics, while decentralized approval is more useful where borrower quality depends on reputation, business character, and local knowledge that is difficult to document. Berger and Udell (2002) extend this argument to small business lending: small and opaque borrowers often depend on relationship lending because they lack audited statements, long credit histories, or formal documentation, and loan officers accumulate soft information through repeated interaction. Hunter (1995) finds that organizational

structure shapes economic performance within large commercial banks, and Petersen and Rajan (1994) show that stronger lending relationships improve credit availability by reducing information asymmetry.

The relationship-lending literature does not imply that decentralization is always superior. Soft information can improve screening, but it is harder for senior management to verify and monitor, and branch-level discretion may create risks when judgments are poorly documented or controls are weak. Liberti and Mian (2009) provide direct evidence: using credit dossiers from a large multinational bank in Argentina, they show that when the approving authority is farther from the loan officer who collected the information, decisions rely less on subjective and more on objective information. This implies that centralization changes not only who approves a loan but what type of information drives the decision. Berger, Miller, Petersen, Rajan, and Stein (2005), comparing large and small United States banks, find that large, more hierarchical banks are less likely to lend to informationally difficult small firms, consistent with the view that moving decisions upward improves standardization but may reduce responsiveness to borrowers whose creditworthiness is not fully documented.

Taken together, Stein (2002), Liberti and Mian (2009), and Berger et al. (2005) point to the same mechanism: hierarchy increases reliance on hard, verifiable information, while decentralization preserves soft information generated through local relationships. Sapienza (2002), studying Italian bank mergers, shows that organizational change can influence loan contract terms, demonstrating that bank structure is not merely administrative but can shape the terms on which borrowers receive credit. Canales and Nanda (2012) add an important qualification: decentralized banks are more likely to use soft information in setting terms, but decentralized branches can also exercise greater market power over small borrowers in concentrated local markets, producing inefficiencies when competition is weak and borrowers have few alternatives.

More recent research examines how centralization performs under stress. Aghion, Bloom, Lucking, Sadun, and Van Reenen (2021) contrast a localist view, in which decentralization helps during shocks because local managers have better local information, with a centralist view that headquarters can make difficult decisions more quickly and consistently; they find that decentralized firms performed relatively better in sectors more exposed to the global financial crisis. Evidence from developing economies shows that the effect of lending structure depends on information conditions and institutional quality. Banerjee and Duflo (2014), using a directed lending program in India, show that credit constraints remain important and that formal rules affect which borrowers obtain credit, while Beck, Demirgüç-Kunt, and Martínez Pería (2011) show that institutional and financial infrastructure shape banks' ability to lend to small and medium enterprises. Wegner (2024) finds that more centralized lending structures in German banking alter both credit allocation and risk taking, though the German setting differs sharply from Nepal in information systems and institutional depth, reinforcing the need for evidence from developing banking systems.

A common limitation of this literature is its reliance on cross-sectional, cross-country, or bank-level comparisons, which makes it difficult to separate the role of approval structure from differences in borrowers, institutions, regulation, and local conditions. This study adds institution-specific evidence by examining a clearly dated change in approval authority within one public-sector bank, using loan-level data before and after the reform. However, the design does not fully eliminate alternative explanations: concurrent workflow changes, macroeconomic credit conditions, shifts in branch workload, staffing, portfolio composition, or monitoring practices may also have affected the outcomes. In addition, small and large loans differ systematically, and the parallel-trends assumption is not supported for disbursement time. The study therefore documents policy-associated relative changes within ADBL rather than claiming to isolate a definitive causal effect of centralization.

3 Data and Methods

Institutional Background

The empirical strategy examines the credit-approval reform implemented at ADBL on 17 September 2024. Before the reform, loans below NPR 10 million were generally approved at branch level, while loans of NPR 10 million and above were predominantly processed centrally. After the reform, centralized approval was intended to apply to standard loans across size categories. The change in exposure was substantially greater for small loans: their recorded central processing rate increased from 27.3 percent to 94.9 percent, whereas the corresponding rate for large loans increased from 84.5 percent to 98.3 percent. Large loans are therefore not an untreated control group but a less-exposed comparison group that also experienced further centralization. The interaction term measures whether outcomes for small loans changed differently from those for large loans after the reform. Because both groups were affected and may also have been exposed to concurrent bank-wide and macroeconomic changes, the coefficient is interpreted as a policy-associated relative change rather than an isolated causal effect.

Conceptually, lending outcomes are shaped not only by borrower characteristics but also by how decision authority is arranged within the bank. Centralization may improve credit governance through more uniform screening standards, clearer accountability, stronger monitoring, and better institution-wide visibility of portfolio risk. Its effect on operational efficiency is theoretically ambiguous: centralized review may add approval layers and increase file-return or resubmission cycles, particularly for smaller loans, but may also reduce delays through standardized documentation, clearer delegation, and more consistent workflows. Operational efficiency can encompass approval time, disbursement time, rejection rates, application withdrawals, file-return cycles, resubmissions, and compliance with service-level standards. In this study, however, the available administrative data permit consistent measurement only of approval time and disbursement time, which should be interpreted as partial indicators of operational efficiency rather than a comprehensive measure. The effect on credit risk is also unlikely to appear immediately, so the analysis considers both NPL status and the earlier WatchList signal.

Variables and Treatment Definition

The study uses four primary outcome variables. Approval time measures the number of days from process initiation to loan approval, while disbursement time measures the number of days from approval to disbursement. These measures are calculated only for applications with the required completion dates. Rejected, withdrawn, incomplete, repeatedly returned, or unresolved applications may therefore be absent, creating potential survivorship and sample-selection bias if those files systematically experienced longer processing times. The efficiency outcomes should be interpreted as processing times among completed applications rather than measures of the entire application pipeline.

Table 1 *Variable Definitions*

Variable	Definition	Measurement
Approval time	Days from process-initiation date to approved date	Continuous (days)
Disbursement time	Days from approved date to disbursed date	Continuous (days)
NPL status	1 if NPL amount > 0, overdue days > 90, or NPL/Stage 3 date recorded	Binary
WatchList status	1 if overdue days are 31–90 or a recorded qualitative/policy WatchList trigger is present	Binary
SmallLoan	1 if funded loan amount < NPR 10 million	Binary
PostPolicy	1 if process-initiation date is on or after 17 Sept 2024; intended policy exposure	Binary
SmallLoan × PostPolicy	Relative-change interaction for more-exposed small loans	Binary interaction
Branch fixed effects	Controls for time-invariant branch differences	Categorical

Variable	Definition	Measurement
Month-year fixed effects	Controls for common time shocks	Time effect
Loan-type fixed effects	Controls for business vs. personal loan differences	Categorical
Overdue days	Recorded number of days past due	Continuous (days)
NPL amount	Recorded amount classified as non-performing	Continuous (NPR)
Actual processing mode	Recorded central or branch processing route	Categorical
Outstanding balance	Recorded loan balance equal to the sum of regulatory classification balances	Continuous (NPR)
Exposure-weighted NPL ratio	NPL balance divided by total outstanding balance	Ratio
Exposure-weighted WatchList ratio	WatchList balance divided by total outstanding balance	Ratio
Classification category	Pass, WatchList, Substandard, Doubtful, Restructured, or Loss	Categorical

Notes. Policy timing is assigned using the process-initiation date, with loans initiated on or after 17 September 2024 classified as post-policy. Because not all post-policy loans were actually routed centrally, this indicator represents intended policy exposure rather than confirmed centralized processing. The design is therefore an intention-to-treat-style policy-period comparison. Actual processing mode is assessed separately using the administrative routing record.

Credit risk is measured using binary NPL and WatchList indicators, overdue days, category-specific balances, and the recorded outstanding loan balance. The outstanding balance reconciles to the sum of Pass, WatchList, Substandard, Doubtful, Restructured, and Loss balances in all analytical records, allowing exposure-weighted NPL and WatchList ratios to supplement binary incidence measures. NPL amount equals the combined Substandard, Doubtful, Restructured, and Loss balances. The extract does not contain a separate regulatory provision amount, so provisioning is discussed by classification category rather than estimated as a monetary provision.

Identification and Empirical Strategy

Policy-associated relative changes are estimated using the following fixed-effects specification:

$$Y_{ibt} = \alpha + \beta_1 \text{Small}_i + \beta_2 (\text{Post}_t \times \text{Small}_i) + \mu_b + \lambda_t + \theta_l + \varepsilon_{ibt}$$

where Y_{ibt} denotes the outcome for loan i associated with branch b in month-year t , estimated separately for approval time, disbursement time, NPL status, and WatchList status. Small_i equals one for loans below NPR 10 million, and Post_t equals one for loans initiated on or after 17 September 2024. The standalone Post_t coefficient is omitted from the reported fixed-effects specification. With month-year fixed effects, a Post_t main effect would be identified only from within-September 2024 observations around the mid-month cutoff rather than from the general post-reform period and would not have a meaningful overall post-policy interpretation. The coefficient β_2 on $\text{Post}_t \times \text{Small}_i$ is the parameter of interest and measures whether outcomes for the more-exposed small-loan group changed differently from those for the less-exposed large-loan group. Branch fixed effects μ_b , month-year fixed effects λ_t , and loan-type fixed effects θ_l are included, and standard errors are clustered at the branch level.

NPL and WatchList outcomes are estimated using linear probability models, whose interaction coefficients are directly interpretable as relative changes in probability. Because these outcomes are uncommon, predicted-probability diagnostics are reported in Appendix Table A7A. The NPL model produces fitted values below zero for 32.2 percent of observations and the WatchList model for 16.1 percent, although neither model produces fitted values above one. These diagnostics reinforce cautious interpretation of the linear probability estimates. Seasoning sensitivity is assessed by adding loan-age controls and by restricting the sample to loans observed for at least six or twelve months after disbursement. Identification is further assessed through pre-reform trends and an event-study specification.

$$Y_{ibt} = \alpha + \sum_{m \neq -1} \beta_m \mathbf{1}(\text{RelMonth}_t = m) \times \text{Small}_i + \mu_b + \theta_l + \lambda_t + \varepsilon_{ibt}$$

where $RelMonth_t$ is the difference in calendar months between the loan process-initiation month and September 2024. September 2024 is coded as $m = 0$, August 2024 as $m = -1$, October 2024 as $m = +1$, and November 2025 as $m = +14$. August 2024 is the omitted reference category. The event-study window therefore extends from September 2023 ($m = -12$) to November 2025 ($m = +14$). The extract contains process-initiation records through 30 November 2025, confirming that $m = +14$ is a complete calendar month. Because the reform took effect on 17 September 2024, $m = 0$ is a mixed partial-treatment month and is interpreted cautiously. The transition-period sensitivity excludes August, September, and October 2024. Exposure changed at a common policy date rather than through staggered adoption, so the usual negative-weighting concern in staggered two-way fixed-effects designs does not arise.

Data and Descriptive Statistics

The administrative extract contains 22,831 loan records with process-initiation dates from 1 July 2020 through 30 November 2025. Memo-based approvals (40) and restructuring cases (4) are excluded because they fall outside the normal workflow, and 163 records with missing funded amounts are excluded because the loan-size group cannot be assigned. The final analytical sample contains 22,624 observations; descriptive tables not requiring the size classification use 22,787 observations. No exact duplicate rows or negative processing durations were identified. Sixty-two paired records share customer, initiation date, approval date, funded amount, and proposal type but represent distinct products or facilities with different outstanding balances and are retained. Same-day processing is recorded for 420 approvals and 4,446 disbursements and is retained as valid. There are 186 approval durations and 940 disbursement durations above 365 days; these are retained in the main analysis but excluded in a robustness check. The extract has one disbursement-date formatting error (202400703), reconciled to 3 July 2024 using the approval date and recorded 27-day disbursement time. Reopened-file histories, multiple disbursement tranches, and formal branch-transfer events cannot be identified because the extract contains one processing record and one disbursement date per row without version or transfer-history fields. Eight customers appear in more than one branch, but their records are retained as separate loan facilities rather than treated as confirmed transfers. Table 2A summarizes these validation checks. Confirmed exclusions and the resulting analytical sample are reported.

Table 2 *Sample construction*

Step	Reason	Removed	Remaining
Raw dataset	Initial administrative loan records	-	22,831
Remove memo-based approvals	Outside normal credit workflow	40	22,791
Remove restructuring cases	Distressed-loan modifications	4	22,787
Remove missing funded amount	Treatment group cannot be assigned	163	22,624
Final analytical sample	Total exclusions: 207	-	22,624

Table 2A *Administrative-record validation checks*

Check	Result	Treatment
Exact duplicate rows	0	No duplicate deletion required
Matched multi-facility pairs	62 pairs	Retained; distinct products/facilities and balances
Zero-day approvals	420	Retained as valid same-day processing
Zero-day disbursements	4,446	Retained as valid same-day processing
Negative durations	0	No correction required
Durations >365 days	186 approval; 940 disbursement	Retained in main sample; excluded in robustness
Malformed disbursement date	1	Reconciled to 3 July 2024 using TAT2
Reopened files / multiple tranches	Not separately identifiable	Recorded as a limitation
Customers appearing in >1 branch	8	Retained as separate facilities; not classified as transfers

Notes. The extract has no application-version, tranche-history, or transfer-history fields; therefore reopened files, multiple disbursement tranches, and formal branch transfers cannot be verified directly.

The total number of observations is similar across periods (11,842 pre-policy and 10,945 post-policy), but the loan-purpose composition changes sharply. New loans increase from 8,920 to 9,685 (8.6 percent), while renewals fall from 1,711 to 552 (67.7 percent) and extensions fall from 1,211 to 708 (41.5 percent). Aggregate pre-post differences may therefore reflect changes in workflow mix as well as centralization. Loan-purpose-specific estimates are treated as a central part of the analysis rather than a secondary heterogeneity exercise. By loan type, business loans account for 9,822 observations and personal loans for 12,965 observations.

Table 3 *Sample composition by loan purpose and policy period*

Loan purpose	Pre-policy	Post-policy	Total	Share (%)
New	8,920	9,685	18,605	81.6
Renew	1,711	552	2,263	9.9
Extension	1,211	708	1,919	8.4
Total	11,842	10,945	22,787	100.0

Table 4 *Sample composition by loan type*

Loan type	Pre-policy	Post-policy	Total	Share (%)
Business	6,336	3,486	9,822	43.1
Personal	5,506	7,459	12,965	56.9
Total	11,842	10,945	22,787	100.0

Table 5 reports summary statistics by loan size and policy period. Large loans are fewer and have much higher average funded amounts. Their mean pre-policy approval and disbursement times are also substantially longer, while the post-policy large-loan group contains only 354 observations. Tables 5A and 5B report medians and percentile distributions. The difference between means and medians—especially for pre-policy disbursement time—shows that extreme and legacy-duration files materially affect averages. The descriptive changes are therefore interpreted alongside distributional and outlier-robust results rather than as causal effects.

Table 5 *Summary statistics by loan size and policy period*

Group	Period	Approval time	Disb. time	NPL (%)	WatchList (%)	Funded (NPR m)	N
Large	Pre	77.3	153.8	9.21	24.46	29.35	977
Large	Post	33.1	27.7	0.85	5.37	33.60	354
Small	Pre	27.9	72.0	2.79	9.13	2.99	10,726
Small	Post	25.8	14.0	0.27	2.82	2.33	10,567

Table 5A *Distribution of approval time by loan size and policy period*

Group	Period	Mean	P25	Median	P75	P90
Large	Pre	77.3	17.0	37.0	88.0	181.0
Large	Post	33.1	9.0	21.0	42.0	79.7
Small	Pre	27.9	3.0	8.0	22.0	54.0
Small	Post	25.8	10.0	19.0	32.0	53.0

Notes. Values are days. Percentiles show the distribution and reduce reliance on means affected by extreme files.

Table 5B *Distribution of disbursement time by loan size and policy period*

Group	Period	Mean	P25	Median	P75	P90
Large	Pre	153.8	9.0	22.0	71.0	715.4
Large	Post	27.7	9.0	18.0	33.0	65.7
Small	Pre	72.0	1.0	5.0	18.0	180.5
Small	Post	14.0	2.0	8.0	17.0	33.0

Notes: Values are days. The large gap between means and medians in the pre-policy period indicates strong right-skewness. Approval and disbursement times are in days; NPL and WatchList rates are percentages; funded amount is in NPR million. The four groups sum to 22,624 observations. Values are descriptive group means and should not be interpreted as causal effects.

Table 6 documents differential implementation rather than full treatment compliance. Before the reform, 27.3 percent of small loans and 84.5 percent of large loans were centrally processed; after the reform,

the shares rose to 94.9 percent and 98.3 percent, respectively. Thus, small loans were much more exposed to the policy change, but large loans were also affected. The administrative extract does not identify why 5.1 percent of post-policy small loans remained branch-processed; these cases may reflect authorized exceptions, transitional routing, data coding, or other operational circumstances. Actual processing mode is therefore used as a compliance diagnostic rather than as an exogenous treatment indicator.

Table 6 *Processing mode by loan size and policy period*

Group	Period	N	Centrally processed (%)	Branch processed (%)
Large	Pre-policy	977	84.5	15.5
Large	Post-policy	354	98.3	1.7
Small	Pre-policy	10,726	27.3	72.7
Small	Post-policy	10,567	94.9	5.1

4 Results and Discussion

Descriptive Statistics

Table 7 reports descriptive statistics for the main variables. Mean approval time is 29.26 days with a standard deviation of 61.34 days, while mean disbursement time is 49.60 days with a standard deviation of 165.46 days. The corresponding medians are 14 and 7 days. Maximum durations of 1,271 and 1,575 days indicate extreme or legacy files. The binary NPL and WatchList rates are 1.9 percent and 6.8 percent. Zero-day records are retained as valid same-day processing, and no negative duration is present. Results excluding durations above 365 days and using 99th-percentile winsorization are reported in Appendix Table A7B.

Table 7 *Descriptive statistics of the analytical sample*

Variable	N	Mean	Std. dev.	Min	Max
Approval time (days)	22,787	29.26	61.34	0	1271
Disbursement time (days)	22,787	49.60	165.46	0	1575
Funded loan amount (NPR m)	22,624	4.30	22.63	0.00	1950.00
Overdue days	22,787	8.11	41.33	0	1200
NPL amount (NPR m)	22,787	0.14	2.95	0.00	259.71
NPL status	22,787	0.019	0.137	0	1
WatchList status	22,787	0.068	0.252	0	1
Small-loan indicator	22,624	0.941	0.235	0	1
Post-policy indicator	22,787	0.480	0.500	0	1

Notes. Observation counts differ because variables not requiring funded-amount classification use 22,787 records, whereas loan-size-based analyses use the 22,624-record analytical sample.

Credit-Risk Patterns by Loan Size and Policy Period

Table 8 presents binary NPL and WatchList incidence by loan size and policy period. NPL incidence falls from 9.21 to 0.85 percent for large loans and from 2.79 to 0.27 percent for small loans; WatchList incidence also declines in both groups. These are early-horizon patterns because post-policy loans are younger. Table 8A supplements incidence with outstanding-balance-weighted measures. The large-loan NPL exposure ratio declines from 8.66 to 0.35 percent, while the small-loan ratio declines from 3.17 to 0.20 percent. The corresponding WatchList exposure ratios decline from 19.74 to 6.31 percent and from 10.83 to 3.04 percent. Common-seasoning checks substantially attenuate the relative NPL result, so the descriptive declines are not interpreted as evidence that the reform reduced mature credit risk.

Table 8 *NPL and WatchList incidence by loan size and policy period*

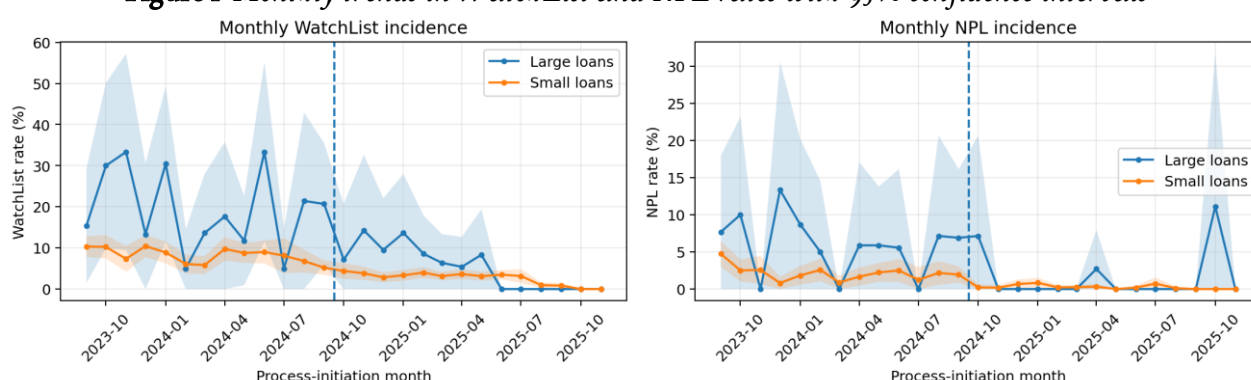
Group	Period	N	NPL rate (%)	WatchList rate (%)	Mean loan size (NPR m)
Large	Pre-policy	977	9.21	24.46	29.35
Large	Post-policy	354	0.85	5.37	33.60
Small	Pre-policy	10,726	2.79	9.13	2.99
Small	Post-policy	10,567	0.27	2.82	2.33

Table 8A Exposure-weighted credit-risk indicators by loan size and policy period

Group	Period	Outstanding balance (NPR m)	NPL exposure (%)	WatchList exposure (%)	Substandard (%)	Doubtful (%)	Loss (%)
Large	Pre	24,728.2	8.66	19.74	3.64	0.86	3.69
Large	Post	9,634.5	0.35	6.31	0.14	0.00	0.21
Small	Pre	27,880.2	3.17	10.83	1.78	0.43	0.96
Small	Post	21,339.8	0.20	3.04	0.09	0.04	0.08

Notes: Ratios use recorded outstanding LoanAmount as the denominator. NPL exposure includes Substandard, Doubtful, Restructured, and Loss balances. Restructured exposure is 0.48 percent for large pre-policy loans and zero in the other three groups. Separate provision amounts are unavailable.

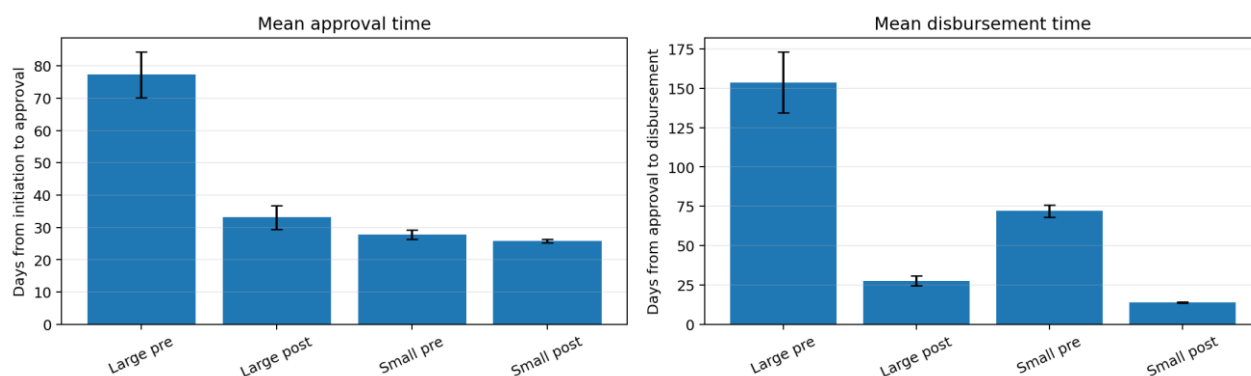
Figure 1 plots monthly WatchList and NPL incidence with 95 percent confidence intervals. Rates for large loans are volatile because some monthly cells contain fewer than 20 observations. Appendix Table A8A therefore reports the monthly denominators for both groups. The figure is descriptive and no causal interpretation is attached to the visual decline.

Figure 1 Monthly trends in WatchList and NPL rates with 95% confidence intervals

Notes. Each panel plots monthly incidence by loan-size group with normal-approximation 95 percent confidence intervals. The vertical dashed line marks 17 September 2024. Monthly group counts are reported in Appendix Table A8A.

Processing Efficiency by Loan Size and Policy Period

Average processing time is lower after the policy date for both groups, but the descriptive decline is much larger for large loans, which were already predominantly centralized. The large–small approval-time gap falls from 49.4 days before the policy to 7.3 days afterward, while the disbursement-time gap falls from 81.7 to 13.7 days. Medians show a more modest distributional change: large-loan approval time falls from 37 to 21 days and small-loan approval time rises from 8 to 19 days. This convergence is not evidence of reform success because the groups have different baselines, the post-policy large-loan sample is small, and extreme files and concurrent bank-wide changes affect means. Figure 2 and Table 9 are descriptive summaries only.

Figure 2 Mean loan processing time by loan size and policy period

Notes. The figure illustrates average approval time and disbursement time by loan size and policy period; exact mean values are reported in Table 9. Any intervals shown are 95 percent confidence intervals around the group means.

Table 9 Mean loan processing time by loan size and policy period

Group	Approval pre	Approval post	Δ	Disb. pre	Disb. post	Δ	N pre	N post
Small	27.9	25.8	-2.0	72.0	14.0	-58.0	10,726	10,567
Large	77.3	33.1	-44.2	153.8	27.7	-126.1	977	354

Notes: Approval time is days from process initiation to approval; disbursement time is days from approval to disbursement. Δ equals the post-policy mean minus the pre-policy mean, so negative values indicate shorter processing time.

Structured Relative-Change Estimates

Table 10 presents fixed-effects relative-change estimates. The event-study joint tests support parallel pre-trends for approval time, NPL status, and WatchList status but reject them for disbursement time. The comparison group also experienced further centralization. The estimates are therefore interpreted as institution-specific relative associations rather than causal treatment effects. The interaction term measures whether outcomes for small loans changed differently after the policy date relative to large loans, conditional on branch, month-year, and loan-type fixed effects.

Table 10 Fixed-effects relative-change estimates

	Approval time	Disbursement time	NPL status	WatchList status
Post-policy main effect	Omitted / not separately interpreted	Omitted / not separately interpreted	Omitted / not separately interpreted	Omitted / not separately interpreted
Small loan	-27.813*** (3.512)	-5.624 (11.069)	-0.0424*** (0.0083)	-0.1036*** (0.0148)
Post $\times$ Small loan	17.720*** (3.249)	-1.417 (8.201)	0.0151** (0.0071)	0.0553*** (0.0160)
Branch FE	Yes	Yes	Yes	Yes
Month-year FE	Yes	Yes	Yes	Yes
Loan-type FE	Yes	Yes	Yes	Yes
Observations	22,624	22,624	22,624	22,624
R-squared	0.179	0.177	0.062	0.087

Notes. Dependent variables are approval time (days), disbursement time (days), NPL status, and WatchList status. NPL and WatchList are estimated as linear probability models. Branch-clustered standard errors are in parentheses. All models include branch, month-year, and loan-type fixed effects. The standalone PostPolicy effect is absorbed by month-year fixed effects and is not separately estimated. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The approval-time interaction is 17.72 days and statistically significant, indicating that small loans experienced a smaller relative reduction than large loans after the policy date. This does not mean that small loans became slower in absolute mean terms and does not establish a causal reform effect. The disbursement-time interaction is -1.42 days and statistically insignificant. The NPL and WatchList interactions are 1.51 and 5.53 percentage points, respectively, indicating smaller relative declines among small loans. The NPL interaction becomes small and insignificant in the common six-month seasoning sample, while the WatchList interaction remains positive but smaller; both are imprecise in the twelve-month sample. Credit-risk findings are therefore treated as early-horizon and seasoning-sensitive.

Primary Results by Loan Purpose

New loans, renewals, and extensions follow distinct credit workflows, documentation requirements, and risk-review standards. Their composition also changes sharply after the policy date. Purpose-specific estimates are therefore treated as primary complementary results rather than a secondary exercise. Tables 11–14 report the interaction estimates separately for new loans, renewals, and extensions; the pooled estimates should be understood as averages across these heterogeneous workflows.

Table 11 Relative-change estimates for approval time, by loan purpose

	New	Renew	Extension
Post × Small loan	21.977*** (2.935)	-32.315 (21.197)	3.738 (12.957)
Branch / Month-year / Loan-type FE	Yes	Yes	Yes
Observations	18,493	2,246	1,885

The approval-time estimates vary across workflows. The interaction is positive and statistically significant for new loans (21.98 days), negative and imprecise for renewals and small and imprecise for extensions. The pooled approval-time result is therefore driven mainly by new-loan files rather than a uniform pattern across all credit workflows.

Table 12 Relative-change estimates for disbursement time, by loan purpose

	New	Renew	Extension
Post × Small loan	-12.988** (6.465)	45.937 (36.168)	-16.457 (19.719)
Branch / Month-year / Loan-type FE	Yes	Yes	Yes
Observations	18,493	2,246	1,885

The disbursement-time interaction is negative and statistically significant for new loans (-12.99 days), but positive and imprecise for renewals and negative and imprecise for extensions. These estimates do not show a consistent pattern across workflows. Credit-risk estimates are presented only as early-horizon associations. Post-policy files have shorter seasoning periods, and purpose-specific cells—especially renewals and extensions—are comparatively small.

Table 13 Relative-change estimates for NPL status, by loan purpose

	New	Renew	Extension
Post × Small loan	0.0174** (0.0081)	-0.1390 (0.0980)	0.0165 (0.0306)
Branch / Month-year / Loan-type FE	Yes	Yes	Yes
Observations	18,493	2,246	1,885

For new loans, the NPL interaction is positive (1.74 percentage points) and statistically significant, while the renewal and extension estimates are imprecise. Because the common-seasoning analysis weakens the pooled NPL result, these purpose-specific coefficients should not be interpreted as default effects.

Table 14 Relative-change estimates for WatchList status, by loan purpose

	New	Renew	Extension
Post × Small loan	0.0741*** (0.0175)	-0.0841 (0.0884)	-0.0439 (0.0668)
Branch / Month-year / Loan-type FE	Yes	Yes	Yes
Observations	18,493	2,246	1,885

Notes for Tables 11–14. Each column reports a separate loan-purpose-specific regression. Observation counts exclude records with missing funded amounts because valid loan-size classification is required to construct the SmallLoan indicator and its interaction with the post-policy period.

The WatchList interaction is positive and statistically significant for new loans (7.41 percentage points), while renewal and extension estimates are statistically imprecise. These coefficients describe relative classification differences and cannot be attributed to improved detection without evidence of changes in monitoring rules or review intensity.

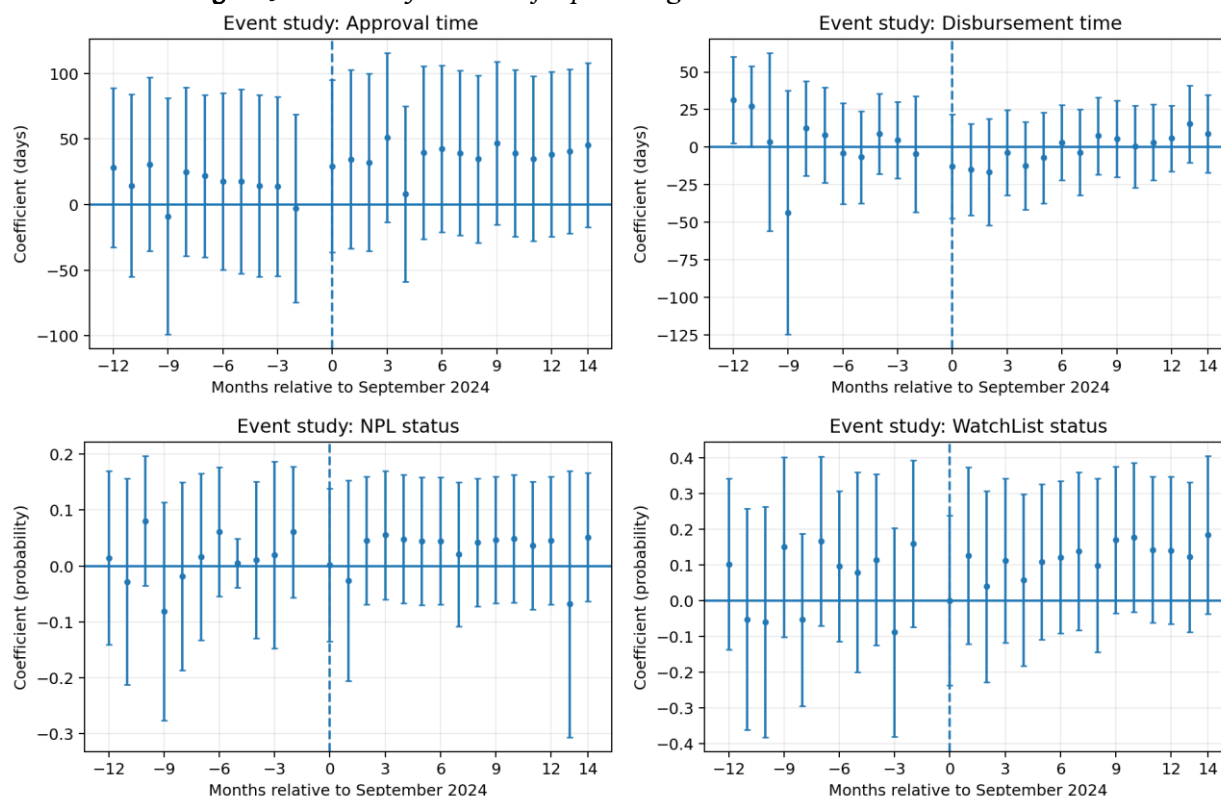
Event-Study Evidence and Robustness

Figure 3 presents event-study estimates of monthly small–large differences relative to August 2024. The joint pre-trend test does not reject parallel trends for approval time ($p = 0.954$), NPL status ($p = 0.166$), or WatchList status ($p = 0.308$), but rejects the assumption for disbursement time ($p = 0.011$). The event study therefore supports a more cautious interpretation for disbursement time, while the remaining outcomes still face comparison-group contamination, composition changes, and unequal seasoning.

Appendix Table A5 reports the joint pre-trend tests. The placebo estimates are insignificant at the 5 percent level, although the approval-time placebo is marginal at the 10 percent level ($p = 0.098$). Excluding August–October 2024 leaves the processing-time interactions similar but increases the binary risk

interactions. Restricting the sample to September 2022 onward preserves the approval-time result, leaves disbursement imprecise, and renders the NPL interaction insignificant. Outlier and seasoning checks are reported in Tables A7A–A7B. These results do not eliminate alternative explanations such as macro credit conditions, borrower-demand shifts, branch workload, staffing, portfolio composition, digital workflow changes, or regression to the mean.

Figure 3 Event-study estimates for processing time and credit-risk outcomes



Notes. Each panel plots coefficients from an event-study regression of the outcome on month-relative-to-policy indicators interacted with the small-loan indicator, with branch, month-year, and loan-type fixed effects. The omitted category is month -1 ; vertical dashed lines mark the policy month, and bars show 95 percent confidence intervals.

The September 2024 policy change is associated with mixed relative patterns in operational efficiency. Mean approval time declines from 77.3 to 33.1 days for large loans and from 27.9 to 25.8 days for small loans, but medians move from 37 to 21 days and from 8 to 19 days, respectively. The fixed-effects estimate indicates a smaller relative approval-time reduction for small loans, while the disbursement interaction is statistically insignificant. The larger mean decline among already-centralized large loans, together with baseline imbalance and extreme-duration files, indicates that bank-wide process changes and regression to the mean may explain part of the pattern. The evidence does not support blanket centralization for small or rural credit.

Credit-risk findings remain uncertain. Exposure-weighted ratios confirm descriptive declines in both groups, but post-policy loans have shorter seasoning periods. The pooled NPL interaction becomes statistically insignificant when a common six-month observation period is imposed, while the WatchList interaction becomes smaller. Twelve-month estimates are imprecise because relatively few post-policy files have matured for a full year. The practical implication is to maintain longer-horizon, exposure-weighted portfolio monitoring rather than conclude that centralization improved credit quality.

5 Conclusion

This paper provides an institution-specific evaluation of ADBL's September 2024 credit-approval reform using 22,624 loan records initiated between July 2020 and November 2025. Mean processing times decline

in both groups, but the largest changes occur among large loans that were already predominantly centralized. Fixed-effects estimates indicate a smaller relative approval-time reduction for small loans and no significant relative disbursement-time change. Binary credit-risk differences are sensitive to loan seasoning, and large loans are a less-exposed rather than untreated comparison group. The results should therefore be interpreted as policy-associated relative changes, not causal effects of centralization.

For ADBL, the appropriate response is an operationally differentiated framework rather than blanket centralization. The bank should define delegated approval limits by loan size, risk grade, borrower type, and complexity; establish service-level standards for each workflow; record file returns, resubmissions, withdrawals, and exceptions; require periodic independent credit review; and maintain an MIS dashboard covering approval time, SLA compliance, routing exceptions, WatchList migration, NPL exposure, and branch workload. Larger and more complex loans may remain subject to centralized specialist review, while routine small loans and well-performing repeat borrowers may use streamlined pathways under central standards and exception reporting.

Several limitations remain. The study covers one public-sector bank and is not representative of Nepal's banking sector. Small and large loans differ in borrower, collateral, purpose, documentation, and monitoring characteristics, and both groups experienced greater centralization. Disbursement time fails the parallel-trends test. The completed-file sample may omit rejected, withdrawn, repeatedly returned, and unresolved applications, while reopened-file histories, multiple disbursement tranches, and formal branch transfers are not recorded. Extreme durations, the small post-policy large-loan sample, sharp shifts in loan-purpose composition, and unequal seasoning affect interpretation. Exposure-weighted risk is reported, but the extract does not include separate provision amounts or a complete application-pipeline history. Future work should extend the post-policy horizon, capture rejection and SLA outcomes, and compare multiple institutions.

AI Use Declaration

AI tools were used only for language editing and paraphrasing. The data are authentic, and all analysis and regressions were conducted by the author in RStudio.

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Appendix

This appendix reports the event-study coefficients underlying Figure 3 (Tables A1–A4), joint pre-trend tests (Table A5), placebo and transition-window checks (Tables A6–A7), rare-outcome and seasoning diagnostics (Table A7A), processing-time robustness (Table A7B), provincial coverage (Table A8), and monthly group counts (Table A8A). All estimates are relative small-large differences and should not be interpreted as causal effects where identification limitations remain.

Table A1 Event-study coefficients for approval time, months -12 to $+14$

Month rel. to reform	Coefficient	Std. error	p-value
-12	28.309	31.004	0.3620
-11	14.441	35.427	0.6839
-10	30.700	33.773	0.3641
-9	-8.874	45.911	0.8469
-8	25.068	32.688	0.4438
-7	21.803	31.460	0.4889
-6	17.809	34.295	0.6040
-5	17.589	35.803	0.6236
-4	14.529	35.337	0.6813
-3	13.790	34.775	0.6920
-2	-2.938	36.547	0.9360
0	29.308	33.449	0.3817
+1	34.648	34.764	0.3198
+2	32.231	34.531	0.3514
+3	51.142	32.875	0.1209
+4	8.056	34.076	0.8133
+5	39.694	33.555	0.2379
+6	42.716	32.428	0.1889
+7	39.349	32.041	0.2205
+8	34.820	32.546	0.2856
+9	46.837	31.716	0.1409
+10	39.328	32.454	0.2266
+11	35.053	31.981	0.2740
+12	38.293	32.023	0.2328
+13	40.814	31.927	0.2022
+14	45.279	31.884	0.1567

Notes. Coefficients are relative small-large differences in approval time (days) compared with August 2024 ($m = -1$). The joint pre-trend test does not reject parallel trends. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A2 Event-study coefficients for disbursement time, months -12 to $+14$

Month rel. to reform	Coefficient	Std. error	p-value
-12	31.438**	14.733	0.0337
-11	27.087*	13.799	0.0507
-10	3.474	30.231	0.9086
-9	-43.491	41.418	0.2946
-8	12.488	16.052	0.4373
-7	8.182	16.165	0.6132
-6	-4.112	17.161	0.8108
-5	-6.635	15.695	0.6728
-4	9.035	13.640	0.5083
-3	4.646	12.937	0.7198
-2	-4.623	19.632	0.8140
0	-12.797	17.578	0.4672
+1	-14.943	15.549	0.3374
+2	-16.619	18.102	0.3594
+3	-3.737	14.447	0.7961
+4	-12.438	14.884	0.4041
+5	-7.035	15.444	0.6491
+6	3.109	12.694	0.8067
+7	-3.463	14.541	0.8119
+8	7.470	13.185	0.5715
+9	5.661	12.951	0.6624
+10	0.430	13.906	0.9754
+11	3.230	12.921	0.8028
+12	5.796	11.249	0.6068
+13	15.386	13.179	0.2440
+14	9.068	13.210	0.4930

Notes. Coefficients are relative small-large differences in disbursement time (days) compared with August 2024. The joint pre-trend test rejects parallel trends, so post-policy estimates are interpreted cautiously. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A3 Event-study coefficients for NPL status, months -12 to $+14$

Month rel. to reform	Coefficient	Std. error	p-value
-12	0.0146	0.0794	0.8538
-11	-0.0280	0.0939	0.7657
-10	0.0809	0.0591	0.1727
-9	-0.0812	0.0995	0.4151
-8	-0.0182	0.0858	0.8318
-7	0.0161	0.0759	0.8318
-6	0.0609	0.0589	0.3019
-5	0.0049	0.0222	0.8243
-4	0.0106	0.0713	0.8825
-3	0.0196	0.0851	0.8181
-2	0.0608	0.0596	0.3093
0	0.0018	0.0698	0.9794
+1	-0.0265	0.0915	0.7726
+2	0.0453	0.0583	0.4373
+3	0.0553	0.0585	0.3456
+4	0.0483	0.0584	0.4089
+5	0.0441	0.0582	0.4496
+6	0.0446	0.0581	0.4434
+7	0.0205	0.0658	0.7552
+8	0.0421	0.0582	0.4694
+9	0.0468	0.0580	0.4206
+10	0.0487	0.0583	0.4049
+11	0.0366	0.0581	0.5289
+12	0.0461	0.0583	0.4301
+13	-0.0680	0.1216	0.5766
+14	0.0514	0.0586	0.3811

Notes. Coefficients are relative small-large differences in NPL incidence compared with August 2024. The joint pre-trend test does not reject parallel trends, but unequal seasoning and rare outcomes remain important limitations. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A4 Event-study coefficients for WatchList status, months -12 to $+14$

Month rel. to reform	Coefficient	Std. error	p-value
-12	0.1024	0.1223	0.4032
-11	-0.0519	0.1580	0.7425
-10	-0.0598	0.1648	0.7170
-9	0.1501	0.1282	0.2430
-8	-0.0534	0.1229	0.6646
-7	0.1663	0.1211	0.1709
-6	0.0964	0.1073	0.3698
-5	0.0790	0.1427	0.5804
-4	0.1146	0.1219	0.3479
-3	-0.0885	0.1488	0.5525
-2	0.1591	0.1189	0.1820
0	0.0007	0.1214	0.9954
+1	0.1260	0.1265	0.3200
+2	0.0396	0.1368	0.7726
+3	0.1125	0.1176	0.3396
+4	0.0576	0.1224	0.6385
+5	0.1092	0.1109	0.3258
+6	0.1215	0.1085	0.2640
+7	0.1380	0.1128	0.2224
+8	0.0984	0.1239	0.4278
+9	0.1700	0.1046	0.1052
+10	0.1763*	0.1065	0.0991
+11	0.1426	0.1045	0.1736
+12	0.1410	0.1048	0.1798
+13	0.1219	0.1069	0.2553
+14	0.1838	0.1129	0.1047

Notes. Coefficients are relative small-large differences in WatchList incidence compared with August 2024. The joint pre-trend test does not reject parallel trends. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

Table A5 Joint pre-trend tests for event-study coefficients

Outcome	Months tested	F-statistic	p-value	Interpretation
Approval time	-12 to -2	0.402	0.9543	Parallel trends supported
Disbursement time	-12 to -2	2.278	0.0113	Pre-trend present; caution
NPL status	-12 to -2	1.413	0.1664	Parallel trends supported
WatchList status	-12 to -2	1.170	0.3077	Parallel trends supported

Notes. Each row reports a joint Wald F-test for the null that the pre-reform event-study interaction coefficients for months -12 through -2 are jointly zero. Failure to reject is consistent with, but does not prove, parallel pre-trends.

Table A6 Placebo test (false reform date: 17 September 2023)

Outcome	Placebo coef.	Std. error	t-statistic	p-value	Significant?
Approval time	-8.016	4.824	-1.662	0.0978	Marginal at 10%
Disbursement time	-4.281	10.911	-0.392	0.6951	No
NPL status	+0.0193	0.0127	1.526	0.1283	No
WatchList status	+0.0339	0.0256	1.327	0.1857	No

Notes. Models are estimated on the 11,703 pre-policy observations using a false reform date of 17 September 2023. All include branch, month-year, and loan-type fixed effects with branch-clustered standard errors. Approval time is marginal at the 10 percent level; the other placebo coefficients are not statistically significant.

Table A7 Robustness: transition period excluded and restricted pre-policy window

Outcome	Main estimate (SE)	Excl. transition (SE)	Sep 2022 onward (SE)
Approval time	17.720*** (3.249)	17.911*** (4.699)	20.634*** (3.455)
Disbursement time	-1.417 (8.201)	-0.195 (13.269)	-7.879 (4.841)
NPL status	0.0151** (0.0071)	0.0411*** (0.0097)	0.0069 (0.0084)
WatchList status	0.0553*** (0.0160)	0.1002*** (0.0215)	0.0402** (0.0173)

Table A7A Rare-outcome diagnostics and seasoning sensitivity

Outcome	Main	+ Loan-age controls	≥6 months seasoned	≥12 months seasoned
NPL status	0.0151** (0.0071)	0.0150** (0.0071)	0.0049 (0.0072)	-0.0108 (0.0092)
WatchList status	0.0553*** (0.0160)	0.0551*** (0.0161)	0.0354** (0.0173)	-0.0151 (0.0209)
Observations	22,624	22,624	17,808	11,826

Notes. Loan age is measured from disbursement to the December 2025 extract date. The ≥12-month specification contains only 719 post-policy small-loan observations. LPM fitted-value diagnostics: NPL minimum -0.052, 32.2 percent below zero, none above one; WatchList minimum -0.110, 16.1 percent below zero, none above one.

Table A7B Processing-time outlier and transformation sensitivity

Outcome	Main	Exclude >365-day files	99th-percentile winsorized	Log(1 + days)
Approval time	17.720*** (3.249)	18.362*** (2.664)	18.173*** (2.727)	0.902*** (0.074)
Disbursement time	-1.417 (8.201)	-0.229 (2.186)	-0.367 (7.623)	0.203*** (0.078)
Observations	22,624	21,510	22,624	22,624

Notes. The approval-time interaction remains positive across checks. The disbursement interaction remains insignificant in levels and winsorized specifications, while the log specification indicates a proportional difference that should be interpreted cautiously because many records have zero days.

Notes: The transition-period specification excludes all observations initiated in August, September, and October 2024 (1,450 observations), including the mixed policy month. The restricted-window specification begins in September 2022 (2,351 observations excluded). All models include branch, month-year, and loan-type fixed effects with branch-clustered standard errors. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$.

The analytical sample spans 275 branches across all seven provinces, with the largest shares in Bagmati, Lumbini, and Koshi. This broad geographic coverage describes ADBL's portfolio but does not establish external validity beyond the bank. Branch fixed effects absorb time-invariant branch differences but do not rule out province-specific or time-varying shocks.

Table A8 Provincial distribution of loan observations and branches

Province	Pre-policy	Post-policy	Total	Share (%)	Branches
Bagmati (Province 3)	3,719	3,212	6,931	30.6	66
Lumbini (Province 5)	2,517	2,068	4,585	20.3	46
Koshi (Province 1)	1,901	1,957	3,858	17.1	45
Madhesh (Province 2)	1,370	1,382	2,752	12.2	42
Sudurpashchim (Province 7)	1,013	792	1,805	8.0	25
Gandaki (Province 4)	702	967	1,669	7.4	30
Karnali (Province 6)	481	543	1,024	4.5	21
Total	11,703	10,921	22,624	100.0	275

Table A8A Monthly observation counts underlying Figure 1

Month	Large loans (N)	Small loans (N)
2023-09	26	570
2023-10	20	439
2023-11	15	272
2023-12	15	488
2024-01	23	438
2024-02	20	426
2024-03	22	446
2024-04	17	420
2024-05	34	536
2024-06	18	400
2024-07	20	160
2024-08	14	323
2024-09	29	615
2024-10	14	455
2024-11	14	547
2024-12	21	736
2025-01	22	717
2025-02	35	898
2025-03	47	1,172
2025-04	37	904
2025-05	24	1,018
2025-06	43	1,003
2025-07	30	410
2025-08	22	841
2025-09	15	715
2025-10	9	456
2025-11	10	419

Notes: Counts show that monthly large-loan cells are small, ranging from 9 to 47 observations, which explains the volatility and wide confidence intervals in Figure 1.

Notes. The analytical sample contains 22,624 observations from 275 unique branches. ADBL's full network comprises 285 branches, so ten branches did not contribute eligible analytical records during the observation period. Geographic coverage should not be interpreted as sector-wide representativeness.