



# Potential tectonic shifts in payments

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\* Views expressed are strictly the author's.



Eric Grover  
988 Bella Rosa Drive  
Minden, NV 89423  
USA  
+1 775-392-0559  
+1 775-552-9802 (fax)  
[Eric.Grover@IntrepidVentures.com](mailto:Eric.Grover@IntrepidVentures.com)

- Apple Pay: impact on payments world in US and internationally
- PayPal: how will separation from Ebay impact its business?
- Banks: interesting bank-led mobile payments innovation.
- Emerging Markets: where can we see "m-Pesa"-like innovations emerging?

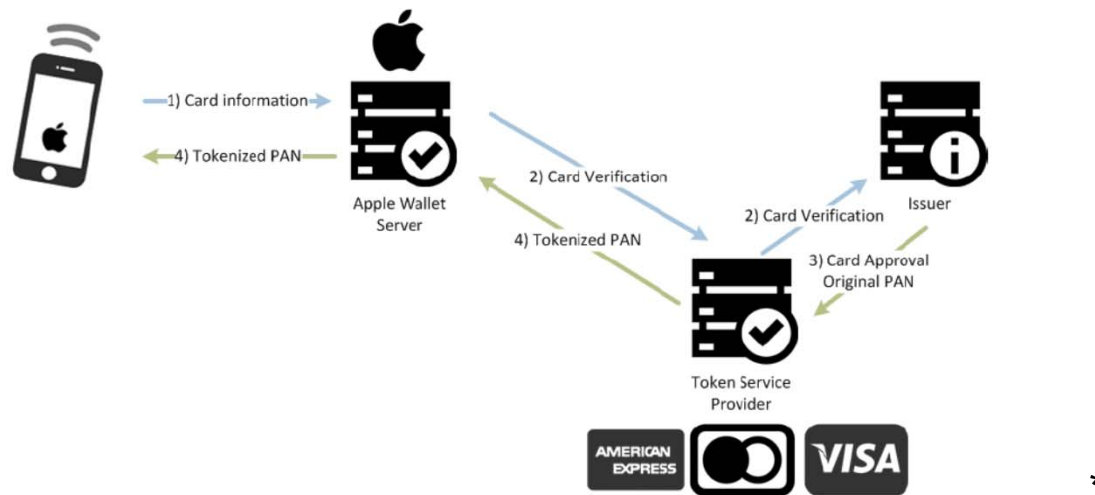
# Apple Pay

- Apple's hugely anticipated mobile wallet Apple Pay goes live in the US today.
- Existing and aspiring players across the payments value chain will be impacted.
  - Launch partners include:
  - Networks: American Express, MasterCard and Visa
  - Issuers: Bank of America, JPMorgan Chase, Citigroup, American Express, Wells Fargo, Capital One, U.S. Bank, Navy Federal Credit Union, USAA, PNC, and Barclays
  - Processors: Chase Paymentech, First Data, Visa (Cybersource/Autherize.net), Total Systems, and Stripe
  - Merchants:
    - In-store: McDonald's, Macy's/Bloomingdale's, Walgreens/Duane Reade, Disney (stores and parks), Staples, Subway, Whole Foods Market, Nike, Toys 'R Us, Petco/Unleashed
    - In-App/Online: Target\*, Groupon, Panera, Starbucks, InstacartTickets.com, Sephora, Uber, MLB.com and OpenTable

\*Target is a member of Merchant Customer Exchange (MCX)

# Apple Pay

- Apple is working with existing payments system players, and, importantly, embraced open NFC and tokenization standards
- Enrollment:

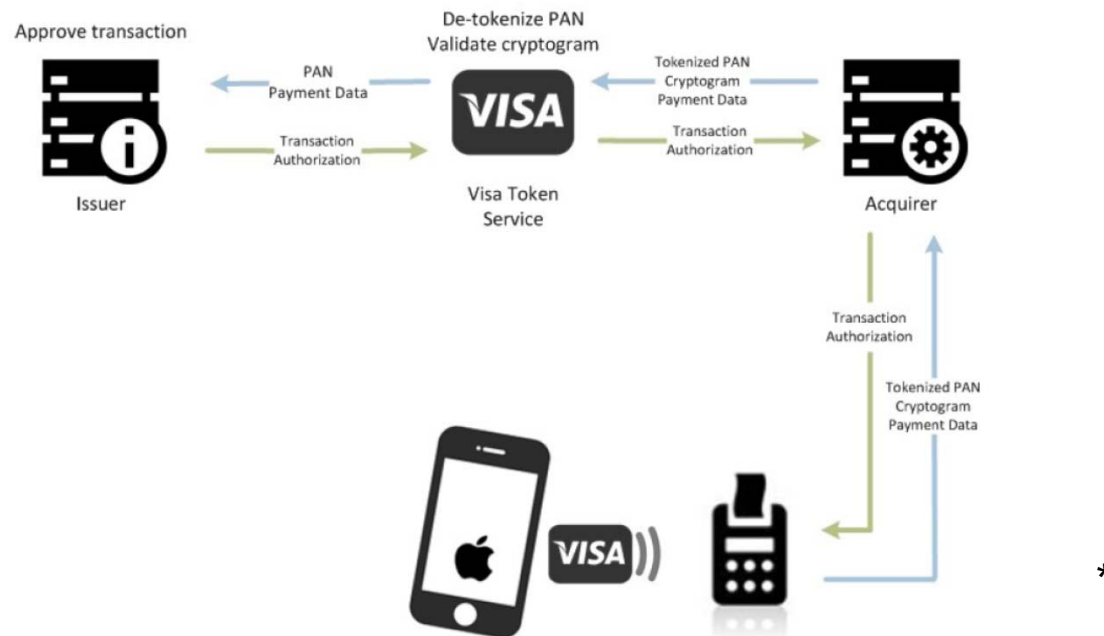


- The Cupertino smartphone behemoth's primary aim is to enhance the iOS platform and Apple customer relationships, not to disrupt the payments system.

\* UL

# Apple Pay

- Processing:



- Focus is on proximity payments at the physical pos and in-app\* mobile commerce.

\* UL

# Apple Pay

- Consumers and merchants are conservative in payments.
- Need to achieve critical mass of Apple Pay wallet holders and merchants
- Must create a compelling reason(s) for consumers and merchants to adopt Apple Pay in terms of ease of use and benefits.
- In mobile commerce, secure low-friction payments are probably sufficient and Apple's control of the iOS platform confers advantage.
- At the physical pos however the existing payment system is low friction and habit.

# Apple Pay

- NFC will ride in the EMV rollout slipstream to achieve critical mass.
- Many in the payments industry believe Apple can and will move the proximity-payments market. Near term puts NFC in the pole position.
- Initial launch didn't include rewards. Apple, perhaps with retail partners, needs to provide or facilitate provision of benefits to cardholders to incent them to use Apple Pay at the physical pos in lieu of swiping or inserting a piece of plastic.
- Apple launched its digital wallet in the US because: (1) it and its partner networks are there, (2) with 40% share of smartphones, it's Apple's biggest market, (3) the U.S. payment-card market is as or more competitive than any in the world, giving Apple leverage, and (4) of substantially richer economics.

# Apple Pay

- Out of the gate Apple extracted 15 basis points for credit and half cent for debit transactions from large bank issuers.
- Smaller banks with less (no) negotiating leverage and debit interchange double the Goliaths, will likely pay more.
- Large banks would prefer their customers use their wallets, not Apple's, or any other third party's digital wallet. E.g. Chase while participating in Apple Pay continues work on its proprietary mobile wallet.
- Apple was able to squeeze banks because it could credibly threaten to shift spend from nonparticipating to participating bank issuers.
- Apple Pay cheerleaders contend it will accelerate the half-century conversion of cash-to-electronic payments. Maybe.
- Because a disproportionate percent of iTunes accounts are funded with credit cards, banks hope Apple Pay getting traction will convert debit to more profitable credit transactions.



# Apple Pay

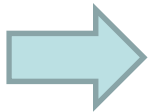
- Retail payment networks such as Amex, MasterCard and Visa pleased. The Cupertino smartphone giant embraced the existing payments ecosystem. The networks are processing tokenizing accounts and transactions, and codes, which enhances transaction security, reinforces their positions at the heart of the payments ecosystem, generates fees, and preempts law or a regulatory diktat from Washington prescribing payments security.
- Merchant acquirers and processors have rushed to support mobile in-app integration for Apple Pay. Currently mobile acceptance is priced at a premium, with 2.9% plus 20% per transaction is fairly typical.
- Merchant reactions mixed. Predictably MCX members have said they won't participate at the physical pos. Several however indicated they would support Apple Pay for mobile commerce.

# Apple Pay

- There are 200-plus digital wallets, most of which to date, have disappointed.
- In 2014 the graveyard of failed, aborted or significantly scaled back digital wallets started to fill up.
  - Buyster (Orange, Booyes Telecom, SFR and Worldline joint venture) RIP
  - O2 RIP
  - Weve (O2, Everything Everywhere and Vodafone standard mobile wallet joint venture) RIP
  - V.me outside Europe now Visa Checkout
  - Square Wallet replaced with less ambitious Square Order
- Cupertino smartphone giant finally taking the plunge will spur more activity from the major wallets in Google ecosystem, MCX, Softcard, and perhaps banks.
- October 14<sup>th</sup> CEO Jaimie Dimon said Chase was going to launch a response saying “We think that we can also be friendly to merchants with data, with pricing, with simplified contracts. So we are trying to make this an ecosystem that works better for everybody and is far more secure. I have customers on both sides and I’m far more secure.”

# Apple Pay

- Whether it boosts electronic payments or shifts the credit/debit mix, if Apple Pay is successful, Apple will demand a great share of banks' economics.



Apple Pay is an exigent threat to banks.

# PayPal

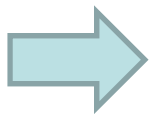
- Ebay is a marketplace. PayPal is a payment scheme, processor, digital wallet, issuer and within the MasterCard and Visa universe a merchant. Traditionally closed general purpose payment system. Starting to open up à la Discover and American Express
- While clearly there are synergies, PayPal will be better off independent.
- PayPal while independent became the leading payment system within eBay while eBay was promoting its own payments joint venture with Wells Fargo BillPoint.
- While many retailers on their own or partnering with financial institutions have successful retail credit card programs to generate incremental sales, there is inherent tension and has not been much success in a retailer(s) promoting general purpose retail payment systems.
  - Sears in 1985 at the time the world's largest retailer, launched Discover
  - Alibaba- Alipay
  - MercadoLibre – MercadoPago
  - Amazon – Expanding beyond Amazon, but clearly many retailers reluctant to accept a payments wallet from such a direct competitor.
  - Merchant Customer Exchange
  - Auchan – Flash & Pay – QR coded based mobile wallet. Attempting to curate a multi-retailer payment scheme.

# PayPal

- While PayPal funds iTunes accounts, it's not in Apple Pay. Credible reports Apple was concerned about PayPal trying to work with Samsung. But regardless, it would have been hard to rationalize PayPal would want to pay 15 basis points or more to be a wallet in a wallet, particularly if it would have been constrained in the larger Android platform.
- Independent, freer to partner to maximize value of payments business.
- Arguably easier to attract payment talent
- Freer to acquire, not that at this juncture there's compelling reason to.
- Activist investor Carl Icahn suggests the payments world is ripe for consolidation and that independent of EBay, PayPal could create value by participating. It's not however clear where PayPal lacks scale and the ability to generate robust organic growth.
- Investor and PayPal co-founder Peter Thiel: "It makes sense for them to naturally spin it out again and for PayPal to focus 100 percent on payments. " Regarding M&A "I think mergers only make sense when there are real synergies ... and it's not obvious what the synergy between PayPal and any other business would be at this point."

# PayPal

- Strategy to become a full-spectrum network serving e-commerce, mobile commerce and payments at the physical pos makes sense. Achieving relevance at the physical pos will be a long, hard slog. Opening up, partnering with merchant acquirers and in the US Discover, to close the acceptance gap with MasterCard and Visa, right approach. Need to build clusters of critical mass of acceptance and spend. Directly and/or with retail partners PayPal must provide incentives to consumers to use PayPal in lieu of the Amex, MasterCard or Visa card they're habituated to and rewarded for using.
- While one can construct M&A rationales with/for Alipay, Amex, Chase, Discover, Facebook, Google, et al, PayPal at least for the moment best off independent.



Separation from eBay is a plus for PayPal

# Banks in m-payments/banking

- In Sweden SEB, a Nordic financial services group, Danske Bank, Handelsbanken, Länsförsäkringar Bank, Nordea, Swedbank and Sparbankerna launched Swish, a mobile real-time P2P payments service.
  - 500,000 users
  - banks charge fees, typically .75 cents per month and .15 cents per transfer
- In France Banque Populaire Caisse d'Epargne (BPCE) teamed up with Twitter to let customers tweet money to each other.
- Of note, Twitter testing letting merchants receive payments off Tweets, initially using processing platforms: (1) Stripe, (2) Thing Daemon Inc's Fancy luxury-goods marketplace, (3) Gunroad Inc., an online market for writers, software developers and the arts community and (4) Music-today, a marketing, ticketing and fulfillment service for musicians and music sellers.

# Banks in m-payments/banking

- United Kingdom
  - Paym
    - Following launch of Barclays Pingit based on Vocalink Faster Pay and Vocalink's Zapp, Paym was launched in May
    - Bank-owned Vocalink processes
    - Bank-supported P2P current-account-to-current-account payment system relying on mobile-phone # aliases.
    - At outset Bank of Scotland, Barclays, Cumberland Building Society, Halifax, HSBC, Lloyds Bank, Santander, TSB and Danske Bank customers can enroll.

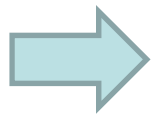


# Banks in m-payments/banking

- United Kingdom
  - Zapp retail payment scheme
    - Full-spectrum retail payment network
    - Supports NFC, Bluetooth low energy and QR codes
    - UK Bank-owned Vocalink retail payment system harnessing handsets and ACH, to compete with MasterCard and Visa payment cards.
    - WorldPay (close to 50% UK acceptance), Optimal, Realex, Optimal, Sage Pay, and Elavon (U.S. Bank), collectively reaching > 60% UK merchants.
    - HSBC, First Direct, Nationwide, Santander and Metro Bank will roll out Zapp to UK consumers. Collectively they reach > 35% UK consumers.
    - Charges fixed transaction fee, varying by channel, to acquirers.
    - Shares on the order of 70% of transaction fee with bank issuers.
    - Aims to take 10% of retail transactions by 2017, primarily from debit. To the extent however Zapp takes credit-card-transactor share, for banks it's a revenue loser.
    - Will launch in 2015

# Banks in m-payments/banking

- In Spain,
  - CaixaBank is working with Gemalto to launch a contactless EMV payment wristband. In sync with Cupertino's wizards and Gemplus founder Marc Lassus who in the mid-nineties evangelized using wrist watches to carry contactless payment credentials.



Where banks don't offer compelling mobile payments, acceptance, P2P, commerce and bill pay, others will.

# Emerging market payments innovation

	Population (millions)	Card Payments (millions)	Card Payments Per Capita	
France	65.5	8575	130.92	} Electronic retail payment systems well established
Sweden	9.6	2130	221.88	
UK	64.1	10668	166.43	
US	313.9	77938.6	248.29	
Brazil	201	9928	49.39	} Cash is leading payment system in most of the world
India	1233	1112.4	0.90	
Mexico	117.6	1719.6	14.62	
South Africa	52.9	1542	29.15	

\*

- BIS. All #s are 2013 except for US which is 2012. All transactions on domestic cards except for US which are on all cards.

# Emerging market payments innovation

- M-Pesa success ingredients:
  - Powerful owner MNO Vodafone/Safaricom with enormous national and global reach
  - Weak competition, low banking penetration, weak traditional payment card issuance and acceptance and use
  - An accommodating regulator/regulatory environment
- Best prospects of another seismic m-Pesa payments entrant are elsewhere in sub-Saharan Africa or in an Asian market(s) with similar characteristics. It's highly unlikely to emerge from Western Europe or the U.S.

# Emerging market payments innovation

- Brazil
  - ELO is a domestic payment scheme jv between Banco de Brasil, Bradesco and Caixa Economica Federal, using Visa as a processor, targeted at low-income customers and government-benefit recipients.
  - Cards tripled yoy reaching 37 million cards in 2013.
- Mexico
  - Mexico's Interbank Electronic Payment System (SPEI) run by the central bank.
  - 41 of 88 participants are nonbanks
  - Performance ratcheted up. Sending bank, central bank and receiving bank each has 30 seconds to process and acknowledge.
  - Central bank charges SPEI participants 4 cents per transaction during the day shift and 1 cents per transaction at night.
  - Consumer fees average 40 cents per transaction. Some banks provide "free" bundled with account. Recipients not charged.

# Emerging market payments innovation

- India
- RuPay
  - August, 2013 DNS was the first bank to issue RuPay debit cards. In 2013 RuPay cards increased to 13 million, up from just 200,000 at the end of 2012.\*
  - Network charges issuer \$.001 and acquirer \$.0005 per transaction.\*\*
  - Interchange .45% for transactions up to RS 2000 and .65% above Rs. 2000.\*\*
- Inter-bank Mobile Payment Service
  - Enables mobile P2P and some retail payments
  - Launched September, 2012
  - August, 2014
    - 67 member banks
    - 5 million payment transfers\*\*

\*Payments Cards & Mobile

\*\* National Payment Corporation of India

# Emerging market payments innovation

- Indonesia is a ripe market:
  - 240 million people.
  - 90% mobile phone penetration
  - Only 11% of Indonesians have debit cards.
- PermataBank's BBM money transfer supported by Monitise launched on Blackberry in 2013. More than 50% of smartphones are Blackberry
- Users can create a mobile money account attached to their BBM identity, and transfer money to other BBM contacts, purchase airtime, or move money to bank accounts.
- Supports P2P money transfer and retail payments off and online
- No additional fees for moving money from BBM to BBM account.
- 60,000 registered users in first 90 days
- Will be available on iOS and Android in 2015

# Emerging market payments innovation

- Philippines
  - Leading mobile-phone operator Smart Communications' Smart Money
    - Mobile-phone operator electronic wallet enabling bill payment, airtime reloads and money transfer
    - Can send funds to 51 million SMART subscribers in the Philippines
    - Companion co-branded MasterCard
    - 12 partner banks
    - 5000 physical branches
    - Global remittance network through MoneyGram partnership
  - Number two MNO Globe Telecom
    - Globe Cash – P2P money transfer
    - Globe Charge – Mobile acceptance for SMB owners

Hybrid co-branded payment and money-transfer systems are a logical endgame.



# Emerging market innovation

- South Africa is a hotbed of experimental mobile payments innovation.
- Absa's Payment Pebble (m-acceptance), Nedbank's PocketPOS (m-acceptance), ZipZap (m-acceptance priced at 3%), iKhoka (m-acceptance priced at 2.75%) and FlickPay (mobile QR-code-based wallet).
- First National Bank (FNB) offering mobile wallet and m-acceptance (white-labeled mPowa offer).
  - FNB doing more than 230 million mobile transactions per month\*
- Standard Bank/SnapScan in South Africa. 16 thousand merchants. Mobile-phone based payment system using QR codes. Merchants pay 3% discount fee.
  - SnapScan offers two funding options:
    - Informal businesses receive vouchers redeemable at Spar outlets or Standard Bank ATMs.
    - Credit to current account.

\*April 8, 2014 IBM Press Release. ["IBM Debuts new Mobile, Storage and Hadoop Offerings for the Mainframe."](#)  
Almost certainly includes more than payments. Nonetheless impressive.



# Emerging market innovation: bKash

- Bangladesh. 165 million people, ~ 60% of whom are still unbanked.
- Universal cell phone coverage
- High cell phone penetration
- Central bank created a favorable regulatory environment
- bKash is a subsidiary of BRAC Bank with investments from Money in Motion, the International Finance Corporation and the Bill & Melinda Gates Foundation.



- 90 thousand retail agents. Also using direct payroll deposit.

# Emerging market innovation: bKash

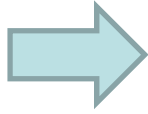
- bKash is a subsidiary of BRAC Bank with investments from Money in Motion, the International Finance Corporation and the Bill & Melinda Gates Foundation.
- Offers mobile P2P and digital wallet for retail payments
- Registering and putting cash in are free. P2P payments \$.06. Taking cash out 1.85%



The advertisement features a smiling woman on the left. On the right, the bKash logo is displayed above the text "a BRAC BANK company". Below this, it says "Shop with bKash, enjoy" followed by a large "10% Cash Back" graphic. A list of partner retailers is shown in three categories: "Super Stores" (including Agora), "Online Bus Ticketing" (including SHOHJ), and "Fashion Houses" (including Yellow, Lotto, and others). The bottom of the ad includes the phone number "16247" and the website "bkash.com".

- In Bangladesh initial mobile financial services launched mid-2011. bKash went live in the second half. By 2012 it had 2 million accounts and by 2013 11 million accounts
- In 2014 there are 20 licensed mobile financial services providers. bKash has ~ 80% market share.

# Emerging market innovation

 Emerging markets are the most fertile and unpredictable environment for potentially disruptive mobile and non-mobile “m-Pesa-like” payments innovation.

Q&A