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Overlay services for instant payments

The Deloitte Center for Financial Services

This paper focuses on the need to define common overlay services as different networks work toward operationalizing instant payments in the United States. Common overlay services stand to benefit all parties (networks as well as financial institutions) by enabling greater reach, scale, and innovation, thus reducing duplicative efforts and investments and furthering the shared goal of serving all customers.

Overlay services could expand the ubiquity of instant payment services

Overlay services are tailored offerings that augment a payment service by building on existing basic infrastructure and delivering enhanced value to the participants of a payment network. With the launch of various instant payment services by different networks, financial institutions often want to connect to more than one network and switch between them based on payment volume, pricing, transaction limits, and reach to depository accounts.

As networks determine interoperability aspects, their participants can benefit from certain overlay services, such as liquidity management, tokenization, biller directory, fraud prevention services, and customer directory.

These overlay services can benefit all participants in the ecosystem and significantly help expand the reach and ubiquity of instant payments services, which in turn would further aid interoperability efforts between multiple networks to ensure seamless processing (both sending and receiving of payment instructions across payment solutions and optimizing investments). Interoperability, coupled with overlay services, promotes competition, reach, and scale. Therefore, networks can consider working closely with each other to evaluate common utilities that can benefit the overall market and help reduce duplicative instant payment processing services.¹

Benefits of overlay services and how they may help interoperability



Benefits for networks²

Building a ubiquitous, safe, and fair system requires cooperation between different networks (both public and private sector services) to identify common overlay services. This collaboration stands to benefit all parties in different ways:

- **Faster adoption and ubiquity:** Overlay services aim to fulfill common expectations regarding user experience, rights, and obligations, regardless of the underlying clearing and settlement networks. It would consequently lead to a greater volume of seamless transactions across networks, leading to instant payments' ubiquity in the United States (similar to the Electronic Payments Network [EPN] and the Fed's automated clearing house [ACH] network for ACH clearing and settlement).
- **Increased efficiencies by leveraging common capabilities:** Common overlay services would allow each network to leverage each other's capabilities and solutions. For example, networks might leverage capabilities such as liquidity management and customer directory or build a common biller directory and minimize duplication of efforts.
- **Scope of innovation:** Sharing a goal and widely accepted industry best practices to build common overlay services can help promote interoperability, which can act as a foundation for creating a cohesive instant payments ecosystem upon which new disruptive capabilities can be developed.



Benefits for financial institutions³

From financial institutions' (FIs) perspective, participants of one network should not have to duplicate their investment of time and resources to build instant payment processing services. This can be counterintuitive to the purpose of developing a large-scale global network with the aim of speeding up payment processing. Building common overlay services from the beginning can offer a multitude of benefits to FIs of different scale.

- **Flexibility of use:** Overlay services based on a predefined interoperability model would allow FIs to have the ability to either operate multiple services or switch seamlessly between them, with no impact on customer experience. This choice would enable FIs, especially smaller institutions, to choose between underlying networks based on their volume, acceptable pricing, transaction limits, and other preconditions (such as maintaining balances in joint reserves for instant payments, etc.) while using common services, which work irrespective of the instant payment network chosen for settlement.
- **Reduction in overheads and better customer experience:** Identifying common capabilities and designing services on top of it would help FIs avoid the need to build similar products on different rails. Instead, they can focus on routing logic based on costs, time, and other considerations. Common overlay services built on top of an interoperable network is cost-efficient for FIs, especially community banks and credit unions, as it reduces complexity for customers and thus the costs involved in addressing customer queries. This also helps them maintain a consistent customer experience (by leveraging the best of the capabilities offered by multiple networks) and provide a wider reach.
- **Greater innovation:** Interoperability facilitated by common overlay services between multiple instant payments systems provide FIs and fintechs seamless access to different systems and encourages open banking and instant payments product innovation. This will be particularly important for larger FIs that place innovation high on their list of digital priorities.

Instant payments networks can leverage their capabilities for greater efficiencies

Overlay services built using the same underlying messaging standard can help drive interoperability between multiple networks. This can be further supported by building a consistent set of guidelines that help institutions connect to these networks; each network would build its host of primary capabilities, with some secondary capabilities on the road map. Networks can work together to identify a set of unique capabilities to leverage. This requires developing a common set of rules that doesn't overburden the FIs that use these networks and that supports a frictionless experience. The following are some of the overlay services and capabilities that instant payment networks can employ to serve all customers without duplicating efforts:

- Liquidity management:**⁴ A common liquidity management tool allows participating FIs to pool funds to cover outflows and support funds availability for 24/7 payments when intraday overdrafts cannot be covered by account transfers.
- Tokenization:**⁵ With current fraud prevention strategies believed to be insufficient to identify fraudulent transactions in real time, tokenization aims to reduce the risk and impact of Demand Deposit Accounts (DDA) account-based fraud by setting up fast and secure automated controls, such as token restrictions, to provide additional assurance. With the underlying information (DDA and American Bankers Association [ABA] numbers) protected, all FIs can benefit from a standardized and interoperable tokenization solution. This also offers customers greater security for their digital identity and strengthens fraud prevention. Nonsensitive tokens generated through this process can be used to replace sensitive data elements used in a digital identity, which render it nonexploitable and enable easy exchange between parties.
- Biller directory:** As more FIs become instant payments-enabled and start driving volumes, networks may want to provide customers access to a biller directory solution or define common standards that allow them to make stand-alone instant payments to billers.
- Fraud prevention services:**⁴ To contain fraud risks associated with instant, irreversible payments, FIs are able to define and set certain parameters that limit transaction activity in a network. This is based on FIs' knowledge of their own customers.
- Customer directory:**^{6,7} A centralized directory that stores a receiver's public identifier and alias data (e.g., mobile number or email ID) mapped to banking information acts as a single source of truth for participating banks (both senders and receivers) to retrieve the required information and originate payments. The directory can also be used to look up a customer's eligibility to receive instant payments. Directories already available in the market can be leveraged and customized to suit the need for instant payments.
- Regulatory framework for transaction monitoring and fraud prevention:** A consistent regulatory framework ensures efficient transaction monitoring over networks and makes it easier for regulators to approve the approaches taken by FIs. A common framework also makes it easier for FIs to standardize customer onboarding processes such as know your customer (KYC) and switch between networks seamlessly.

Providing overlay services that can be leveraged by different networks can reduce cost, effort, and time to market

Primary capabilities offered by networks



Request for payment



Credit transfer



Payment acknowledgment



Request for return of funds



Request for information



Detailed remittance advice

Unique overlay services that can be offered by networks



Liquidity management



Tokenization



Biller directory



Fraud prevention



Customer directory



Regulatory framework for transaction monitoring and fraud prevention

Call to action for instant payments networks



Drive interoperability as a prerequisite

Instant payments networks need to work together to develop standards for translation across different message specifications so that different clearing and settlement networks can exchange transactions (e.g., allowing a payment message initiated on one network to be delivered to a receiver on another network). This model is currently leveraged to allow FIs to choose between FedACH and EPN to connect to the US ACH.



Design overlay services over minimally viable instant payments services

Instant payments networks should go to market with a minimally viable payments service. Once these networks are interoperable, overlay services can be designed by working closely with each other. This will enable FIs to use those overlay services irrespective of the underlying network being used to process transactions.

Endnotes

1. American Bankers Association, "[ABA: Fed must prioritize interoperability in development of FedNow](#)," ABA Banking Journal, September 25, 2019.
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3. US Instant payments Council Network Committee, "[Instant payments Interoperability](#)," June 2020.
4. American Bankers Association, "[Fed Announces Details of FedNow Service](#)," ABA Banking Journal, August 6, 2020.
5. The Clearing House, "[About Secure Token Exchange](#)."
6. Pratin Vallabhaneni, "[Fed Announces 'FedNow' Real-Time Payments Service](#)," White & Case, September 5, 2019.
7. Independent Community of Bankers of America, "[Federal Reserve Actions to Support Interbank Settlement of Instant payments](#)," November 7, 2019.

Contacts

Zachary Aron

Principal
Deloitte Consulting LLP
zaron@deloitte.com

Christopher Allen

Managing director
Deloitte Consulting LLP
chrallen@deloitte.com

Vishal Kalsi

Senior manager
Deloitte Consulting LLP
vikalsi@deloitte.com

Mansi Dhamija

Manager
Deloitte Consulting LLP
mdhamija@deloitte.com

Noopur Dogra

Senior consultant
Deloitte Consulting LLP
ndogra@deloitte.com

Prakhar Agrawal

Consultant
Deloitte Consulting LLP
prakhaagrawal@deloitte.com

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