WELCOME
The UK Faster Payments experience
The platform for innovation

Marion King
Chief Executive Officer
7 September 2011
How it all started
# The road to Faster Payments

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>March</td>
</tr>
<tr>
<td>2004</td>
<td>November</td>
</tr>
<tr>
<td>2005</td>
<td>September</td>
</tr>
<tr>
<td>2006</td>
<td>October</td>
</tr>
<tr>
<td>2007</td>
<td>April</td>
</tr>
<tr>
<td>2008</td>
<td>January</td>
</tr>
<tr>
<td>2009</td>
<td>January</td>
</tr>
<tr>
<td></td>
<td>27 May</td>
</tr>
</tbody>
</table>
Governance of the UK payments industry

- To have a strategic vision for payments and lead the future development of co-operative payment services in the UK
- To ensure payment systems are open, accountable and transparent
- To ensure the operational efficiency, effectiveness and integrity of payment services in the UK
Faster Payments Service

Customer:
- Step 1: Customer contacts bank
- Step 2: Payment instruction initiated

Sending bank:
- Step 3: Authorisation
- Step 4: Payment validated
- Step 8: Confirmation of payment

Faster Payments Service:
- Step 7: Receives notification that payment was successful

Receiving bank:
- Step 5: Receiving bank authorises payment
- Step 6: Receiving bank confirms receipt and credits account

All parties are aware of the fate of the transaction at all times.
Volume growth

Source: CHAPS Clearing Company Limited
The future is mobile

- Faster Payments
- Certainty
- Speed
- Reliability
- Security
- Irrevocability
- Portability
- Convenience
- Cost

Faster Payments

VOCALINK
safer payments, smarter partner
SPEI: the real time funds transfer system in México
Introduction

- The Interbank Electronic Payment System, SPEI, is the main system for electronic transfers in Mexico.

- It was launched in 2004

- SPEI is an hybrid system, under the BIS’ payment system classification.
  - In order to reduce the participants’ liquidity needs, SPEI implements a multilateral netting algorithm
  - It clears and settles whenever there are 300 new payments, or 20 seconds have passed since the last settlement cycle.
  - Settlement is conditioned to sufficient balances in the participants’ accounts.
  - Central Bank provide intraday credit to participants which can be used in SPEI
SPEI’s main features

- In a peak day, SPEI settles more than one million payments. The previous system had a peak of 23 thousand payments per day.
- SPEI settles the financial markets’ high value payments as well as low value payments from customers.
- 90% of SPEI’s payments are for amounts under MXN 100 thousand (approx. 8,000 USD).
- It is open 23 hours at day, from 7:00 pm (value date next business day) to 6:00 pm.
  - Banks are obligated to at least offer SPEI transfer systems to clients from 6:00 am to 6:00 pm through e-banking
- The central bank allows non-banks financial entities to participate in SPEI. Currently, 45, out of 81 participants, are not banks.
Converging to real-time in SPEI

- Banks offer real-time money transfers to their clients principally thorough their e-Banking systems.

- Central Bank’s rules force:
  - Originating banks to send customer’s payment instructions to SPEI within 30 secs. after accepting the instruction
  - Receiving banks to credit beneficiary’s account within 30 secs. after receiving the settlement instruction from SPEI.

The Central Bank’s rules started regulating times lapses of: 30 min, then 10 min, then 5 min …
Converging to real-time in SPEI

Core system: Technical characteristics

- SPEI was designed to handle a high number of transactions quickly:
  - Short messages, a proprietary protocol, encapsulation of several payments within one single digitally signed instruction.
  - A payment can be settled within one second after arriving to SPEI.
  - In production, SPEI has settled up to 800,000 payments in about 40 minutes.

- No specially sophisticated equipment is needed: two sites with a medium-size IBM server on each site.

- SPEI was designed to encourage host-to-host communications to participants.
  - The central bank did not provide client applications to the participants.
  - Banks are strongly encouraged to implement STP for SPEI.
Converging to real-time in SPEI

- Message layouts
  - SPEI messages suit the participants’ and their clients needs, to fully identify the originator and recipient of each payment.
  - There is a new layout to process mobile payments through SPEI.

- The role of the Central Bank (BoM):
  - BoM operates SPEI on its own premises.
  - BoM continuously monitors and improves the system’s performance. We meet regularly with SPEI participants to discuss improvements and new requirements.
Other SPEI’s features

- Low prices for SPEI participants and their customers
  - The central bank charges MXN 0.50 per transaction in the day shift and MXN 0.10 in the night shift, to the SPEI participants.
  - Banks used to charge their customers up to MXN 120 per transaction. Currently banks’ tariffs are under MXN 5, on average. Some banks include unlimited SPEI transactions for a monthly fee.
  - Beneficiary customers are not charged for receiving a SPEI deposit. (CB Rule)
  - Single fee. Banks can not differentiate fees based on the amount of the transaction. (CB Rule)
Other SPEI’s features

- **Public awareness**
  - Spots in mass media have been broadcasted, to inform about the system’s characteristics.
  - The central bank’s website includes a SPEI section to provide practical information about SPEI, including how to use it, banks tariffs to their clients, etc.

- **Government’s payments**
  - Since 2008, the Federal Government processes its payroll and providers’ payments through SPEI.
  - Currently, SPEI processes almost 100% of the Federal Government payments
  - There is a plan to disburse social security pension payments via SPEI.
Other SPEI’s features

- Payments tracking service
  - The central bank website provides to the public with a free tracking service for SPEI payments.
  - Using this service, customers can know the status of their payment (settled, pending or rejected by the beneficiary’s bank) as well as the exact time when the payment was processed by SPEI.

- Promptly, the central bank’s website will also provide with an “official receipt” of all SPEI’s successfully credited transfers.
  - The receipt will be issued by the beneficiary’s bank, within 10 minutes after the money was credited in the account.
Future steps

- Reduction of *time-to-send* and *time-to-credit* from 30 to 5 secs.
- Inclusion of mobile payments.
- More payments by the government and the social security agencies.
- Transaction’s receipt.
- Improvements on the system to support higher numbers of payments (at least 2 million transactions per hour).
  - Implementation of a new communications protocol.
  - Development of more efficient online back-up mechanisms.
  - Fine-tuning of several modules.
Transactions

Number and value of SPEI transactions
(monthly average of daily transactions)
Transactions

Number of SPEI transactions, grouped by value
(daily average of each month)

- below 100,000 MXN: 88%
- between 100,000 and 1,000,000 MXN: 9%
- above 1,000,000 MXN: 3%
Transactions

Number of SPEI payments during the day
(daily average, in thousands)

Time of the Day

Government

CLS

19 - 20 20 - 22 22 - 24 0 - 2 2 - 4 4 - 6 6 - 8 8 - 10 10 - 12 12 - 14 14 - 16 16 - 18

46 0 0 0 0 1 20 47 72 100 87 50
Session 2: Consumer Demand for Immediate Funds Transfer Service in the U.S.
Digital Payments Trends and Opportunities
*Leveraging Change to Drive Advantage*

Tony Catalano, Division President, ePayments
September 7, 2011
Digital Channels are Changing How Consumers Manage and Spend Their Money

Impact on Payments: Consumers moving to “right here right now” payment expectation is that both information and money should move real-time
... Impacting MANY Payment Relationships ...  
Consumers and small businesses have a need and desire to exchange money and information electronically across their entire “personal payment network”. Consumers increasingly expect Real-Time Electronic payments, but today many of these processes are still disjointed and slow.
Consumers See Many Uses for “Personal Payments”

- **Send money to someone**: 88% (Yes), 55% (I might use it)
- **For charity donations or collections**: 53% (Yes), 34% (I might use it)
- **Collect money for service you provide**: 47% (Yes), 28% (I might use it)
- **Ask for money from someone**: 43% (Yes), 22% (I might use it)
- **Collect or contribute group gift**: 40% (Yes), 24% (I might use it)

Source: Fiserv Primary Research, June 2009
ZashPay – Person to Person Payments Made Easy

• An easy way to send and receive money electronically to people you know or owe using email or mobile number

• Integrated into online banking, mobile banking, tablet banking.

• >650 FIs live, >250 more coming online

• 100% reach: ZashPay.com for any user whose FI who hasn’t joined – full send and receive

• Real-time notification

• Real-time money movement in 2012
P2P is Part of Broader Need for a Personal Payment Network that Delivers Convenience and Speed

Our Goal: Make the Bank the Most Convenient and Trusted Place for Consumers and Small Businesses to Pay and Get Paid by Anyone They Know or Owe . . . . . Convenient, Secure, and Fast
Five Keys to Success in a Personal Payment Network:

1. Leverage a Large Network of FIs and Consumers
2. Deliver on Secure, Reliable and Efficient Payment System
3. Support Flexible Deployment by all Network Sponsors
4. Deliver Integrated User Experience Across All Digital Channels
5. Deliver Effective Adoption Marketing
2011 Mobile Person-to-Person (P2P) Payments Study

Tracking the features, performance and capabilities of major U.S. mobile P2P platforms
Today, traditional payments constituents and alternative players alike are pushing mobile P2P solutions forward in the market.
Summary of Findings

Each service had a wide range of times needed to complete transactions; a function of the learning curve, error screens, and features available.

Range of Time Required to Complete a P2P Transaction via Mobile

- Average Time

<table>
<thead>
<tr>
<th>Service</th>
<th>Time in Minutes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serve 1</td>
<td>3</td>
</tr>
<tr>
<td>Amazon.com 1</td>
<td>4</td>
</tr>
<tr>
<td>US Bank 1</td>
<td>4</td>
</tr>
<tr>
<td>PayPal 1</td>
<td>5</td>
</tr>
<tr>
<td>mpayy 1</td>
<td>5</td>
</tr>
<tr>
<td>Fiserv 1</td>
<td>5</td>
</tr>
<tr>
<td>Venmo 1</td>
<td>5</td>
</tr>
<tr>
<td>Chase 1</td>
<td>5</td>
</tr>
<tr>
<td>Zash 1</td>
<td>5</td>
</tr>
<tr>
<td>Oboy 1</td>
<td>2</td>
</tr>
<tr>
<td>InG Direct 2</td>
<td>2</td>
</tr>
<tr>
<td>Mastercard MoneySend 1</td>
<td>10</td>
</tr>
</tbody>
</table>

First Annapolis Consulting | M&A Advisory Services
Summary of Findings

Cost Per Transaction

<table>
<thead>
<tr>
<th>Service</th>
<th>$10 Transaction</th>
<th>$100 Transaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>PayPal</td>
<td>$0.59</td>
<td>$3.20</td>
</tr>
<tr>
<td>Amex Serve *</td>
<td>$0.59</td>
<td>$3.20</td>
</tr>
<tr>
<td>MC MoneySend</td>
<td>$0.29</td>
<td>$0.99</td>
</tr>
<tr>
<td>Zashpay/Fiserv</td>
<td>$0.75</td>
<td>$0.99</td>
</tr>
<tr>
<td>Obopay</td>
<td>$0.25</td>
<td>$0.75</td>
</tr>
<tr>
<td>Amazon Payments</td>
<td>$0.50</td>
<td>$0.75</td>
</tr>
<tr>
<td>ING Direct</td>
<td>Free</td>
<td></td>
</tr>
<tr>
<td>Discover</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mpayy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Venmo</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chase QuickPay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POPmoney</td>
<td>$1.00</td>
<td></td>
</tr>
</tbody>
</table>

Note: PayPal and Serve transactions based on a card-funded transaction. Stored balance transactions are free.

* Serve plans to begin charging fees later this year after an introductory trial period.
** POPmoney enables each bank partner to determine if and how much their consumers will pay for mP2P transactions. Banks have taken varying approaches, ranging from free P2P services to transaction fees up to $1.00.
Summary of Findings

The study revealed three critical components for developing a market-competitive mobile P2P offering.

1. **Scalable adoption (distribution).**
   - Source and destination-agnostic approach to moving funds (e-mail address, SMS, social network, etc.)
   - Multiple mobile channels: apps, mobile web, SMS, online
   - Brand awareness

2. **Simplicity and ease of use.**
   - Streamlined processes for sign-up, funding methods, and verification
   - Quick and secure authentication, loading, sending, receiving, or withdrawing funds

3. **Mobile wallet integration.**
   - P2P as one of many services, including payments at the POS, remote/e-commerce, mobile banking integration, offers/loyalty
   - Bells and whistles: unique interfaces for specific use cases (e.g., split the bill) are secondary to incentive dollars for signing up, social network integration and location-based service integration
PAYPAL OVERVIEW
Global reach, local focus
We Enable Global Commerce...

- 190 global markets
- 20 local language sites
- 25 currencies
...Resulting In Tremendous Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Active accounts (in millions)</th>
<th>Transactions per active consumer account</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>70</td>
<td>11.5</td>
</tr>
<tr>
<td>2009</td>
<td>81</td>
<td>12.2</td>
</tr>
<tr>
<td>2010</td>
<td>94</td>
<td>13.5</td>
</tr>
</tbody>
</table>

1. As of December 31. 2. Trailing 12 months.
...Resulting in Tremendous Growth

Growth in Total Payment Volume

TPV growing 3.0 times faster than online market

2008: $60 Billion
2009: $72 Billion
2010: $92 Billion

24% CAGR

1. Online market growth based on 12 countries (US, CA, AU, UK, DE, FR, IT, NL, ES, AT, BE, CH) using Forrester online retail and travel estimates.
How PayPal Works

Anyone with an email or phone number can send money or pay online without sharing financial information

Directly from the PayPal wallet

PayPal sends the money, but NEVER shares personal or financial information with the seller

Seller receives money and can choose how they withdraw
Successfully Bridging Two Worlds...

Internet Companies  PayPal  Global Financial Networks

...by making traditional payment systems work better online
Safety & Security Is In Our DNA

- Phishing Protection
- ID Theft Protection
- Spoof Protection
- Fraud Prevention

Detect Fraudsters

Buyer and Seller Protections

PayPal VERIFIED

PayPal
Flows that Delight!

[Image of a shopping basket from Harrods.com]

**Standard UK Delivery £4.95***
*Click here for more details

**Shopping Basket**

- **ITEM**: St Andrews Small Tea Set
- **PRICE**: £0.95
- **QTY**: 1
- **DISCOUNTS**: Update quantity
- **SUB TOTAL**: £0.95

[Links to continue shopping, go to checkout, and checkout with PayPal]

[Links to more information on UK and International delivery charges]

[Commands to empty basket and continue shopping]

Confidential and Proprietary
Checkout in 2 clicks!

- **One username and password for all online purchases**
- **Simple payment summary for easy review**
- **Uses buyer information stored with PayPal**

[Image of PayPal login screen]

[Image of payment review screen]
PayPal: Empowering the “New Dialogue”

We are well-positioned to connect buyers and sellers in a new dialogue to help realize greater value from their relationship.

Intent  Discovery  Shopping  Buying  Payment  Post-Sale

Solutions In Every Channel and No Channel:

- Move the point of sale to where the decision is
- Connect buyer needs with trusted sellers and brands
- Let business compete – local vs. remote, off-vs. online
- Create new currencies and terms that inspire and sustain loyalty
- Win ‘top of wallet’ through smarts and ways to pay others can’t
Enabling the Revolution
New capabilities that allow merchants and consumers to connect and transact safely, anytime, anywhere and anyway

CONSUMERS

- **Unique Payment Utility:**
  - Options to pay and defer payment other methods can’t or don’t provide
- **Unique Forms of Value:**
  - Coupons, virtual gift cards, and virtual currencies
- **Shopping Utility:**
  - Offers, deals, eReceipts, wish lists
- **Anytime, Anywhere, Any Way:**
  - Web, mobile, NFC, “empty hand”, payment card
- **Safely, Securely:**
  - Data can’t be stolen if it is never shared

MERCHANTS

- **Multi-channel Support:**
  - Ability to target customers on and offline channels
- **Unique Targeting:**
  - Reach customers based on real purchase intent
- **Unique Value Delivery:**
  - Deliver coupons, offers and loyalty balances directly to the wallet
- **Easier Integration:**
  - Handles the complexity of splitting tender and discounting
- **Level Playing Field**
  - Access to capabilities formerly reserved for largest merchants
While Serving The World’s Largest Brands

PayPal # of top 100 online merchants

<table>
<thead>
<tr>
<th>Country</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>59</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>40</td>
</tr>
<tr>
<td>Germany</td>
<td>30</td>
</tr>
<tr>
<td>France</td>
<td>28</td>
</tr>
<tr>
<td>Australia</td>
<td>63</td>
</tr>
</tbody>
</table>

PayPal large merchants

Retail
- HP
- Walmart
- Virgin Mobile
- Yahoo!
- Argos
- 1-800 Flowers
- BIG W
- DX
- DealExtreme
- Li-Ning

Travel
- Delta
- JetBlue
- British Airways
- Air China
- Southwest
Revolutionize Commerce
The PayPal Vision is ambitious...and completely within our reach

Use your mobile phone to scan this code. Additional promotional offers.
Check out with PayPal

PAYPAL: DELIVERING THE FUTURE OF MONEY TODAY...
AN ESSENTIAL PART OF OUR CUSTOMERS’ FINANCIAL AND BUSINESS LIVES, ENABLING SECURE COMMERCE ANYTIME, ANYWHERE, ANY WAY
Luncheon Keynote:
Jeff Lacker
President
Federal Reserve Bank of Richmond
Session 3: Business Demand for Immediate Funds Transfer Service in the U.S.
Business Demand for Immediate Funds Settlement in the U.S.

Christopher Huppert
Senior Vice President

Immediate Funds Transfer Symposium
9/7/11
# NACHA – ACH rankings

## Largest inter-bank originators for 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Bank Name</th>
<th>Volume (MM)</th>
<th>YOY Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>J.P. Morgan Chase</td>
<td>3,174</td>
<td>-2.7%</td>
</tr>
<tr>
<td>2</td>
<td><strong>Wells Fargo</strong></td>
<td><strong>3,028</strong></td>
<td><strong>2.7%</strong></td>
</tr>
<tr>
<td>3</td>
<td>Bank of America</td>
<td>1,934</td>
<td>-1.3%</td>
</tr>
<tr>
<td>4</td>
<td>Citigroup</td>
<td>788</td>
<td>-2.6%</td>
</tr>
<tr>
<td>5</td>
<td>PNC Financial Services Group</td>
<td>654</td>
<td>33.8%</td>
</tr>
</tbody>
</table>

## Largest inter-bank receivers for 2010

<table>
<thead>
<tr>
<th>Rank</th>
<th>Bank Name</th>
<th>Volume (MM)</th>
<th>YOY Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bank of America</td>
<td>1,531</td>
<td>2.1%</td>
</tr>
<tr>
<td>2</td>
<td><strong>Wells Fargo</strong></td>
<td><strong>1,460</strong></td>
<td><strong>-1.7%</strong></td>
</tr>
<tr>
<td>3</td>
<td>J. P. Morgan Chase</td>
<td>987</td>
<td>2.0%</td>
</tr>
<tr>
<td>4</td>
<td>PNC Financial Services Group</td>
<td>444</td>
<td>-1.2%</td>
</tr>
<tr>
<td>5</td>
<td>U.S. Bancorp</td>
<td>403</td>
<td>8.1%</td>
</tr>
</tbody>
</table>

Source: NACHA
Same-Day ACH Perspective

- Same-Day Opt-In Model creates complexity in selling a solution to Corporate Originators to reach a limited number of endpoints.
- Opt-In model requires significant development to manage participant lists.
- Debit and credit entries should be supported in a same-day solution with appropriate limits.
- Same-Day ACH Service should be a premium service that reflects increased risk and increased costs and benefits.
Same-Day ACH Perspective

- A limited same-day ACH service has potential benefit for electronic check conversion, emergency payroll / tax payments, expedited bill payment and reversal entries.
- Same-day deadlines need to meet the needs of participants.
- Same-day ACH has value for emerging P2P and mobile payments.
Same-Day ACH
Issues and Opportunities

- RDFIs will have to pick up and post same-day entries. May not be staffed today to support this activity.
- ACH software changes are likely necessary.
- Fraud and potential recoveries may change.
- Should participants in the ACH same-day settlement value chain be compensated/rewarded for supporting a new class of premium transactions?
### Fiscal Year 2010 FMS Cash Flows

#### Payments
- **ACH**: 869.174 Million, $1.7 Trillion
- **Fedwire**: 0.086 Million, $0.3 Trillion
- **Checks**: 189.043 Million, $0.3 Trillion
- **Total**: 1.1 Billion, $2.3 Trillion

#### Collections
- **ACH**: 193.6 Million, $1.5 Trillion
- **Fedwire**: 1.5 Million, $0.9 Trillion
- **Checks**: 123.7 Million, $0.5 Trillion
- **Debit/Credit Cards**: 90.9 Million, $0.009 Trillion
- **Total**: 409.7 Million, $2.9 Trillion
IFT for Payments
Potential Uses

- Federal Agencies
  - Small Same Day Payments
    - Fedwire Minimum - $100,000
    - 10,000 Wires Annually Less Than $100,000
  - Exception Processing

- Public
  - Reach the Unbanked
  - Exploring Payments Via Pay Pal
IFT for Collections
Potential Uses

- Federal Agencies
  - Requirement to collect some funds at the time of the transaction (ex. auctions, real estate) on a same day basis.

- Public
  - Desire to use the same payment instruments for the government sector that they use when conducting transactions in the private sector.

- Federal Government
  - Improve cash management processes by settling transactions faster and electronically.

- Exploring use of alternative payment instruments (such as Same Day ACH and IFT) to complement the use of existing settlement payment instruments.
Conclusions

- IFT Potential for the Government
  - Speed
  - Fedwire and ACH Complement
  - Reach Unbanked Recipients
  - Improve Cash Management
  - Integration with Existing Processes
The Potential for Immediate Funds Transfer (IFT)

September 7, 2011

Jon Wells
Director
Banking and Cash Management Operations
Allstate Insurance Company
Northbrook, IL
Challenges of new payment mediums in the personal lines insurance sector

The personal lines insurance market can be classified as very competitive and mature with significant provider sophistication

Different payment channels and mediums used to be a provider differentiator

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Receipts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payments made to the insurance company for an obligation</td>
<td>Small % of total; large transactions, customer directed, predominantly electronic</td>
<td>Large % of total; multiple channels, multiple mediums, customer choice, highly automated</td>
</tr>
<tr>
<td><strong>Disbursements</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payments made from the insurance company</td>
<td>Claims provider payments, corporate obligations, taxes</td>
<td>Dual payee checks, small % ACH, experimenting with cards, potential for IFT</td>
</tr>
<tr>
<td><strong>Liquidity and Float</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The conversion to cash and prediction of needs</td>
<td>Large transactions necessitates predictable timing – but overall less than 30% of receipts</td>
<td>Large numbers smooth spikes, multiple channels adds complexity, cost, and choice – availability has never been better</td>
</tr>
</tbody>
</table>
Receipts - Customer preference drives payment channel expansion

Payment channel offerings are based upon customer demand

- Over the last 15 years, no channels have gone away; only new channels added
- Volume shifts – demographics, company incentives, type of insurance
- Billers have different needs – payment acceptance vs. actual funds received
  - credit providers vs. service providers
- Regulatory changes driving demand? (i.e. – Check 21, Dodd-Frank)
- Would IFT be customer demanded? Company demanded? Both?

**B2B (Originated by C2B)**
- Mortgage companies – EDI/EFT
- Merchant acquirer - Wire
- Alternative payment providers – Wire
- On-line bill consolidators – ACH

**C2B (Direct)**
- Direct Debit, Recurring ACH
- Lockbox (ARC, ICL)
- IVR, Company Website
- On-line Bill Payments
- Agency – Check
- Agency – Cash
- Debit Cards
- Credit/Prepaid Cards
Receipts – The Importance of Positioning

Payment channel success and adoption often rests on the attractiveness

**Customer/Company Perspective**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR</td>
<td>Lockbox</td>
</tr>
<tr>
<td>Credit Card</td>
<td>IVR</td>
</tr>
<tr>
<td>Debit Card</td>
<td>Retail location</td>
</tr>
<tr>
<td>Recurring</td>
<td>Recurring ACH</td>
</tr>
<tr>
<td>Credit/Debit card</td>
<td>On-line payments</td>
</tr>
</tbody>
</table>

**Customer Requirements:**
- Does it make paying bills easier?
- More automated?
- Greater control without hassles?
- Provide discounts or offers?
- Embrace technology?
- Private and secure?

**Company Requirements:**
- Less/least costly to administer?
- Mechanized and secure?
- Boost customer retention?
- Increase customer satisfaction?
- Improve cross selling?
- Open additional means of communication or marketing?
- Provide additional demographic understanding?
Disbursements – The contract, customer choice and differentiation drive payment medium selection

Payment mediums are based upon:

- Insurance contract with lien holders wanting protection and proof of payment – Dual Payee Check (B2C and B2B)
- Customers can defer payment to a provider upon completion of repairs (B2B)
- Catastrophe response is driving creative payment exploration
- Corporate obligations are largely ACH, wire or check, with check & wire declining
- Would IFT be customer demanded? Company demanded? Both?

<table>
<thead>
<tr>
<th></th>
<th>Property/Casualty Insurance</th>
<th>Life Insurance/Annuities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional Disbursement Mediums</td>
<td>Checks ACH</td>
<td>Checks ACH Retained Asset Accounts (checks)</td>
</tr>
<tr>
<td>Emerging Disbursement Mediums</td>
<td>Cards IFT</td>
<td>Retained Asset Accounts (cards) IFT</td>
</tr>
</tbody>
</table>
IFT – Will likely carve out a nice niche

IFT will have benefits for individuals and businesses, but it must be:

- Cost effective
- Easy and Secure
- Immediately available
- Consumer valued
- Allow for remittance detail
- Improve cross boarder payments
- Funds immediately available
- Work with banks and non-banks

How could IFT show up in the insurance space?

- **Subrogation clearing (B2B)**
  Settling of subrogation obligations between insurance companies with minimal remittance information - currently settled by check today

- **Catastrophe (Emergency Living Expenses)**
  Cash availability need is immediate

- **Life Insurance/Annuity withdrawals**
  Larger transactions, sometimes needed quickly for medical expenses, closings, deadlines

Where IFT is not likely to show up?

- **Payroll**
  ACH direct deposit is dominate
- **Accounts Payable**
  Payment terms and contracts rule
- **Retail locations**
  Cash and check still the medium most received, cards next
- **EDI Applications**
  Large amounts of remittance data
The Potential for Immediate Funds Transfer (IFT)

September 7, 2011

Jon Wells
Director
Banking and Cash Management Operations
Allstate Insurance Company
Northbrook, IL
Business Demand for Immediate Funds Transfers
...and can the U.S. RTGS adapt to meet the need?

IFT Symposium at Federal Reserve Bank of Chicago
September 7, 2011

The views expressed in this presentation are those of the speaker and do not necessarily reflect the views of the Federal Reserve Bank of New York or the Federal Reserve System.
### IFT for US Dollars: Today vs. the future

<table>
<thead>
<tr>
<th>Existing systems</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTGS / Wire transfers</td>
<td>Fedwire®, CHIPS</td>
</tr>
<tr>
<td>“Closed loop” networks</td>
<td>PayPal, Western Union, “on us” proprietary bank products</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Potential Future Systems</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Integrated system” (high and low value on one system)</td>
<td>SIC (Switzerland); SPEI (Mexico)</td>
</tr>
<tr>
<td>Near real time retail payments</td>
<td>FasterPayments (UK)</td>
</tr>
<tr>
<td>Broader closed loop networks</td>
<td>“On we” networks, i.e., ClearXChange</td>
</tr>
<tr>
<td>Mobile payments</td>
<td>M-pesa (Kenya)</td>
</tr>
</tbody>
</table>

"Fedwire" is a registered service mark of the Federal Reserve Banks.
## IFT vs. RTGS

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Desired state for IFT</th>
<th>Does RTGS meet desired state?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Certainty</td>
<td>Payment guaranteed to receiver</td>
<td>Yes, with immediate finality</td>
</tr>
<tr>
<td>Speed</td>
<td>Within minutes (or faster)</td>
<td>Immediate for interbank; For end-user, it varies</td>
</tr>
<tr>
<td>Security</td>
<td>Low / limited fraud</td>
<td>Yes</td>
</tr>
<tr>
<td>Control of Timing</td>
<td>Payer controls timing</td>
<td>Payer controls timing to bank; Bank controls ultimate timing</td>
</tr>
<tr>
<td>Universal Acceptance</td>
<td>Easy to send; Easy to receive</td>
<td>Yes for interbank; More complex for end-user</td>
</tr>
<tr>
<td>Versatility</td>
<td>Ability to use for most payment types</td>
<td>Potentially, yes In practice, more limited</td>
</tr>
<tr>
<td>Low cost / transparent pricing</td>
<td>Pricing is low and is easy to know up front</td>
<td>Low cost &amp; transparent for banks; Higher costs &amp; less transparent for end-user (sender &amp; receiver)</td>
</tr>
</tbody>
</table>
Barriers to using wire transfers for general purpose IFT in U.S.

- **End-user pricing is high and often not transparent**
  - Reducing wire transfer costs was cited as the #1 reason that would influence corporations to send more wire transfers*

- **End-user speed and control varies considerably**
  - Wires are not always posted to end-user accounts immediately
  - Even if posted, real-time information systems are often lacking
  - Payments can be held up in credit, liquidity or compliance queues

- **End-users often find wires cumbersome to use**
  - Need to know receiver’s banking details
  - Lack of information makes it not only difficult to automate, but also difficult to know why a wire was received in the first place

*Today, the value of RTGS is often diluted and the price is higher as you move away from the direct RTGS participants*

Evidence of Existing Demand for IFT from U.S. Corporations

- Despite the barriers to using wire transfers for IFT, a significant portion of all Fedwire traffic is B2B payments
  - More than 50 percent of Fedwire payments (by volume) are below $20,000
- Corporations – who are not direct users of Fedwire – came directly to the FRBs to champion product enhancements on Fedwire
  - Aimed at enabling straight-through-processing and reducing manual exception processing
- Fedwire is implementing changes that will enable banks to improve the wire transfer process for corporations
  - Business remittance payments (November 2011)
  - Payments notification (November 2011)
  - For more information, see: http://www.frbservices.org/campaigns/remittance/
Evidence from abroad: Adapting RTGS for IFT

<table>
<thead>
<tr>
<th>Desired attribute</th>
<th>SPEI (Mexico)</th>
<th>SIC (Switzerland)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment guaranteed to receiver</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Within minutes (or faster)</td>
<td>• Settle every ~20 seconds</td>
<td>• Immediate</td>
</tr>
<tr>
<td></td>
<td>• Banks post to customer account within 5 minutes</td>
<td></td>
</tr>
<tr>
<td>Low / limited fraud</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Payer controls timing</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Easy to send; Easy to receive</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ability to use for most payment types</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Pricing is low and is easy to know up front</td>
<td>Yes</td>
<td>Yes with lower pricing for non-peak times and for lower value payments</td>
</tr>
</tbody>
</table>
Can the U.S. RTGS be adapted for IFT?

- **Technical feasibility looks promising, but more information is needed**
  - *Potential demand:* FedACH processes over 40 million transactions per day. Do all transactions require immediate settlement?
  - *Potential supply:* Significant excess capacity exists on Fedwire; technology can be harnessed to increase capacity and pricing can be developed to smooth processing flows

- **Business case feasibility is less clear. U.S. banking system needs to coalesce around a common solution, but views (and interests) are diverse**
  - What will induce banks to invest in an enhanced user experience (e.g., real-time information & posting, end-user directory, etc)?
  - Will pricing practices change (e.g., lower and more transparent end-user pricing)?
  - How will these changes be developed, implemented & coordinated?
Session 4: Implementation Considerations
Liz Oakes
Director of Industry Relations
VocaLink
Immediate Funds Transfer

Implementation considerations for Small and Medium businesses

BC Krishna (bc@mineraltree.com)
President and CEO
For **2.5 million** small and medium sized businesses in the US

**Accounts Payable and Cash Management**

are

*ad hoc*,

paper-based,

manual processes

hampered by *poor security and inadequate controls*. 


What is MineralTree?

A private label **bank-branded** cloud solution that delivers **Automation, Simplicity, Security**

to **SMB Accounts Payables and Cash Management**
During the summer of 2011, MineralTree collected approximately 1000 survey responses from SMBs across 10 market segments:

- Focus on $500K to $50M annual revenue
- Mostly phone based
- Some online
Survey questions and focus

- Annual revenue
- Size, nature of AP team
- Payables process, tools used, degree of automation
- Monthly total payables volume
- Payment types and relative percentages (check, ACH, wire, credit card, PayPal)
- Awareness of payables fraud, risk, loss
SMBs are distinctly different from other market segments

<table>
<thead>
<tr>
<th>Micro</th>
<th>Small and Medium</th>
<th>Corporate</th>
</tr>
</thead>
<tbody>
<tr>
<td>23+ million &quot;non employer&quot; businesses, revenue up to $500K per year</td>
<td>2.5 million small and medium businesses, revenue from $0.5M-$50M</td>
<td>50,000+ &quot;corporate&quot; businesses, revenue over $100M</td>
</tr>
</tbody>
</table>

27 million US businesses

- **Micro**
  - 10-50 payables per month
  - Informal, “consumer-like” payables process
  - **Payment trend**: increasing use of credit card, debit card, online bill pay; diminishing use of checks; limited direct use of ACH (e.g., payroll)

- **Small and Medium**
  - 100 - 2500 payables per month
  - 70%-90% paper checks
  - 5 segments represent 60% of the SMB market
  - 150 banks serve 80% of the market
  - Semi-formal, manual payables process
  - **Payment trend**: continued use of checks; some use of non-payroll ACH, wire

- **Corporate**
  - Large # of payables
  - Formal, increasingly automated payables processes
  - **Payment trend**: aggressive adoption of ACH

Source: US Census Data 2007
Checks dominate, likely to persist

• Payables process forces check writing
  – AP staff does weekly “check run” from QuickBooks

• Difficulty in obtaining payment information for payee
  – RTN, Account Number

• Remittance advice is a huge issue
  – Has to work end-to-end, and across payment types
  – (not just an EDI/ACH issue)
SMB: perception of electronic payments

• Very little knowledge, awareness of multiple electronic payment types
  – ACH, Wires often seen as the same thing: “EFT”
• Very little incentive, appetite for more immediate, or real-time payments
• Cost conscious, and unlikely to pay higher transaction fees
  – Must easily see clear business benefit
Backup slides
Session 5:
Summary and Next Steps
Summary and Next Steps

David Marshall*
Senior Vice President
Federal Reserve Bank of Chicago

Symposium on Immediate Funds Transfer for General-Purpose Payments
Federal Reserve Bank of Chicago
September 7, 2011

* The opinions in this presentation are the presenter’s and do not reflect positions of the Federal Reserve Bank of Chicago or the Federal Reserve System.
Topics

1. Public Policy Foundations
2. Benefits and Costs of IFT
3. Key Design Elements for an IFT Network
4. Fee Structure
5. Governance Enablement
6. Role of the Fed in Fostering IFT
7. How to Proceed/Next Steps