

# *The Electronification of Payments*

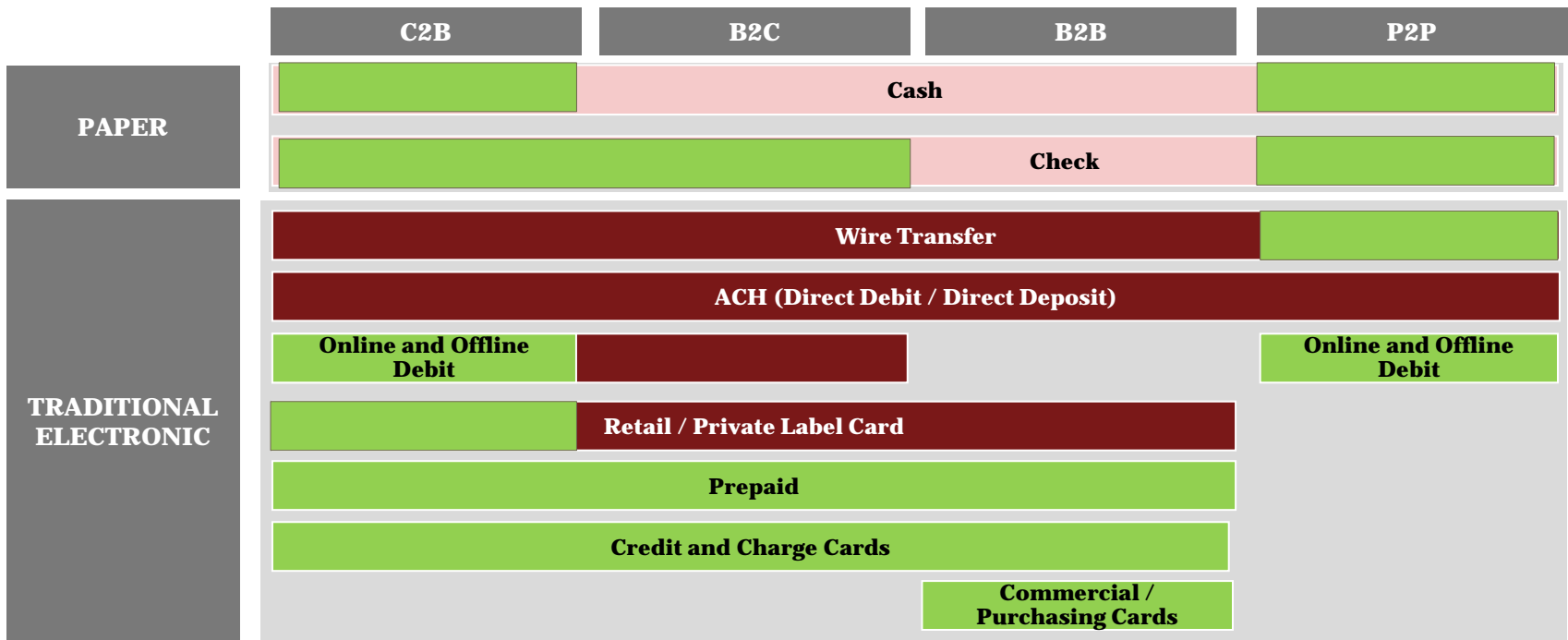
Digital disruptors and the future of the DDA

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Payments  
PwC

***Banks were once effectively the sole providers of all ways to pay***

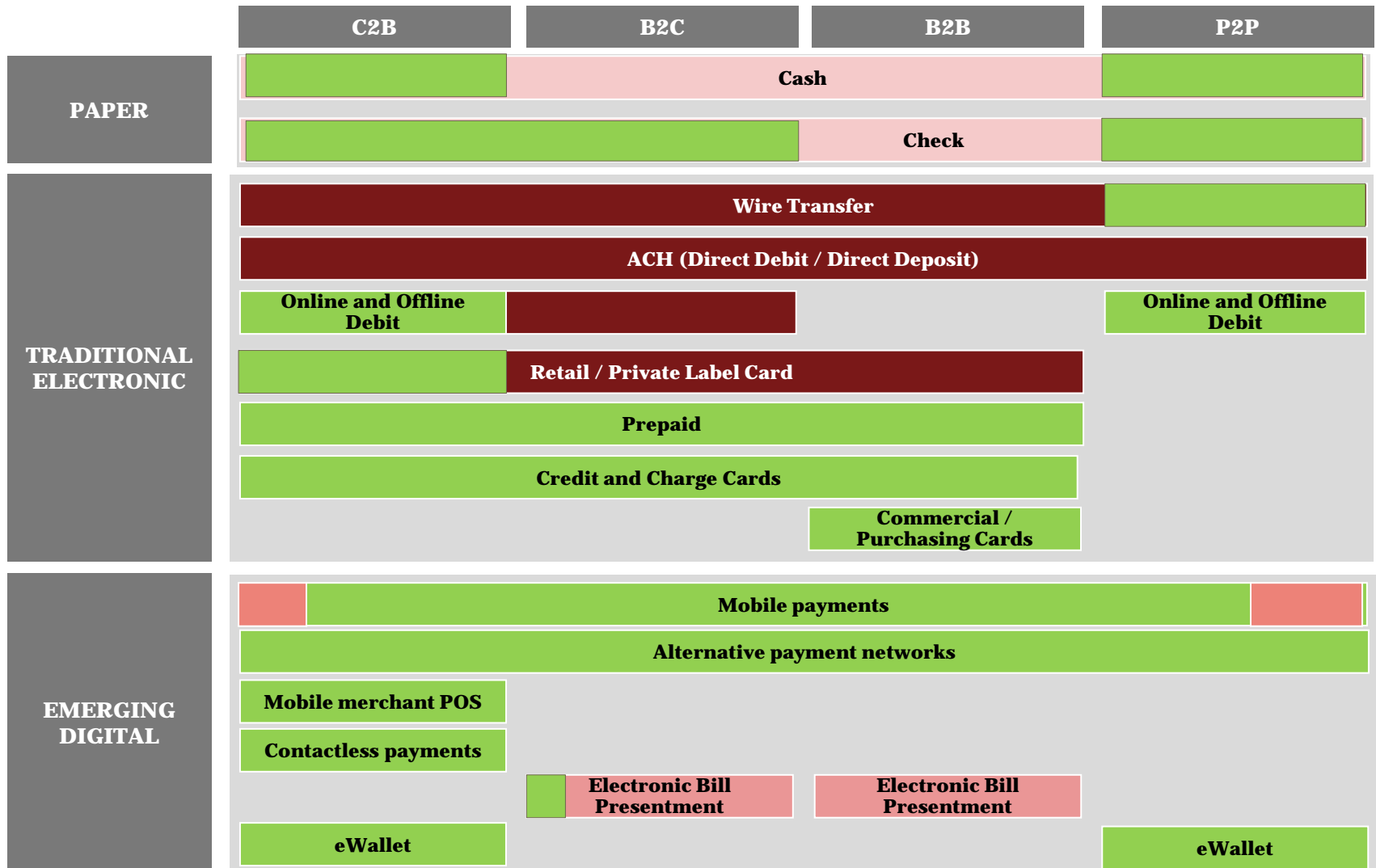
	C2B	B2C	B2B	P2P
<b>PAPER</b>	<b>Cash</b>			
	<b>Check</b>			
<b>TRADITIONAL ELECTRONIC</b>	<b>Wire Transfer</b>			
	<b>ACH (Direct Debit / Direct Deposit)</b>			
	<b>Online and Offline Debit</b>			<b>Online and Offline Debit</b>
	<b>Retail / Private Label Card</b>			
	<b>Prepaid</b>			
	<b>Credit and Charge Cards</b>			
				<b>Commercial / Purchasing Cards</b>

***Disruptors have targeted much of the payments landscape – and left much of the least profitable bits for the banks***



The map shows payment types and markets targeted by non-bank payments providers, not current proportionate revenue. On a revenue basis, banks still dominate.

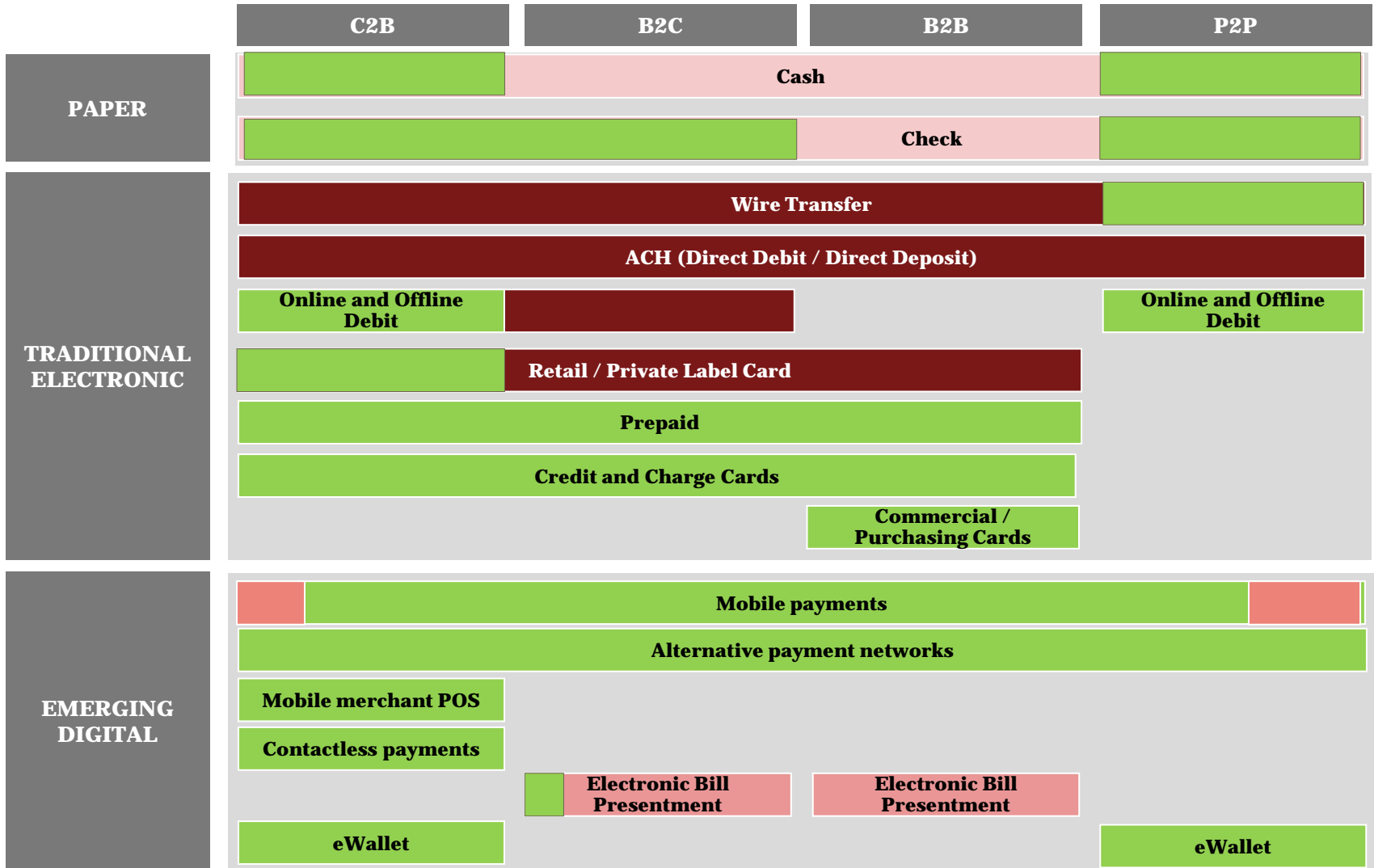
***Disruptors added a whole new territory that banks have been slow recognize is there and decide how to profit from***






# *From this world*

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# To this world?






## Who are the disruptors and how do they do it?

<i>Player group</i>	<i>Players</i>	<i>Advantage</i>	<i>Disadvantage</i>
<b>Augmenters</b> 	Existing mass market brands – e.g. telcos, retailers.	Local consumer reach Unconstrained by legacy payments infrastructure	Are they trusted for financial services?
<b>Digital natives</b> 	Apple, Google, Facebook, Amazon, eBay/PayPal	Global reach and reputation. Deep technological capabilities Unconstrained by legacy payments infrastructure	Are they trusted for financial services? Do they have local support networks?
<b>Digital disruptors</b> 	Start-ups (e.g. Dwolla, Square, Pygg)	Agile and focussed Unconstrained by legacy infrastructure.	Can they access capital to scale quickly? Are they trusted for financial services? Do they have local support networks?

***Payments at their core are the exchange of digital messages so are natural targets for innovation by digitally based companies***

# Who are the disruptors and how do they do it

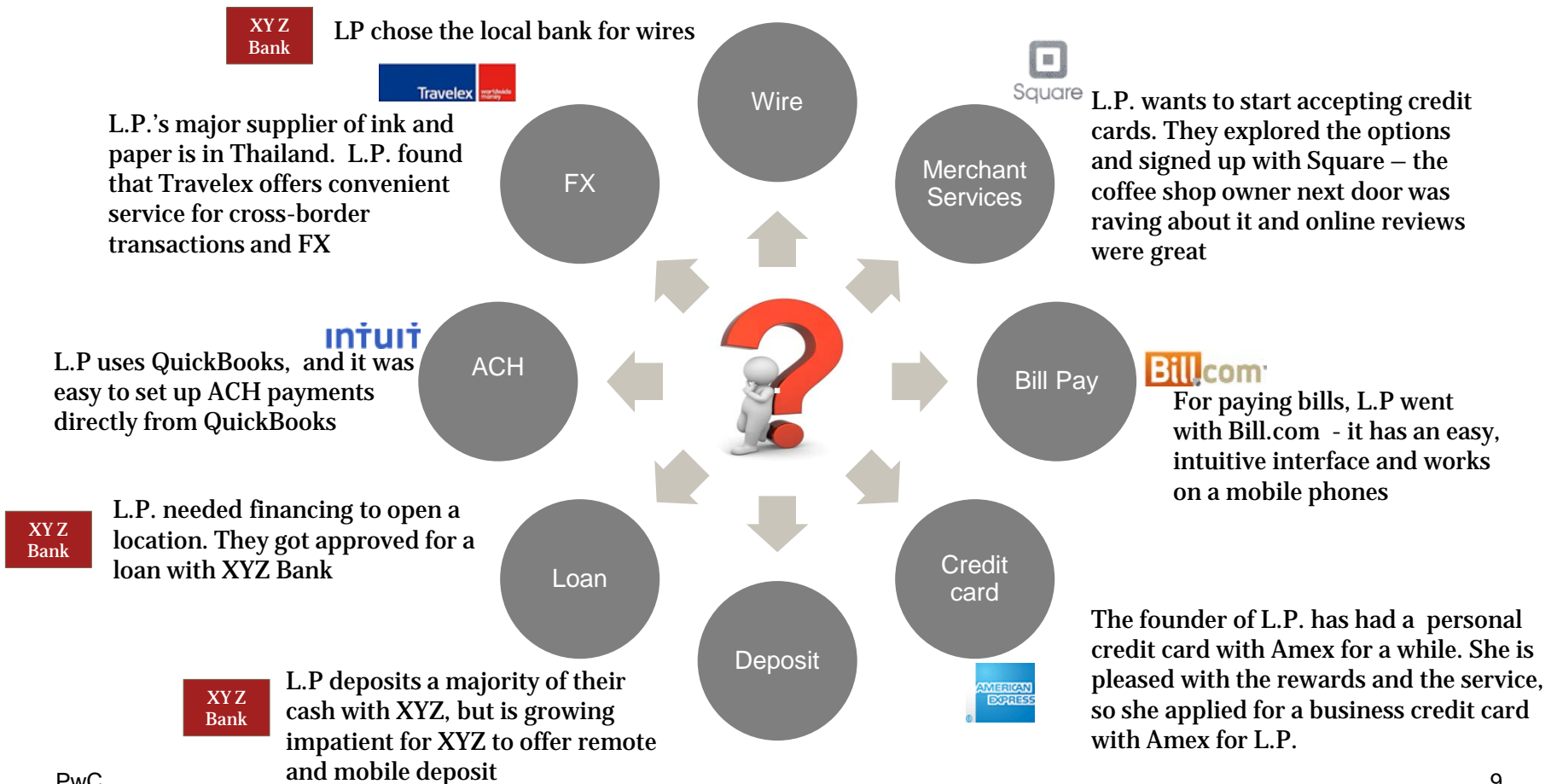
<i>Disruptor</i>	<i>Business Model</i>	<i>Value Extraction</i>	<i>Challenge to Banks</i>
	<ul style="list-style-type: none"> <li>• By-passes bank payment systems except for final bulk settlement</li> <li>• Universal purchase scheme:               <ul style="list-style-type: none"> <li>• On-line/in-store</li> <li>• Card/cardless</li> <li>• Swipe /“NFC” equivalent</li> <li>• e-wallet functionality</li> </ul> </li> <li>• Pay without checking out</li> <li>• Aggressive fraud prevention</li> <li>• Signing-up major merchants by based on their large consumer base</li> <li>• Service offering includes extension of credit to customer</li> </ul>	<ul style="list-style-type: none"> <li>• Earnings on customer balances held prior to settlement</li> <li>• Fees charged to customers</li> <li>• Fees charged to merchants</li> <li>• Interest on extended credit</li> <li>• Uses critical mass of 132M customers to gain merchant participation and thus drive transaction volume based revenues</li> <li>• Excellent anti-fraud capability and customer service to drive volume and thus revenues</li> </ul>	<ul style="list-style-type: none"> <li>• Business model is to replace banks at all POS, on-line and physical; swipe and NFC</li> <li>• Can extend credit to customer</li> <li>• e-wallet dilutes bank branding</li> <li>• Well funded and owned by successful, sophisticated parent company e-Bay</li> <li>• Coherent, long term business strategy with major partners</li> <li>• Has achieved critical mass</li> </ul> <p style="text-align: center;"><b>Threat = HIGH</b></p>
	<ul style="list-style-type: none"> <li>• Acquiring merchant aggregator</li> <li>• Merchant mobile phone to card terminal conversion hardware</li> <li>• Uses standard bank-issued cards</li> <li>• From POS on, process is identical to existing bank card process</li> </ul>	<ul style="list-style-type: none"> <li>• Charges some merchants higher fees than banks do</li> <li>• Deducts fees before depositing payment received from merchant</li> <li>• Holds balances longer for fraud check</li> <li>• Low cost terminals</li> <li>• Saves costs on customer service</li> </ul>	<ul style="list-style-type: none"> <li>• Simply another aggregator</li> <li>• Higher cost to merchant vs. banks</li> <li>• Lower maximum daily limits than banks</li> <li>• Higher fraud attempt rates</li> </ul> <p style="text-align: center;"><b>Threat = LOW</b></p>
	<ul style="list-style-type: none"> <li>• Alternative P2P payments scheme</li> <li>• Merchant payment capability</li> <li>• Bank linked and non-bank versions</li> <li>• Successfully getting people to use their Dwolla account rather than their bank account</li> </ul>	<ul style="list-style-type: none"> <li>• Earnings on customer balances held</li> <li>• Fees charged to customers</li> <li>• Fees charged to merchants</li> <li>• Savings from bypassing bank networks (runs on the Internet)</li> </ul>	<ul style="list-style-type: none"> <li>• Dwolla-to-Dwolla payments (no bank account needed)</li> <li>• Low fees</li> <li>• “The anti-bank” cachet and marketing</li> <li>• Operates outside bank/card networks</li> </ul> <p style="text-align: center;"><b>Threat = MEDIUM</b></p>



# A case study of how banks could lose it all

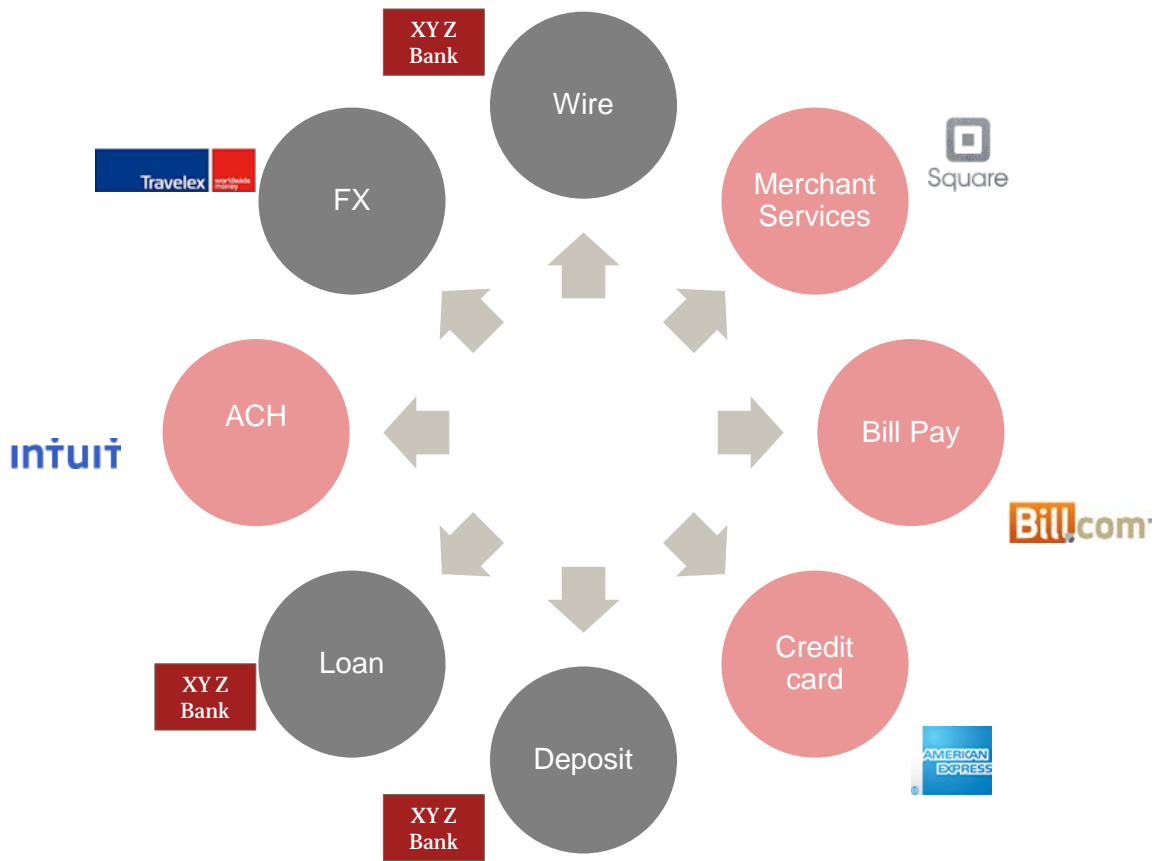
In a do-nothing scenario banks could lose clients' business to competition

**Case Study:** "Little Printings" is an online photo and greeting cards business. They have grown fast, and are planning to open new locations. The company has fifty employees and works with multiple suppliers worldwide.



## ***A case study of how banks can lose it all***

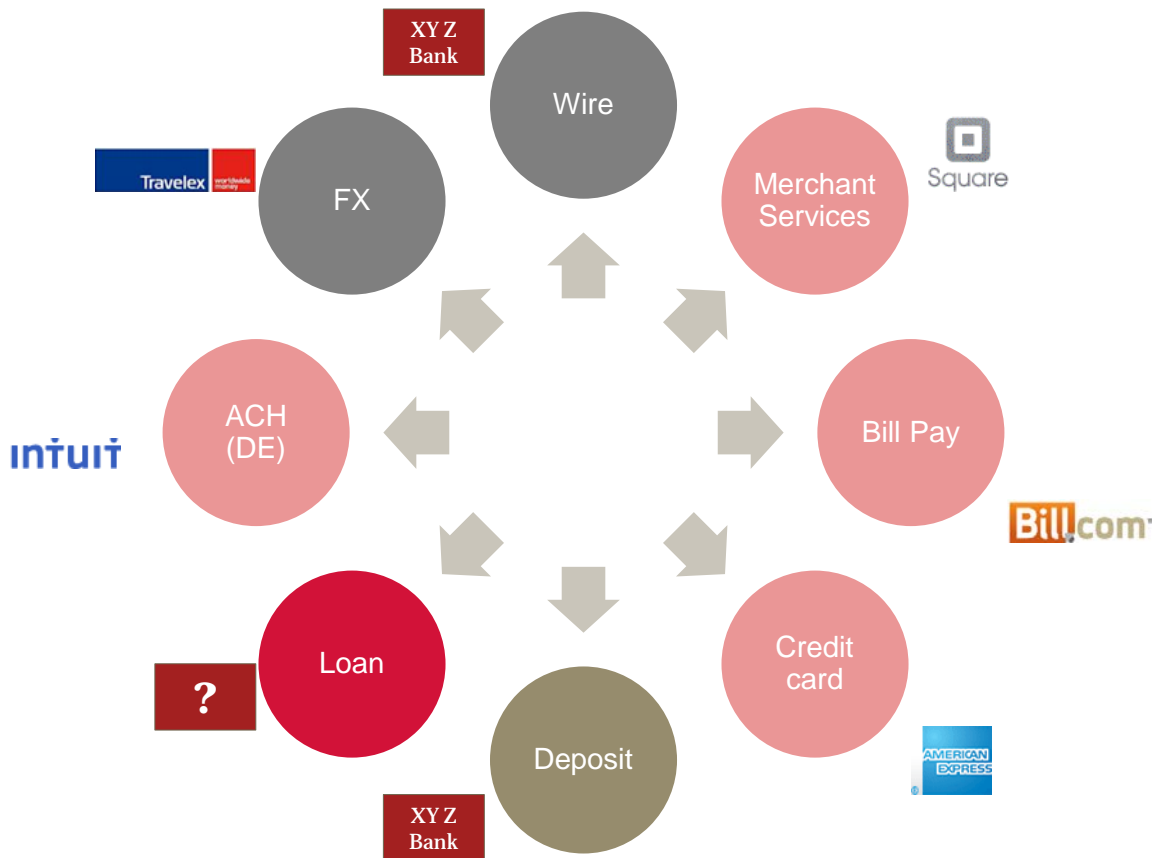
In a do-nothing scenario banks could lose parts of clients' business to competition



Half of the services that Little Printings chose to do away from banks were payments

## ***A case study of how banks can lose it all***

In a do-nothing scenario, banks can lose parts of clients' business to competition

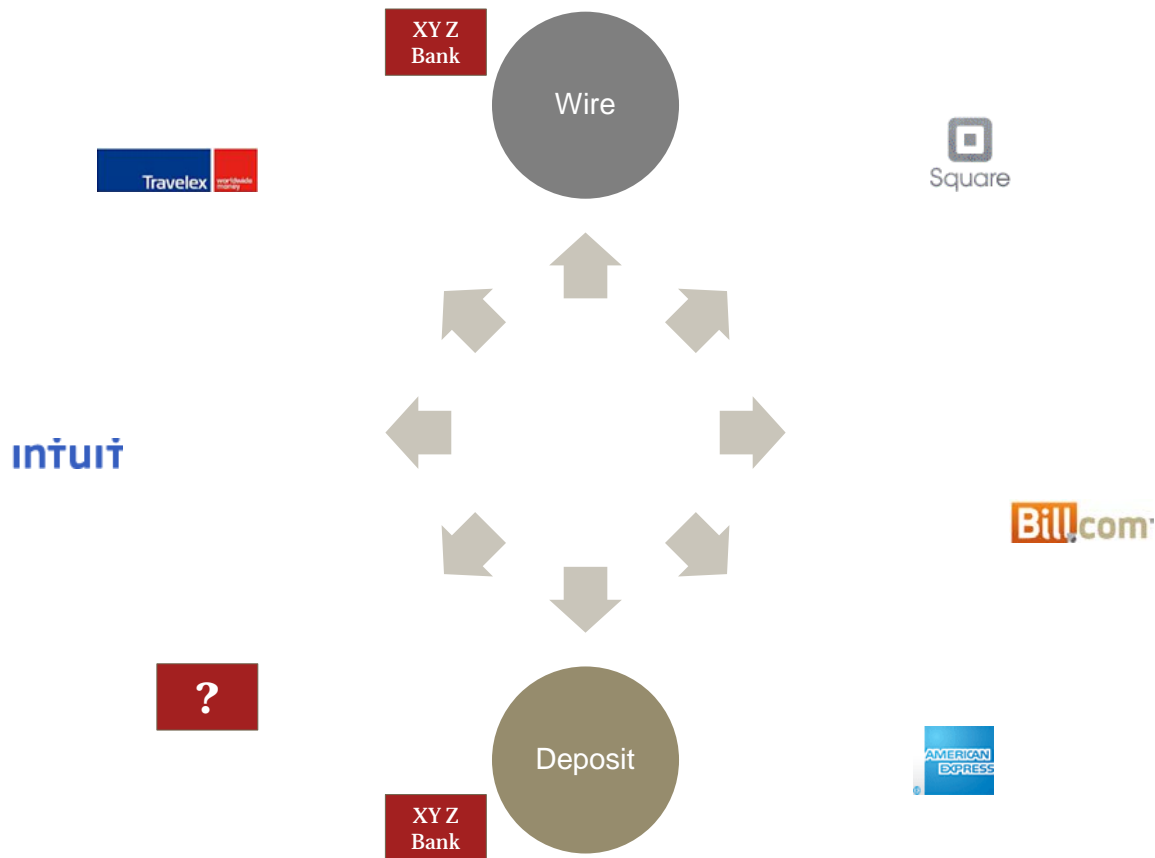


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On-line lenders look an awful lot like on-line payments used to .....

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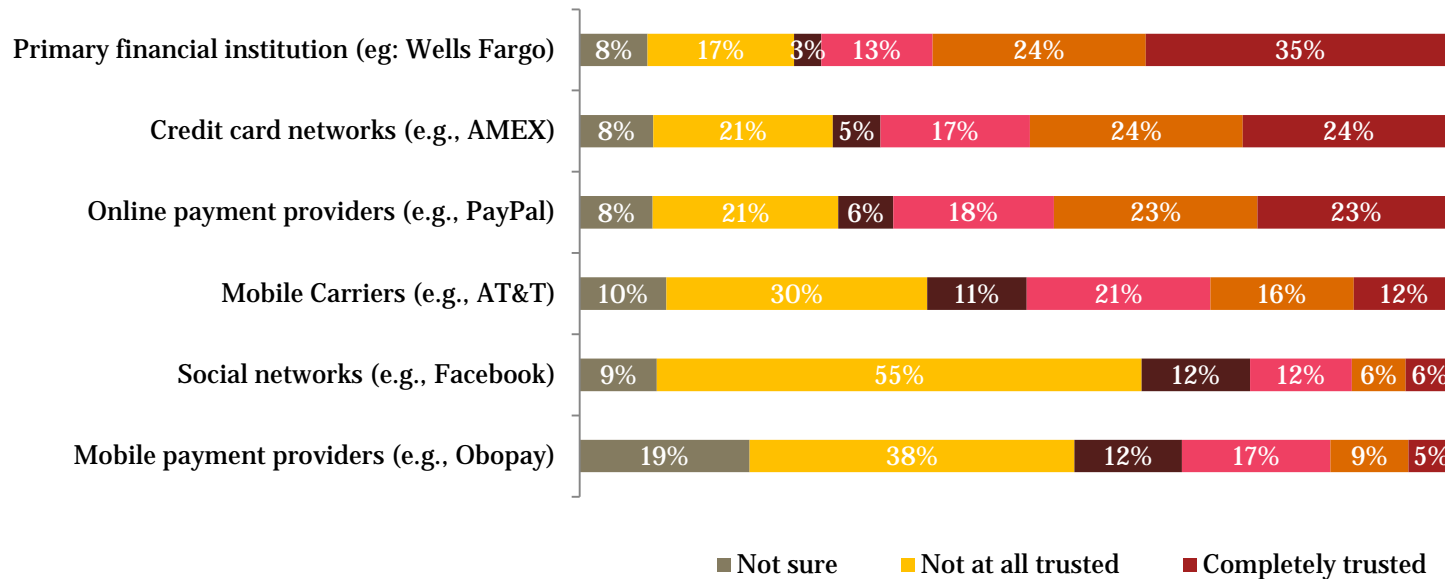
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Can XYZ bank stay in business providing just two of Little Printing's financial needs?

# Trusted Institutions

## Trusted Mobile Payment Organisations

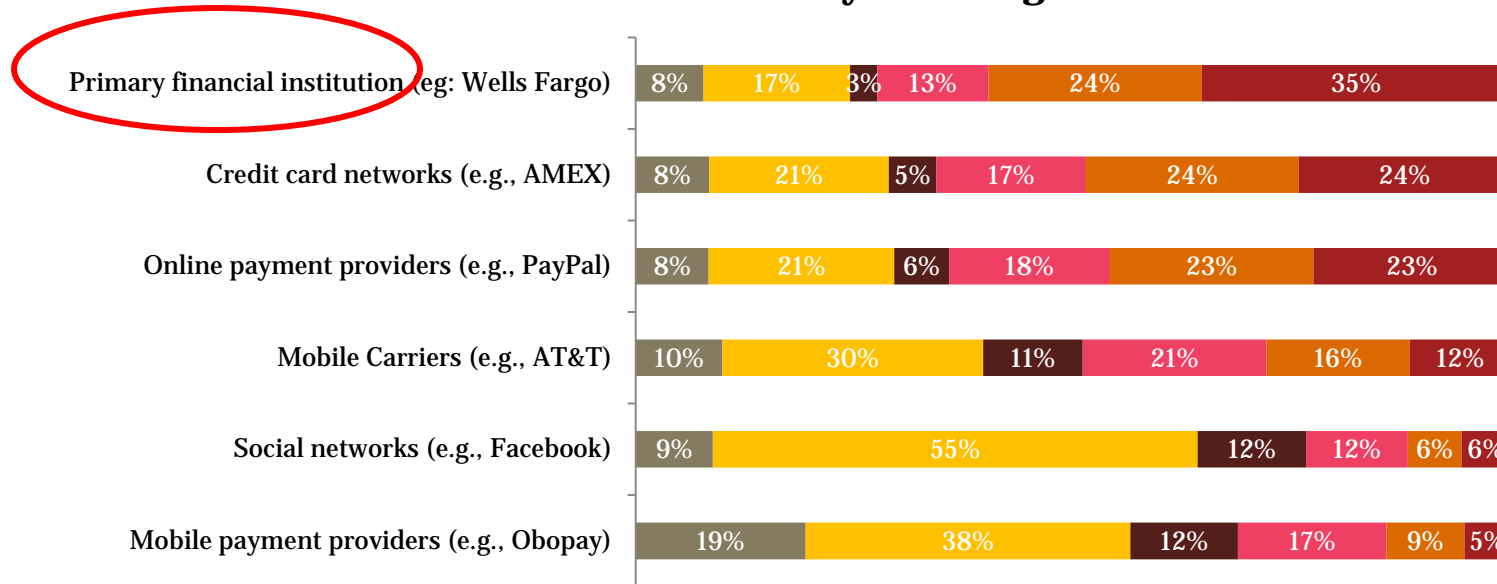


Brand names in parentheses were used by the researchers as examples to clarify to participants in the study what the category labels are descriptive of. Results are indicative of the category and not necessarily indicative of any particular brand of payment provider.

## Trusted Institutions

Banks are currently the most trusted institutions to provide mobile payment solutions, and current mobile phone providers are the least trusted.

### Trusted Mobile Payment Organisations

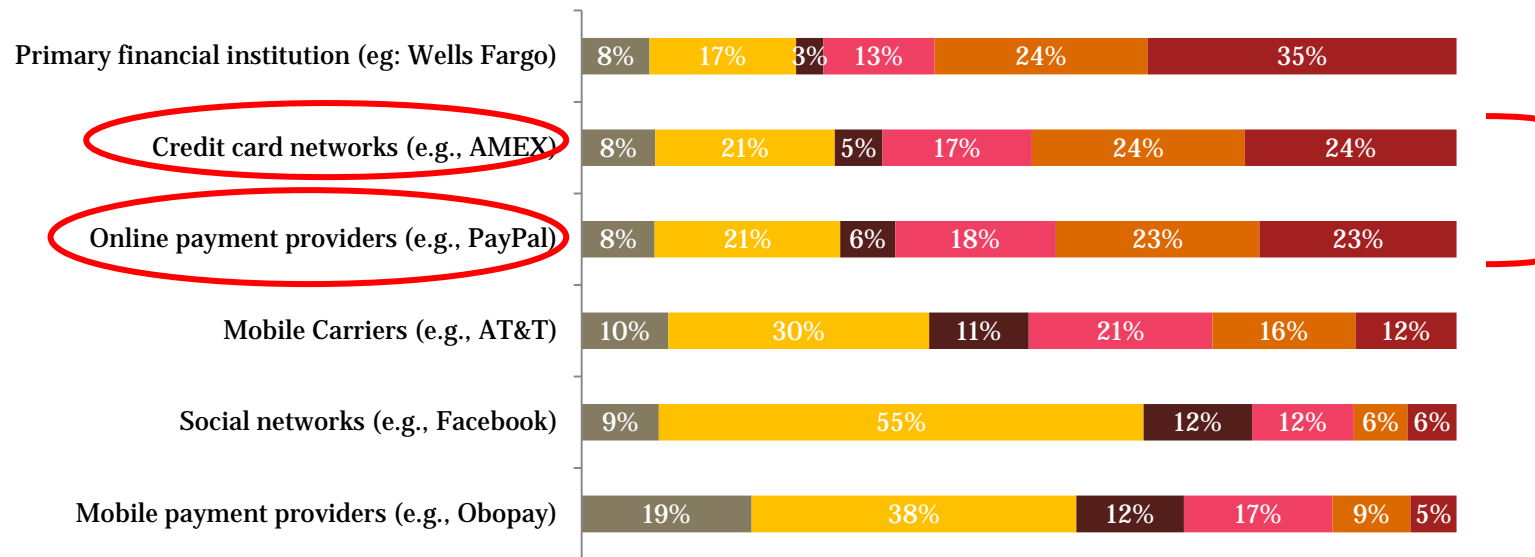


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But PayPal, the one who has been a non-bank payments provider the longest, has trust numbers statistically identical to Amex, who has been in business for 163 years and stresses safety as a feature. Are people getting “OK” with the new payments companies?

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## ***Trusted Institutions?***

Many say this repeatedly reported “trust preference” for banks for mobile payments will erode as people gain experience with mobile payments security

How do the latest mobile devices stack up against the home-banking PC/laptop?

**Unique banking identity.** A person’s banking identity is more closely tied to their mobile device (as well as to their SIM card) than would be the case with a laptop or PC.

**Locating lost or compromised devices.** Mobile phones have multiple ways to locate – and to lock down – a lost one. Most PC’s/laptops do not come with this capability.

**Preventing fraud through geolocation and geofencing services.** Geo-location works the way your card company will block transactions made far from where you live. With mobile, it can be based on how far from where you most recently were, even if you are traveling. Geo-fencing prohibits payments transactions outside a zone the customer can set and modify at any time.

**Authenticating via biometrics.** iPhone’s have it. An Android version is coming. 99% of PCs and laptops don’t.

**Encrypting and complying with regulation.** Mobile payments or banking applications must be compliant with PCI data security standards. Recently released new mobile payment guidelines on Payment Application Data Security will further enhance the security practices employed by merchants and mobile payment application developers.



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## ***But wait....didn't banks have a built in advantage?***

- Opportunities exist in exploiting what banks have that the non-banks (mostly) don't have:
  - **Customer belief that its safer with a bank**
  - **Account adjacency**
  - **Funding adjacency**
  - **Being regulated**
  - **Deposit insurance** - Unlike the at risk money a consumer leaves "on deposit" with a mobile payment scheme or a merchant leaves pending settlement
- **Is the DDA – and ACH access to it - the sleeping giant of future payments?**
  - It all already exists and most people already use it
  - It is proven, governed and regulated
  - Most of the disruptors use the DDA as the source and destination for their product
  - The other disruptors use the ACH to move their transactions in bulk

***What would it really take to turn the ACH into its own disrupter?***

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## ***The DDA is the core of most customer's banking relationship***

In the U.S. the checking account is the primary relationship most customers have with their financial institution

- Customers define “their” bank as the one at which they have their checking account
- Customer's believe checking accounts are safer than other payment instruments
- The checking account is used for large/important payments: Mortgage payments, insurance premiums, new car, taxes, school tuition
- The checking account is the account for ACH transactions –still mostly payroll to most people

***The ACH network has greater ubiquity than the disrupters in terms of the number of customer endpoints, the number of transaction types, and the variety of ways that a payment can be initiated***

## ***Retailers are taking the lead in developing new payment systems that use the DDA***

<b><i>Retailer</i></b>	<b><i>Description</i></b>
Shell Oil	<ul style="list-style-type: none"> <li>• “Swipe and pump” convenience</li> <li>• Account manageable online</li> <li>• Clearing by Telecheck improves fraud detection capability</li> </ul>
Home Depot	<ul style="list-style-type: none"> <li>• Instead of having to swipe a a card, customers with PayPal accounts can just type in their phone number and PayPal PIN code on the keyboard at the register to make purchases. A receipt is electronically sent to a customer’s email or cell phone.</li> <li>• Home Depot participating stores are in San Francisco, Atlanta, and Omaha</li> </ul>
Major Food Chain	<ul style="list-style-type: none"> <li>• Converting loyalty/rewards card into a DDA linked “check card”</li> <li>• Becoming white label source to offer DDA based payments to others</li> </ul>

<b><i>Retailer</i></b>	<b><i>Description</i></b>
Wal-Mart	<ul style="list-style-type: none"> <li>• Prepaid debit card</li> <li>• Card can also be used as a substitute for a traditional checking account</li> <li>• Account manageable online</li> <li>• AmEx and Wal-Mart recently added the addition of FDIC Insurance and Worry-Free Check Writing to Bluebird</li> </ul>
Target	<ul style="list-style-type: none"> <li>• Credit or debit card</li> <li>• Credit card backed by TD Bank, Debit backed by Target</li> <li>• Has run its credit card operation in-house since 1995</li> <li>• Revamped in part due to high default and consumer credit risk during economic downturn</li> <li>• Account manageable online</li> </ul>

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## ***Summary: New payments and the DDA***

- Non-bank technology firms, retail chains and others have rapidly colonized what used to be considered the banks' "payments franchise"
- While transaction percentage is small, growth rates of some are very strong
- The biggest and best run are definitely taking payments share from banks
- Banks have the things that are the foundation for reclaiming their share of the payments business
  - Customer trust
  - The DDA
  - The ACH

***Perhaps what banks have been looking for to compete is to a good degree already there.***

