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## **Swift Institute evaluates real-time payment systems**

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**The Swift Institute announces the availability of a new paper that proposes a hybrid model for real-time retail systems, combining the benefits of a real-time gross settlement system (RTGS) with those of a deferred net settlement (DNS) system.**

The report, entitled "Near Real-time Retail Payment and Settlement Mechanism Design" by Zhiling Guo, Robert J. Kauffman, Mei Lin, and Dan Ma from the School of Information Systems at Singapore Management University focuses on the development of a 'hybrid priority queuing mechanism' for faster payment settlement systems.

Rapid expansion of e-commerce, along with rising domestic and cross-border payments, has fuelled the demand among financial institutions for a cost-effective means to expedite clearing and settlement of low-value retail payments. Traditionally, retail payments have made extensive use of interbank netting systems, in which payments are accumulated for end-of-day settlement. This approach, known as deferred net settlement (DNS), reduces the liquidity needs of the payment system, but bears inherent operational and financial risks for unsettled intraday payments. As large dollar volumes of retail payments accumulate, real-time gross settlement (RTGS) has been recognised as an attractive option, especially for high-value payments. It permits immediate settlement of transactions during the day, but it brings up other risks and incentives issues that require consideration.

This research proposes a mechanism that supports centralised queuing, permits payment prioritisation, reduces payment delays, enhances liquidity, and optimises the settlement process, including a modelling framework and experimental simulations to evaluate the proposed approach.

The results point out the qualities of a cost-effective and value-maximising mechanism to quickly settle increasingly large volumes of retail payments, while ensuring that the incentives for payment system stakeholders are given careful consideration.

"Currently, there are 18 countries live with a domestic real-time payments (RTP) system," says Peter Ware, Director of the SWIFT Institute. "There are another 12 countries that are exploring, planning or building, and an additional 17 Eurozone countries also in the exploratory stage. We hope that this paper contributes to the ongoing debate around the best methods for devising these systems."