RTP® and FedNow® - Real Time Payment Systems

Instant Payment Services Primer

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Background

While it used to take as long as 48 to 72 hours for payments to fully transfer, we have now come to expect instant payments. However, the "instant" transfers we use today are often not true instant payments because the transfers are not truly complete until they settle in the receiving account, which can take up to several days. As such, these payments are often revocable, and the risk of faulty or fraudulent transfer is either assumed by the bank or passed on to the participating customers.

Currently, there are various payment platforms providing fast payment services, but it was only with the launch of Real-Time Payments ("RTP") and, subsequently, FedNow that true instant payments were made available.

- Payment platforms like Zelle and PayPal provide immediate payment services. While payments on these platforms can
 be processed and even settled within minutes, they often come with the tradeoff of increased fraud risk because these
 transactions are irrevocable. Thus, costumers will often bear some of the risk of processing these transactions. In
 addition, these platforms can have outages, which can, unexpectedly, leave users unable to utilize these payment
 networks.
- Wire transfers can transfer funds instantly from bank to bank, but, due to delays in the clearing process, domestic wire transfers can take up to 24 hours to reach customer accounts. In addition, wire transfers are not available 24/7, and they are revocable.
- ACH payments can settle same day, but ACH uses a batch system where the payments are processed in batches, rather than instantly. Additionally, the transfers only occur during banking hours. These payments are also revocable.
- Debit card networks like Visa Direct do facilitate immediate transfers, but these payments don't settle immediately. In addition, the funds are not actually transferred to the recipient's account outside of banking hours. Furthermore, these payment systems are suboptimal for businesses, as there is often a delay between the sale and the transfer of funds.
- In 2017, The Clearing House launched RTP and began providing fast and 24/7 immediate payments. More recently, in July 2023, the Federal Reserve released FedNow, which (like RTP) provides instant payments that both clear and settle immediately. RTP and FedNow provide speed with irrevocable, instantaneous and secure transfers with 24/7 access and increased protection over account information. These key features set them apart from other fast payment solutions.
 - While similar, RTP and FedNow possess key differences like transaction limits and ownership. RTP and FedNow complement each other by providing customers with more options and healthy competition.



Real-Time Payments (RTP®)

RTP is a system launched and operated by The Clearing House ("TCH") in 2017. RTP processes U.S. domestic payments 24/7 with immediate settlement and permits any federally insured U.S. depository institution to participate. Nonbanks, such as payment companies and nonbank lenders, cannot directly send or receive payments via RTP, but they can act as service providers for participating organizations.

RTP settles payments in RTP's joint, master account at the Federal Reserve Bank of New York. All participating banks must prefund the pooled account and maintain sufficient balances to meet liquidity needs. After a payment settles, the sender and receiver get an instant confirmation that the payment was completed, including confirmation of the amount transferred.

RTP has a per-transaction cap of \$1 million, with the potential to increase. As of December 2023, 481 banks and credit unions use RTP. Additionally, TCH estimates that RTP is accessible to institutions that hold about 90% of U.S. demand deposit accounts. RTP is an open loop system allowing payments between accounts at different banks. Any federally insured depository institution can be an RTP network participant. Customers of RTP network financial institution ("FI") participants are able to initiate payments from their existing accounts.

The RTP network operates 24/7, which allows FIs to send or receive payments at any time. Recipients receive the payment within seconds of the sending bank initiating the transaction; RTP network receiving FIs are required to make funds available immediately, except where necessary for risk management or legal compliance purposes. Payments are irrevocable providing certainty in transactions through RTP. However, in case of error, there is a process to facilitate FI-to-FI communication to return the funds.



RTP® Transfer Process

- 1. Sender initiates a payment request with Sender's Fl.
- 2. Sender's FI authenticates the instruction and availability of funds (or credit) in Sender's account.
- 3. The RTP network validates the transaction and routes the transaction to Receiver's FI.
- 4. Receiver's FI responds whether the payment message has been accepted.
- 5. Once Receiver's FI accepts a payment message, the RTP network settles the payment and immediately sends a response to Sender's FI as well as a confirmation to the Receiver's FI.
- 6. Sender's FI sends a payment confirmation message to the Sender. Receiver's FI sends a payment receipt message to the payee and immediately make these funds available to the Receiver.



FedNow®

FedNow is an interbank instant payment infrastructure launched by the Federal Reserve in July 20, 2023 through which banks and other eligible institutions (depository institutions eligible to hold an account in the Federal Reserve Bank) can offer instant payment services 24/7/365. FedNow guarantees money transfer within 20 seconds (and often much faster). Transactions are limited to \$100,000 by default; however, FIs may opt to increase the transaction limit up to \$500,000. Funds must be available in the account sending the payment for the payment to be sent. FedNow also offers additional tools for fraud prevention.

FedNow offers costumers reliable and consistent payment processing with its immediate and secure 24/7 system. Currently, FedNow has a lower adoption rate than RTP. However, because it is run by the Federal Reserve, it can potentially roll out to 10k institutions.

FedNow also offers liquidity management transfers ("LMTs"). Institutions that opt into LMTs will have the ability to complete high-dollar-limit credit transfers with other FIs at scheduled times, even when the FedWire Funds Service is unavailable.*

*FedWire focuses on wholesale payments and allows for bank-to-bank transactions where end user accounts are not required. FedWire is unavailable on weekends and designated holidays. LMTs enable immediate fund transfers between FIs to manage liquidity in real time and ultimately support payments through FedNow, even when FedWire is unavailable. To support this intended purpose, LMTs will be available overnight on weekdays, on weekends and on holidays. Hours under consideration are weekdays 7 p.m. to 7 a.m. EST and 24 hours per day on weekends and holidays.



FedNow® Transfer Process

- 1. A Sender initiates payment with FI.
- 2. The Sender's FI, or its service provider, submits a payment message to the FedNow Service.
- 3. The FedNow Service validates the payment message.
- 4. The FedNow Service sends message to the Receiver's FI to seek confirmation that it intends to accept the payment message. At this point, the Receiver's FI has the opportunity to confirm, among other things, that it maintains the specified account.
- 5. The Receiver's FI sends a positive response to the FedNow Service, confirming that it intends to accept the payment message.
- 6. FedNow Service debits and credits the designated master accounts of the Sender and Receiver FIs (or those of their correspondents), respectively.
- 7. FedNow Service sends a payment message forward to the Receiver's FI with an advice of credit and sends an acknowledgement to the Sender's FI that settlement is complete.
- 8. The Receiver's Fl credits the Receiver's account.



FedNow® vs. RTP®

FedNow and RTP both facilitate instant account-to-account payments 24/7. However, there are several distinguishing features between the two systems.

Similarities:

- Both offer options to send money, request a return of funds and make payments.
- Both provide instantaneous transaction and fund availability.
- Both offer the security and certainty of irrevocable payments.
- Both operate 24/7.
- Both use the ISO 20022 electronic data interchange standard for FIs.

While there is redundancy between the two systems, this serves the purpose of increasing economic security because redundancy in real time payments facilitates healthy competition.

Differences:

- FedNow is available to any organization eligible to maintain a master account with a Federal Reserve Bank. RTP permits any federally insured U.S. depository institution to participate.
- FedNow settles payments through participants' master accounts held at the Federal Reserve Bank. RTP settles payments in RTP's joint, master account at the Federal Reserve Bank of New York. RTP requires that all participating banks prefund the joint account and maintain sufficient balances to meet liquidity needs.
- The FedNow LMT feature allows credit transfers during non-business hours. LMTs are instant, large-value money transfers between banks or from banks into joint accounts for domestic private sector instant payment services.
- FedNow and RTP are not interoperable meaning one cannot send payments between the two systems.
- TCH operates RTP, and the Federal Reserve operates FedNow.
- FedNow has a default transaction limit of \$100,000, but participants can request an increase up to \$500,000. RTP has a \$1 million limit, which may increase soon.
- FedNow is new and growing, while RTP is more established having launched in 2017.
- FedNow only processes domestic payments, while RTP will process some inbound foreign payments.



Payment Methods Compared

Payment Rail	RTP*	FedNow [*]	ACH	Same Day ACH	Wire	Alternative payment platforms (e.g., PayPal*, Venmo*, Zelle*)
Processingtime	Instant	Instant	Batch	Batch	Within minutes	Depends on network (near-instant or up to 3 days)
Settlement time	Instant	Instant	2-3 business days	Same business day (after payments clear)	Same business day if within the availability window (potentially within minutes)	Within minutes or up to several days
Transfer type/Payment direction	Credit push	Credit push	Credit push or debit pull	Credit push or debit pull	Credit push	Credit push
Accessibility	Financial Institutions that join	Financial Institutions that join	All banks	All banks	Most banks	Varies
Exchange of banking information requirement	Offers available checking account tokenization to replace account information	Transactions occur directly between accounts	Yes	Yes	Yes	No
Revocability	No	No	Yes	Yes	No	No
Always on	Yes	Yes	No	No	No	Depends on network
Transaction Limit	\$1 million	\$100,000 by default but can be up to \$500,000	One cent less than \$100 million	\$1 million	No limit, though banks typically set their own	Depends on platform and bank limits





