Improving the U.S. Payments System: A Faster Payments Assessment

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End-to-End Strategic Focus

**Safety and Security**
- Maintain and enhance FRB network security
- Enhance understanding of end-to-end security
- Collaborate and promote industry best practices

**Speed**
- Develop solutions to enhance payment speed
- Understand market demand for faster payments
- Continue migration of paper to electronic

**Efficiency**
- Develop solutions to promote efficiency
- Understand needs and barriers
- Promote standards adoption to improve efficiency
New End-to-End Strategic Focus on Speed, Security and Efficiency

Retail Payments Study

ISO 20022 Business Case Assessment

Consultation Paper

Research on End-User Demand for Select Payment Attributes

Payment Security Landscape Study

Faster Payments Assessment

Future Payments System Improvements

The road we traveled...
Desired Outcome

Ubiquitous, Faster Electronic Solution(s)

• A ubiquitous, faster electronic solution(s) will exist for making a broad variety of business and personal payments, and the Federal Reserve will provide a flexible and cost-effective means for private sector arrangements to settle their positions rapidly and with finality.
Faster Payments Assessment Approach

- Identify target use cases for faster payments, leveraging global lessons
- Develop potential design options for improving the speed of the U.S. payment system
- Assess each design option including business and technical requirements, business case and impact on stakeholders
- Provide a potential implementation plan for the path forward
Faster Payments Assessment
Learnings from Around the World

- The UK’s Faster Payments Service
- Australia’s New Payments Platform
- Canadian Payments Association
- Brazil’s Transferências Electrônicas Disponíveis
- Poland’s Express ELIXIR
- South Africa’s Real Time Clearing
- Singapore’s G3
- The EU’s Single Euro Payments Area
- Finland’s Finvoice
- Mexico’s Sistema de Pagos Electrónicos Interbancarios
Global Case Studies

- Decision to launch faster payment system has been strategic, not financial
- Initial prioritization of P2P (speed) and B2B (speed, remittance data)
- Real-time settlement not required for real-time availability
- Permitting players to create new services can help facilitate adoption
- Insufficient payment product differentiation and premium pricing likely to impede adoption
- All countries have relied on a combination of incentives
- Stakeholder engagement has been a powerful tool for building industry support
Faster Payments Assessment
End-user needs for each use case were assessed against 11 features and functions

1. Access to system
2. Credit / Debit
3. Information content (e.g., remittance data)
4. Authentication support
5. End user privacy and security
6. Timing and method of authorization and clearing
7. Availability of funds
8. Timing and method of settlement (interbank)
9. Revocability, returns, denials and exceptions handling
10. Transaction notification / documentation
11. Cross-border interoperability

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Faster Payments Assessment
Use cases by identified gaps

Need for increased efficiency & effectiveness (other than speed)

<table>
<thead>
<tr>
<th>High</th>
<th>Low</th>
</tr>
</thead>
<tbody>
<tr>
<td>P2B ad-hoc in-person (PoS)</td>
<td>B2B ad-hoc high value</td>
</tr>
<tr>
<td>B2B recurring</td>
<td></td>
</tr>
<tr>
<td></td>
<td>P2B ad-hoc real time remote (e.g., emergency bill pay)</td>
</tr>
<tr>
<td></td>
<td>B2P ad-hoc low</td>
</tr>
<tr>
<td></td>
<td>B2P ad-hoc low</td>
</tr>
</tbody>
</table>

Real-time funds availability needed
- P2P
- B2P ad-hoc high
- B2B ad-hoc low

Need for increased speed
- P2B recurring
- P2B recurring
- P2B ad-hoc remote time delay

Note:
Placement of use cases on matrix is qualitative based on the gap between end user needs and what the market provides today (i.e., "need for increased speed") and is not based on absolute speed required

1 Non-commerce P2P only, P2P commerce (e.g., babysitter, gardener) is considered P2B; 2 Includes revenue for P2B ad hoc, remote, time delay

NOTE: Analysis was replicated across all instruments (i.e., check, ACH, credit infrastructure, debit PIN infrastructure, wire); Mapping reflects gap to most commonly used infrastructure for use case today; Estimated industry revenue from payments included in parentheses

SOURCE: Team analysis; McKinsey Payments Map; Consumer Financial Life Survey

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## Faster Payments Assessment

### Five Use Cases Could Benefit…

<table>
<thead>
<tr>
<th>Use case</th>
<th>Volume / % of total payments</th>
<th>Speed required</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B2B(^1) ad-hoc low value</strong></td>
<td>11.1 billion / 5%</td>
<td>• Real-time authorization/clearing</td>
</tr>
<tr>
<td>(e.g., just-in-time supplier payments)</td>
<td></td>
<td>• Intra-day availability of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Intra-day interbank settlement</td>
</tr>
<tr>
<td><strong>B2P ad-hoc high value</strong></td>
<td>NA</td>
<td>• Real-time authorization/clearing</td>
</tr>
<tr>
<td>(e.g., insurance claims, legal settlements)</td>
<td></td>
<td>• Real-time availability of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Late-day interbank settlement</td>
</tr>
<tr>
<td><strong>P2P(^2) transfers</strong></td>
<td>4.3 billion / 2%</td>
<td>• Real-time authorization/clearing</td>
</tr>
<tr>
<td>(e.g., rent repayment to roommates)</td>
<td></td>
<td>• Real-time availability of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Late-day interbank settlement</td>
</tr>
<tr>
<td><strong>B2P ad-hoc low value</strong></td>
<td>3.2 billion / 1%</td>
<td>• Intra-day authorization/clearing</td>
</tr>
<tr>
<td>(e.g., temporary employee wages)</td>
<td></td>
<td>• Intra-day availability of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Late-day interbank settlement</td>
</tr>
<tr>
<td><strong>P2B ad-hoc, remote</strong></td>
<td>10.3 billion / 4%(^3)</td>
<td>• Real-time authorization/clearing</td>
</tr>
<tr>
<td>(e.g., emergency bill pay)</td>
<td></td>
<td>• Late-day availability of funds</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Late-day interbank settlement</td>
</tr>
</tbody>
</table>

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1 Business includes Government
2 Does not include P2P commerce such as paying babysitter/lawn mowing kid; these transactions are distributed across a number of P2B use cases
3 SOURCE: McKinsey expert and industry interviews, public consultation responses; McKinsey Payments Map; Consumer Financial Life Survey
Faster Payments Assessment
Options Targeted for Full Evaluation

- **Evolve ACH** to provide increased batch clearing windows (considered for comparison purposes, but not one of four options fully evaluated)

- **Evolve ATM/PIN debit infrastructure** to leverage existing real-time functionality

- **Direct clearing** between FIs using common protocols and public IP networks in a distributed architecture

- **Build new infrastructure** to support faster payments; variants include:
  A. Build new single-item clearing infrastructure that leverages legacy infrastructures (ACH, wire and check systems) for settlement
  B. Build new clearing and settlement platform for retail payments\(^1\) (excludes systemically important payments)
  C. Build new clearing and settlement platform for all payments (includes systemically important payments)

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1 Retail payments do not include large payments sent on high-value payment systems to settle transactions between financial institutions or other systemically important activity.
Regardless of design option, elements learned can be applied to any payment system enhancement

- Enhanced settlement services can enable evolution toward faster payments
- Payment infrastructure can move toward greater customization by use case and transaction type
- Direct clearing supported by common rules and procedures could be considered as a component of any design option
- A common platform could replace one or more legacy systems and lead to significant efficiency and flexibility in the system
Faster Payments Assessment
Perspectives on Options Assessment and Path Forward

- **Evolve ACH** may be quickest to implement with the fewest required changes. However, it only achieves near real-time, not real-time, notification and clearing.

- **Evolve ATM/PIN debit infrastructure** has existing real-time capabilities but presents challenges with aligning networks, integrating corporate cash management systems at FIs, expanding credit capability and changing the economic model.

- **Direct clearing over public IP networks** leverages existing, low-cost communications networks used by millions worldwide, but assuring stakeholders of the safety of the system will be challenging even if required security exists.

- **Build new clearing-only infrastructure (legacy settlement infrastructure)** may be able to meet the needs for real-time in the target use cases in a reasonable timeframe, but integration with legacy settlement constrains the flexibility of the design.

- **Build completely new infrastructure** offers the most flexibility to meet future needs, but cost and time to implement may make this challenging to pursue.

To meet the needs of targeted use cases, the options assessment suggests that building new infrastructure is the optimal solution.
The business case through 2025 for implementing a faster payments solution for the primary use cases is profit contribution net neutral to negative.

Payments would migrate from paper (cash – ~1%, check – 27%) and electronic (ACH – 11%, Wire – 7%), although migration may differ by design option.

If the faster payments solution includes improved information capabilities (e.g., e-invoicing) that enable more efficient AR/AP systems, $10B to $40B in business back office efficiencies can be captured annually, making the business case positive.

Developed using analytics on secondary research, interviews with industry practitioners/experts, international case studies and consultant proprietary knowledge and experts.

Does not include estimates of profit contributions from latent demand, new use cases and other sources of value; which if included, would further improve the business case.
Additional Desired Outcomes

**Enhanced Payments Safety and Security**
- U.S. payment system security is very strong, public confidence in it is high, and protections and incident response have kept pace with the rapidly evolving and expanding threat environment.

**Improvements in Cross-Border Payments**
- Consumers and businesses have better choices in making convenient, cost-effective and timely cross-border payments from and to the U.S.

**Improved Efficiency**
- Greater electronification of payments originated and received has reduced the average end-to-end (societal) costs of payment transactions and resulted in innovative payment services that deliver improved value to consumers, businesses and governments.

**Strategic Industry Engagement**
- Key improvements for the future state of the payment system have been collectively identified and embraced by a broad array of payment participants, and material progress has been made in implementing them.
Available Research and Event Summaries on FedPaymentsImprovement.org

Research
• Faster Payments Assessment Summary (August 2014)
• ISO 20022 Business Case Assessment Summary (August 2014)
• Payment Security Landscape Study Summary (August 2014)
• Consultation Paper Response Summary (March 2014)
• End-User Payment Research Summary (March 2014)

Event Summaries
• Payment System Improvement Town Hall Summary (June 2014)
• Faster Payments Roundtable Summary (June 2014)
• Payment Security Roundtable Summary (June 2014)

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Next Steps

Prepare and Share a Roadmap
Using industry input and research insight, prepare and share a roadmap for payment system improvement initiatives that advance the speed, efficiency and security of payments.

Collaborate to Achieve Desired Outcomes
Engage industry stakeholders in advisory roles and working groups to design and implement roadmap initiatives.