Guideline.01: Operational Considerations for Instant Payments *Receive-Side Primer*

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Introduction to Instant Payments Operations

Instant payments are transforming the U.S. payments ecosystem and challenging long-held payment processing paradigms, being the newest payment rails developed and available in the U.S. The realities of instant payments' 24x7x365 operating model affect the entirety of the payment workflow, impacting financial institutions' systems and stakeholders both internal and external.

Traditional batch-based processing is no longer practical in this instant payments world. Payments must be sent, received, and confirmed by all parties within seconds. These payments, once sent on a per-transaction basis, are irrevocable. Irrevocability necessitates that financial institutions take the utmost care in adhering to internal controls, best practices, and compliance mandates.

Amidst such pervasive change, optimization of ongoing operations will be key for financial institutions who have already implemented instant payments, as well as those who are considering instant payments - most of whom are planning to begin their instant payments journey on the receiving side of an instant payment.[1]

As such, this document serves as a primer on receive-side operational considerations for instant payments, offering high-level insights on priorities to consider when adopting this new method of receipt. Subsequent guidelines will take a deeper dive on the following operational components:

Section 1: New Flows/Processes in Relation to Existing Payment Flows
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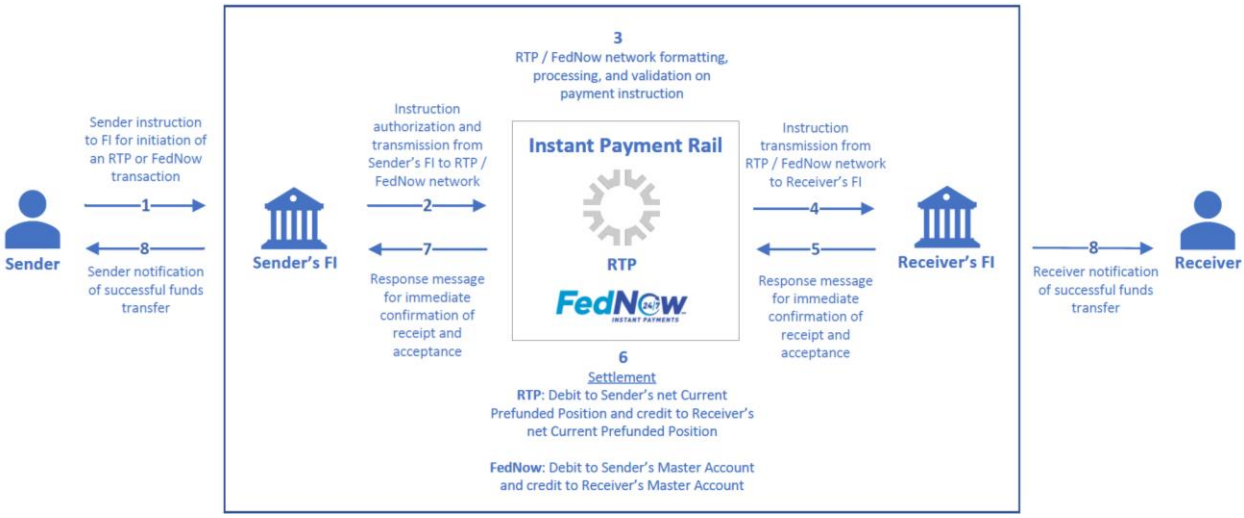
Section 1: New Flows/Processes in Relation to Existing Payment Flows

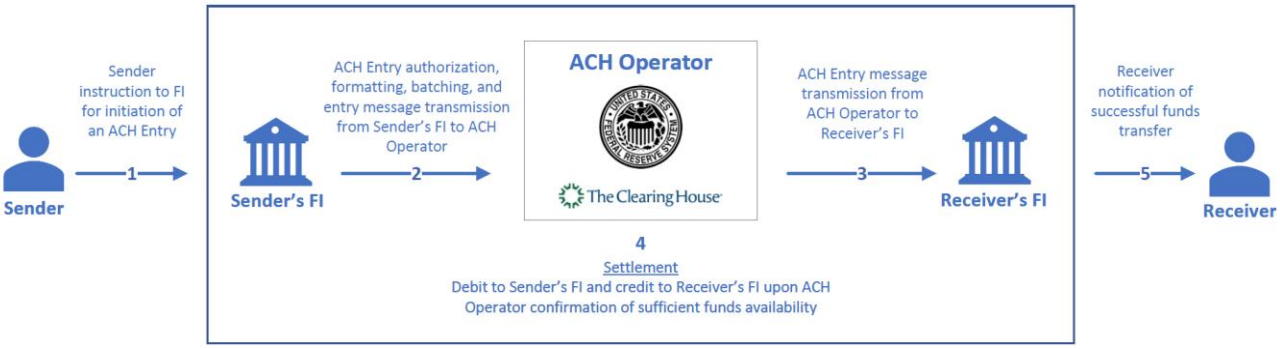
At a fundamental level it is key for financial institutions to understand how messages and money are exchanged within instant payments schemes, and how that differs from traditional rails. As such, below are the high-level process flows for RTP® and the FedNow® Service receipt of payments along with comparisons to traditional rails. While the payment flows share similarities, including payment participants, there are notable differences.

A. RTP/ FedNow Service Message Flow

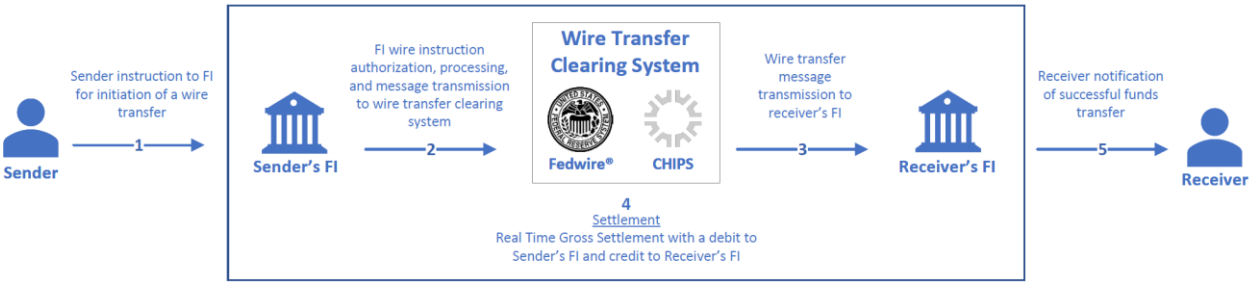


At a high level, the instant payments message flow with RTP and the FedNow Service are mostly the same. There are some differences that will need to be considered, notably around the funding/ settlement/money movement. RTP moves and settles money within the internal RTP ledger that requires funding/defunding from a joint Federal Reserve account using Fedwire®; FedNow Service moves and settles money using direct access to a Federal Reserve master account. There are also some detailed technical differences in how the timeout works. These will be expanded upon in the detailed guidelines with suggestions on how institutions can manage these nuances.

B. ACH Flow[2]



C. Wire Receive-Side Flow[3]



While both RTP and the FedNow Service require an immediate confirmation of receipt and acceptance 24x7x365, neither wire nor ACH requires a response. This core feature provides payment certainty to both financial institutions and the sender and receiver of the transaction. In general, messages across RTP and the FedNow Service are also acknowledged between the participant financial institutions and the network, also promoting more seamless payments and network integrity.

RTP and the FedNow Service support an immediate rejection which should be automated, whereas both ACH and wire require a manual review and result in a return later through a manual process.

In comparison, ACH and wire transfer receive side is a one-way communication with the receiving institution accepting a wire payment or receiving an ACH file.

All four payment rails provide the opportunity for the receiving institution to return the payment for various reasons but differ in the method and speed at which that is completed.

Section 2: Liquidity Management

Today, more than ever, treasury management relies on thorough and timely recognition of funds availability and location. Instant payments schemes and 24x7x365 payment processing have increased the need for immediate recognition and usage of funds. Simultaneously, the timing of cash flows becomes increasingly difficult to predict, adding a new dimension to a financial institution's liquidity management challenges.

Financial institutions that will participate in the FedNow Service and The Clearing House's CHIPS[4] and RTP systems face the additional challenge of managing two separate liquidity positions as well as a combined overall liquidity position in their reserve account at the Federal Reserve. For example, money held intra-day for the RTP system cannot be used for Fedwire transactions.

Additional consideration needs to be given to monitoring, maintaining, and managing these liquidity pools during system downtimes, system outages, and gateway outages, as well as the need for stand-in processes during such periods. For both CHIPS and RTP, this means ensuring proper pre-funding as well as the ability to redirect/invest excess funds.

This will be especially true in the initial roll out of the FedNow Service, as many financial institutions will be receive-only. ACH, CHIPS, Fedwire (cash and securities), paper money, and coin distribution all access the same liquidity pool as RTP and the FedNow Service. Instant payment implementers, even when only implementing the receive side of these systems, need to integrate the liquidity management of the new payment systems with the processes already in place for existing systems and functions. It should be noted that the Federal Reserve will be offering a liquidity management tool in conjunction with the FedNow Service, but this will only be available at select times—these being when Fedwire is down and will have both single and same day transaction limits.

The receive-only approach reduces the liquidity risk involved as there are only funds coming into the financial institution and, by instant payment scheme rules, these payments are considered irrevocable. This does not diminish the need to recognize funds at the financial institution and accountholder levels and update the respective liquidity levels. Financial institutions need to monitor their liquidity positions to reallocate and invest funds not immediately needed for other transactions.

Section 3: Mechanisms and Processes for Reconciling Incoming Funds in Real-Time

Real-time recognition of funds leads to the need for real-time account reconciliation to maintain up-to-date, timely, and accurate account position(s) for purposes of reporting and accounting. The systems which conduct the automated reconciliation use automated transaction data matching and record linking. The use of automated reconciliation in real-time allows for continuous matching of transactions and provides the ability to expediently identify discrepancies and take corrective action. Automated real-time reconciliation provides more accurate data for funds availability calculations than slower and more manual efforts.

As it relates to all the liquidity concerns and considerations discussed in the previous section on liquidity management, financial institutions will need to consider changes to their processes that exist today for existing rails to accommodate the difference in flows, most notably the 24x7x365 "always on" nature of the service and the different cutoff times and implications for reconciliation from RTP and the FedNow Service.

Section 4: Fraud Mitigation

Fraud exists, no matter the environment. Some of the characteristics that make instant payments desirable to a business or consumer (i.e., immediacy, irrevocability) also make the technology attractive targets for fraud. Instant and irrevocable payments in a new environment where regulation (i.e., responsibility and accountability) is still being decided upon are a playground for fraudsters. It may challenge internal anti-money laundering compliance systems. Gaps will exist, and procedures are evolving every day. The key to fraud in a credit-push environment such as this one is understanding the difference between authorized fraud (i.e., scams) and unauthorized fraud, and customer resistance to authorized fraud scams.

For receive-only instant payment implementations, financial institutions need to consider both the business side of the risk – around the payment irrevocability as well as the technical implications – with many financial institutions needing to implement or integrate with a fraud monitoring tool that can run 24x7x365 and support the high-performance service level agreements needed to work with these rails.

Risk related to instant payments fraud can be managed but will require a strategy tailored to the underpinnings of the new faster payments technology. This new strategy requires a blending of standard and advanced tactics, coupling human- with technology-based methodologies. Many of the standard internal controls that are effective with other legacy payment instruments apply to instant payments.

The U.S. Faster Payments Council white paper that examines fraud prevention[5] provides recommendations for additional fraud mitigation tools that have proven helpful in combating fraud risk. Paired together, the "old" and the "new" methods can establish a multi-faceted, layered fraud prevention strategy that combines the best of both worlds to identify fraudulent transactions before they are sent.

Section 5: Exception Processing

Exceptions are something every financial institution experiences. The exception process can be based off the institution's processes for other implemented payment rails. The most common instant payment exception is the Request for Return of Funds (RFRF). These requests are initiated by the accountholder for a multitude of reasons and come in as a request for cancellation of payment. The response for the RFRF should be instantaneous and follow the given guidelines for reviewing the request. The accountholder needs to be notified of the decision of the request immediately. The return may be completed through the system the financial institution uses to work their instant payment exceptions monitoring or may be returned via another rail, as a receive-only participant return cannot be made yet through the instant payment rail. Each exception should be reviewed individually and determined whether it falls within the operating rules for instant payments.

When considering exceptions in traditional payment rails, what comes to mind are situations like being unable to locate an account, a stop payment, and having non-sufficient funds. Instant payments, being a credit push transaction with instant response requirements, remove the possibility of these exceptions. Exceptions in an instant payment network will be driven in an automated fashion and will be generated when an automated system is able to verify the payment information but is unable to make a decision that requires further investigation, such as an OFAC[6] or fraud alert. In these situations, the automated response to the instant payment message will be to accept without posting. This response allows the receiving institution to review the transaction and decide within the required time limit. It is important that institutions develop policies and processes to address these potential exceptions and the need to quickly review and make decisions to accept or reject the transactions.

In a receive-only implementation, the financial institution will need to consider how to return the funds. Some institutions do allow returns through the rails in the cases where a return is needed, but many do not as they are not yet enabled to send any payments. In those cases, returns are sometimes managed via other rails, which leads to other reconciliation procedures that need to be considered and the potential that the sender's expectations regarding the timing of the send and the return might not align.

Section 6: Mechanisms for Achieving Performance Requirements

System performance measurements for instant payment receipt, including transaction processing, limitations, uptime, and rejects, will be valuable in determining the degree to which financial institutions ensure sufficient speed for receiving instant payments 24x7x365.

All online transaction processing (OLTP) applications must address the issue of system performance because all OLTP applications have some kind of performance criteria that must be met to operate successfully. Performance validation for a new receive-only instant payments application introduces new vectors for measurement. For example, the FedNow Service and RTP require that a receive-only application return an accept or reject message within five seconds of receiving a credit transfer message. Considerations should include:

1) Knowing the maximum rate at which credit transfer messages will arrive. There may be limitations on transactions per second (TPS).
2) Determining whether processing requirements for the system could interfere with credit transfer processing.
3) Considering how to address hardware and software fault tolerance due to the necessity for credit transfer processing availability (24x7x365).
4) Familiarity with processing credit transfer messages and using guidelines based on experience to initially size a system to address credit transfer volumes.
5) Benchmarking system performance by testing credit transfer messages at varying volumes and noting resulting performance. Applications should be revamped accordingly in the case that unacceptable bottlenecks are exposed during testing.
6) If the receive-only application has not been developed, a pilot system can be created to mimic primary components of the final system to get a sense of processing demands.
7) If using a third-party application to process receive-only credit transfers, use vendor recommendations for initial sizing. Be prepared to adjust the sizing to accommodate the processing profile.

In summary, to facilitate receive-only instant payments through RTP or the FedNow Service, financial institutions need to have a modern technology infrastructure in place that includes instant payment processing and compliance platforms, application programming interface (API) integration, payment gateways, and fraud detection mechanisms.

Financial institutions need to consider factors such as transaction processing speed, uptime, and rejects when designing their systems, and have mechanisms in place to achieve the new performance requirements, such as real-time monitoring, capacity planning, and disaster recovery.

Section 7: Business Continuity and Resilience

Given instant payments are 24x7x365, it is necessary for financial institutions to build resilient systems and have comprehensive business continuity plans in place. While these may not be specific to instant payments, key areas to consider include:

1) Uptime requirements – Both the RTP and the FedNow Service network have specific uptime requirements that must be met. Financial institutions will need to understand, and potentially adapt their internal processes or maintenance procedures to meet this requirement and may want to consider "stand-in processing"[7] solutions to minimize the impact of downtime.
2) Weekend and evening support – Ensure continuous support (technical and operational) is available during weekends and overnight.
3) Escalation procedures – Identify when situations or errors warrant escalation internally or to the network. This may include when to decide to sign off the network and who within the financial institution is able to make that decision or may relate to situations with overnight or weekend funding or reconciliation.
4) Contingency plan – The instant nature of these payments requires automated decisioning and transaction processing; however, financial institutions will need to plan for times when processes or systems do not work as expected. For example, plan for what steps will need to be taken if an automated reconciliation fails or is out of balance.
5) Performance monitoring – Financial institutions should also consider how they will identify or be alerted to certain activities, such as excessive canceled or timed out messages, or unexpected rejected transactions, or other potential system issues and errors. Being able to monitor and detect potential concerns in a timely manner is important to support network integrity and accountholder experience.

Section 8: Staffing Needs and Training Requirements

Each financial institution's support needs and requirements will vary based on their customer service approach, operational capabilities, and underlying technology. However, some key areas to consider when focusing on internal staffing needs and support include:

1) Front office vs. back-office support – the systems, tools, and resources needed for direct accountholder facing employees vs. back-office operations.
2) Training on the core functions and differences of instant payments, as well as education around use cases and how RTP and the FedNow Service differ from other instant payment products like Zelle®.

3) Staffing and support – depending on the specific use case deployment and payment volume, additional staffing could be necessary in back-office areas like fraud prevention, reconciliation, disputes, or front-line teams. Additional areas of consideration may include application support, compliance, and liquidity management. However, some staffing needs may be mitigated by automation and alerting capabilities.

Regardless, it should be anticipated that staffing and support needs will change and evolve based on accountholder acceptance and their usage of instant payments and the introduction of send services and non-value messages.

Section 9: Accountholder Support, Education, and Disclosures

Given the differences between instant payments and traditional payment rails, it is critical to consider accountholder-facing aspects of offering instant payment services.

Education and awareness should be the focus in terms of ensuring accountholders know the service is available, as well as some of the key differences and benefits instant payments provide such as the real-time nature, 24x7x365 availability, and irrevocability of the payment.

Financial institutions should also emphasize how accountholders can benefit from the service through the businesses or individuals with whom they transact. This includes necessary accountholder disclosures, or agreement updates to cover the instant payment service offering, service level agreements, and other features like irrevocability.

As noted earlier in staff needs and training requirements, accountholder support requirements will continue to change and evolve based on accountholder acceptance and their usage of instant payments and the introduction of additional payment functions such as send services and support of non-value messages. Each financial institution should evaluate their existing accountholder support model and evaluate if any changes are needed. For example, if a financial institution has a 24x7x365 call center, they may be able to leverage their existing support model without making any changes. The use cases accountholders utilize, and the respective volumes they generate, could drive the need for additional or new support and is an area that should be evaluated and adjusted over time.

Section 10: Regulations and Compliance

Instant payments are subject to laws and regulations that govern electronic payments generally, and to regulations and system rules that govern the use of instant payments systems. These regulations are designed to ensure the safety and security of the payments system, protect consumers, and promote efficient use of the system. They may include requirements for authentication, authorization, data security, and other measures to protect the integrity of the system. Specific system rules are also applicable for real time networks and are another layer of rules that need to be followed.

Below is a summary list of relevant rules and regulations. Please note that this list reflects point-in-time rules and regulations pertinent at the time of publishing and should NOT be considered comprehensive, given the potential for regulatory changes.

1) A new subpart C, under Reg J, will apply to the FedNow Service, granting the Federal Reserve the authority to issue an **Operating Circular (8),** with more specific terms and conditions.[8]
2) Subpart C will also incorporate **provisions of Article 4A from the Uniform Commercial Code (UCC).**[9] Generally, UCC has been adopted in all 50 states; provides comprehensive rules governing the rights and responsibilities of the parties to funds transfers; and provides that the provisions of UCC Article 4A apply to all transfers over the FedNow Service, even those that might meet the definition of an "electronic fund transfer" under the EFTA. However, in the event of an inconsistency between the provisions of subpart C and the EFTA, the EFTA would prevail to the extent of the inconsistency. As case law develops, so will greater clarity.
3) **Regulation J Subpart C – 210.42**[10] – Payment orders can be posted on the account number even though beneficiary's bank identifies a name different from the name identified in the payment order.
4) **Funds Availability – 210.44(b)**[11] – Once the beneficiary's bank accepts the payment order, the beneficiary bank must credit the account immediately in accordance with Section 4A-405(a) of Article 4A. The FRB declined to define immediately.
5) **Funds Availability Exceptions 210.44(b)(3)**[12] – Where the beneficiary's bank has reasonable cause to believe that the beneficiary is not entitled or permitted to receive payment, the beneficiary's bank must notify the FRB that it needs additional time.
6) **Unauthorized FedNow Service Transfers** – If the accountholder avoids liability or the bank did not have commercially-reasonable security procedures, the bank must refund the accountholder. A refund must include interest if the accountholder notifies the financial institution within a reasonable time which is set by an agreement (disclosure) but cannot exceed 90 days from notification. The accountholder has up to one year. For consumer unauthorized FedNow Service transfers, Regulation E[13] will also apply.
7) **The Clearing House RTP Operating Rules**[14] – Defines the rights and responsibilities of Participants and TCH with respect to the RTP System.

Conclusion

This primer is meant to serve as a springboard for financial institutions to plan the journey to faster payments adoption by providing high-level insights of the various areas for consideration. The ten areas covered are the focus points that the team of experts on the FPC Operational Considerations for Instant & Immediate Payments Work Group felt were the most important to consider.

While more detail will be provided in the next guideline of this series around specific solutions and ways to address these areas, no two financial institutions are the same – therefore the problems shared, while universal, may not be solved in the same manner for each institution.

Subsequent guideline series will cover the send side of instant payments as well as non-value messages (Request for Information, Request for Payment, Request for Refund).

Beyond the scope of this primer and subsequent guidelines, we recommend financial institutions also look at other areas to learn what they need for implementation of instant payments. While there are many operational and procedural challenges when implementing instant payments, there are lessons that can be learned within the institution's experience with retail point-of-sale, ATM usage, and card processing, as they work continuously in 24x7x365 environments. In addition, there are lessons that can be learned from other countries and institutions that have implemented instant payments.[15]

Acknowledgements

About the Faster Payments Council and the Operational Considerations for Instant & Immediate Payments Work Group

The Faster Payments Council (FPC) is an industry-led membership organization whose vision is a world-class payment system where Americans can safely and securely pay anyone, anywhere, at any time and with near-immediate funds availability. To further this vision, the Faster Payments Council established the Operational Considerations for Instant & Immediate Payments Work Group to provide financial institutions with guideposts to effectively manage operational change that instant and immediate payments have on bank operations.

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References

[1] Faster Payments Council. (2023, April). *2023 Faster Payments Barometer*. https://fasterpaymentscouncil.org/userfiles/2080/files/Barometer_Infographic_04-17-2023%20Final(1).pdf.

[2][3] Nacha. (n.d.). *How ACH Works*. Retrieved October 4, 2023, from https://achdevguide.nacha.org/how-ach-works.

[4] The Clearing House. (n.d.). *CHIPS®*. Retrieved October 4, 2023, from https://www.theclearinghouse.org/payment-systems/CHIPS.

[5] Faster Payments Council. (2020, July). *Examining Faster Payments Fraud Prevention*. https://fasterpaymentscouncil.org/userfiles/2080/FraudInfoSharingWP.pdf.

[6] U.S. Department of the Treasury. (n.d.). *Office of Foreign Assets Control*. Retrieved October 4, 2023, from https://ofac.treasury.gov/.

[7] Stand-in Processing: the process whereby a third-party authorizes transactions in the place of intended receiver processor when the receiver is unable to authorize such transactions directly.

[8] The Federal Reserve Financial Services. (2022, September 21). *Funds Transfers Through the FedNow℠ Service*. https://www.frbservices.org/binaries/content/assets/crsocms/resources/rules-regulations/operating-circular-8.pdf.

[9] Uniform Law Commission. (n.d.). *Uniform Commercial Code*. Retrieved October 4, 2023, from https://www.uniformlaws.org/acts/ucc.

[10][11][12] Federal Register. (2022, June 22). *Collection of Checks and Other Items by Federal Reserve Banks and Funds Transfers Through Fedwire*. https://www.federalregister.gov/documents/2022/06/06/2022-11090/collection-of-checks-and-other-items-by-federal-reserve-banks-and-funds-transfers-through-fedwire.

[13] CFPB. (2020, July 21). *12 CFR Part 1005 - Electronic Fund Transfers (Regulation E)*. https://www.consumerfinance.gov/rules-policy/regulations/1005/.

[14] The Clearing House. (n.d.). *RTP®*. Retrieved October 4, 2023, from https://www.theclearinghouse.org/payment-systems/rtp/document-library.

[15] Faster Payments Council. (n.d.). *Faster Payments Resources*. Retrieved October 4, 2023, from https://fasterpaymentscouncil.org/Guides-Research.