White Paper

Incredible India! Four Imperatives to Accelerate Electronic Payment Adoption

Emerging Market Perspective Series: Report 1

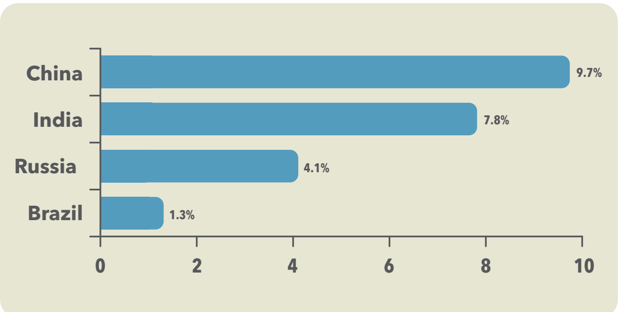
By Amit Sethi

Executive Summary

A leading analyst group predicts that "India will climb…to be one of the world's top five generators of non-cash payments by 2017."[1] In the emerging BRIC (Brazil, Russia, India and China) markets, cash remains king; but in India the tide is turning as consumers increasingly conduct electronic payment transactions with either plastic cards or, to a lesser degree, mobile phone-based applications. This market trend is being driven by a population of more than 1.2 billion, 350-400 million of which are part of the burgeoning middle class. This key demographic, growing annually at five percent, is developing a voracious appetite for consumer goods that can be supported through access to basic banking services provided by domestic and foreign financial institutions.

India represents a particularly bright spot in the global marketplace, especially compared to the anemic forecasted U.S. GDP growth rate of 1.5 percent. India's GDP, as of first quarter 2011, was 7.8 percent. This report addresses conclusions from a recent TSYS and Evalueserve in-depth research report into the India electronic payment market. From 2004 until 2010, India's average quarterly GDP growth was 8.4 percent,[2] surpassing Brazil's at 4.5 percent.[3] Conducting business in India is not without its challenges, however. A greater proportion of India's population falls below the poverty line compared to other BRIC countries. Plus, India's payment infrastructure suffers from an acute lack of investment relative to other emerging markets. But India does represent the largest democracy in the world, boasting a young, upwardly mobile population both digitally and financially.[4] In comparison to other emerging markets, India holds strong potential for financial institutions (FIs) to provide non-cash based payment mechanisms and basic banking services to two market segments — the middle class and, over the longer term, the rural unbanked. In rural markets, where the banking payments, technology and communications infrastructure is even weaker than that of metro markets, mobile payments could leapfrog over card-based payments as they meet the needs of a large percentage of unbanked customers. This topic will be explored in Report 2 of our *Emerging Market Perspective Series: Incredible India.*

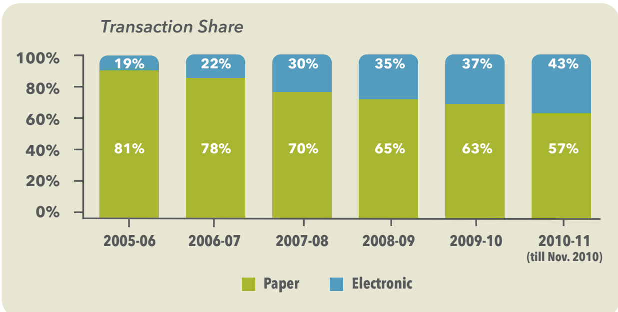
BRIC Country Rankings by GDP Growth 2009 Q1 – 2011[2]



Source: "India GDP Growth Rate." TradingEconomics.com.

Figure 1

India's Electronic Payments Growth[7]



Source: TSYS/Evalueserve Study, May 2011.

Figure 2

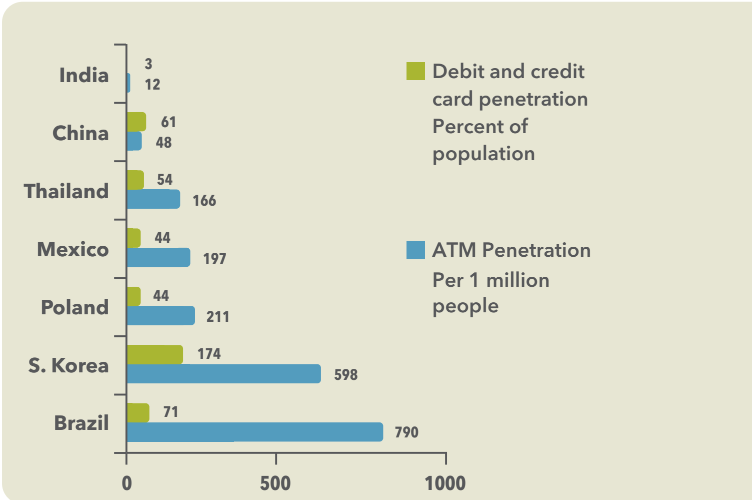
The sheer number of potential consumers is a key catalyst for significant growth of non-cash payments in India. However, the supply side — the availability of card acceptance points, point of sale (POS) devices, ATMs and kiosks — does not *yet* support the growing middle-class consumer's appetite for such services. This report examines the crucial investments that must be prioritized by the electronic payments industry to gain momentum and reach its market promise.

The most critical issue is India's need to fully develop and expand the existing technology infrastructure so that it will support banking and growth in electronic transaction acceptance points. The dearth of acceptance points is a critical bottleneck that must be overcome in order to meet consumers' changing payment preferences and create a sustainable electronic payments system. Examining how the telecommunications industry leveraged the strategy of *co-opetition*, when competitors cooperate in order to create maximum value for all market participants, to spur the growth of mobile phone subscribers from approximately 100 million at the end of 2005 to more than 800 million today,[5] this report discusses a model for how the retail banking market may evolve and overcome many of the infrastructure deficiencies that are currently limiting growth. With the loose framework of co-opetition laying the foundation for a scalable infrastructure, the other two critical factors are the role of government in easing the way for infrastructure development and the education of consumers on the tangible benefits of electronic transactions. It is imperative investments focus on four areas: developing the infrastructure with a co-opetition strategy, correcting the market's structural imbalance, the Indian government's role in banking services that are available and affordable to all, and educating the Indian consumer about the benefits of electronic payments. An effort in these areas will fuel the growth of electronic payments in India and ultimately generate the momentum needed for the market to reach its *tipping point*, the moment of time marked by generating critical mass.

The Promise of Electronic Payments in India: Banking Service Penetration & Growth Indicators

India's growing middle class presents FIs a significant opportunity to link economically-desirable consequences and derive substantial revenue streams from new banking and payment products, channels and customer segments while rising to meet a developing market's consumer needs. On the dawn of a new financial era defined by electronic payments, India's penetration of electronic payment products is exceptionally low compared to other emerging markets, but it is increasing rapidly. Figure 3 compares India to other emerging markets. These penetration figures, coupled with consumers' eagerness to adopt non-cash based payment methods, amplify the opportunity for domestic or foreign FIs to increase their service offerings in India by taking the lead on electronic payments and by partnering with other consumer-facing industries and specialist service providers.[6]

India's Penetration of Banking Products is Low Compared to Other Emerging Markets[6]

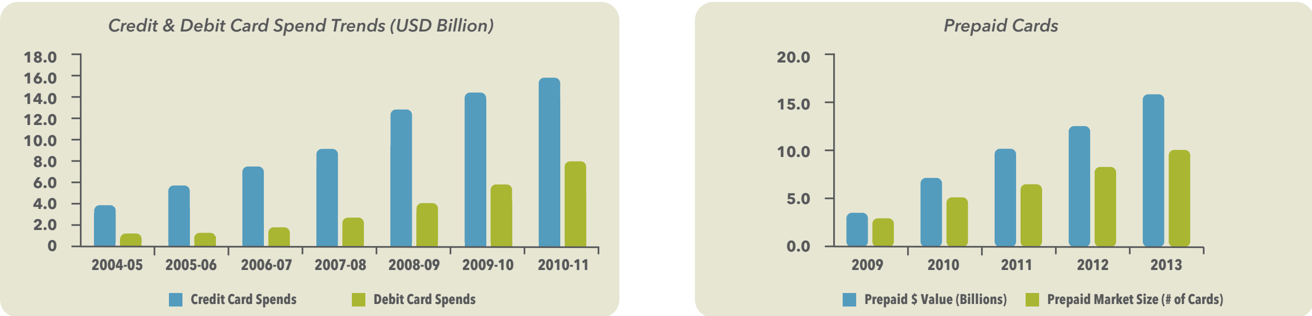


Source: India Banking 2010; McKinsey Global Institute analysis.

Figure 3

The volume of India's electronic transactions at POS is on the rise, growing at more than 40 percent annually.[7] Payment card transactions — debit, credit and prepaid — are growing at double-digit rates with debit cards' 45.5 percent CAGR driving the growth.[7] Since 2003, debit card adoption rates have grown more than 40 percent annually[8] and the volume of debit cards, at 216 million cards issued in 2010 and growing, is outpacing credit cards, which have settled at close to 18.1 million[9] from a peak of 27 million. The TSYS/Evalueserve research found that the credit card spend, at $16 billion, is double the country's debit card spend.[8] The penetration of prepaid cards, estimated at 3.5-4 million cards, is appreciably lower than either credit or debit cards. Given that prepaid cards are experiencing an estimated CAGR of more than 50 percent and that the target prepaid customer segment is estimated to be 600 million, this type of payment card has the most significant room for growth."[8] Usage and adoption rates illustrate that consumer demand

Key Indicators for India's Market Growth



Source: TSYS/EvalueServe Study, May 2011.

Source: "The Indian Prepaid Card Market." Published by VRL Financial News Ltd. 2010

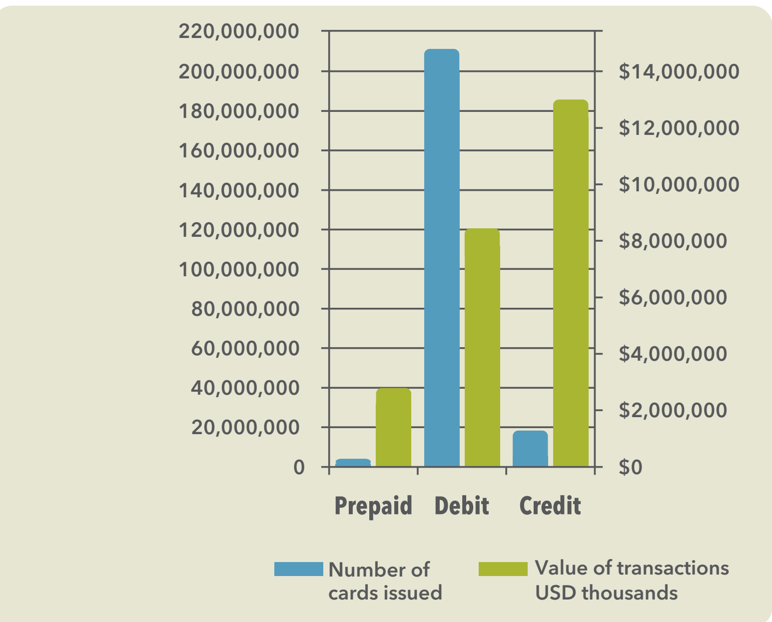
Figure 4

for electronic transactions is undeniably on the rise, which will be further cultivated with the investment in the outlined four imperatives.

Imperative #1: Developing the Infrastructure with Co-opetition

The most critical factor hindering the adoption of electronic payments in India is the lack of a technology and payments infrastructure that can support the emerging financial system. In China, the government's protectionist role, often viewed as limiting, contributed to local FIs gaining

Number of Payment Cards Issued vs. Spend[8]



Source for Prepaid statistics: "The Indian Prepaid Card Market" Published by VRL Financial News Ltd. 2010
Source for Debit and Credit statistics: Reserve Bank of India: "RBI Bulletin Retail Electronic Payment Systems"

Figure 5

the momentum to support increased competition. Today, many of the Indian government's initiatives outline higher standards for India's financial payment systems. Despite proactive endeavors by the National Payments Corporation of India (NPCI) and the Reserve Bank of India (RBI), India is less able to move in the same monolithic and oversized leaps as China, given the Chinese government's role in mandating and implementing national change.

In India, the best model for success in driving electronic payments is not necessarily understanding how another emerging market approaches payments. Rather it is looking to another industry that has achieved phenomenal success by deploying what may be a uniquely Indian strategy. For FIs, many lessons can be borrowed from the strategic playbook of India's telecommunications industry. Its meteoric rise — growing 52 percent annually for the period 2005-2010 — has made it one of the world's largest mobile markets.[8] Understanding the growth of Indian telecom, achieved by leveraging a co-opetition approach, helps crystalize a development strategy for financial services to support the country's banking and electronic payments services. "Co-opetition is a business strategy based on a combination of cooperation and competition, derived from an understanding that business competitors can

> "A co-opetition strategy could quickly and cost-effectively allow FIs to implement a technological infrastructure that supports electronic payments at the national level and support the financial inclusion of all."

Growth of Credit and Debit Cards Pertaining *Only* to Point of Sale (POS) Transactions[7]

Source: TSYS/EvalueServe Study, May 2011.

Figure 6

benefit when they work together."[10] Telecom's two pronged approach first entailed the players' co-operation in joint shared investments in infrastructure and technology that enabled extended national reach and scalability for industry stakeholders, thereby avoiding duplication of capital and operating costs inhibiting the profitability of this nascent business. Furthermore, this approach led to telecom players outsourcing cost-intensive functions to third-party providers that offered core competency, specialist expertise and scale to further reduce costs. Second, the players competed by segmenting the market and distinguishing themselves through products, pricing and services attuned to the specific needs of niche customer segments.

Borrowing from the Mobile Telecommunication's Playbook

Nationwide investment in the mobile telecommunications sector doubled to $40 billion from 2009 to 2010.[8] A key driver of telecom's growth was the industry's recognition of the value of collaboration. Leveraging their strengths would produce industry-wide benefits, such as addressing geographic network fragmentation, averting significant capital investment by a single organization to establish a national presence, and enabling access for market segments across both rural and urban markets. A recent report, Mobile Network Sharing 2010-2015, states that "around 70 percent of operators [in emerging markets] have used sharing to their advantage in the form of site sharing, co-location and national roaming."[11]

At the genesis of India's mobile telecom industry, many providers were operating independently, each attempting to build its *own* infrastructure. As the market evolved, competitors recognized the synergies of shared infrastructure gained through outsourcing commodity-based elements such as cell towers. Bharti Airtel, India's largest telecom carrier, outsourced the majority of its call-center operations to IBM and much of its core infrastructure, including cell towers, to Nokia and Ericsson.[12] In order to boost its customer service expertise, Idea Cellular contracted with Firstsource to provide customer relationship management services including customer service, billing, new product information and plan details. Mobile carriers who utilized a shared infrastructure and outsourced operations achieved cost efficiencies and increased coverage, ensuring rapid, sustainable growth for all key industry stakeholders — mobile carriers, customers and business at large.

Some movement toward an outsourced shared banking infrastructure in India is evidenced by the creation of credit bureaus such as Credit Information Bureau India (CIBIL), and joint ventures with Experian and Equifax. A strong indicator of co-operation is Equifax's market entrance with its credit information solutions garnered from six leading Indian banks and FIs — Bank of Baroda, Bank of India, Kotak Mahindra Prime Limited, Religare Finvest Limited, Sundaram Finance Limited and Union Bank of India — which reduces credit risk for the entire industry while encouraging the growth of consumer-based lending.[13] But there is much work to be done to achieve the type of co-opetition mindset that would support the market for electronic payments reaching its tipping point in India. To do so would require a "divide and conquer" philosophy that benefits all key stakeholders. In the banking industry, outsourcing should be viewed as a solid strategic play allowing FIs to depend on a trusted provider to address capital, technology-intensive infrastructure provisioning and services, such as payment processing, which also require specialist expertise. This approach allows FIs to grow their core businesses without the need to focus on capital-, time- and cost-intensive infrastructure demands. In addition, the outsourced model

EMERGING MARKET PERSPECTIVE: Brazil and China

How Each Market Reached Its Tipping Points With Electronic Payment Adoption

Brazil: The modernization of a paper-centric payments environment to one of electronic payments began in the late 80's and early 90's with the confluence of government regulatory action and developments from open-market competition. The Brazilian Central Bank created The Brazilian Payment System (SPB) for greater automation, which drove the adoption of electronic fund transfers to replace paper-based instruments. Subsequently, Brazilian banks replaced the time-intensive and manual check-clearing process with automated processing services. In an environment of chronic hyperinflation, with rates reaching 6,000 percent annually, this was a huge boon for FIs. Another benefit was a reduction in the massive overhead and bureaucracies with which the banks previously had to contend the banks. The SPB's increased efficiencies — particularly the reduction in funds transfer time — were pivotal technological drivers in the transformation beyond cash and paper-centric commerce in the 1990s. By 2001, the Brazilian Central Bank had reached key benchmarks and shifted its focus to risk management within compensation and settlement systems.[23]

Along with the developments from the government, an innovation from the private sector was taking place- the non-association debit and ATM network called TecBan. Tecban's track record started in 1982 when three banks, Unibanco, Bamerindus and Banco Nacional, joined forces to create Tecnologia Bancaria SA (TecBan) with an ATM pilot in the city of Curitiba. Tecban's milestone innovation, the Cheque Eletrônico, was a system of electronic funds transfers allowing the payment of goods with a debit card from the partner financial institutions instead of paper checks. The limitation to this debit card was that all transactions were off-line, as information such as credit limit, was included in the third track of the card. Due to aggressive moves in an open market, Cielo and Redecard overtook the dominant position earlier held by Tecban and, consequently, the new networks helped POS terminals proliferate with lower per-bank infrastructure expenses. Such open-market developments combined with government regulatory actions to catalyze Brazil's adoption of electronic payments.

China: In the 1990s, the Chinese government embarked on a program to diversify the economy from its near absolute reliance on exports. Part and parcel to this plan was to embolden a domestic consumer market and consumer class. China UnionPay was created in 2001 to create and enforce rules and regulations for the payments environment and to enable national acceptance of payment cards. Previously, Visa or Master Cards usage was limited to POS terminals affiliated with a particular bank, which defeated the idea of a shared network to address the staggering infrastructural challenges presented by the country's geography and demography. People's Bank of China restricted access and rights to competing schemes. This was a protectionist move that many nascent industries (such as China's domestic payment scheme) need to effectively scale up to compete with established players (such as Visa and MasterCard). This also coincided with more 20 years of astronomical growth in the economy. From 1988 to 2008, China's average annual increase in real GDP, at over 9.6 percent[30], has been by far the greatest of the world's major economies. Today's purchasing power of the burgeoning middle class in China is quite significant — and growing.

The following table demonstrates how India has yet to reach its tipping point in many key indicators.

Payment Cards By the Numbers 2010

	Number of Debit Cards (Thousands)	Debit Transaction Value (USD, Millions)	Number of Transactions per Debit Card per Annum	Number of Credit Cards (Thousands)	Credit Transaction Value (USD Millions)	Prepaid Transaction Value (USD Millions)	POS Terminals Penetration (per 1,000 Capita)
U.S.[24]	318,480	$1,087,648	83.2	1,244,700	$1,943,730	$162,600	19.74
Brazil[29]	255,053	$98,614	11.3	153,375	$196,971	$56,008	1.95
China[32]	2,185,437	$34,369	10.7	229,600	$791,520	$169,556	0.25
India	216,039[9]	$8,039[9]	0.8	18,190[9]	$12,354[9]	$2,900[8]	0.05[7]

can be leveraged by FIs to achieve distribution reach and deeper penetration in markets where the FI does not have a presence by establishing a *Business Correspondents* (BC) network in partnership with other industries. The FIs should instead prioritize market competition based on product differentiation and customer-focused initiatives related to customer acquisition and retention, account activation rates, usage, pricing, risk management and loyalty/reward programs; or on product innovation focused on the development of new products or programs targeting distinct market segments.

The concept of a shared infrastructure would allow banks to forge relationships for increased accessibility of banking services in a robust, scalable and cost efficient manner. In particular, translating this strategic approach to card payments, a shared infrastructure for ATMs, POS terminals, kiosks and mobile payments could be utilized by multiple FIs with a pay-per-use model. Already, Tata Communications Banking InfraSolutions Ltd. (TCBIL) and CMS Securities offer FIs a fully outsourced ATM model. As outsourced ATM providers, these companies select and set up the physical locations of the machines and, more importantly, incur and bear the capital costs and operating risk. As stated by Mr Rajiv Singh, President of TCBIL, "Our customers would not need to make upfront investments in channels like ATM, POS, etc., as we take end-to-end responsibility of asset ownership, deployment, and maintenance, backed up by our 24/7 operations capabilities." We have assimilated strong capabilities in various banking infrastructure needs and are well positioned to service the growing needs of banks. Banks can focus on their core functions and investments and partner with us for the management of their infrastructure needs."[14] This co-opetition strategy could quickly and cost-effectively allow FIs to implement a payments infrastructure that supports electronic payments at the national level and enables deeper market penetration that supports the national objective of financial inclusion of currently excluded customers. Rural market dynamics appear extremely ripe for mobile payments, an opportunity that is explored in report 2 of the *Emerging Market Perspective Series: Incredible India*.

Market conditions for financial services mirror the explosive growth of the mobile telecommunications sector, which transformed its accessibility to a broad consumer base. First, rates will continue to fall. Mobile calling rates decreased more than 90 percent[15] between 1998 and 2005, thus boosting subscriber levels. Seeking to spur similar cost reductions in electronic payments is RuPay, India's domestic scheme recently launched by NPCI. Supported by RBI and owned by a consortium of nine public sector, private sector and foreign banks, RuPay is loosely modeled after China's China UnionPay as a domestic alternative to the leading global providers, Visa and MasterCard, and supports the government's vision of financial inclusion for the rural and unbanked. RuPay aims to lower payment processing costs, increase payment card acceptance points, and spur consumer adoption and usage.[16] Second, demographic trends — the growing middle class and rising income levels — that contributed to robust mobile penetration has the potential to do the same for electronic payment transactions. Third, synchronizing the country's mobile industry standards with global standards was critical. The RBI's *Payment Systems Vision Document* outlines six key tasks required to support growth in electronic payment transactions.

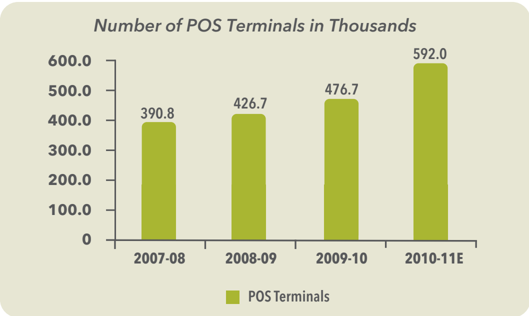
Imperative #1 Take Away

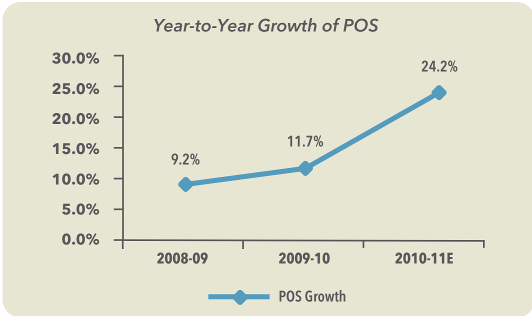
FIs should prioritize market competition based on product differentiation and customer-focused initiatives related to product development, customer acquisition, account activation, usage, pricing, risk management and loyalty / reward programs; or on product innovation focused on the development of new products or programs targeting the distinct market segments.

Imperative #2 Developing the Infrastructure to Correct the Market's Structural Imbalance

The typical "chicken and egg" situation in card issuance and payment acceptance is reflected in the imbalance between the number of payment cards in circulation and the number of acceptance points — merchants with POS terminals and ATMs — in India. This is a fundamental hurdle to growth in electronic payment usage and per-card transaction volume in the Indian market today. With approximately 10 bank branches per 100,000 adults, accessibility to banking services in India is extremely low in comparison to other emerging markets.[7] Estimates suggest there are now 600,000 POS terminals, which is an enormous increase from the 40,000 terminals in 2002, but an extremely small number for the size of the population.[18] In the near term, the country's largest bank, State Bank of India (SBI), plans to install more than 500,000 POS terminals within the next few years, nearly doubling the country's units.[19] By comparison, China, a country with a similar sized population, has a 0.25

Growth of Point-of-Sale (POS)[7]





Source: TSYS/Evalueserve Study, May 2011.

Figure 7

POS terminals penetration rate (per 1,000 capita), while India's rate is 0.05. (See Emerging Market Perspective Sidebar.)

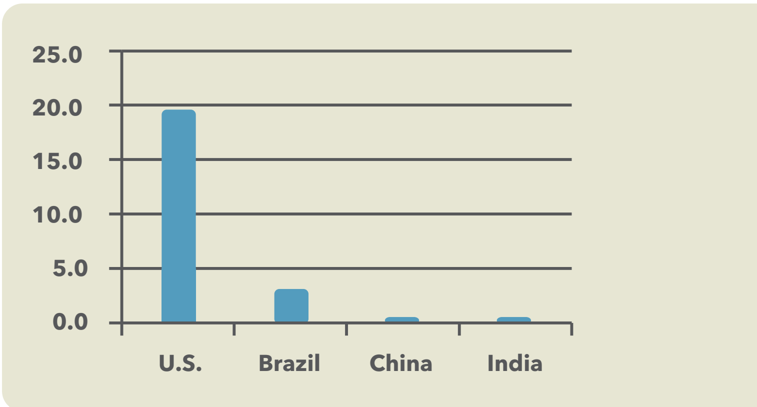
Indian merchants with POS units on average handle less than one debit card transaction and only 1.3 credit card transactions per POS terminal per day.[18] From the merchant perspective, POS terminals are highly under-utilized; and from the consumer perspective, they are not easily accessible. Clearly, the lack of consumer access is a factor that works against motivating cardholders to activate cards and use them for purchases at retailers instead of using them to just withdraw cash from ATMs. Those FIs motivated solely by profits are removing unprofitable POS terminals. This is in sharp contrast to the SBI's response to the Indian government mandate — outlined in the RBI's *Payment Systems Vision Document* — to make banking services affordable and available to all. Currently, more than 70 percent of ATMs and POS terminals are located in major markets, while a mere five percent dot the rural landscape. Despite the relatively low usage and access levels, the existing POS terminals have registered double-digit growth — and are expected to register 24 percent growth in 2011 as banks increasing rely on this growing channel for incremenal revenue streams.[7]

Imperative #2 Take Away

Correcting the market imbalance by increasing the per capita penetration of ATMs and POS would help serve consumers' increased appetite for electronic banking transactions and could be a key driver in accelerating card adoption.

Despite more than 10 times as many POS terminals than ATMs, the vast majority of debit card transactions occur as ATM withdrawals as it is still easier to withdraw cash from ATMs than use cards at the myriad outlets operating without POS terminals. Even though today's POS card usage is low, spending with payment cards — credit and debit — is expected to continue climbing. Prepaid cards alone are estimated to reach at least \$9.9 billion by 2013 with Visa and MasterCard size estimates projected at \$65-90 billion over the next 4-5 years.[20] This is a true testament to the strength of the market size and an indicator of its growth trajectory. Modernizing the infrastructure will help spur a growth cycle

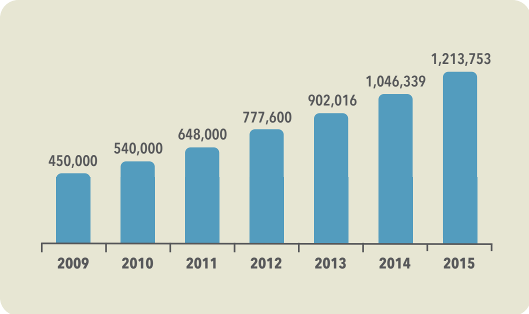
Country Comparison of POS Terminal Penetration (1,000 per Capita)



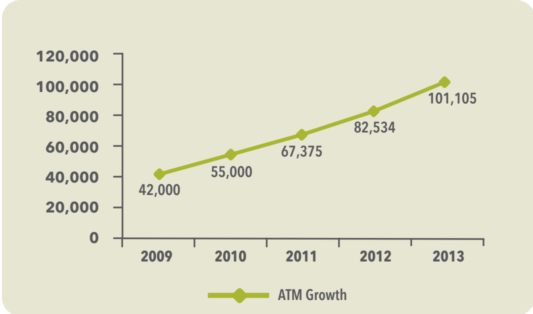
Source: Sidebar: Payment Cards by the Numbers 2010.

Figure 8

Projected Growth of POS Terminals[8]



Growth of ATMs[8]



Source: "The Indian Prepaid Card Market" Published by VRL Financial News Ltd. 2010.

Figure 9

> "The RBI's Payment Systems Vision Document outlines six key tasks required to support growth with electronic payment transactions. Its stated mission is 'To ensure that all the payment and settlement systems operating in the country are safe, secure, sound, efficient, accessible and authorized.'"[17]

for the entire ecosystem in which the supply side of card-accepting merchants develops in tandem with the demand side of consumers' increased appetite for electronic banking transactions.

Imperative #3: Government's Role in Creating Accesibility to Payment Services for All

Today, a significant discrepancy exists between customer demand and payments acceptance infrastructure in India, which entails distinguishing between usage and accessibility. The proactive role the Indian government is taking to help build the payments infrastructure is instrumental in bringing about change. Recognizing banking's infrastructure challenges, the government approved the Payments and Settlement Systems Act (2007), which provided the RBI's explicit regulatory control of all payments and settlement systems in India. The RBI's Payment Systems Vision Document outlines six key tasks required to position the country for growth in payments, which will in turn spur economic growth. Its stated mission is "to ensure that all the payment and settlement systems operating in the country are safe, secure, sound, efficient, accessible and authorized."[17] Adhering to this lofty vision, RBI created the National Payment Corportion of India (NPCI). The NPCI's mandate is to be the primary agency for retail payments development: "to build-state-of-the-art, world-class, customer-friendly electronic payments retail systems available and affordable to all around the clock."[21]

Evidence of progress toward NPCI's mission abounds, from government schemes, programs that encourage electronic payments and financial systems and products that reach beyond the metropolitan markets. The Indian government has evaluated cards as a payment instrument for government benefits and social schemes. One such example is the *kisan card*, which provides farmers with access to credit for their agricultural operation expenses, such as production and cultivation. The RuPay initiative,[22] a key NPCI program, is based on creating a domestic scheme for authorizing and settling transactions at a lower cost than its global counterparts. This brings card accessibility to the masses as cost efficiencies afforded to banks are passed on to the end consumer. Providing enhanced security and simplifying the overall experience is an identity authentication pilot program utilizing biometrics data captured by India's national Unique ID scheme (UID) for customers enrolled in UID, encouraging usage.[25]

Imperative #3 Take Away

The proactive role of the Indian government to facilitate building the electronic payments infrastructure is instrumental in addressing the imbalance between customer needs and their adoption supported by increased accessibility of acceptance points.

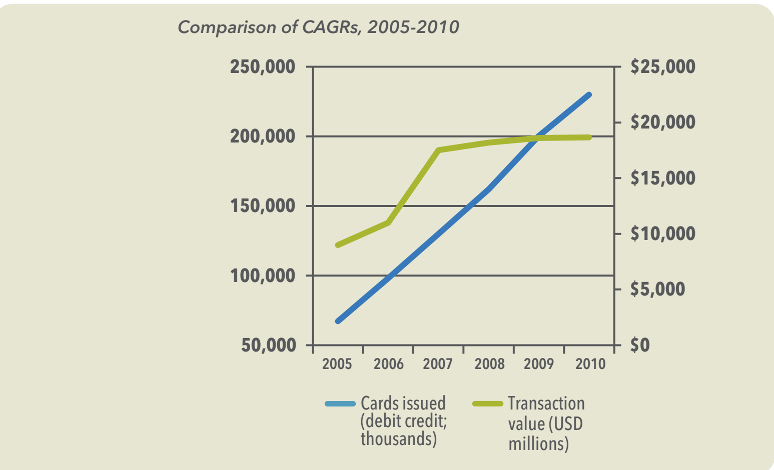
Furthermore, biometric authentication, as a unique identifier, addresses RBI's mandate of solutions supporting financial inclusion for all citizens.

India's geographic landscape, with all its limitations in physical and technological infrastructure, creates challenges for electronic payment systems providers in reaching a range of customer segments. In order to expand banks' traditional and alternative distribution channels beyond bank branches, ATM and POS terminals, the RBI supports the recruitment of *Business Correspondents* (BC) by banks. BC's handle the delivery of cash and accept cash deposits, open new accounts and provide other services for rural populations where bank branch access is either limited or non-existent.

Imperative #4: Educating Indian Consumers About the Benefits of Electronic Payments

Cardholder numbers in India remain inflated as many cards remain inactive and a large percentage of cardholders never or rarely use them due to the debt-averse and traditionally cash-oriented nature of India's culture. Figure 10 indicates that from 2005 to 2010 the CAGR for cards issued was 75 percent higher than the CAGR for transaction value over the same time period. This divergence shows low activation and usage of the cards that are in existence.[26] Estimates indicate that 50 percent of credit card accounts are dormant and 80 percent of debit cards are not used at the point-of-sale. Further compounding this lack of consumer use is the limited number of merchants with point-of-sale terminals, and these numbers will continue to remain low until the payments acceptance infrastructure is developed.[27]

Growth in Cards Issued[9]
75% greater than transaction value growth



Source: Data from the Reserve Bank of India. RBI.org

Figure 10

Imperative #4 Take Away

Educating consumers on the value and benefits of electronic payments should positively correlate with their adoption of payment instruments, card activation rates and usage volume — all critical for realizing electronic payment transactions' potential.

Consumers' existing cultural values and beliefs toward cash and debt could present challenges to the development of a mature electronic payments industry. Deriving from these traditional values is a persistent belief that non-cash based transactions bear a high-level of risk. However, there's evidence of changing consumer behavior toward increasing adoption of prepaid and electronic payment mechanisms among Indian consumers, with consumers growing increasingly comfortable with the benefits of electronic payments. In fact, India's e-commerce market is growing by leaps and bounds — about 30 percent annually — with online auction company eBay alone experiencing 60 percent year-over-year growth.[28] In order for consumers to participate, online purchases must be made with either a prepaid, debit or credit card; or through PayPal which is linked to either a payment card or a bank account.

The findings from Visa's 2010 prepaid card survey suggest that 80 percent of those surveyed, " … enjoy the benefits of cashless transactions and the convenience of carrying [prepaid] cards."[20] According to Edgar, Dunn & Co. Director Samee Zafar, "banks can issue prepaid products across consumer segments and across product sets — from a "bank on a card" for the un/underbanked to per diem corporate expenditure cards to government or state benefit cards to mobile wallets for contactless and remote mobile payment. Prepaid cards are now being used to facilitate remittances as well. India is the world's largest recipient of foreign remittances. The direction of a bank's initial foray will very much depend on a bank's strategic priorities and plans."[31] Consumer education focused on the value of electronic payment mechanisms could facilitate the adoption of card-based transactions. Education would promote and increase awareness about the benefits of card usage, including security, convenience and loyalty and reward programs. Ultimately, these efforts could encourage adoption of payment instruments, drive card activation rates and increase usage volume — all critical for realizing electronic payment transactions' potential.

Conclusion

India's population is one of the world's largest, but its sheer volume of consumers alone cannot create a market without the proper infrastructure. From the outlined evidence and studies, it should be clear that electronic payments will experience exponential growth as India's technological and communications infrastructure begins to achieve higher standards. The co-opetition strategy borrowed from the mobile telecommunications industry's rapid rise is one avenue for addressing the challenging market conditions. And the value derived from outsourcing operational elements to trusted third-party partners will allow FIs to focus on creating differentiation through customer-oriented marketing, leveraging the distribution reach of other consumer-facing industries through core payments infrastructure and capabilities built by specialist providers. In and of itself however, an enlightened industry model is not enough to ensure that the electronic payments sector reaches its tipping point in India. It is critical for the government to play a proactive role in advancing infrastructure and regulatory improvements in order to open up the market. Efforts by FIs to educate consumers about the benefits — safety, convenience, and security — of electronic transactions are also crucial. Modernizing India's payment infrastructure would ease access, promote card usage and trigger a much needed transformation of banking and payment services, enhancing the country's competitiveness as a global player and elevating the living standards of its citizens. With a clear outline of what it will take for India's electronic transactions ecosystem to reach its potential, a remaining question left to discuss is, "What is the role of mobile payments in improving access to India's rural and unbanked customers?" This is discussed in report 2 of the TSYS *Emerging Market Perspective Series: Incredible India*.

ABOUT TSYS

Amit Sethi is a 25-year veteran of the global payments industry. During his career, Mr. Sethi has been actively involved in the financial services, technology and outsourcing industries in the US and India. He has held a series of executive positions with companies such as Bank of America, HSBC, Visa International, KPMG, Oracle Corporation and iGate. Mr. Sethi was Global Sales Head of Financial Services and Service Industries for Sutherland Global Services prior to joining TSYS, one of the world's largest companies for licensed and outsourced payment services, where he is now Managing Director of India and Southeast Asia.

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