E-Signature Adoption Trends
In Financial Services

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Fast Facts

4 of the top 10 banks in North America

More than 600,000,000 documents annually.

80% customer adoption of e-signatures in branches

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Industry Chatter

“Chase, RBC Sign Off on E-Signatures” Jan 23, 2013

“the electronic signatures movement is gathering momentum in the banking industry” Mar 1, 2013

But even in branches, mobile devices are taking over from traditional computers to facilitate originations, as Varrasso illustrated.

“Electronic signatures can help mortgage originators increase sales, move things quicker through the process and as a result get better prices for their loans from investors.” Feb 11, 2013

“Signature Mortgage ...has reduced both the application process and loan closure drastically by switching to an e-signature solution. More than 90 percent of the company's loans are now completed electronically.” Feb 14, 2013
Trends and Drivers

Customer experience - “Customers, who are more comfortable with the Web and mobile apps, are now driving e-signature adoption; it’s no longer just enterprises looking to reduce paper costs.”

Increased regulatory oversight - “CFPB probing ... retail financing practices”

Branch re-positioning - “The face of branches is changing as digital channels grow. The result is specifically a rethinking of the role of the branch and a wave of “branch of the future” efforts.”

Mobility – By 2020 the majority of e-signature transactions will be launched from mobile devices.
E-Signatures in Banking Today

- Consumer and merchant retail credit contracts
- Disclosure delivery
- Small business loans
- Leasing and asset-based loans
- Account openings
- Online mortgage applications
- Student loans
- Consumer loans
- Auto loans
- Retail financing
- Credit card applications
- Mortgage closings and notes
- Wealth management and retirement products

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Top 10 NA Banks Case studies

1st LOB: Consumer and small business loans
- Paperless branch/improve customer experience
- Signature capture with LCD tablets in the branch
- 80% adoption across 3,000+ branches
- Reduced errors 90% / Loan process 4 steps vs 16
- Cut document costs 80% / redeployed 95K personnel hours

Expansion to other LOB:
- Account openings & deposits, Retail Branches
- Account openings and authorizations, Wholesale Banking
- Account openings, Wealth Management
- Account openings, Payment Processing
- EFT authorizations, Treasury management (cloud)
- Total transactions 35,000 per day

1st LOB: Account Openings
- Transform customer experience with in branch automation, all documents e-signed, no paper
- Account openings, consumer lending, credit card apps, etc.
- Click-signing with tablet PCs in the branch
- 12M account openings across 5,000+ branches
- Expect to reduce errors & courier costs, speed processing, etc.

Expansion to other LOB:
- Consent, electronic statements, Retail Branch
- Account openings, Private Banking, remote signing
- Account openings, Private Banking, mobile signing
- Account Openings, Private Banking – International
- Account openings, Treasury management
Top 10 NA Banks Case studies cont.

1st LOB: Wealth management mobile sales force
- Stylus E-signing on tablet PC or signature pads
- Reduction of 75% in error processing rates
- Save ~82,000 hours (41 FTE)
- Complete sale in 1 visit, prevent abandonment
- Improve brand through new e-service
- 40% adoption rate in first 90 days

Expansion to other LOB:
- Account opening, Wealth management, Retail Branch
- Account openings, Retail Branch
- Consumer, small business lending, Retail Branch

1st LOB: e-Disclosures for Mortgage, Home Equity
- Click-sign online in a browser
- 2.5M documents (and growing) across 9,000 branches
- Eliminate courier costs, reduce back office costs
- Meet compliance requirements for disclosure delivery
- Prove electronic delivery & acceptance of documents

Expansion to other LOB:
- Account openings, Wealth mgmt., Wholesale Banking
- E-Closing mortgage (e-Sign, e-Vault, MERS)
- E-Servicing, Secondary marketing (e-Sign, e-Vault, MERS)
Case Studies: Community Banks, Lending

- Online mortgage applications
- Click-sign online in a browser
- 98% of all loans completed electronically
- Loans closed in < 25 days vs. industry avg. 45 - 60 days
- Shorter rate locks (15-21 days) = more profit per loan
- 100% increase in revenue in last 12 months

- Treasury management operations: Collections, disbursements, concentration, investments, etc.
- Click-sign online in a browser
- Cut document processing times from days to minutes
- Increased accuracy, completion rates & customer satisfaction
E-Signatures in Branches

“retail branches ...remain the primary driver of customer acquisition and consultative sales. Most new household relationships are still opened face-to-face...

“Going Local to Optimize Branch Profitability” BAI Banking Strategies

- Cornerstone of sales and service for customers
- Provide a destination for in-person interaction
- E-Signature-based transactions provide consistency across channels
- Greater efficiency, best customer experience for in-person service
By 2020, the majority of e-signature transactions will be launched from mobile devices.

**Transformational**

Close customers quickly

**Convenient**

**Efficient**

**SMART PHONES:**
257M; 50% of US Adults

**Tablets:** 126M
20% of US Adults

**Mobility**

Increase revenue

A better customer experience

**Banking Apps:**
- 1M today
- 25M in 2 years

**100M in 5 years**
74% increase

**MOBILE APPS:**
$6B Now
$55.7B by 2015
Legal and Regulatory Acceptance

**UETA (Uniform Electronic Transactions Act)**
- Uniform law enacted in 47 states (IL, NY, WA have alternatives)

**ESIGN (Electronic Signatures in Global and National Commerce Act)**
- Federal statute, adopts most provisions of UETA, pre-empts non-UETA state laws

**Effect of UETA and ESIGN**
- Legalizes electronic records and electronic signatures with respect to existing laws and regulations
- Covers contracts, records, disclosures and other documents required by law
- Provides for electronic delivery, retention, accessibility and notarization of electronic records
- UCC revised to align with ESIGN, UETA requirements
- Technology-neutral approach
- With UCC Art. 9, enables sale, securitization, syndication of financial instruments requiring unique originals
  - Electronic mortgage notes
  - E-chattel for secured financing, asset-backed securitization

**Acceptance in courts**
- Numerous court cases upholding use of e-signed records, contracts in financial services
- Courts have established rules for admissibility of e-signed records and evidence
Factors affecting enforceable and compliant transactions

- Participants
- Channels
- Document Sources
- Legal and regulatory
- Business Process, Applications
- Device Support
Common Enterprise Solution
Signatures and Authentication

Intent

Enforceability and compliance

Attribution

Identity

Non-repudiation

Fraud prevention
# Capturing E-Signatures and Authentication

<table>
<thead>
<tr>
<th>PROCESS-CREDENTIAL</th>
<th>INTENT</th>
<th>ATTRIBUTE</th>
<th>IDENTIFY</th>
</tr>
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<tbody>
<tr>
<td>Click Sign</td>
<td>✓</td>
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<td></td>
</tr>
<tr>
<td>Password/Shared Secret</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Signature Capture</td>
<td>✓</td>
<td></td>
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</tr>
<tr>
<td>SMS Passcode</td>
<td>✓</td>
<td>✓</td>
<td></td>
</tr>
<tr>
<td>Voice Signature</td>
<td>✓</td>
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<tr>
<td>Digital Certificate/Smart Card</td>
<td>✓</td>
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<tr>
<td>E-mail Notify</td>
<td>✓</td>
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<tr>
<td>Knowledge-based (KBA)</td>
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<td>✓</td>
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<tr>
<td>Driver’s License</td>
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<tr>
<td>Credit Card</td>
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</tr>
<tr>
<td>Other Credential/Document</td>
<td>✓</td>
<td></td>
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</tr>
</tbody>
</table>
e-Sign Framework

Customer Transaction

Access | Authenticate | Present | Data Capture | Document Insertion | Sign | Deliver

UI | Navigation | Workflow | Session MGMT | E-mail MGMT

Control

Transaction participants
Document and Transaction Security

**E-Signed Document Security**
- Embedded signature block, signer identity, time & date stamp, e-signature audit log
- Digital signature tamper seals document
- Securely link e-signature to document
- Digital certificate identifies signing system
- Verifiable through document viewer (PDF)

**Transaction Security**
- Encrypt data transmissions
- Prevent unauthorized changes during transaction
- E-Delivery through web download
- Link audit trails, process evidence to signatures to create a chain of custody
System and Application Integration

Information Technology

Interfaces

Document Services

Mobility & Devices

Services & Apps

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Mobile E-Signing

Integration
Mobile app or HTML5

Security
Encrypted, transitional data

Offline
Sync up at re-connect

Evidence
GPS, pictures, video, sound
Transaction Management

Internal users

External Representatives

Manage

Monitor

Report
QUESTIONS?

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