

FINsights

Technology Insights for the Financial Services Industry

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PAYMENTS



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- Mobile Banking and Payments Security and Usability: What's in Your Mobile Wallet?
- Innovation in Retail Payments • Electronic Invoicing: How to Increase E-Invoicing B2B Transactions

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INNOVATION IN RETAIL PAYMENTS

- SABITHA VUPPALA
- SUJATA BANERJEE

This article chalks out the retail payment landscape, focusing on innovation in this space, associated drivers and market trends. We will provide a detailed examination of some of the emerging payment models, opportunities and imperatives for banks in the Consumer-to-Consumer (C2C) money transfers, and Consumer-to-Business (C2B) online payments segments.

The Retail Payments Landscape

Retail (or consumer) payments are a broad category and refer to payment transactions where a counter party (or more specifically, the initiator) is an individual consumer. While one traditionally may think of payments as cash, checks and cards, the pace of current innovations has led to an array of new payment methods - micropayments, e-purse, social money transfers, contactless, mobile, etc. - which further enrich and complicate the retail payments landscape.

It is possible to segment the retail payments space in a number of different ways. In Figure 1, examples of players in the retail payments sector are shown along with mainstream transaction types.

Consumer-to-Consumer (C2C): This includes both micro and macropayments, such as shared expenses, gifts, service payments, remittances, and online auction purchases. Traditionally, these payments have been made via cash and checks.

Consumer-to-Business (C2B) in Person: This includes everyday transactions such as purchasing small items and paying fares, such as shopping for groceries, large items, gas, and various services. Apart from cash and

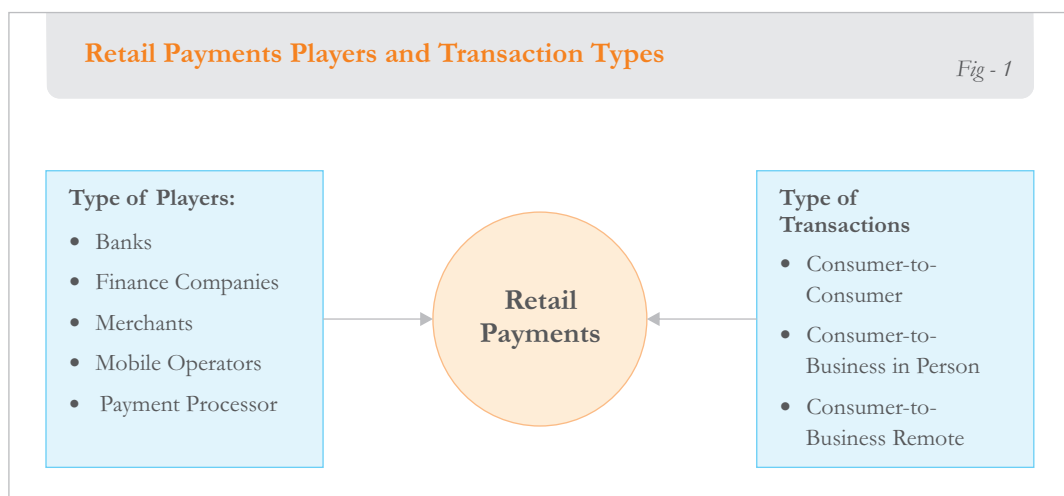
checks, cards are widely used for these types of transactions, though mostly for macropayments.

Consumer-to-Business (C2B) Remote: This includes remote payments for goods and services, bill payments conducted online or through mobile and landline telephones. While these are mostly macropayments, there is also a need for micropayments to purchase music, ringtones, and similar items.

Innovation and Trends in Retail Payments

According to various sources - such as Nilson, the Federal Reserve and NACHA - the payment system continues to shift from paper to electronic. While cash and check usage is declining, credit card growth has also slowed down. ACH is growing steadily and debit cards are showing rapid growth.³

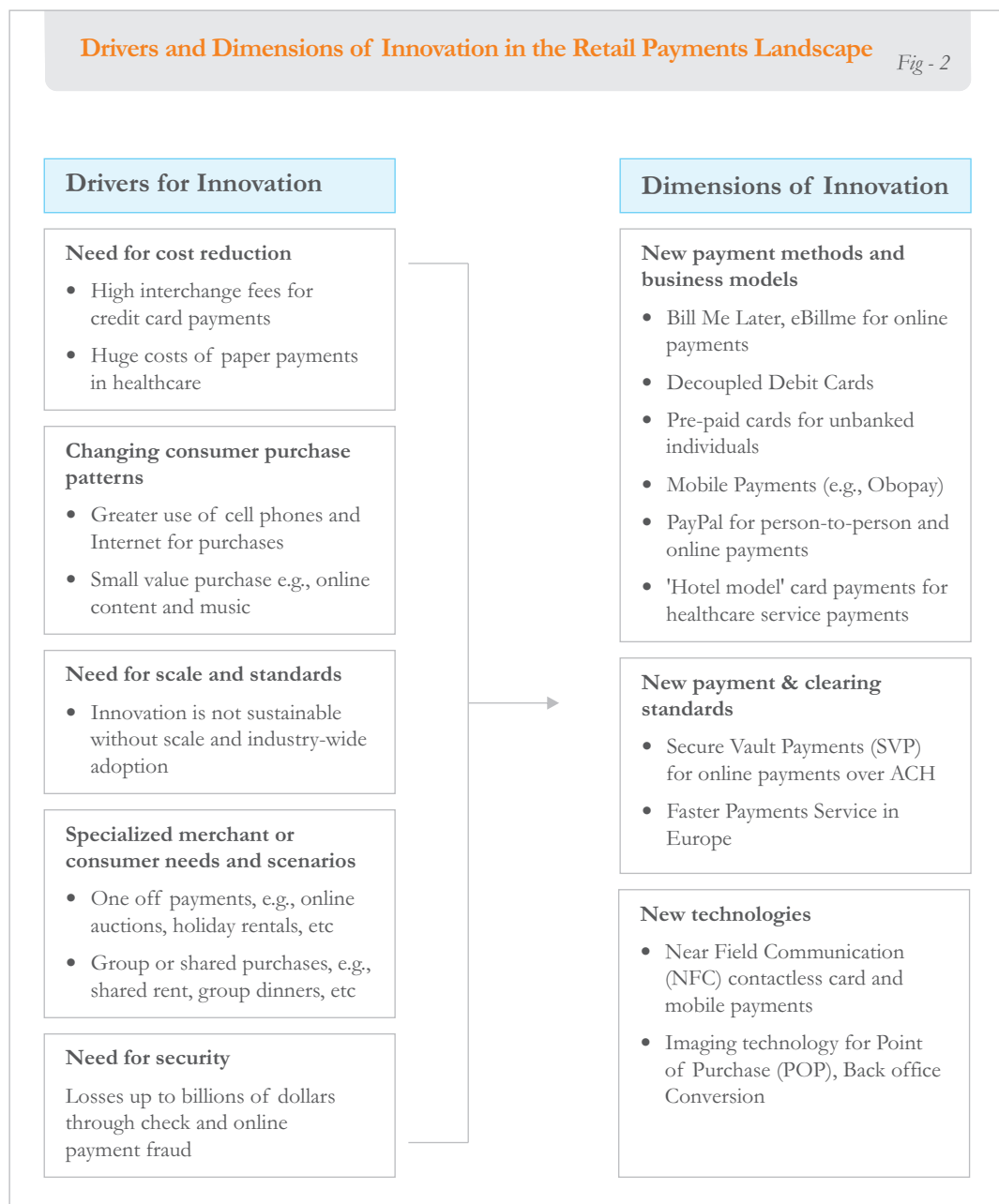
The cause of this shift and the rapid pace of innovation in the payments space cannot be traced back to a single set of rationale. Different players such as consumers, merchants and payment service providers have different drivers, often not limited to one. Figure 2 highlights some of the different drivers of innovation and dimensions along which these can occur.



To fully take advantage of the opportunities that the evolving retail payments space presents, it is important for each player to understand drivers specific to them and the benefits they are seeking to achieve. This understanding will help them better prioritize and strategize among the various retail payment strategy options and dimensions that exist. Cost reduction, revenue/ volume growth, early mover

advantage and customer retention are all benefits that firms may seek.

The types of retail payments innovation occurring run the gamut, and include: Variations to an existing payment method (e.g., prepaid debit card, Decoupled Debit Card), a new method using a traditional underlying payment type (e.g., PayPal), or completely new payment products (e.g. contactless e-purse). For some players, the



business case would rest on finding the right niche to target, rather than attempting a mass-market strategy. Examples of these niches are mass-transit and healthcare Point-of-Sale (POS) payments.

Figure 3 provides some examples of scenarios and offerings, devices, and the drivers/benefits for the different retail payment types. The various product innovations, devices and benefits can exist in more than one box and over a period of time can move to other boxes.

Consumer-to-Business (C2B) in Person:

Debit cards are displacing credit cards, cash and checks. Consumer debit purchases exceeded US\$1 trillion in 2006 globally, up by 19% from 2005.³

Decoupled debit and contactless chip cards are the big examples of innovation in the card space. The former offers a revolutionary

option for non-banks to issue debit cards and settle payments over ACH (read “lower interchange fees”). Contactless cards offer a more convenient and faster option for low value and “on the go” payments, e.g., train ticket purchases.

Back Office Conversion (BOC), a new standard introduced by NACHA in March 2007, is an example of innovation in terms of payment and clearing standards. Check imaging technology and NACHA payment standards that enable conversion of checks to ACH transactions - such as BOC and Point of Purchase (POP) - have made the check payment and settlement process faster and more cost-effective for banks, consumers and merchants.

Mobile payment is an interesting space to watch. The ubiquity of the cell phone provides a

Examples of Innovations for Different Retail Payment Scenarios¹

Fig - 3

Transaction Type	Scenarios & Offerings	Payment devices	Benefits Sought	Example
Consumer-to-Business in Person	Shopping, restaurant, gas, micropayments, toll tags, healthcare service payment, rent payment	Cash, check, ACH, card – credit, debit, decoupled, contactless, e-purse “hotel model” card payments	- Lower cost - Convenience - Speed (esp. for micro-payments)	Contactless payments: MasterCard's PayPass, American Express ExpressPay, Exxon Mobil's Speedpass Capital One Decoupled Debit Cards
Consumer-to-Business Remote (Online)	Micropayments (music, games), e-commerce, bill payments	ACH, card, online payment accounts, EBPP, account aggregation	- Security - Easy check out process - Real-time bill payments - Choice of payment method	NACHA Secure Vault Payment (SVP), Google Checkout, Bill Me Later
Consumer-to-Consumer	Social money, remittances, online payment accounts, online auctions	Cash, check, mobile, Internet, wire transfers	- Lower cost - Speed of funds transfer - Context-based requirements - e.g., shared bills	Buxfer, Billmonk, PayPal, Western Union

compelling business case, but the need for standardization of technologies and processes to enable mass adoption is the biggest hurdle for this payment mode to take off in a big way.

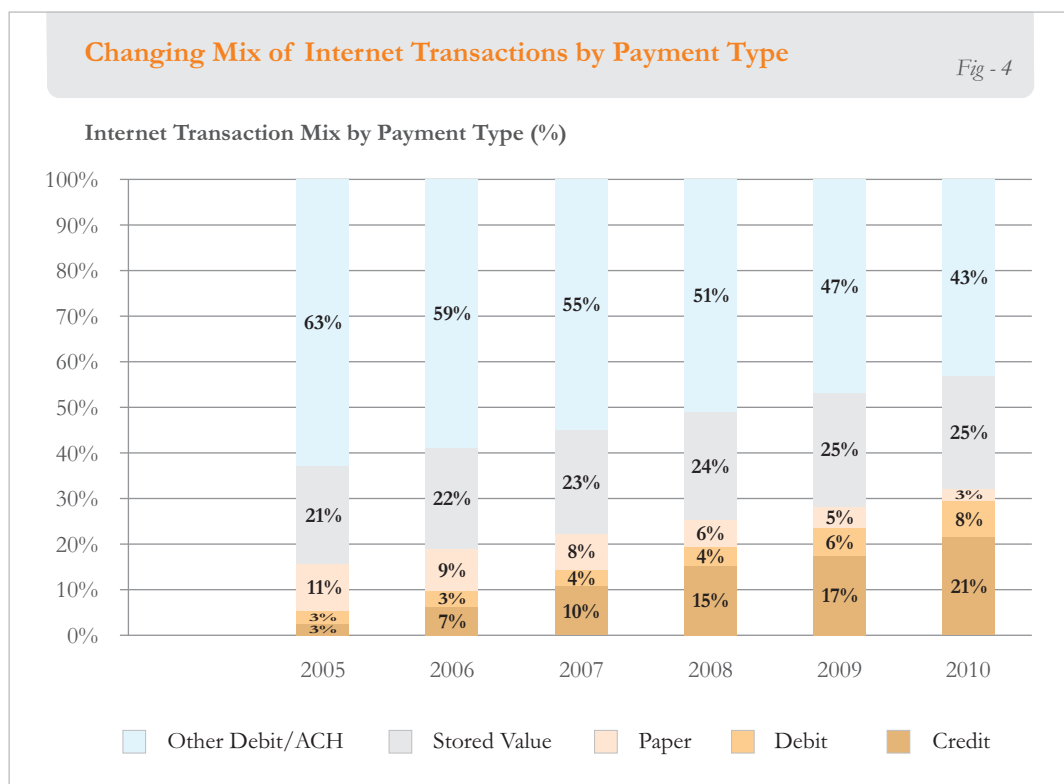
Consumer-to-Business (C2B) Remote: Internet payments for e-commerce, including bill payments, are the biggest part of this category. Alternate payment methods are increasing both from a merchant adoption and a consumer preference perspective. PayPal, Google Checkout, Bill Me Later, eBillme and NACHA's Secure Vault Payments (SVP) are some of the leading names. The subsequent section looks at this in more detail.

Consumer-to-Consumer (C2C): This includes both micro and macropayments - such as shared expenses, gifts, service payments, remittances, and online auction purchases. Innovations, in this segment, have occurred on several dimensions - new business models, standards and technology,

customer experience, and convenience. Examples include online payment accounts, stored-value model, mobile payments, electronic funds transfer, and prepaid cards. Payment providers have also successfully found niches to service - such as social money and cross-border remittances to Mexico or India, personal finance management with tools for bill payment and tracking shared expenses/ "IOU"s (e.g., Buxfer).

Examining Consumer-to-Business: e-commerce payments

The US e-commerce market offers a huge opportunity for Internet purchases and payments. They have rapidly adopted the Internet, and currently have the largest Internet user population in the world (211 million).⁴ Although e-commerce sales are a small percentage of retail sales (3.4% in 2007)⁵, they enjoy a very healthy growth rate (19% increase from 2006 to



Source: Federal Reserve Bank of Boston Report.⁵

2007, as compared to 4% between 2006 and 2007).

While credit cards are currently the most used payment method, followed by debit cards, the security concerns with card-based payment methods are gaining prominence. These concerns are primarily that credit card data might be intercepted or misused by unauthorized third party members.

Also, for a card-based payment, the consumer has to enter the entire card number, billing address, CVV and expiry date. Compare this to newer payment options that require a simple email address and password (after the initial set up), giving ample opportunities for innovation in terms of the checkout process.

There is an increasing recognition that offering a reliable, convenient and secure payment method is important in driving closure of the online shopping experience with an actual purchase. This, along with the opportunity to expand penetration to non-card holders, and the possible reduction of the interchange fees, gives merchants and payment players incentives to explore or adopt alternate payment methods.

Players - such as Google (Google Checkout),

eBillme, and Bill Me - Later have come up with different payment options, focused on addressing some, or all, of the aforementioned pain points associated with card payments. While these are classified together in the category of “alternate payment methods”, each of these have their own unique features and business model. See Figure 5 for a comparison.

Banks will continue to provide settlement services in all of these payment models. However, with more consumer adoption of these payment services, banks lose visibility and the opportunity for enhanced wallet share through direct relationships with end-users.

While none of these payment models offer solutions to all the concerns, they definitely offer a viable alternative to card payments. Not surprisingly, adoption is picking up. According to a recent Brulent survey of the top 100 retail websites, there was a 267% spurt in acceptance of these alternate payment methods over a 4 month period.⁶ This is impressive despite a low base; only 24% of the websites surveyed accept alternate payment methods to major cards (Amex, Visa and MasterCard).

Illustrative Comparison of a few Key Alternate Payment Models

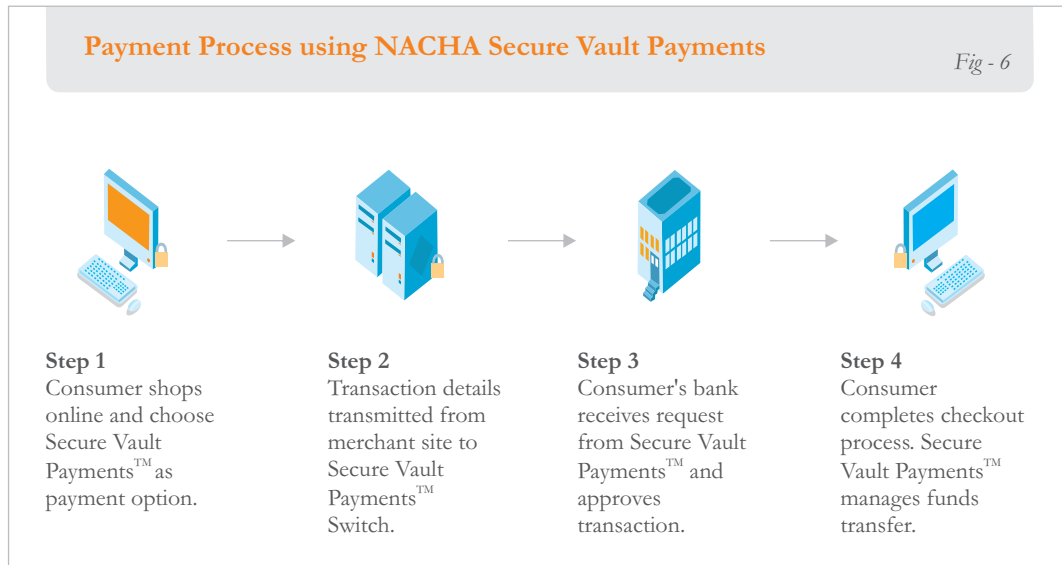
Fig - 5

	PayPal	Bill Me Later	Google Checkout
Payment Model	Stored value model – funds stored in PayPal account	Credit model – pay now, bill later	e-Wallet model - single wallet
Value Proposition	Good for non-credit card holders Also supports “person to person” payments and “invoicing over email” (good for one-off purchases e.g., online auctions, holiday rentals)	Easy checkout process using date of birth, and last 4 digits of Social Security No. Easy bill payment Good for high value purchases	Faster and convenient checkout process using Gmail Id and password Strong brand and visibility through Google advertising

Source: Secure Vault Payments.⁴

Payment Process using NACHA Secure Vault Payments

Fig - 6



Source: Secure Vault Payments.⁶

Opportunity for Banks in E-commerce Payments

NACHA has recently piloted an innovative model for e-commerce payments, leveraging banks' existing online banking services, and the NACHA payment network. If the pilot succeeds and achieves sufficient scale and adoption by merchants, banks and consumers, this new initiative could potentially disrupt the online payments market. (Refer to Figure 6 for payment process over NACHA SVP).

The key value proposition of this model is that consumers can completely avoid sharing or saving credit card (or other financial account) details with a third party. The key value proposition of SVP for the different players is as follows:

- Consumers: Easy checkout and payment process using online banking ID and password
- Merchants: Guaranteed funds, lower transaction fees (as compared to credit card inter-change fees) and opportunity to penetrate the non-credit card holders segment

- Banks: New revenue opportunities, a value-added offering through online banking and a more “direct and visible” role in the payment process

SVP is still in pilot stage, but banks, merchants as well as NACHA have adopted a cautious strategy. Involved parties want to avoid a radical disruption to the credit card payments market and get the process, positioning and pricing right. Even so, Celent estimates that SVP will account for over 10% of all online payments by 2010.⁴

Examining Person-to-Person (P2P) Money Transfers

Account-to-Account (A2A) and Person-to-Person (P2P) money transfers are essential service offerings of Retail Banking firms and Financial Institutions.

A2A refers to the ability to transfer funds between the same customers' accounts, held at multiple financial institutions. P2P money transfer, on the other hand is the ability to transfer money where the ownership of the account is different.

However, within this space, traditional services - such as intra-bank account transfers (e.g., movement of money from consumers' investment account to savings account) and cross-border wire transfers - would today be classified as commodity offerings. The opportunity for building customer stickiness and new revenues seems to be in offering innovative channels and addressing specialized needs of money transfers. This is reflected in emerging trends and the growing popularity of mobile money transfers, social money transfers and the introduction of Faster Payment Service in the UK.

Mobile Money Transfers

With the overall mobile subscription base crossing 3.3 billion globally in 2007, mobile payments present lucrative revenue opportunities for banks.³

In the US, according to an SNL Kagan report, approximately 84% of the US population is subscribed to wireless and this is expected to grow to 100% by 2013.⁸

Although m-commerce is relatively slow to take off in the US, banks, mobile operators and payment service providers are actively working toward new mobile banking and payments services and business models.

Earlier this year, Trumpet Mobile and RadioShack tied up with Western Union to enable subscribers to transfer money from their mobile phones.⁵ In April, Citibank announced that it would pilot Obopay's mobile person-to-person payment service, available to Citibank checking account customers.⁶ The customer will be able to use Obopay's mobile application to send and receive funds directly from their mobile phones.

Social Money

Social Money, the lending or transfer of

money within a community is another innovation that is gaining ground. For example, BillMonk from Obopay Inc. enables the tracking of money between friends. It targets, amongst others, roommates, young professionals and college students who often share expenses and find it difficult to track expenses over long periods of time, leading to financial tension. BillMonk enables the tracking, splitting of expenses and settlement online over mobile phones using Obopay.

Faster Money Transfers

In the UK, thirteen banks and building societies have been working together to introduce the Faster Payment Service (FPS). This service aims to reduce the time taken for low value payments made P2P and Business-to-Business (B2B), which currently takes three working days using UK's automated clearing system - to near real-time. The CHAPS service already exists for high value transactions.

Once enrolled for this service, a bank's customer will be able to instruct the bank to make the payment through FPS (based on sort code) to another account that can receive funds through FPS. It is estimated that the funds will reflect in the recipients account within a few hours of being initiated.

Opportunity for FIs - "Any to Any" Account Money transfer services

In today's world, there is a convergence of banking, brokerage, investments advisory, loans, credit cards and other financial services to the customer. Most of the large financial institutions offer a mix of these services and are moving toward an "enterprise-wide" view of the customer. Through offering "integrated financial services", these institutions hope to capture a higher percentage of the customer's wallet share. Many of the erstwhile non-bank financial institutions are foraying into the banking space, organically or through

acquisitions, to offer such integrated financial services (Charles Schwab, eTrade and Capital One are just a few examples).

An essential differentiator for organizations offering such an array of financial services to the customer is “*any to any*” account money transfer service, i.e., ability to offer the customer:

Fund transfers to and from any of the consumers' accounts held with the financial institution (i.e., banking, brokerage, card, investment and loan accounts) to make payments, fund investments, and maintain required balances in each account

- convenient inter-bank not just intra-bank fund transfers
- money movement through the customer's preferred mode (checks, electronic transfers, card payments, cash deposits, etc.)
- ability to initiate and track money transfers from “any channel”
- financial advisory services that require an aggregated view across all accounts of the customer (held with multiple financial institutions)

“Any to any” account money transfers should be viewed as a strategic offering rather than a tactical “line of business” specific offering. Such offerings would require FIs to invest in a more centralized money movement infrastructure and operational models.

Conclusion

The incredible amount of change in the retail payments space makes it imperative for financial institutions to innovate, or be at the risk of losing customer loyalty and core binding relationships. Understanding the specific drivers and derived benefits for specific customer segments and/ or payment scenarios will help them identify new opportunities to

innovate and offer new products and business models.

While offering innovative payments is in itself the core focus, financial institutions also need to invest in technology and reorganize operations. The ultimate goal is providing a seamless view of payment transactions and the underlying accounts, across different lines of business, channels, and payment types. Compliance to regulatory requirements, risk and fraud management and pricing are areas that go hand-in-hand with core payments processing.

We believe that financial institutions need to invest in integrated, enterprise-wide money movement and payment technology platforms.

It is through investment in these platforms that firms will be able to support the dynamic retail payments environment and the myriad of rapidly emerging payment devices, channels, business models and processes.

Financial institutions will need to take a more strategic approach while investing in such technologies, developing a more centralized model for improved scale and reuse.

Undoubtedly, this space promises to be an interesting one to watch, and interact with, in the near future.

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The author would like to thank Manishi Varma (Principal Consultant, Infosys Consulting) for his contribution to the article.



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