

U.S. Real-Time Payments Business Playbook

Version 1.03
March 2016

Proposed features, functionality,
implementation details, requirements
and timetables are in development and
subject to change at any time.

Real-Time Payments Playbooks

Real Time Payments (RTP) provide consumers and businesses with the ability to immediately send and receive funds directly from their accounts at financial institutions anytime 24/7/365. RTP represents a new phase of evolution within the United States (U.S.) payments industry, with several key features that differentiate them from current payment methods, specifically speed, value-added messaging capabilities, and immediate availability of transaction status. RTP will provide FI's with the functionality and features to innovate for the future.

Outside the U.S., many countries are developing "faster payments" systems to expedite the movement of money and increase the speed that transferred funds are made available to recipients. Within the U.S., The Clearing House (TCH) is leading a multi-year effort to build a real-time payments system (RTP) that addresses the needs for safer and faster payments in an increasingly digital economy.

Your institution has expressed interest in finding out more about the RTP system and what it would take to implement. TCH has developed three targeted playbooks highlighting considerations for business, operations and technology audiences. As each FI is different, these playbooks should be considered guidelines rather than rules to give your organization the information and insight it needs to get started. In addition, contact information for TCH experts can be found in the Contact Us section on page 47.

BUSINESS PLAYBOOK 01



The Business Playbook provides a basic understanding of the real-time payments system and the potential for using it as a platform to develop new services. This playbook includes consideration of the involvement of various business units and specific items to consider as you develop your ideas and plans.

OPERATIONS PLAYBOOK 02



The Operations Playbook outlines the processes and procedures that may be needed across various operational areas within your organization as you implement the RTP system.

TECHNOLOGY PLAYBOOK 03



The Technology Playbook contains a technical overview of the RTP system for participating FIs in order for them to develop high-level estimates for interfacing to the RTP system.

The Clearing House owns and operates payments technology infrastructure, which clears nearly \$2 trillion each day for financial institutions in the U.S. and around the world. Its business is developing and operating industry utilities focused on safer and faster payments.

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Purpose and objectives

Playbook target audience

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01: What is the RTP Playbook?

RTP Playbook purpose and objectives

The purpose of the RTP Playbook is to provide a clear and consistent description of RTPs from an FI's perspective and to outline a tactical approach for implementing RTP. The Playbook offers information to support communications with its internal and external stakeholders (e.g., vendors and regulators) as an FI moves forward with its RTP effort. It can also be used to create awareness by providing a clear understanding of what RTP is, identifying key benefits, and providing a framework highlighting key actionable items organizations should consider as they begin planning and execution of their RTP solution.

The following pages include key tasks and decision points, along with practical tools and tips for RTP planning and implementation. It provides guidance and recommended practices in the form of checklists, reminders, and useful exercises to assist your organization in delivering RTP.

01 How to use this document

Call out symbols and icons help you use this document to its fullest extent.



02 Overview of Real-Time Payments



Describes real-time payments and how they work. Provides examples that demonstrate the breadth and scope of RTP. Clarifies the role of RTP in the payments ecosystem.



03 How do Real-Time Payments Work?



Illustrates use case scenarios in the RTP system, including step-by-step flow of messages.



04 Business Case Considerations



Demonstrates opportunities for new products and markets. Supports analysis of operations and technology investments and associated costs.



05 Impacted Areas



Identifies the potential impact on product, process, technology and the organization when deploying RTP. It includes communications, operations/support and performance considerations.

06 References and Supporting Documentation

Provides links to additional documentation and resources for a deeper understanding of RTP.

07 Contact Us

Provides contact information for experts who will answer questions and assist you as needed.

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RTP Business Playbook target audience

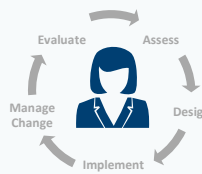
The RTP Business Playbook is intended for FI business decision makers and partners who want to gain a better understanding of the business implications of implementing RTP. The following roles have been identified as being highly impacted by RTP. However, it is important to note that the impact may reach beyond the roles listed here as each FI is unique.

Program Sponsor/Business Strategist



The program sponsor authorizes the project and is ultimately responsible to the business for the success of the project. This person owns the business case for the engagement and helps to remove roadblocks to successful execution.

Change Management Lead



The change management lead is responsible for strategically planning and overseeing the change process across the organization, including governance, communications and training. This person provides company leaders with the tools they need to implement change.

Product Manager



The product manager champions the product(s) and manages the brand. This person is responsible for the planning, forecasting, marketing, adoption and management of RTP through the product life cycle. Product managers also liaise with the various departments that touch the product.

Project Manager



The project manager is responsible for planning and executing the day-to-day activities of the project. This person is also responsible for ensuring the project is running on time and within budget.

Line of Business Lead



The line of business (LOB) lead is responsible for managing the portfolio of products for their particular customer segment and the profit and loss within that segment. This person is responsible for leveraging RTP solutions to add value for their customers.

Business Analyst



The business analyst investigates goals and issues related to the project, analyzes the data, determines the most appropriate solutions, and facilitates development of functional requirements.

Legal and Compliance Officer



The legal and compliance officer is responsible for understanding the rules and regulations applicable to the banking and financial industry and developing and implementing appropriate compliance programs and processes.

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How to use this document

Throughout the Playbook, icons will appear that represent important notes, tips, or resources that you can reference to help navigate the process of implementing RTP. There are specific callouts to focus attention on key decision points, action items, and checklists that FIs should consider.



IMPORTANT The “Important” icon marks the information or action item that is of utmost importance for a successful implementation. You should pay special attention to this information and ensure that these items are tracked to closure.



TIPS / FACT CHECK The “Tip / Fact Check” icon indicates helpful information about the industry. You may discover a leading practice in the field or an innovative way to implement your solution to save time or money.



CHECKLIST The “Checklist” icon highlights a list of recommended considerations for approaching a specific RTP concept or task. For example, these lists may be used as a starting point for project managers when creating a plan to complete a specific RTP-related task identified in the Playbook.



RESOURCES The “Resources” icon marks the section offering links to additional resources on a topic. Resources may include embedded file attachments, external sites, files, white papers, or press releases.



DECISION POINT The “Decision Point” icon highlights a step where your FI will need to make a decision regarding the implementation of RTP.



STAKEHOLDERS The icons displayed in the “Stakeholders” callout box indicate groups that may have an interest in RTP within your organization. Highlighted icons represent areas that should be involved in the discussion of the topic while grayed icons represent groups that may have less of an interest in that topic.



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02: Overview of Real-Time Payments

What are RTPs?

Real-time payments provide consumers and businesses with the ability to conveniently send and receive immediate fund transfers directly from their accounts at FIs, anytime 24/7/365. RTP represents a new phase of evolution within the U.S. payments industry and provides a platform for product innovation. Financial institutions can leverage a variety of features – enhanced speed, security, and messaging capabilities – to create unique offerings for their retail and corporate customers.

Real-Time Payment Characteristics

01

24/7/365 – The RTP system will operate on a 24/7/365 model, which means the system will be available for customers to send or receive payments at any time.

Immediate Availability – Recipients will receive the payment within seconds of the Sender initiating the transaction; the Receiving FI is required to make funds available immediately, except where necessary for risk management or legal compliance purposes.

02

03

Payment Certainty – Senders will not be able to revoke or recall a payment once it has been authorized and submitted to the RTP system. However, there will be a process to facilitate FI-to-FI communication around return of funds sent in error.

Ubiquity – The RTP system will be accessible by all financial institutions, regardless of size or charter type, and will reach the vast majority of U.S. account holders.

04

05

Extensibility – Rich, flexible messaging functionality will be included to support value-added products. For example, the RTP system provides messaging capability enabling a request for payment directly via RTP.

Account Data Privacy – The system can support tokens to encrypt Receiver account information as it is transmitted through the RTP system.

06

07

Convenience – Users of the RTP system will be able to initiate payments from their existing accounts.

Cash Flow Control – The ability to send and receive payments immediately will give customers more control over cash flow, which is particularly important for cash-constrained small businesses and consumers

08

09

Adaptability – The RTP system will have flexible architecture to adapt to changing market needs

Global Standards – The RTP system will remain consistent with international global compatibility to the extent it is compatible with domestic U.S. requirements

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How are RTPs different?

CURRENT PAYMENT METHODS

DELAYED AVAILABILITY – Due to unpredictable clearing times, the sender does not know for 1-3 days whether the transfer was successful and that funds are available to the receiver for use.

01

REAL-TIME PAYMENTS

Immediate Availability and Notification

With TCH's RTP system, receivers have immediate funds availability. Related status notifications are sent to senders (that a transfer was successful) and recipients (that funds are available).

PAYMENT REVERSAL – Payments may be reversed under certain circumstances and within a predefined period of time.

02

Payment Certainty

Payments cannot be revoked or recalled once authorized by a sender and submitted to the RTP system.

CREDIT PUSH AND DEBIT PULL – ACH supports credit push as well as debit pull transactions.

03

Credit Push Only

TCH's RTP solution will only support Credit push transactions. The payee may send a Request for Payment message but will not be able to pull funds directly from the payer's account.

LIMITED MESSAGING OPTIONS – Remittance information must be included within the payment message itself.

04

Flexible Messaging Options

TCH's RTP solution will provide flexible, robust messaging components with multiple options for enclosing remittance information. Options include using the payment message, sending a non-payment message, or referencing an external remittance source.

DELAYED FRAUD DETECTION – The time between the sending and actual posting of a payment allows for a window during which fraud analysis may be conducted.

05

24/7 Fraud Detection

Fraud detection and controls will need to be enhanced and automated to correspond with the ability to move funds nearly instantaneously. Platform level Anti-fraud detection/alerts will also be available.

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Who can use RTP?

RTPs are intended to be used for transactions between any entity whether business, consumer, or government.

Business to Business (B2B)



A **small business** paying an urgent invoice in order to receive goods or services



A **restaurateur** who pays for farm-fresh produce from the local farmer to serve that evening's dinner specials

Business to Consumer (B2C)



A **utility company** requesting payment for services from a business or consumer



A **small businessman** who is paying temporary employee salaries or tips on an ad hoc basis



A **retail bank** distributing personal loan proceeds to a dealership on behalf of a customer who is at the showroom buying a new car



A **large corporation** paying employees for travel expenses in time for payment of corporate credit cards



An **insurance company** adjustor reviewing a claim, determining a settlement amount, and immediately providing funds to the policy holder

Person to Person (P2P)



College roommates splitting monthly rent and utility payments



A **head of household** sending emergency funds to a family member on vacation

Consumer to Business (C2B)



A **busy working individual** paying for general services around the house such as the gardener, cleaning services, or child care provider



A **day trader** sending real-time money transfers to his or her investment account to take advantage of the most recent market swing

Government to Consumer / Consumer to Government (G2C/C2G)



A **government agency** paying out emergency disaster relief funds to citizens impacted by a natural disaster



A **tax payer** making his or her tax payment in time for the April 15 deadline

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Defining the RTP Ecosystem

1 The Clearing House hosts the RTP core infrastructure for the U.S. that provides:

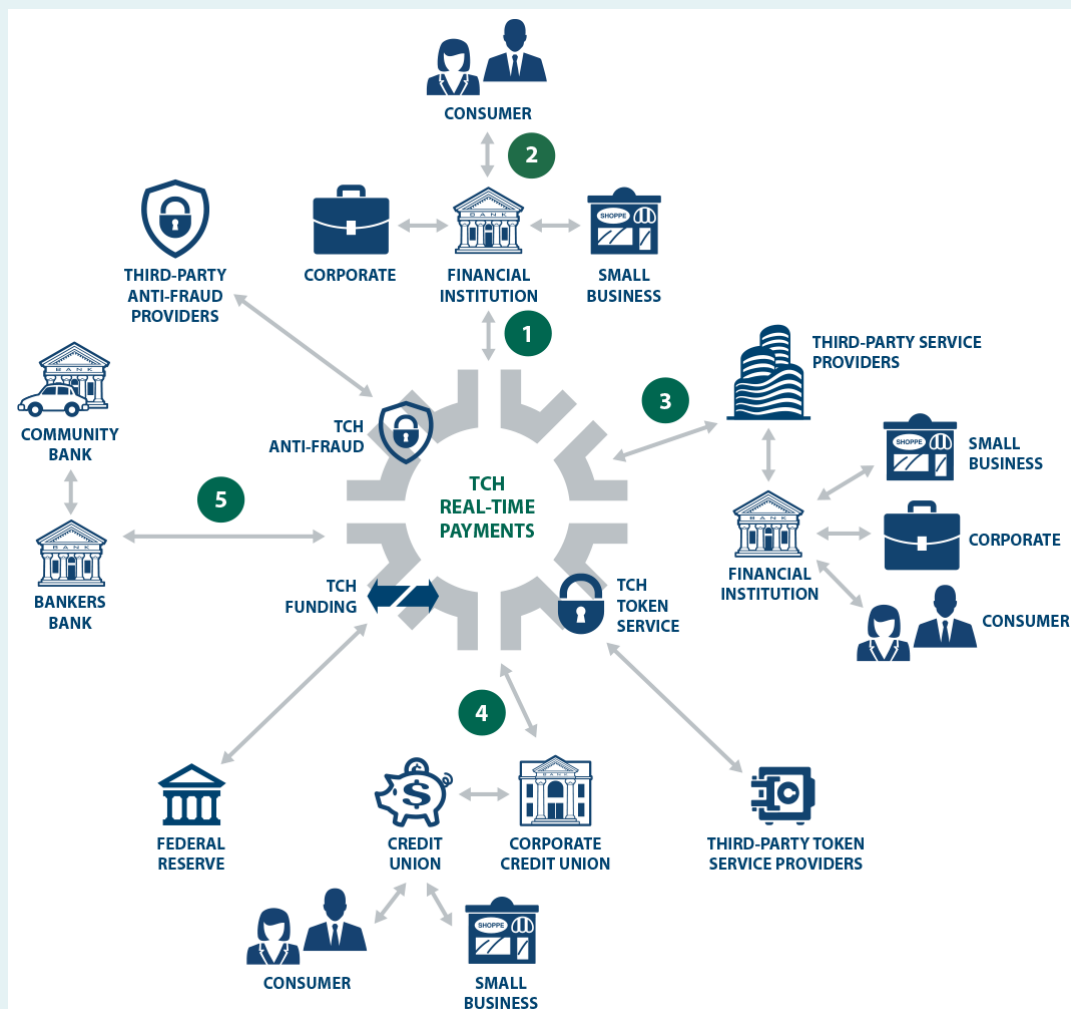
- *Payment processing and settlement services* – The RTP system will clear and settle payments and transmit value-added, payment-related messages to and from FIs.
- *Anti-fraud* – The RTP system will centrally monitor for network-level fraudulent activity and provide fraud alerts to FIs. This capability will augment and support the FIs own automated real-time fraud detection capabilities with respect to transactions they send to and receive from the RTP system.

2 Financial Institutions of all sizes will have the ability to **directly** connect to the RTP core infrastructure to provide real-time payments capability and value-added services to their customers and clients. FIs may also connect through third-party service providers.

3 Third-Party Service Providers (for example: FIS, Jack Henry and D+H) will provide connectivity to RTP providing access to FIs that may not want to connect directly to the RTP system. They will also integrate RTP into their existing and new payments products for the benefit of these FIs' account holders.

4 Banks*, Bankers' Banks, Community Banks and Corporate Credit Unions, will provide connections to RTP as well as funding services for their FI customers that may not want to connect directly to the RTP system or provide their own funding.

* Note: Although banks and credit unions may provide connectivity and funding services to other FIs, no correspondent payments will be permitted through the RTP system.



Note: There should be no difference in the user experience for customers of direct FIs and those connecting through a TPSP.

Illustrative RTP ecosystem

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Drivers of RTP

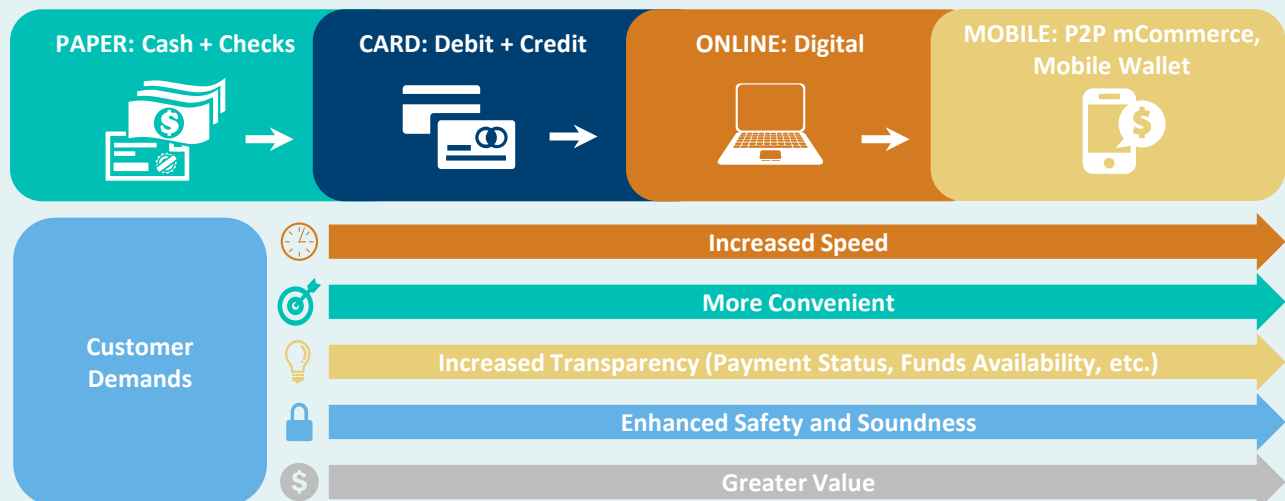
Customer demand

In today's world of sophisticated computing devices, information is moving in real-time. With high-speed data networks, and nearly universal presence of smartphones and wearables, customers expect everything – including payments – to keep up with their pace of life.

- **Increased speed:** Over the past decade, immediate delivery of electronic content and near real-time delivery of physical goods has become the norm. This along with faster, omnipresent technology, has increased the expectation for faster payment solutions.
- **More convenient:** Customers are moving away from cash and checks in favor of the convenience associated with newer banking channels, like online and mobile. Growth rates of non-cash transactions in mature markets (North America, Europe, mature Asia-Pacific) have accelerated in the past few years, accounting for almost three quarters of the payments market.¹
- **Increased transparency:** A faster pace of life means making sure payment information is transparent and readily available. Customers are looking for robust, real-time payment information, including payment status and immediate confirmation of funds availability.
- **Enhanced safety and soundness:** Despite an increase in data transparency, customers still expect their information to be kept secure and private. As data breaches have become nearly commonplace events, the demand from consumers for information privacy and security has continued to increase. FIs must work harder to implement the best and most secure systems to protect customer account data.
- **Greater value:** Banks and non-bank payment service providers are creating value-added services such as automated matching of purchase orders to invoices for businesses or geo-location based in-store promotions for consumers. These value-added services can span the entire purchasing experience beyond the payment itself. They enrich the basic payment data with a wider set of information to create added value.

The RTP system addresses consumer demands in the digital age – providing a way for consumers to make immediate payments to merchants and vendors in a safe and convenient manner.

Customer Adoption of New Payment Mechanisms



¹World Payments Report. Capgemini and The Royal Bank of Scotland; 2015.

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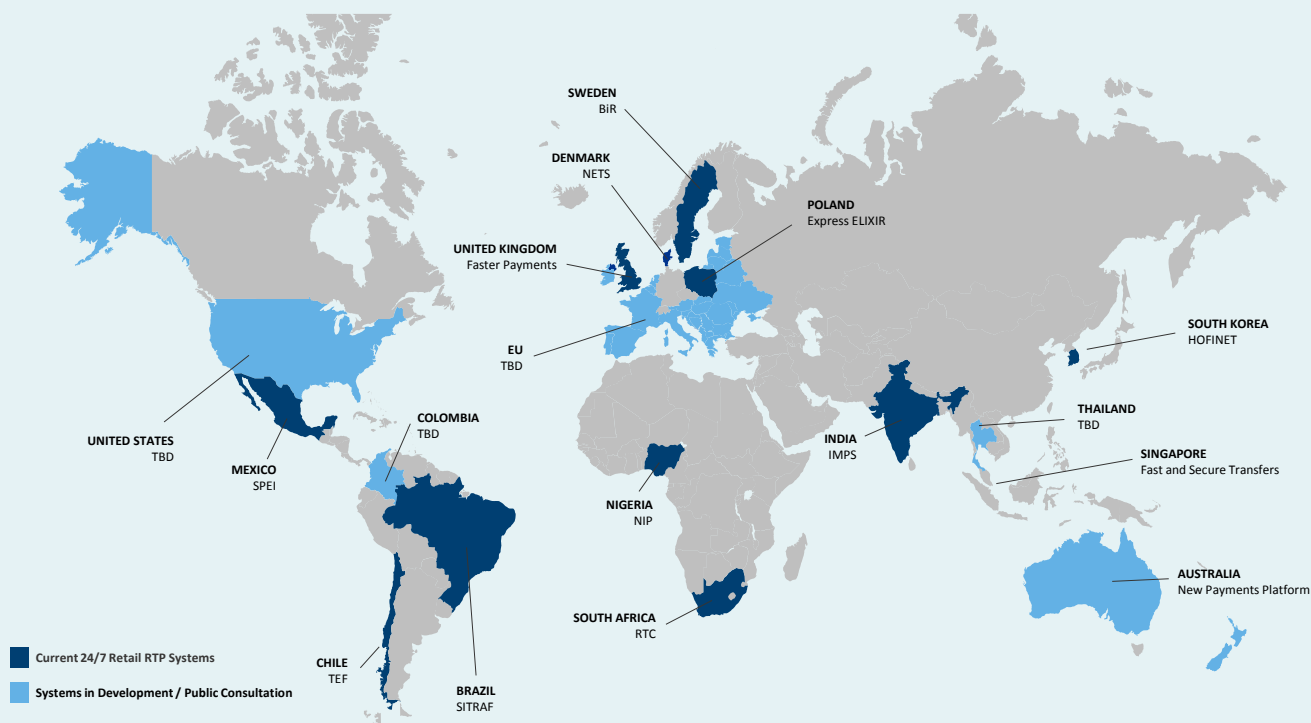
Drivers of RTP

Global competition

While TCH's RTP System is a new capability for U.S.-based FIs, at least 12 countries have implemented 24/7 retail RTP systems supporting immediate low-value account-to-account transfers,¹ and work is well underway in Australia, Europe, and the United States. The European Retail Payments Board has agreed on "the need for at least one pan-European instant payment solution."² In the United States, the Federal Reserve Board has called for the implementation of "a safe, ubiquitous, faster payments capability"³ and The Clearing House has announced that it will create a national RTP system.

The diagram below illustrates the global span of 24/7 retail RTP systems to date. There is a clear trend towards more and more countries either having the ability to conduct faster payment transactions or starting the process of developing a system that allows them to do so.

Countries with 24/7 retail RTP systems that are live or in development



Countries with 24/7 retail RTP systems that are live or in development

- | | |
|--|--|
| <ul style="list-style-type: none"> • Mexico – SPEI (2004) • Chile – TEF (2008) • Brazil – SITRAF (2002) • Sweden – BiR (2012) • Denmark – Nets (2014) • U.K. – Faster Payments (2008) • Poland – Express ELIXIR (2012) • Nigeria – NIP (2011) • South Africa – RTC (2006) | <ul style="list-style-type: none"> • India – IMPS (2010) • South Korea – HOFINET(2001) • Singapore – FAST (2014) • Australia – NPP (2016) • United States – TBD • Colombia – TBD • EU – TBD • Thailand – TBD |
|--|--|

¹KPMG Investigation

²Statement following the second meeting of the Euro Retail Payments Board European Central Bank European Retail Payments Board; December 1, 2014.

³Strategies for Improving the U.S. Payment System. United States Federal Reserve System; January 2015. p. 56

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Drivers of RTP

Regulatory influence

Gaps in the current U.S.-based payments system around speed and price have not only impacted customer satisfaction, but they have also been identified as concerns by the Consumer Financial Protection Bureau (CFPB). The CFPB has raised several concerns with the existing payments systems and sees opportunity for RTP as a potential for FIs to more effectively serve consumers. As such, the CFPB is urging the financial services industry to make RTP an urgent priority to help mitigate many of the issues currently facing consumers.

Identified consumer risks with current payment system

Unauthorized debits from consumer accounts via ACH leading to unexpected fees to the customer and a significant effort for customers to stop payments and revoke orders

Lack of transparency, particularly as it relates to **funds availability**, causing confusion for customers and often significant overdraft charges

Need for expedited payments and **expedited funds access** for individuals with immediate needs or emergency situations leaving them to rely on high-cost money order services to expedite funds transfer

RTP mitigation

Push transactions only; no auto-debit of customer accounts

Real-time funds availability with payment certainty and extensive set of payment and non-payment related messages

Real-time payment delivery for consumer, business, and other payment transactions available 24/7/365

Evolving payment technology capabilities

Evolving non-FI technology players are taking advantage of the existing gaps identified in the payments industry and are quickly capturing market share in the person-to-person payments space. These companies are providing the speed, convenience, and transparency that the banking industry is currently unable to provide. In order to compete, FIs will need to offer their customers a RTP capability that provides speed, convenience, and transparency as well as the level of safety and security they expect from a traditional payments network.

Though not exhaustive, the following list represents the primary groupings of evolving technology players.

- **Closed loop cards and mobile apps:** Many non-bank companies have built closed loop card networks to promote loyalty programs and provide a convenient way for customers to pay for goods. The most successful example has been Starbucks' mobile app, which has seen a 75 percent growth in its mobile app transactions from 2013 (4 million transactions per week) to 2015 (7 million transactions per week).^{1,2}
- **Digital wallets (non-banks):** Digital wallets are beginning to gain traction among consumers as they provide an easy and flexible method to transfer money. PayPal's digital wallet continues to increase in mobile payment transactions, growing 40 percent year-over-year.³ The industry anticipates mobile wallet usage to reach 200 million transactions by the end of 2016.⁴
- **Mobile money (non-banks):** Mobile money allows consumers to access financial services, such as money transfer or bank account access, via use of the mobile phone. In 2014 alone, mobile money services in the U.S. such as Square Cash and Venmo handled \$5.2 billion in P2P payments.⁵

¹Why Is The Starbucks Mobile Payments App So Successful? Forbes; June 13, 2014.

²Starbucks's Mobile App Payments Now Represent 16% of all Starbucks Transactions. Fast Company; January 23, 2015.

³PayPal begins piloting NFC and records 40% growth in mobile payments. NFC World; April 27, 2015.

⁴Mobile Wallets: Contactless & Remote Payments 2015-2020. Juniper Research; September 7, 2015.

⁵Mobile Payments to Explode by 2019. PYMTS.com; November 18, 2014.

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Four myths about RTP

MYTH ONE

RTP is only for P2P

TRUTH

- The RTP system is designed to address unmet customer needs across all customer segments (i.e., B2B, B2C, C2B, P2P, G2C, etc.).
- Consumers, businesses, and government can use RTP.
- For example RTP scenarios, refer to page 9.

MYTH TWO

RTP will only be available to TCH member banks

TRUTH

- Any participating FI, irrespective of their size or charter type, will have the ability to transmit payments through the RTP system.
- FIs will have the flexibility to choose their level of participation (i.e., Receive Only, Send, Allow Request for Payment, etc.) within the RTP system.
- Technology players and third-party payment providers will have a role in the environment to provide or facilitate connectivity where necessary.
- Refer to Real-Time Payments Ecosystem on page 10.

MYTH THREE

RTP is the same as Same Day ACH

TRUTH

- **Value-Added Messaging** – RTP will have the ability to enable new products and services through the use of its extensive and multifaceted messaging capabilities.
- **Availability of Funds** – The RTP system will make funds available in real-time – 24/7/365.
- **Transparency** – The RTP system will provide status updates of payment and non-payment messages in real-time.

MYTH FOUR

OFAC requirements cannot be met in real-time

TRUTH

- Data required for OFAC screening will be included in payment transactions.

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RTP checklist

A checklist of high-level key activities which should be considered as you start your implementation of RTP is included below.



High-Level FI checklist of key activities for implementing RTP

- ☐ Perform a Current-State Assessment of products, channels, processes, technologies, existing gaps, and required capabilities
- ☐ Conduct product ideation to develop new product ideas
- ☐ Determine functional areas that will be impacted by a real-time product offering (i.e. Lines of Business, Product and Services, Information Technology, Operations, Risk Management, Regulatory Compliance, Treasury, etc.)
- ☐ Perform risk analysis including AML, OFAC, and other regulatory compliance risk reviews
- ☐ Develop preliminary RTP business case
- ☐ Perform technology design and development including architectural design and connectivity to core system
- ☐ Develop Target Operating Model (channels, payment processing, real-time acknowledgements, risk and compliance, accounting, release to clearing, reporting, gap assessment versus current state, multi-generational plan)
- ☐ Develop final RTP business case
- ☐ Initiate an RTP Program that establishes a governance process including stakeholder management, management routines, and resourcing
- ☐ Develop RTP business and functional requirements
- ☐ System / IT Development
- ☐ Develop communication and training plans for internal and external users of RTP
- ☐ Perform Technology Testing of RTP system
- ☐ Perform integration testing with RTP system
- ☐ Deploy RTP technology solutions(s)
- ☐ Execute product launch

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Sample B2B RTP Scenario

Sample B2C RTP Scenario

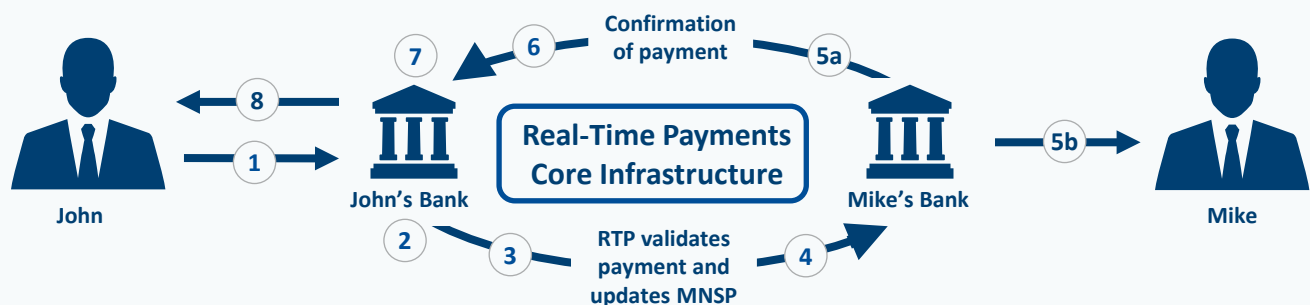
Sample C2B RTP Scenario

03: How do Real-Time Payments Work?

Sample P2P RTP Scenario

Real-time payments are executed through a sequence of payment messages. It starts with a customer sending a payment instruction via a channel made available by their FI. The FI ensures funds availability, conducts required screening, and securely sends the payment instruction message to the TCH RTP core infrastructure. The TCH RTP core infrastructure validates the transaction and routes it to the receiving FI. The receiving FI acknowledges the message and posts the transaction to the receiving customer's account. This provides immediate availability of funds to the recipient. The TCH RTP core infrastructure provides an acknowledgment message to the receiving bank, manages the multi-lateral net settlement positions (clearing) between banks, and periodically settles positions based on predefined settlement windows.

Person-to-Person RTP Example



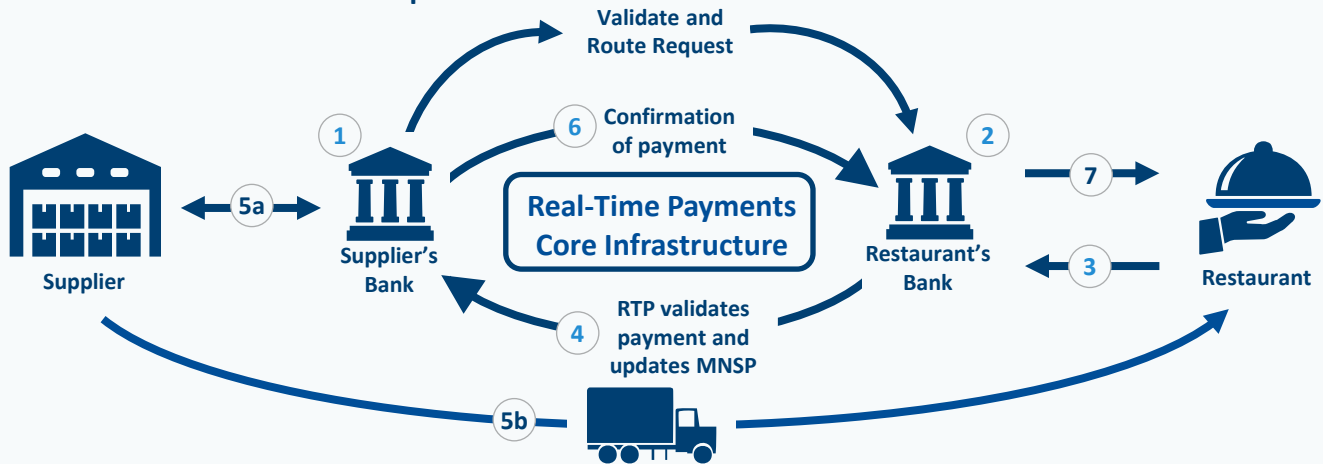
Use case scenario: The flow of information and funds for an RTP transaction can be demonstrated in a simple person-to-person (P2P) transaction. In our scenario, John wants to pay his roommate, Mike, for his half of the current month's rent. Mike has a bank account at a different bank than John.

- 1 John's bank carries out its normal authentication process to verify John as the account owner. John instructs his bank through Online Banking to pay Mike immediately. He includes Mike's routing and tokenized account number to address the payment. He may also add additional reference information so that Mike knows what the payment is for.
 - 2 Before John's bank allows the payment to be made, it will check that his account has sufficient funds and validate the payment request. Under certain cases, the bank may need to hold the payment to perform more extensive fraud protection checks.
 - 3 John's bank submits the transaction to the RTP core infrastructure. At this point, John can no longer cancel the transaction.
 - 4 The RTP core infrastructure validates the transaction details and updates the multi-lateral net settlement position (MNSP) for the debtor and creditor institutions in the amount of the transaction before sending the payment instruction to Mike's bank.
 - 5a Once Mike's bank has received the transaction, it checks that the account number is valid and then sends a message back to the RTP core infrastructure that it has accepted (or rejected) the payment.
 - 5b Mike's bank simultaneously credits his account with the value of the transaction sent by John.
 - 6 The RTP core infrastructure sends a message to John's bank to let them know that the transaction was successful (or rejected).
 - 7 John's bank marks the transaction as complete.
 - 8 John's bank confirms the status of the payment to John. Each sending bank will decide how their customers will be notified of transaction status. In all cases, once a payment has been made, a confirmation message will be sent between banks.
- Note:** Since Mike's bank has opted to receive RTPs, he should be able to see the credit on his account within seconds and be able to access the funds.

Sample B2B RTP Scenario

Immediate payment systems are particularly well-suited to provide value beyond the inherent benefit of fast money movement. A fundamental feature of real-time payments is real-time communication among senders, receivers, and their FIs.

Business-to-Business RTP Example



Use case scenario: A single business-to-business (B2B) transaction between a restaurant and its supplier illustrates the value of extensive immediate messaging. In this scenario, a restaurant orders produce for immediate delivery from a supplier that does not extend trade credit. The restaurant needs the produce for tonight's dinner service and the supplier needs to be paid before shipping the goods. Using the immediate messaging capabilities of a fully-featured RTP system, the supplier can request and receive payment nearly instantly.

1 The supplier reviews an order received from a restaurant and sends a "Request for Payment" (RFP) through their bank. The supplier's bank sends the RFP message to the RTP core infrastructure. Sending the request through a secure, trusted channel reduces fraud risk associated with an e-mail invoice.

2 The RTP core infrastructure validates the request and routes it to the restaurant's bank, which then notifies the restaurant.

3 The restaurant receives the RFP that contains a "Pay Now" button. Upon selecting the "Pay Now" button, a pre-populated payment message that includes all pertinent payment data (e.g., remittance information, payment amount, etc.) is presented to the restaurant so they can make the payment to their supplier quickly and easily.

4 The restaurant's bank submits the transaction to the RTP core infrastructure that validates the transaction details and updates the multilateral net settlement position (MNSP) for the transaction for the debtor and creditor institutions in the amount of the transaction. The payment message is then sent to the supplier's bank that then confirms the account number is valid and accepts the payment.

5a The supplier's bank notifies the supplier of payment. The supplier sends acknowledgement of payment receipt to the restaurant, confirming the produce is on the way.

5b The supplier loads produce for delivery to the restaurant, confident that payment has been made.

6 The supplier's bank sends a message to the RTP core infrastructure with acceptance of the payment and receipt acknowledgement from the supplier.

7 The restaurant's bank notifies the restaurant, confirming that the produce is on the way through a reliable, trusted channel, assuring the restaurant that diners will enjoy dishes made with fresh ingredients that evening.

Note: The exchange of information between buyer and seller goes beyond the remittance detail that typically accompanies B2B electronic payments. Remittance data is essential and allows the supplier to apply payment to the correct invoice, account for any differences, and reconcile those differences. In this immediate payment example, the payment request, notification message, and confirmation message all provide additional value for a time-sensitive transaction.

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Sample P2P RTP Scenario

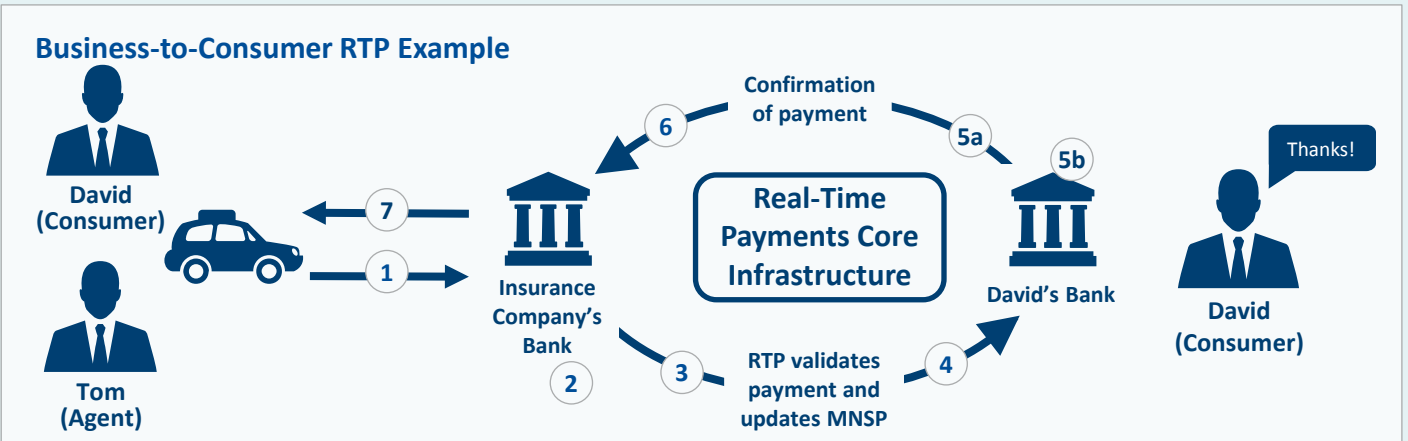
Sample B2B RTP Scenario

Sample B2C RTP Scenario

Sample C2B RTP Scenario

Sample B2C RTP Scenario

A business-to-consumer (B2C) transaction demonstrates that RTP offers value beyond P2P transactions. One example is the case of an insurance claims adjuster now having the ability to meet with a customer shortly after an accident or claim, assess value of damages, and provide funds immediately, thereby relieving the customer of worry in an already stressful situation.



Use case scenario: In this business-to-consumer (B2C) transaction, David has damages to his car from an accident. He calls his insurance company, which sends its local adjuster, Tom, to meet with David and view the damages. Tom inspects the claim, determines the appropriate settlement amount, and approves it remotely. Tom's insurance company immediately sends David the settlement amount.

1 Tom instructs the insurance company's bank to pay David the approved settlement amount. In addition to David's routing and tokenized account number used to address the payment, the payment instruction also includes claim information that both the insurance company and David can access. (Extensive claim information could be included in a remittance advice message or through a reference to an external source).

2 The insurance company's bank uses appropriate customer authentication and payment verification processes to verify Tom has authority to initiate payments from this account. They will also ensure that "good funds" are available.

3 The insurance company's bank submits the transaction to the RTP core infrastructure.

4 The RTP core infrastructure validates the transaction details and the payment instruction and updates the multilateral net settlement position (MNSP). Associated claim information is then sent to David's bank.

5a Once David's bank has received the transaction, it checks that the account number is valid and then sends a message back to the RTP core infrastructure that it has accepted (or rejected) the payment.

5b If the payment is accepted, David's bank simultaneously credits his account with the claim amount sent by the insurance company so he can have immediate access to the funds.

6 The RTP core infrastructure sends a message to the insurance company's bank to let them know that the transaction has been made successfully. The insurance company's bank marks the transaction as complete.

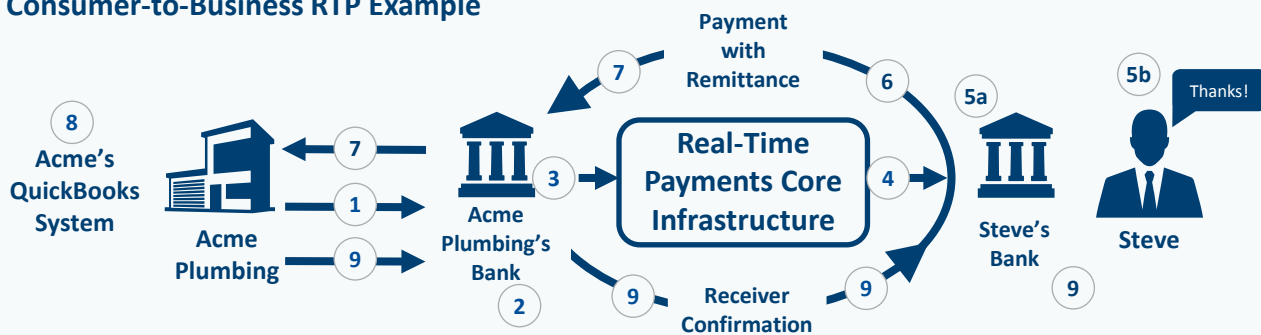
7 The insurance company's bank confirms the status of the payment and provides transaction details to the insurance company. Each sending bank will decide how their customers will be notified of transaction status. In all cases, once the payment has been made, a confirmation message will always be sent between banks.

Note: The exchange of information between buyer and seller goes beyond the remittance detail that typically accompanies B2C electronic payments. Remittance data is essential and allows the supplier to apply payment to the correct invoice, account for any differences, and reconcile those differences. In this immediate payment example, the payment request, notification message, and confirmation message all provide additional value for a time-sensitive transaction.

Sample C2B RTP Scenario

A consumer-to-business (C2B) transaction demonstrates that RTP offers many features beyond traditional money movement. One example is a small business that wants to send electronic invoices to its customers, along with the ability for customers to view and respond immediately with payment. The small business wants to have the payment and remittance data instantly downloaded to its accounting software program to avoid manually entering payment remittances, which can take time and introduce errors.

Consumer-to-Business RTP Example



Use case scenario: Steve, an Acme customer, is presented with a link from his bank's RTP system that displays the bill. An option to immediately pay all or a portion of the invoice is made available. Once Steve is ready to pay, his bank sends the payment directly to Acme's checking account while the remittance information is sent directly to Acme's accounting system via Acme's Bank's QuickBooks interface, where it is immediately posted. Acme confirms receipt of the payment to Steve via RTP.

- 1 Acme Plumbing creates an invoice in their QuickBooks accounting system to be presented to Steve, their customer, for payment. QuickBooks creates a file containing a link to the invoice, (including remittance info) and a Request for Payment for its customers. The Request for Payment is sent to Steve's bank for distribution through the RTP system.
- 2 Acme's bank uses appropriate customer authentication and payment verification processes to verify Acme's Accounting personnel has authority to make payment requests.
- 3 Acme's bank submits the Request for Payment messages to the RTP core infrastructure.
- 4 The RTP core infrastructure validates the payment request and remittance details and forwards them to Steve's bank for distribution to the customer.
- 5a Once Steve's bank has received the payment request, it validates that he is eligible to receive RFPs. Steve's bank then posts the message to his online or mobile banking application.
- 5b Steve is presented with a RFP that has a "Pay Now" button. Upon selecting the "Pay Now" button, Steve is presented with a pre-populated payment message including all pertinent data (i.e., remittance information, payment amount, etc.).
- 6 Once the payment is authorized and submitted, Steve's bank forwards the payment and remittance message to Acme's bank via RTP.
- 7 Acme's bank informs Acme Plumbing that the customer's payment, and related remittance data, has been received and funds are available in Acme's account.
- 8 Acme Plumbing receives remittance information into their QuickBooks accounting system via their bank's interface, avoiding manual entry of payment information, and applies credit to the appropriate customer account.
- 9 ACME sends confirmation that payment has been posted to Steve via RTP.

Note: The exchange of information between buyer and seller goes beyond the remittance detail that typically accompanies C2B electronic payments. Remittance data is essential and allows the supplier to apply payment to the correct invoice, account for any differences, and reconcile those differences. In this immediate payment example, the payment request, notification message, and confirmation message all provide additional value for a time-sensitive transaction.

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04: Business Case Considerations

In 2014, The Clearing House launched its Future Payments Initiative to develop a strategic view of RTP based on an extensive study of payment needs in an increasingly digital economy. Through this review, TCH assessed several aspects surrounding RTP:

- TCH worked closely with industry associations including the Federal Reserve, NACHA, ABA, ICBA, NAFCU, CUNA and TCH banks to identify consumer and business cases with the greatest need for RTP that represent the best incremental value for customers.
- The Future Payments initiative considered the experience and lessons learned of other countries who had already established their own real-time payments system.
- TCH also reviewed ways in which a potential RTP system for the U.S. could maintain and improve the safety and soundness of existing payment systems.

Based on the findings, TCH announced a multiyear initiative to build a ubiquitous RTP system for the U.S. As FIs consider participating in RTP, they will likely need to create a business case for their organization that is specific to their unique payment offerings. Additional detail regarding considerations for the business case can be found in the following sections.

Business Case Considerations for RTP



New Product Ideation

Consider opportunities for new products and markets created by faster payments to deliver innovative products that transform the industry and drive adoption of RTP.



Impacted Products and Service Offerings

Assess customer needs alongside existing product and service offerings to determine the foundation for your organization's RTP strategy.



Competitive Opportunities

Understand competitive opportunities across use cases. Develop your own value-added products and pricing strategies that align with your customers' demand.



Impacted Investments and Associated Costs

Determine investment areas and associated costs to understand the overall cost and impact to your organization.

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Opportunities for new product ideation and markets

The Clearing House is working on a safe, sustainable, standards-based RTP system that is inclusive of all U.S. FIs and includes extensible messaging and robust security. This system will provide a platform FIs can use to develop creative and innovative products for their customers. TCH's guiding principles for developing a platform for product innovation include the following:

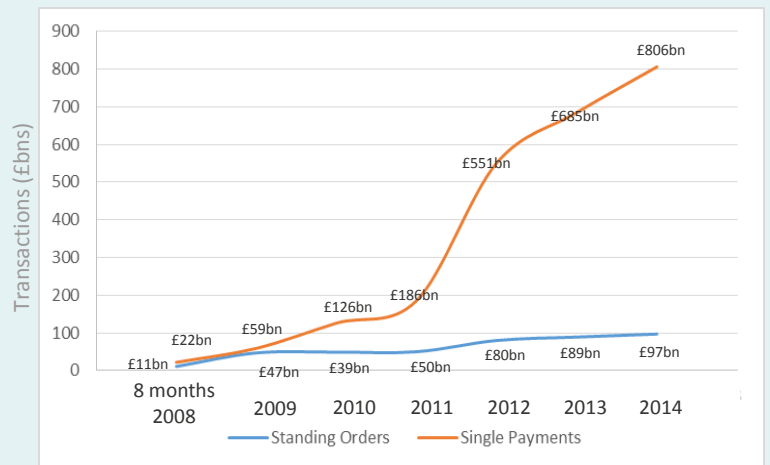
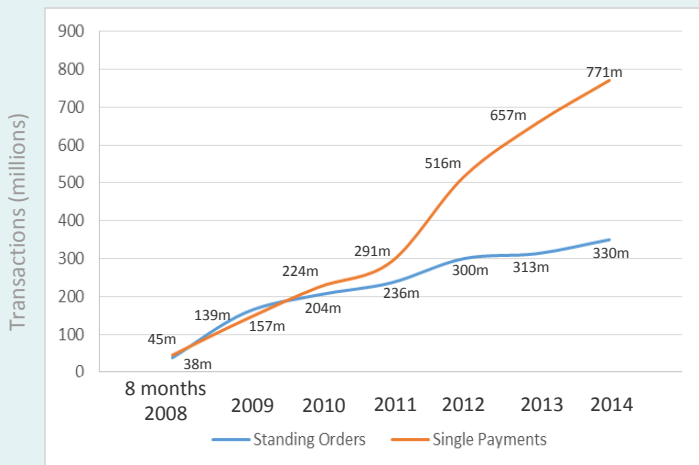
- **Ubiquity** – The RTP system will be accessible to FIs of all sizes and charter types in order to reach the vast majority of U.S. account holders.
- **Adaptability** – The RTP system will be able to adapt as expectations and risk environment inevitably change over time.
- **Extensibility** – The RTP system will include rich, flexible messaging functionality to support innovative value-added products
- **Global Compatibility** – The RTP system will adhere to widely used global ISO 20022 standards to facilitate future interoperability and to ease the implementation burden for multinational banks and companies. To the greatest extent possible, RTP will remain consistent with international global standards to the degree that domestic U.S. requirements will allow.

Demonstrated adoption of RTP in the United Kingdom

Creating new products from the features and functionality offered by faster payments can help drive adoption of RTP. In 2008, the United Kingdom (U.K.) implemented their Faster Payment Service (FPS) to provide a speedier alternative to the country's existing ACH system. Since the inception of FPS, the adoption of mobile banking between 2009-2010 significantly increased the volume of transactions sent through the FPS network. Based on data gathered from the U.K. Payments Council, FPS volume and value growth has surpassed expectations and is expected to continue following the increasing trend as mobile banking continues to grow and new product innovation creates additional demand in the market.

It is worthy to note the successful adoption trends that the U.K. experienced with FPS. However, the adoption of the service in the U.K. should not be used as a direct comparison for adoption in the U.S. as the implementation of FPS was driven by a regulatory mandate in the U.K. in 2011.

U.K. FPS Volume and Value Growth¹


¹ U.K. Faster Payments Council

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Assess customer needs, product, and service offerings

Each FI will need to perform its own comprehensive product analysis to understand its customers' needs and how RTP will impact their existing products and services. Only then will an FI be able to lay the foundation for an RTP product strategy and truly assess the revenue impacts associated with adoption.

1. Assess customer needs

FIs must understand their customer's latent needs and the gaps that may exist in meeting those needs. However, simply understanding current needs is not sufficient. FIs should also consider how customer behavior and expectations will change once they have experienced RTP capabilities. Participants should take into account future customer expectations and determine the many different ways RTP could impact and shape their existing product road map. This will not be a one-time activity, but rather an iterative process of assessing customer needs and wants.

2. Assess current products, service offerings and gaps

Once customer needs are assessed, FIs can conduct an analysis of their existing products and service offerings to their consumer, small business, and commercial clients. Analysis of this data will ensure that those in the Business and Product segments can compare existing offerings to future customer needs in a real-time environment. The results of this analysis will provide an assessment of existing gaps and potential opportunities for a real-time product.

3. Conduct product ideation workshops

Stakeholders should consider conducting product ideation workshops with Business and Product leads to potentially identify new real-time product opportunities based on identified customer needs and existing product gaps. Product opportunities should not be limited to the payment transaction; non-payment messages that enable value-added services associated with the payment transaction should also be included in these discussions. As FIs refine their RTP-related products and services, they should continue to conduct product ideation workshops to improve and enhance their collection of offerings.

Important



As product analysis and assessments are being conducted, some topics that FIs should consider are:

- What are customers' (consumer and corporate) existing needs and how do we use that to drive adoption?
- What gaps in existing product or service offerings can be filled by RTP?
- How does RTP impact an FI's road map? (Product, Operations, Technology, etc.)
- How will customer behavior change over time given adoption of RTP?
- How can RTP be utilized strategically to strengthen the FI's brand?

Tips/Fact Check



RTP systems are particularly well-suited to provide value beyond the inherent benefit of fast money movement. A fundamental feature is the real-time communication among debtors, creditors, and their FIs. The use cases for immediate payment are those that benefit from both immediate funds transfer and immediate messaging such as notification, confirmation or request for payment. With this, FIs will have the opportunity to extend their offerings beyond traditional payment transaction services.

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Competitive opportunities across use cases

With RTP, FIs have the opportunity to create new competitive opportunities for themselves by offering products and services that fill gaps in the market. Services such as request for payment, bill pay, and other value-add services that include information about transactions will allow FIs the ability to develop new competitive revenue offerings driven by consumer demand.

In order to size the opportunities of RTP, an FI should:

- Define the products and services they will provide to address unmet customer demand
- Develop pricing strategy and non-pricing strategies commensurate with the value provided to customers given the chosen product/service set
- Forecast volumes for the new products and services considering:
 - Product potential of RTP
 - Volume saved from offsetting losses to bank and non-bank competitors
 - Impacts to existing product volumes
 - Any anticipated reduction in attrition

As an FI enhances its product line(s) with RTP capabilities, it should consider how it prices these new products and services for its customers. Enhanced revenue opportunities will exist. In addition to fees related to sending and/or receiving RTP, an FI could consider charging for related value-add services, including the messaging capabilities inherent in the RTP system that go above and beyond the financial transaction itself.

Each FI should consider its own strategies for advancing its competitive opportunities. There are several factors, however, that could be considered:

1. Projected cost of implementation to enable RTP
2. Ongoing cost of supporting a RTP infrastructure
3. Ongoing cost of supporting 24/7/365 operations for RTP
4. Clearing costs that are passed onto the participating FIs
5. New value-added service offerings
6. Customer willingness to pay and expected volumes
7. Pricing sensitivity analysis to maximize adoption rates and revenue
8. Product bundling to encourage repeat usage
9. Customer retention (customers that may otherwise leverage other payment options)

Each participating FI will need to evaluate its pricing strategy based on a holistic view of its product catalog, value proposition, and assessment of revenue impacts balanced with technology and operating cost considerations.



Important

RTP will impact existing products and services as well as new products and services.

When calculating new revenue opportunities, participating FIs should consider the revenue impacts to their entire product portfolio.

Furthermore, they should evaluate how these new capabilities will increase their customer retention as compared to market disruptors.



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New product ideation/markets

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Impacted investment areas and associated costs

It is projected that typically, 60 percent of the expected build costs related to RTP will be for online or mobile channel improvements, cybersecurity, payments architecture modernization and compliance platforms – all of which have utility beyond RTP, and are capabilities that most banks are already looking to invest in for strategic banking purposes. With this in mind, implementation of an RTP solution could also serve as an opportunity for FIs to modernize their core infrastructure in a way that enables them to leverage this new infrastructure across business and product lines.

Several FIs have already researched the costs associated with planning or implementing technology upgrades, payment hubs, or automated compliance tools. The industry is finding that these existing efforts can overlap with RTP and significantly reduce the cost to support a new RTP system. The table below provides specific areas where FIs have found potential commonalities in RTP and existing investment.

In reviewing the costs associated with implementing an RTP system, FIs should conduct their own cost estimate, as each institution will have different criteria to consider for analysis and should not rely solely on the guidelines provided above.

Existing investments that may overlap with RTP

Function	Comment
Channel (Mobile & Online)	<ul style="list-style-type: none"> FIs are able to include RTP in planned upgrades to online and mobile banking at moderate incremental cost FIs that have already invested in upgrading online and mobile banking find that these platforms can incorporate RTP more readily than older systems
Payment Engine / Hub Processing	<ul style="list-style-type: none"> Many FIs are already planning to implement payment hubs or similar architectures, significantly reducing the cost to support RTP TCH is encouraging payment hub vendors to create payment “appliances” that can reduce the cost and complexity of supporting RTP
Compliance (Fraud/AML/Sanctions)	<ul style="list-style-type: none"> A number of FIs are already implementing advanced data analytics and automated tools to meet compliance requirements and address payment fraud risk which support all payments, including RTP
Accounting & Settlement	<ul style="list-style-type: none"> The requirements of risk management and compliance, as well as the increasingly real-time nature of mobile banking and card payments, have also led financial institutions to enhance accounting and settlement to eliminate internal float and timing gaps, another prerequisite for RTP
Payment Products and Services	<ul style="list-style-type: none"> FIs are prioritizing which products will take advantage of real-time in order to integrate into business strategies, avoiding an institution-wide approach

Important



- Typically, 60 percent of build cost is projected to be for enhanced product capability such as online or mobile channel improvement, cybersecurity, or payments architecture modernization.
- When sizing infrastructure requirements, FIs should consider increased transaction volume likely to occur with RTP.

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Products & Services

Communications & Marketing

Planning, Execution, and Delivery

Regulations & Compliance

Governance

05: Impacted Areas: Key Considerations

RTP represents a true transformation of the U.S. payments ecosystem and will impact the entire value stream for participating FIs. The capabilities provided will require FIs to reassess such key areas as **Products and Services**, **Communications and Marketing**, **Regulations and Compliance**, and **Governance**.

IMPORTANT

Existing payment systems currently do not meet customer demands for immediate payments, transparency of payment status, or funds availability. RTP will allow for products to meet these customer demands. However, once customers have access and become accustomed to these attributes of RTP, they will become the “New Normal.” As such, FIs will have to continue to innovate and provide new products and services to take advantage of the RTP capabilities.

Products and Services

Topic 1: Products

RTP allows participant FIs the ability to identify new product opportunities based on the enhanced capabilities provided. Not only will banks be able to provide the fast money movement required by customers, but they will also be able to provide value-added information such as notifications, confirmations, and request for payments that enable easier and more robust bill payment. Example value-added products for FIs to consider include:

Sample RTP Customer Solutions	
Business-to-Business	<ul style="list-style-type: none"> Just-in-time payments to suppliers Immediate bill payments with acknowledgement
Business-to-Consumer	<ul style="list-style-type: none"> Temporary employee wages Emergency payroll Urgent B2C (e.g., disaster relief, insurance claim)
Person-to-Person	<ul style="list-style-type: none"> Non-commerce payments (e.g., rent payment to a roommate) Urgent account-to-account transfers (e.g., to fund investments or purchases) Informal services (e.g., babysitting, lawn care)
Consumer-to-Business	<ul style="list-style-type: none"> Immediate bill payments with acknowledgement Some e-commerce payments (e.g., utility bill)
Government-to-Consumer	<ul style="list-style-type: none"> Immediate disaster relief payments with acknowledgement

FIs should identify opportunities to leverage RTP in order to fill gaps in their existing product or service lines as well as building new products and services utilizing RTP capabilities.

Stakeholders



Tips/Fact Check

When a “Request for Payment” message is sent, the payer’s FI could include value-added functionality in the form of a “Pay Now” button. This would allow for payment essential transaction information (Remittance Data) such as receiver account information or editable payment amounts to be pre-populated in the payment message.

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Products and Services

Topic 1: Products (continued)



Checklist for Assessing Impacts to Existing Products and Services

- ☐ Have you thought about how the core competencies of RTP align with your customer segment needs?
- ☐ Have you gained an understanding of products and services that your financial institution offers to consumer, small-business, and commercial clients?
- ☐ Have you conducted an assessment of opportunities to enhance existing products and services using RTP capabilities?
- ☐ Have you conducted an ideation session(s) with business stakeholders and product leads to discuss potential future and strategic opportunities and new products based on the value-added message types that RTP offers?



Tips/Fact Check

Including the reference number from the “Request for Payment” in the corresponding payment message will allow for easy traceability of a payment to the original RFP by the payee that sent the original request for payment.

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Products & Services

Communications & Marketing

Planning, Execution, and Delivery

Regulations & Compliance

Governance

Communications and Marketing

Topic 1: External Communications and Marketing

Focused marketing efforts on creating awareness and driving adoption will not only help FIs realize the benefits of RTPs, but will also be required to educate customers on features and functionality that differ from the traditional payments network. Customer education will be key to providing a positive customer experience. For example, with payment certainty, customers should be made aware that they cannot pull back transactions once they are complete.

Key External Communication Requirements

Segment	Key Messages
Consumer	<ul style="list-style-type: none"> • Ability to send RTP (24/7/365) • Real-time availability of funds • Mobile, online, and ATM capabilities (including person to person transfers and real-time bill pay) • Pricing/fees • Implications of Payment Certainty • Account data privacy
Small Business Banking	<ul style="list-style-type: none"> • Real-time availability of funds • Ability to pay suppliers in real-time • Potential for new merchant services • Ability to send payment requests and other value-added functionality (i.e., bill pay, invoicing) • Pricing structure of new products • Implications of Payment Certainty • Securing account data through use of tokens • Cash management considerations
Commercial or Corporate	<ul style="list-style-type: none"> • Differentiation between RTP and wire processing (including transaction value limits) • Product capabilities that can be used by large corporates • Ability to send payment requests and other functionality • Origination channel capabilities • Improved financial supply chain • Liquidity management considerations • Pricing structure of new products • Securing account data through use of tokens • Cash management recommendations

Tips/Fact Check



When creating the external messaging and communication to customers, FIs should consider tailoring the messaging and communication channels by customer segment:

- Consumers
- Small businesses
- Commercial / Corporations

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Products & Services

Communications & Marketing

Planning, Execution, and Delivery

Regulations & Compliance

Governance

Communications and Marketing

Topic 2: Internal Communication

The adoption of RTP will have enterprise-wide impacts for FIs. RTP capabilities provide new product opportunities for all customer segments across consumer, business, and wholesale banking. Furthermore the adoption of these capabilities may change the usage of other payment products by customers. Technology and Operations organizations will have to address new technology and processes from front-end channels through payment processing and accounting. With such broad reaching impacts throughout the organization, FIs need to develop and execute multifaceted communication plans to inform the organization of ongoing changes.

Communications will be unique in that RTPs do not just represent an incremental change, but rather a new standard for the speed of business. For most customers, their exposure to the new speed of business will become the “new normal”. Participating FIs will experience a significant change in the characteristics of the payments network. These new characteristics will require a change in how FI staff view payments:

- 24/7/365 operations
- Payment certainty
- Immediate availability of funds to DDA accounts
- Potential liquidity impacts/cash flow control
- Multiple settlement cycles per day
- Value-added messaging
- Security through tokenization
- Potential for global payment transactions

Given the changes in adoption and product offerings over time, internal communications management will have to be dynamic and ongoing. Stakeholder management and internal communication begins with the project execution of RTP capability and continues throughout the product life cycle.

Stakeholders



Communications and Marketing

Topic 2: Internal Communication (continued)

Key Internal Messaging

Internal Audience	Key Messages
Line of Business / Product Teams (including Finance Partners)	<ul style="list-style-type: none"> • Development of new products and impacts to customer channels • Pricing assessment • Impact analysis to existing products/revenue • Change management/training for sales and customer facing teams on new products • Ongoing adoption rates and necessary adjustments • Governance Process
Marketing	<ul style="list-style-type: none"> • Overview of new products and features • Identification of potential customers and opportunities • Coordination of products in marketing plans
Technology Teams	<ul style="list-style-type: none"> • Business and functional requirements requiring development for core payments processing, channel updates, new products, and reporting • Awareness and requirements for RTP SLAs • Infrastructure requirements (requires volume forecasts over time) across payments products • Technical support requirements • Governance process
Operations Teams	<ul style="list-style-type: none"> • Change management plans for coming changes • Business process re-engineering to support RTP SLAs • Training on new processes and tools for processing RTP transactions • Potential changes to roles and teams based on volume migration • Governance process
Customer Servicing Teams	<ul style="list-style-type: none"> • Awareness of new products and changes to operations to support • Development of trouble shooting and scripts for handling RTP requests • Updates to case management system for new products and services • Governance process
Risk and Compliance Teams	<ul style="list-style-type: none"> • Clarity of regulatory controls and processes (e.g., AML, OFAC, etc.) • Notifications to clients • Potential fraud considerations • Governance process

Important



When communicating the approach of RTP to your internal organization, there are several key themes that you should keep in mind:

- Communicate the nature of the transformational change (What is RTP? Why is RTP necessary to your organization? How will RTP enhance the products and services of your organization?)
- Discuss the expected time line and process of implementing RTP
- Be sure to communicate and support your organization's commitment to RTP
- Identify the target audience for each communication topic to ensure that the appropriate information is communicated to the right groups

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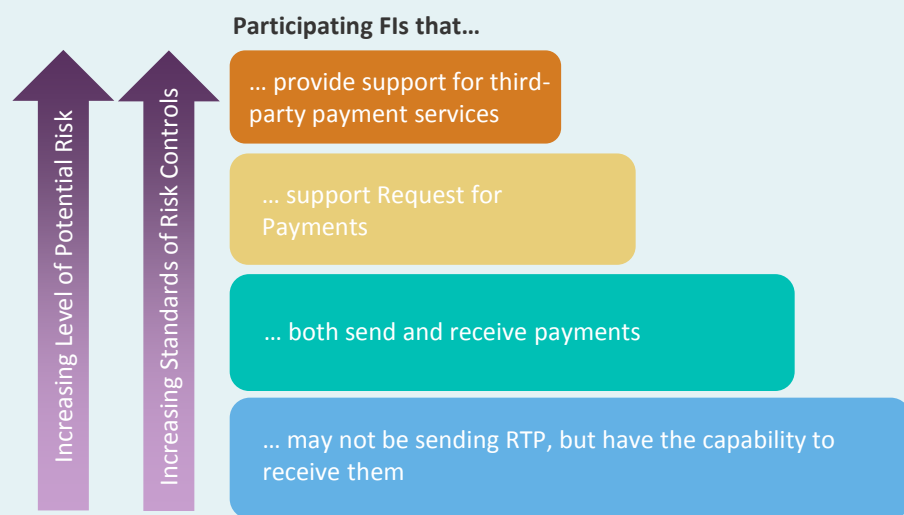
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Topic 1: RTP Functionality Level

As FIs make the decision to on-board onto the RTP system, a decision needs to be made regarding the level of capability they wish to offer their clients. TCH will provide a tiered approach to risk control associated with the activities that a financial institution is offering. This approach will be additive in nature based on level of participation.



All participants must meet a minimum set of privacy and security standards in order to participate, even if to "Receive Only." Starting with the "Send RTP" functionality, the level of risk materially increases and continues to accumulate with each increasing level of capability. In order to mitigate these risks, each access level entails adherence to incremental security safeguards and risk mitigation requirements that must be met in order to maintain the level of network security needed for RTP.

Decision Point



Each participating FI must decide on the level of functionality in which it intends to participate. Participants will have the option of the following capabilities:

- Receive RTP
- Send RTP
- Support Request for RTP
- Support third-party payment services

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Topic 1: RTP Functionality Level (continued)

Receive RTP

“Receive Payment” capability means that a participating FI with this capability is only able to receive payments from other registered participants of the RTP network. An FI with only “Receive Payment” capability will not be able to send payments on behalf of its customers via the RTPS.

An FI who has “Receive RTP” capability must meet the following minimum requirements:

- Comply with FFIEC guidelines as applied through Prudential Regulator Examination
- Make funds immediately available to recipient’s DDA account
- Report fraudulent behavior to The Clearing House and/or sending FIs (note: Can be facilitated through TCH offering)
- React to alerts from centralized activity monitoring utility

Increasing Level of Potential Risk

Increasing Standards of Risk Controls

... may not be sending RTP, but have the capability to receive them

Send RTP

Participants with “Send RTP” capability are able to transfer payments through the RTP system in addition to receiving real-time payments. As risk level increases with the ability to send payments, participants must have the ability to meet the increased level of requirements to participate in the RTP system.

An FI who has “Send RTP” capability must meet the following minimum requirements:

- Comply with all “Receive Only” requirements
- Have a minimum of two (dual) factor authentication (as defined through the RTP governance process)
- Must have robust customer onboarding and KYC process
- Must require registration of customers sending payments
- Screen for real-time fraud and risk for payments being originated

Increasing Level of Potential Risk

Increasing Standards of Risk Controls

... both send and receive payments

... may not be sending RTP, but have the capability to receive them

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Topic 1: RTP Functionality Level (continued)

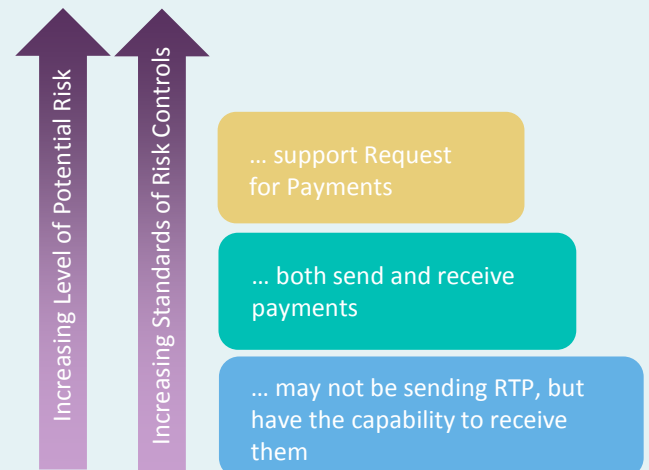
Support Request for RTP

Participants with “Support Request for RTP” capability are able to transmit end-user requests for RTP to other end users through the RTP system. As this functionality has an increased risk profile, a participant must meet the capability requirements established for:

- “Receive RTP”
- “Send RTP”

Additionally, a participant with this functionality must meet the following requirements:

- Make warranties and representations that Requests for Payment are for legitimate purposes
- Screen and monitor Request for Payment initiators, with the ability to identify abusive or fraudulent use and take corrective actions including suspension of initiator access to the network (as defined through the RTP governance process)
- Respond to network reports of abuse of Request for Payment

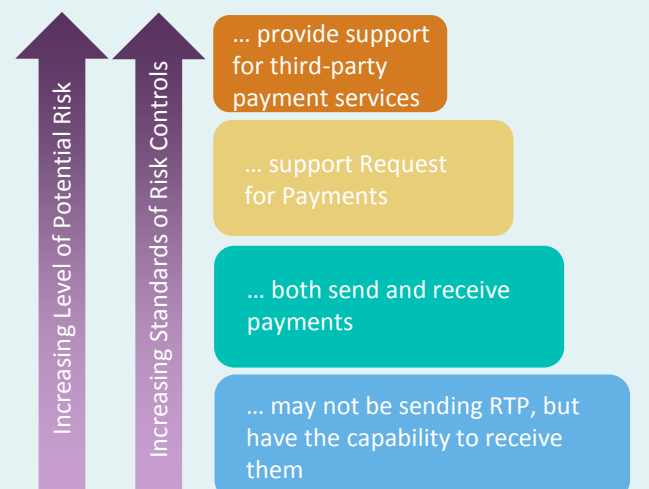


Support for RTP originated by third-party payment services

FIs that permit third party payments (i.e., nonbank payment providers that wish to utilize the system via an account at a participating FI) must:

- Comply with requirements for all participating sending and receiving financial institutions that permit customers to initiate requests for payment
- Perform due diligence on and monitor the RTP activity of third parties
- Make warranties and representations that third party is abiding by rules for payment origination
- Follow FFIEC guidelines regarding third party relationships
- Not permit third parties to originate values greater than the FI's financial resources can support

In addition TCH will require third parties to apply to participate in the RTP, enter into an agreement with TCH to abide by RTP system requirements for third parties, certify that the third party meets certain prudential and risk management requirements, and comply with certain consumer protection laws and regulations as if the third party was a depository FI.



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Topic 2: 24/7/365 Customer Service and Ops Support

FIs introducing RTP must be prepared to deliver these capabilities 24 hours per day, 7 days per week, 365 days per year with high availability regardless of their level of participation. This means they must be able to:

- Receive and respond to payments and non-payment messages 24/7/365
- Provide necessary back-office operations and customer service support 24/7/365
- Perform applicable real-time fraud and AML screening 24/7/365

This requires operational ability to perform necessary risk management and compliance functions such as customer authentication, authorization, regulatory compliance screening, and anti-fraud screening in an automated fashion. In addition, FIs will need to develop policies and procedures for handling requests for return of funds sent in error on both the sending and receiving side.

FIs will have to determine and address gaps in their servicing capabilities related to associate readiness, process capabilities, knowledge base specific to RTP, case management tools, and availability of support.



Stakeholders



Topic 3: SLA and Performance Metrics

To ensure the effectiveness of the entire RTP ecosystem, participating FIs will be expected to meet specific Service Level Agreements (SLAs). Receiving FIs must make funds available to recipients via posting or memo posting within seconds for any accepted payment. Furthermore, receiving FIs need to be able to either accept or reject most payments automatically without manual review and make funds available 24/7/365. Both sending and receiving FIs must be able to receive and respond to payments and non-payment messages within allowable SLAs.

Response time SLAs will exist for:

- Credit transfer
- Request for payment
- Request for return of funds
- Remittance advice
- Pended transactions
- Non-payment messages

Banks may additionally consider defining internal performance metrics for:

- Posting time
- Security
- Quality



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Topic 4: Tokenization: To be supported in second half of 2017

What is Tokenization?

Tokenization is the process of substituting a random, format preserving credential (token) for a customer's real account number. By keeping real account data safe, tokenization helps prevent fraud and makes it easier to recover from fraud if it occurs. When an account number is tokenized, the account data is held behind the FI's firewalls and customers are not required to provide sensitive account information externally. As a token has no meaning or value outside the FI, if a tokenized account number is compromised, the token is of limited or no use to cyber criminals. Even if a token is stolen, it can be replaced quickly and without customer involvement, making recovery less costly and impactful.

How does TCH's Token Services work?

TCH's Token Services de-tokenizes transactions as they reach the RTP system. This allows payees to always receive "real" account information and therefore make little to no changes to their internal systems while still realizing all the protections that tokenization offers. In this model, the payee's FI issues tokens to all directories or endpoints where real account information is currently stored. When a transaction using those tokenized credentials enters the real-time system, TCH knows to de-tokenize the transaction and send the payee's FI the real account information.

Token Services decision

Participants have the ability to choose the method in which they would like to implement their token services for their RTP system. Participants must choose to either (1) Build their own in-house token vault, (2) Utilize TCH's token services, or (3) Utilize a third-party token service. In making this decision, participating FIs should ensure that the Business, Product, IT, and Risk/Security teams are all represented in the decision making.

Decision Point



Prior to sending transactions to or receiving transactions from the RTP system, a participating FI will need to determine how to handle the tokenization/de-tokenization of account numbers. FI's may choose from several options. They can:

- Subscribe to TCH's Token Services
- Subscribe to a third-party token service
- Build an in-house token vault

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Topic 5: ISO 20022 Messaging Readiness

What is ISO 20022?

ISO 20022 is an international framework for the standardization of global financial messaging across payments, securities, cards, foreign exchange, and trade services. It is a worldwide effort to ensure that processes, messages, and terminology in financial services are synchronized across borders, facilitating global financial activity.

As a framework, it is important to note that ISO 20022 covers the entire life cycle of messages—the comprehensive methodology of how messages are proposed, developed, and maintained—and does not necessarily refer to a specific set of message formats.

ISO 20022 has emerged as an enabler of a single, common “language” for global financial communications that can assist organizations in responding to evolving demands. Recent global developments have highlighted the value of streamlining all financial communications and increasing the interoperability of expanded remittance information.

What are the strategic benefits of adopting ISO 20022?

Strategically speaking, the adoption of ISO 20022 for the RTP system is one that enables the system to capitalize on the global momentum of the message type. Several large and internationally active U.S. corporations and banks have already adopted ISO 20022 messaging as a standard message type which has driven down cost and complexity while increasing their processing efficiency.

ISO 20022 also enables the RTP system to provide a way for organizations to develop, source, and introduce new products and innovation without requiring customized development which allows the U.S. market to move in tandem with global markets to remain competitive.

ISO 20022 also offers users a central financial repository where industry users have access to a data dictionary of business and message components. If there is no ISO 20022 message available to cover a specific transaction, new models and messages can be petitioned with the ISO 20022 registration authority.

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Topic 6: ISO 20022 Messaging Readiness (continued)

RTP Message Types

The RTP system utilizes several types of messages to transmit transactions and messages through the system. Below is a summary of the categories and types of messages that can be sent while a more comprehensive messaging toolkit can be found in the link located in the **ISO 20022 Messaging Resources box**.

1. **Payment messages** consist of the credit transfer transaction information sent by the debtor institution to the creditor institution for one single payment transaction. The return acknowledgement of this payment instruction will inform the debtor of the status of their payment transaction.
 - Payment Instruction (pacs.008)
 - Payment Status – Successful, Pending, Rejected (pacs.002)
2. **Value-added messages** are non-payment messages that can be used to initiate or support payment messages.
 - Payment Acknowledged by Receiver (remt.001) TBD
 - Request for Payment (pain.013)
 - Response to Request for Payment (pain.014)
 - Request for Information (camt.027)
 - Response to Request for Information (camt.028)
 - Remittance Advice (remt.001)
3. **Exception messages** will be sent to the appropriate transaction party should there be an instance where the RTP system does not successfully complete a message.
 - System Cancel (Time-Out) Message (camt.056)
 - Request for Return of Funds (camt.056)
 - Response to Request for Return of Funds (camt.029) TBD
 - Suspected Duplicate Transaction (pacs.002)
 - Token Not Valid (pacs.002)
 - Questionable Transaction (pacs.002)
 - Payment Rejected by Receiver (pacs.002)

Tips/Fact Check



In 2013, the Federal Reserve Bank of NY, The Clearing House Payments Company, NACHA, X9, and the Financial Industry Standards, Inc. conducted an evaluation to determine whether the U.S. should adopt ISO 20022 payment messages.

The study showed that demand for adoption of ISO 20022 in the U.S. exists among large global banks and corporations while smaller institutions maintain a general satisfaction with the status quo. The absence of a regulatory mandate or industry deadline may inhibit the sense of urgency needed for industry wide adoption of ISO 20022. However, the study also indicated that there were several strong strategic benefits to consider adoption in the U.S. payments market:

- **Global momentum:** Large U.S. corporates and banks are actively adopting ISO 20022 and this trend is expected to continue
- **Global competition:** Compatibility enables the U.S. to maintain parity with other global markets and U.S. dollar clearing systems in other jurisdictions that are adopting ISO 20022 messaging
- **Cost savings and processing efficiency:** Standardizing message formats allows for consolidation of payment platforms at banks and corporations, which could promote STP and drive down costs
- **Interoperability:** A common format promotes ease of transacting domestically and globally by using a single, open standard rather than multiple proprietary standards

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Topic 7: ISO 2022 Messaging Readiness (continued)






4. **Admin and system messages** are sent to users in the event that there is an event that affects the normal operations of the RTP system and users need to be notified of the event, action items, or warnings. The admin and system messages are not covered in the ISO 2022 format and will be proprietary to the RTP network and include the following:

- Unsolicited messages (e.g., directed or broadcast)
- Notification messages
- Free format messages
- Warning messages
- Alert messages

Stakeholders



Example messages for common scenarios

Scenario	Message Category	ISO Message Types
 <p>A head of household sending emergency funds to a family member</p>	Value-added Messages	<ul style="list-style-type: none"> • Request for Payment (pain.013) • Payment Ack by Receiver (remt.001)
	Payment Messages	<ul style="list-style-type: none"> • Payment Instruction (pacs.008) • Payment Status (pacs.002)
 <p>A small business paying an urgent bill payment in order to receive goods or services based on payment request from supplier</p>	Value-added Messages	<ul style="list-style-type: none"> • Request for Payment (pain.013) • Response to Request for Payment (pain.014) • Payment Ack by Receiver (remt.001)
	Payment Messages	<ul style="list-style-type: none"> • Payment Instruction (pacs.008) • Payment Status (pacs.002)
 <p>A utility company requesting payment for services from a late paying business or customer</p>	Value-added Messages	<ul style="list-style-type: none"> • Request for Payment (pain.013) • Response to Request for Payment (pain.014) • Remittance Advice (remt.001) • Payment Ack by Receiver (remt.001)
	Payment Messages	<ul style="list-style-type: none"> • Payment Instruction (pacs.008) • Payment Status (pacs.002)
 <p>A tax agency issuing a refund to a taxpayer for their recently filed taxes</p>	Value-added Messages	<ul style="list-style-type: none"> • Payment Ack by Receiver (remt.001)
	Payment Messages	<ul style="list-style-type: none"> • Payment Instruction (pacs.008) • Payment Status (pacs.002)
 <p>An individual who inadvertently sent two separate payments and would like to request a return of funds</p>	Value-added Messages	<ul style="list-style-type: none"> • Payment Ack by Receiver (remt.001)
	Request for Return of Funds Messages	<ul style="list-style-type: none"> • Request for Return of Funds (camt.056) • Response to Request for Return of Funds (camt.029) • Suspected Duplicate Transaction (pacs.002)
	Payment Messages	<ul style="list-style-type: none"> • Payment Instruction (pacs.008) • Payment Status (pacs.002)

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Topic 7: ISO 20022 Messaging Readiness (continued)



Checklist for implementing ISO 20022

- ☐ Have you identified a resource that is knowledgeable in ISO 20022 to help your FI understand the necessary requirements for adoption of ISO 20022 messaging within your organization?
- ☐ Have you conducted a business assessment to review your institution’s current ISO 20022 landscape from an external business perspective?
 - Business flows
 - Message types
 - Dependencies on external organizations
 - Value-added capabilities
 - Robust data transmission
- ☐ Have you conducted a technology assessment to review your institution’s current ISO 20022 landscape from an internal application perspective?
 - Summary of business flows, message types, and interface specifications with all internal applications
 - Which existing applications will be affected?
 - What are the requirements to produce or consume ISO 20022 data?
 - Will internal applications manage the requirements directly within the application or indirectly via an integration or middleware solution?
 - What new application capabilities are required?
- ☐ Have you outlined the proposed scope of ISO 20022 for your organization in a road map for your stakeholders?
 - List all impacted external organizations
 - List all business applications
 - List all specific business benefits
 - List all message flows and message types
 - Map out a high-level time table for implementation
- ☐ Have you assessed the expected costs and benefits of the proposed ISO 20022 roadmap for the stakeholder business case?

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Regulations and Compliance

Topic 1: Regulations and Compliance Review

As with any new product and capability, each FI should conduct an appropriate regulatory and compliance review regarding the implementation of RTP, consistent with regulators' expectations. Among other things, an FI should assess the risks associated with a new product or service, including requirements for complying with applicable laws, regulations and regulatory guidance. Potentially relevant laws and regulatory requirements include:

- Electronic Fund Transfer Act/Regulation E
- Bank Secrecy Act/AML requirements
- OFAC/sanctions obligations
- Regulatory expectations regarding data security

Such regulatory and compliance reviews are not specific to RTP and FIs should perform these reviews following their standard policies and procedures.

Stakeholders



Governance

Topic 1: SLA and Performance Metrics

The RTP system will have continuous monitoring of the proper governance procedures that define the expectations for performance of participating FIs. Required SLA and performance metrics will be clearly defined as a part of the governance process. Performance will be monitored and adjustments to standards may occur as part of the ongoing management routines.

As described previously, some initial SLAs have already been defined. Examples of these SLAs include:

- Receiving FIs must make funds available to recipients via posting or memo posting within seconds for any accepted payment
- Receiving FIs must be able to either accept or reject most payments automatically without manual review 24/7/365
- Both sending and receiving FIs must be able to receive and respond to payments and non-payment messages within allowable SLAs

These SLAs will be governed to manage and maintain the efficacy of the RTP system.

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06: References and Supporting Documentation

If you would like to receive any of the following supporting documentation, please contact Mark Majeske via e-mail (Mark.Majeske@theclearinghouse.org) and specify the document(s) desired.

Functional Overview Diagram

The fundamental process for sending funds from one party's account to another party's account is conceptually straight-forward. However, significant infrastructure and protocols are needed to enable the immediate routing, necessary controls, and robust messaging that is required. TCH will provide the core infrastructure to enable this RTP system for FIs. FIs will have to develop the appropriate capabilities, interfaces, and processes to connect with the RTP system. The functional overview diagram is a high-level overview of the core RTP infrastructure.

Business Requirements

The RTP business requirements outline the critical activities and objectives that will guide the development of the system architecture and technical specifications for the system. This document divides the business requirements into four categories in order to illustrate the policies and procedures the payment system requires, the policies and procedures for the participating FI and the operator, and the best practices of the RTP System for participants.

Functional Requirements

The RTP functional requirements capture and specify the particular intended behavior of the RTP System. This document provides users with the requirements framework as well as the functional requirements that will govern the RTP System.

Message Toolkit

The RTP ISO Messaging Toolkit illustrates the messages that can be transmitted through the RTP core infrastructure and the related ISO 20022 message type that is used. This document covers all anticipated message categories including payment messages, value-added messages, exception messages, administrative messages, settlement messages, and system messages.

Sequence Diagrams

The RTP Sequence Diagrams illustrate how message types interact with the RTP system and the sequence in which they are transmitted for each use case scenario. Each scenario shows the message type interactions arranged in the appropriate time sequence needed to carry out the functionality of the scenario.

Process Flows

The process flow diagrams of the RTP system represent schematic illustrations of the message flow for each use case scenario that the RTP core infrastructure will be able to process. Each diagram specifies an illustrative flow that a debtor and creditor institution might take along with the detailed step-by-step processes and decisions that the RTP system must conduct in order to transmit payment/non-payment messages.

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Operating Rules

Operating Rules

TCH has established governance arrangements for the RTP system that is designed to ensure the integrity, effectiveness and success of the RTP system. TCH is developing comprehensive operating system rules and participant agreements that will establish the rights and obligations of participants in the RTP system. The following chart describes some of the key elements of the RTP system rules, as well as practices and procedures that FIs will need to implement in connection with their offering of RTP products and services (including practical implications for FIs that are not dictated by the system requirements or operating rules). Note that the chart below is intended only to provide examples of the issues the RTP rules will address, and the final RTP system rules may vary from the requirements described in this chart.

RTP Requirements	Operating Rules and Procedures	FI Requirements
All payments are originated by the payer	<ul style="list-style-type: none"> A legal basis must be provided for credit transfers that are authorized by a payer Rights and obligations of all parties to the transaction must be defined- including the payer, the payee, the sending FI, the receiving FI, and the payment system operator 	<ul style="list-style-type: none"> Develop products and services for customers to send and receive credit transfers
FI customers have the ability to send or receive payments 24 hours a day, 7 days a week, 365 days a year	<ul style="list-style-type: none"> FIs must be able to receive and respond to payments and non-payment messages 24/7/365 within an established SLA 	<ul style="list-style-type: none"> 24/7/365 as a receiving FI FIs must have the ability to perform necessary risk management and compliance functions such as customer authentication, authorization, regulatory compliance screening, and anti-fraud screening 24/7/365 in an automated fashion
Senders and receivers will have complete, timely information about the status of RTP	<ul style="list-style-type: none"> Receiving FIs must accept or reject the majority of payments within seconds and all payments in a reasonable time FIs must make immediate notification of payment status to senders and receivers or provide a channel for senders and receivers to view payment status 	<ul style="list-style-type: none"> FIs must integrate accurate RTP status inquiry, notification, and feedback into online and mobile banking services
Receiving FIs will provide immediate availability of funds to recipients 24/7/365	<ul style="list-style-type: none"> Receiving FIs must make funds available to receivers within seconds for any accepted payment Payments can be rejected for risk management, inability to post, or legal compliance Payments may be held for review for a reasonable time only when necessary for risk management and legal compliance purposes (expected to be a small percentage of payments in the ordinary course of business). After review, FIs must accept or reject payments- not withhold availability 	<ul style="list-style-type: none"> Receiving FIs must either post or memo post funds for payments received immediately Receiving FIs must be able to either accept or reject most payments automatically without manual review 24/7/365
Real-time exchange of financial and non-financial messages that support a variety of use cases	<ul style="list-style-type: none"> Sending FIs must adhere to standard formats and usage rules for payment and non-payment messages Receiving FIs must make all relevant information from payment and non-payment messages available to receivers Receiving FIs must act on administrative messages 	<ul style="list-style-type: none"> FIs must develop products, services, and processes to create, deliver, and respond to payment, non-payment, and administrative messages

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Operating Rules

Operating Rules (Continued)

RTP Requirements	Operating Rules and Procedures	FI Requirements
System wide limits on transaction value, updated periodically based on objective criteria	<ul style="list-style-type: none"> Limits on the value of transactions cleared through the payment system will be established by the RTP System RTP System rules may include a process for revising the transaction value limit Sending FIs may set lower value limits for their customers Receiving FIs may not set a transaction limit lower than the system wide limit An initial transaction limit will be established for the RTP system with the intention to review and raise the limit over time 	<ul style="list-style-type: none"> Policies and procedures must be available for a sending FI to set their transaction value limit and have it apply to payment origination Risk management policies and procedures must be available to accept payments up to the system wide transaction value limit FIs must have the ability to identify the potential structuring of transactions made to avoid established transaction limits
Funds cannot be taken back from the receiver; payer can request return of payment made in error	<ul style="list-style-type: none"> The legal basis for payment finality will be established by the RTP System The RTP System will not provide a basis for sending FIs to reclaim funds from receiving FIs for unauthorized payments (the sending FI only has obligation to verify payment authorization) 	<ul style="list-style-type: none"> FIs must have effective processes and technology to prevent unauthorized payment origination Sending FIs must have policies and procedures in place for handling customer claims for unauthorized transfers and funds sent in error Receiving FIs must have policies and procedures to respond to requests to reclaim funds sent in error
An inter-FI process including electronic messaging to support Requests for Return of Funds sent in error	<ul style="list-style-type: none"> A process for senders to request return of payments sent in error must be established by each FI An inter-FI process for handling Requests for Return of Payments sent in error will be established by each sending FI Timely responses for Response to Request for Return of Funds will be requested. 	<ul style="list-style-type: none"> FIs must have products and services with features that prevent errors in sending payments Sending FIs must establish policies and procedures for handling customer Requests for Return of Funds sent in error Receiving FIs must establish policies and procedures for responding to requests to reclaim funds sent in error
Settlement process and legal framework that reduces or eliminates potential for settlement failure	<ul style="list-style-type: none"> The RTP System rules will establish requirements and procedures for prefunding and settlement of RTP transactions 	<ul style="list-style-type: none"> FIs must have the capability to satisfy RTP prefunding requirements and monitor / manage their prefunded position on an ongoing basis either directly or through a funding agent
Use of a unique code in lieu of an account number that cannot be used to debit the account (token)	<ul style="list-style-type: none"> The Secure Digital Payments company is developing an approach for tokenizing account numbers. 	<ul style="list-style-type: none"> FIs must create and operate their own Token Vault, outsource their tokenization process to a Token Service Provider, or leverage TCH's token services FIs must integrate tokenization into products and services FIs must have the ability to educate customers on tokenization

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Operating Rules

Operating Rules (Continued)

RTP Requirements	Operating Rules and Procedures	FI Requirements
Participating FIs must meet minimum levels of standards for security and privacy protection	<ul style="list-style-type: none"> RTP system rules should reference external security and privacy standards All FIs must meet data protection standards Sending FIs must meet rigorous standards for sender authentication and payment authorization Rules will establish security and privacy standards for FIs that are auditable and audited An FI's security standards should not unnecessarily restrict usability 	<ul style="list-style-type: none"> Most security and data protection requirements should apply across all channels and products and not to a specific payment system
Support for anti-fraud, anti-money laundering, and OFAC / sanctions compliance processes	<ul style="list-style-type: none"> Sending FIs should have rules that require them to provide the necessary data for regulatory compliance needed by the receiving FI 	<ul style="list-style-type: none"> FIs should have policies and procedures to obtain data required for regulatory compliance during the payment initiation process Automated anti-fraud screening may be required to meet expectations to accept or reject payments in seconds or minutes
Use global message standards and define processes consistent with global practices	<ul style="list-style-type: none"> RTP system should avoid unnecessary divergence from operating rules for payments systems in other countries TCH will develop rules for international payments if the RTP system connects with foreign real-time systems in the future 	<ul style="list-style-type: none"> FIs should adapt products and services to use international standard payment formats and processes
Tiered approach to fraud prevention and mitigation segmented by activity-based system participation	<ul style="list-style-type: none"> RTP system rules will ensure the minimum requirements for risk control are associated with the activities that a financial institution is offering and will be additive in nature for each increasing level of potential risk RTP System to create a centralized utility that analyzes network-level data to identify and report potential fraudulent behavior (e.g., detect anomalous send/receive activity; excessive complaints) <ul style="list-style-type: none"> Velocity checks on origination, receive, and request for payment volumes Detection of patterns that indicate potential networked fraud or money mule activity Alerts with reason codes upon detection of anomalous activity for impacted financial institutions 	<p>All participants must comply with FFIEC guidelines as applied through prudential regulator examination</p> <ul style="list-style-type: none"> All participants must report fraudulent behavior to TCH and/or sending FIs (note: this could be facilitated through TCH offering) All participants must react to alerts from centralized activity monitoring utility Sending FIs must establish a minimum of two factor authentication (as defined through RTP governance process) Sending FIs must require registration of customers sending payments Sending FIs must screen for fraud and risk in real-time for payments being originated (continued)

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Operating Rules

RTP Requirements	Operating Rules and Procedures	FI Requirements
Tiered approach to fraud prevention and mitigation segmented by activity-based system participation (continued)		<p>Request for payment participants (above requirements plus)</p> <ul style="list-style-type: none"> • Make warranties and representations that Requests for Payment are for legitimate purposes • Screen and monitor request for payment initiators, with the ability to identify abusive or fraudulent use and take corrective actions including suspension of initiator access to the network (as defined through RTP governance process) • Respond to network reports of abuse of Request for Payment <p>Originated by third-party payment service participants (above requirements plus)</p> <ul style="list-style-type: none"> • Make warranties and representations that third-party is abiding by rules for payment origination • Apply same requirements to third-party payment services that are applied to FIs that send RTP and allow requests for payment (as applicable) • Follow FFIEC guidelines regarding third-party relationships • Allow network to enforce rules against FIs and third-parties by allowing network to levy fines and suspend activity on the network • Prohibit third-parties from originating volume greater than their financial resources can support in the case of third-party failure <p>In addition TCH will require third parties to apply to participate in the RTP, enter into an agreement with TCH to abide by RTP system requirements for third parties, certify that the third party meets certain prudential and risk management requirements, and comply with certain consumer protection laws and regulations as if the third party was a depository FI.</p>

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Your questions and comments are very important to us. For more information about RTP, please contact us using the information provided below.

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