

A Policy Brief for "The Empirical Analysis of Bank Instant Payment System"

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Introduction

Instant payment systems (IPS) are transforming the speed and timing of fund transfers. While the consumer benefits of IPS—convenience, accessibility, and real-time settlement—are widely recognized, their implications for banking behavior remain under-explored. This brief investigates how IPS adoption influences banks' liquidity positions and risk decisions, and outlines policy recommendations drawn from empirical evidence.

Banks operate under regulatory and liquidity constraints that influence portfolio decisions. The introduction of IPS changes the timing and predictability of fund flows, especially for demand deposits, potentially affecting liquidity coverage strategies, interest rate sensitivity, and exposure to balance sheet risk. These structural adjustments may carry systemic consequences, particularly for smaller institutions with tighter liquidity buffers.

Data and Methodology

This study uses panel data covering commercial banks over a multi-year period surrounding the rollout of a national instant payment system. A staggered difference-in-differences (DiD) approach is employed, leveraging variation in IPS exposure across banks and over time. Control variables include bank size, financial stability, and liquidity risk. I also control for variations in asset holdings and lending activity.

Key Empirical Findings

- **Liquidity Composition Shift:** Treated banks experienced an increase in demand deposits and a reduction in time deposits, likely driven by depositor behavioral changes in response to IPS convenience.
- **Precautionary Asset Allocation:** There was a rise in liquid asset holdings, reflecting banks' attempt to hedge against unpredictable outflows.
- **Risk Rebalancing:** Particularly among small and mid-sized banks, a portfolio shift toward riskier loans was observed, possibly as a means to offset narrowing deposit margins.
- **Heterogeneity:** Effects were strongest in institutions with lower pre-existing digital capacity or tighter regulatory buffers.

Policy Implications

The findings suggest that the adoption of instant payment systems (IPS) introduces new forms of liquidity risk that may not be fully captured by existing regulatory frameworks. Supervisory authorities should consider adapting liquidity coverage ratios (LCRs) to reflect the increased volatility and immediacy of fund outflows associated with real-time transactions. Traditional end-of-day liquidity metrics may underestimate the pressures banks now face intraday. Moreover, stress testing exercises should incorporate IPS-induced liquidity dynamics, especially for smaller institutions with limited capacity to adjust rapidly to changing deposit flows.

Smaller and regionally focused banks may require targeted technical assistance to upgrade their digital infrastructure and strengthen their liquidity management capabilities. IPS adoption can also reshape how banks respond to policy interest rates, potentially altering the transmission of monetary policy through faster reallocation of deposits and reserves. To manage these structural changes, regulators should coordinate IPS rollouts with broader financial reforms—such as the phased introduction of compliance requirements, enhanced liquidity backstops, and closer supervisory monitoring. A proactive regulatory approach will be essential to ensure that the benefits of IPS—efficiency, inclusion, and competition—do not come at the expense of financial stability.

Future Research Directions

This analysis opens several promising avenues for future inquiry. A more granular examination of depositor behavior across different types of customers and regional contexts could help uncover the mechanisms behind observed liquidity shifts. Moreover, linking banks' exposure to instant payment systems with downstream effects on local credit supply and consumption patterns would allow researchers to assess the broader macroeconomic implications of IPS adoption. Over the long term, it would be valuable to investigate whether these systems influence the allocation of credit and the evolution of banks' capital structures. Finally, comparative studies across countries that have implemented IPS with different institutional designs may reveal best practices and inform regulatory strategies for balancing innovation with financial stability.

Conclusion

Instant payment systems mark a fundamental shift in payment infrastructure. While they hold great promise for improving efficiency and inclusion, their introduction also creates new liquidity and risk dynamics for banks. Regulatory frameworks must evolve accordingly. A forward-looking, data-driven approach will be essential to harness the benefits of IPS without compromising stability.