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Payments | the way we see it

Domestic Payment Card Networks

Emerging opportunities and challenges

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Contents

1 Overview

The current global payment card network industry is dominated by just a few players. Among these global players, Visa® and MasterCard® enjoy a dominant market share. However, recently there has been an increasing trend towards domestic processing of payment transactions in many countries. Since the launch and wide adoption of UnionPay™ cards in China, many other countries are also considering launching similar networks in their countries. The high costs of transaction settlement on international networks, uneven market pricing, and lack of competition are some of the key drivers being put forward by those promoting domestic processing of payment transactions. However, the inherent nature of the payment card network industry and its current dynamics pose some challenges and opportunities for these new domestic networks. Their launch is also expected to affect the cost structure of the industry and will have some deep implications for existing players in the market.

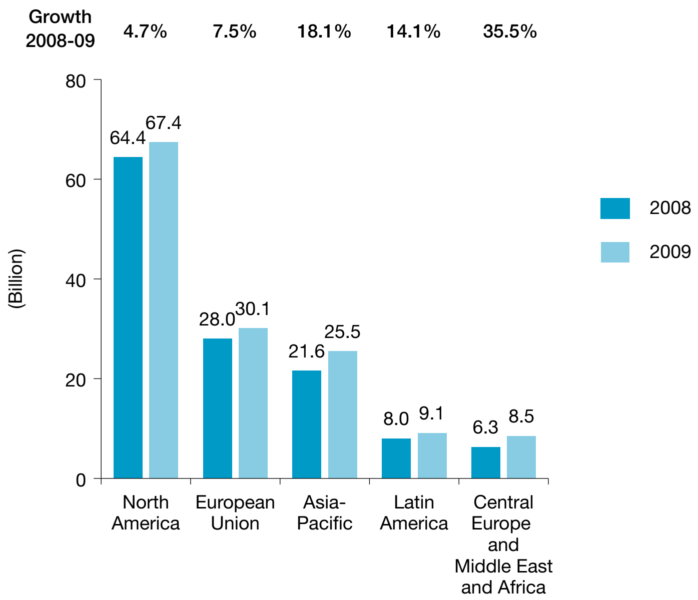
This paper discusses some of the key domestic payment card networks initiatives that have already started commercial operations while also covering some networks that are expected to commence operations soon. It then analyzes the key concerns arising from the new networks for existing global players and how they will have to alter their existing strategies to operate in this new environment. Finally, it analyzes the steps needed to be undertaken by these new domestic networks in order to succeed in an industry dominated by a few players.

2 Payment Card Network Landscape

2.1. Global Payment Card Industry

The global payment card industry is still in a growth phase across most regions. Payment card transaction volume is growing in both developed and developing countries, with the magnitude of growth being greater in the latter. While the benefit of increased convenience due to card payment is driving this growth globally, the accelerated growth in developing countries is largely a result of the rising proportion of middle income households and increased financial inclusion among the general population in these regions. Globally, the total cards transaction volume in 2009 was 9.7% higher than in 2008. The Central Europe, Middle East, and Africa regions combined recorded the highest growth in percentage terms while Asia-Pacific recorded the highest growth in the absolute number of transactions. Visa and MasterCard are the biggest transaction processing players globally, with Visa processing the largest number of transactions.

Exhibit 1: Growth in Cards Transaction Volume across Major Geographies



Source: *World Payments Report 2011*, Capgemini

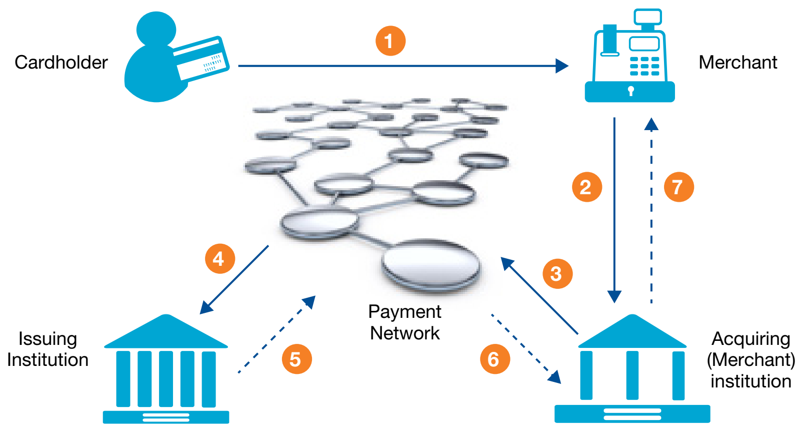
The payment network system is a two-sided industry, as it serves two distinct groups of users that provide each other with certain benefits. The needs and desires of both these groups need to be balanced.

2.2. Processing a Payment Transaction

A typical payment card transaction results in a two-way communication among multiple stakeholders. Each stakeholder has an incentive to be part of the payment network:

- **Cardholder –** Using a card increases the convenience for the cardholder since he or she does not have to carry cash all the time. This reduces the risk of theft or loss.
- **Merchant –** The merchant increases the chance of sale by accepting popular cards used by cardholders. Cardholders are more likely to spend in a store or channel that accepts cards.
- **Merchant's Financial Institution –** The merchant's financial institution charges a fee called "merchant discount" for every transaction at the merchant's point of sale. This means the financial institution receives revenue from every sale.
- **Card Issuing Institution –** The issuing bank charges a fee called "interchange fee" to the merchant's institution for every transaction. The more cards issued, the more revenue the issuing institution can make off this fee.
- **Payment Card Network Provider –** For every transaction, the payment card network provider charges fees for services provided to merchants and financial institutions.

Exhibit 2: Steps in a Typical Payment Transaction



1 User buys goods from the merchant and pays using his bank card

2 The merchant submits the purchase details to its financial institution (acquirer)

3 4 The acquirer then sends the purchase details to the cardholder's bank through the cards payment network (at this stage the merchant receives the "payment guarantee" and the card user receives his goods)

5 6 The cardholders financial institution then pays the acquirer the transaction amount less the interchange fee (a default fee set by the network provider or a customized fee negotiated directly between the two financial institutions)

7 The acquirer then pays the transaction amount less a "merchant discount" to the merchant (the merchant discount may include interchange fee, cost of transaction processing, cost of service, acquirer's profit margin, and any other cost)

Source: Capgemini analysis, 2011, www.visa.com

2.3. Nature of Competition in Existing Payment Card Network Industry

An analysis of the competitive dynamics of the payment card network industry (Exhibit 3) shows that it is oligopolistic in nature. One important reason for this is the role played by network externalities, which favors existing players in the industry. While consumers would like to use cards that are accepted by most merchants, merchants would themselves want to accept cards that are used by the majority of cardholders. This leads to a situation where existing players attract more cardholders as well as more merchants, while at the same time creating an uphill task for any new entrant.

Another reason is that there are significant barriers to entry due to the need for large technology infrastructure-related investments, which helps increase the convenience of using cards and also mitigates payment fraud-related risks. The existing players are also investing in mobile payment technology, which is expected to drive future growth in the payment industry.

Going forward, the industry is expected to witness the entry of new players that will primarily be domestic in scope and backed by the federal and local banks in their respective regions.

Exhibit 3: Porters Five Forces Analysis of the Payment Card Network Industry

Low Threat of New Entrants

- High technology related costs and absence of network externalities for new players result in low threat of new entrants
- However, with strong support from governments, new domestic entrants are expected to arise in the future

Moderate Bargaining Power of Buyers

- Varying network reach of alternate payment systems and the significant network externalities of existing cards network result in limited bargaining power of buyers

High Internal Rivalry

Low Bargaining Power of Suppliers

- The presence of many issuing banks in the industry, low number of network providers, and huge contract sizes result in increased leverage for payment card networks and low bargaining power for suppliers

Low Threat of Substitues

- Alternatives like PayPal™ are not as widely used as cards
- Card network players are also establishing themselves in the next growth area for payments, using mobile payment technology

Source: Capgemini analysis, 2011

3 Market Potential for New Players

Uneven pricing and fee structure across different groups of users sometimes result in introducing discrepancies into the existing payment networks.

3.1. Discrepancies in Existing Payment Card Networks

In spite of the wide reach of current payment card networks across major geographies and economies, some studies have found discrepancies in their functioning and pricing patterns[1]. Many of the new domestic payment card networks being launched are aimed at reducing these discrepancies so as to better promote the use of cards. The existing discrepancies include:

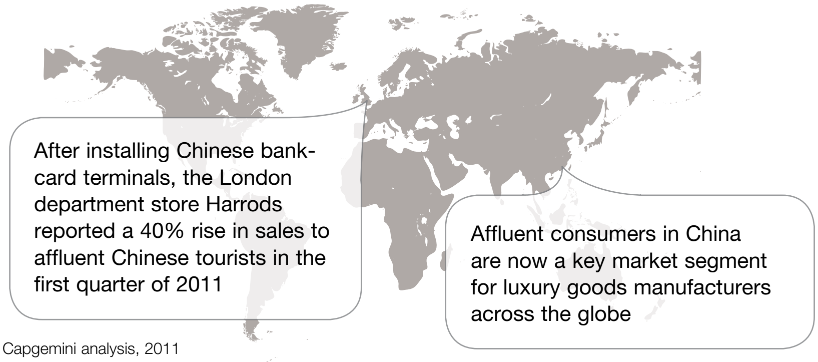
- **Higher fees on international payment networks** compared to those on domestic networks. On average, businesses are paying 30% to 40% lower fees for domestic debit card usage than for international debit card usage.
- **Higher fees for smaller merchants** as compared to larger merchants. On international networks, smaller merchants pay on average 60% to 70% higher fees than those paid by larger merchants. However, the difference between smaller and larger merchants was observed to be just 6-7% on domestic networks.
- **Higher fees for businesses in some sectors** compared to those in other sectors. A difference in price pattern for merchant fees has been observed across certain sectors. High margin businesses such as restaurants, florists, and car rental companies pay much higher merchant fees than those paid by lower margin businesses such as fuel companies and wholesale trade firms.
- **Direct correlation of merchant fees with interchange fees**. On average, countries with higher interchange fees also have higher levels of merchant discounts, which shows that interchange fees are passed on to merchants through higher merchant discounts.

Luxury retailers in the UK, Germany, France, and other European countries have reported double digit growth in online sales to Chinese customers after installing China UnionPay (CUP) terminals.

3.2. Tapping the Wealth of Affluent Customers in Emerging Markets

In some countries, domestic payment network cards are very popular and those issued by the international networks are not widely used. As such, customers in such countries cannot shop at merchant locations that accept only cards issued on international networks. Therefore, by accepting the domestic payment network cards, merchants can attract buyers from such countries and increase their sales, while buyers in these countries also benefit from increased options. Such a measure also helps tourist destinations around the world, as the increased convenience of using payment cards can make them more favorable to tourists. These strategies can help merchants tap into the rapid growth of wealth and cards in emerging markets.

Exhibit 4: Retailers in the UK Experience Increased Sales after Accepting China UnionPay Cards



Source: Capgemini analysis, 2011

[1] European Commission Interim Report 1, 2006

Increasing acceptance in many countries across the world is helping China UnionPay to become one of the key players in the global payment card industry.

3.3. Case Study: China UnionPay

While payment cards have been issued in China for more than three decades now, China's payment card industry only began to take off in 2001. The total number of cards in circulation increased from 320 million in 2001 to about 2.1 billion in 2009[2]. This growth rate corresponds to one of the highest rates amongst all major countries. Also, though credit cards are fast gaining popularity in China, the total number of these cards in circulation is much less than that of debit cards.

UnionPay is the only player allowed to settle domestic payment card transactions in China. Though some international card networks are allowed to issue co-branded cards along with UnionPay, any domestic transaction done using these cards will be settled by UnionPay while any international transaction would either be settled by UnionPay or by the international issuer, depending on specific terms and conditions. While enjoying a monopoly position in China, UnionPay has also rapidly expanded its operations overseas, and is now accepted in more than 110 countries across the globe. The total number of UnionPay cards issued worldwide is currently more than 2.3 billion[3]. As of July 2011, 65 institutions in 17 overseas countries and regions have issued UnionPay cards locally.

UnionPay embarked on a well designed strategy to enable rapid international expansion[4]. The company first focused on overseas travel patterns of Chinese cardholders. It then focused on leading acquirers, banks, and ATMs in these countries and identified institutions that would prefer a partnership with UnionPay for competitive and mutually beneficial reasons. This partnership allowed customers of these institutions to gain access to ATMs and point-of-sale terminals in China. After penetrating these regions, UnionPay then focused on promoting the issuance of local currency UnionPay cards in these regions. The company also focused on brand-building activities from the beginning. To increase the international appeal of these cards, the logo used on cards and merchant signage dropped the word "China" and simply referred to UnionPay – a neutral and non-nationalistic term.

[2] Bank for International Settlements (BIS) – Red Book
[3] www.unionpay.com, July 2011
[4] *The Rise of China UnionPay*, Edgar Dunn & Company, April 2009

4 Establishing Successful Domestic Payment Card Networks

Domestic payment card networks can integrate new technological innovations like mobile payments, "Google Wallet" etc., as a part of their offerings right from the beginning, instead of altering their strategies at a later stage as the existing payment network providers need to do.

Ability to sustain high technology infrastructure-related costs which in turn depends on ability to attract a wide user base will be a key factor in determining the success of domestic payment networks.

4.1. Existing Domestic Networks

Some countries already have their own transaction processing networks. While CUP is already successful in China, Singapore has its own network called Network for Electronic Transfers (NETS). Recently, India, Malaysia, and Russia have announced intentions to launch their own domestic payment card networks.

4.2. How Domestic Payment Card Networks Can Be Successful

Successful payment networks will need strong infrastructure and efficient regulation to ensure their success[5]. To attract users and merchants, domestic payment card networks will need to establish the following:

- **Telecommunication Network –** A robust telecommunication network that supports real-time authorization with minimum downtime, comparable with international networks, will increase the reliability and efficiency of the payment network.
- **Acceptance Network –** The network should establish enough point-of-sale terminals, an internet payment facility, automatic teller machines, and other such infrastructure to make its presence visible and make the network usage attractive to consumers as well merchants.
- **Credit Bureaus –** A well-functioning credit bureau should be able to provide the past credit history of consumers, which would help issuing banks to assess the trustworthiness and credibility of their customers and offer products accordingly.
- **Consumer Education –** Consumers across all regions will need to be educated on proper usage of the new payment network, and also taught important rules and regulations. This would help to promote safe usage habits and avoid exploitation of any card user or merchant.
- **Regulation –** The network should provide effective operating guidelines that are applicable across all participants and also fair to all stakeholders. The guidelines should also be such as to help prevent fraud and any other credit and financial risk in the network.

Achieving sufficient economies of scale while also managing complexity will be key criteria that will determine the success or failure of new payment card networks, as this will help to justify the economic and operational viability of the network.

[5] *Credit Card Market: Economic Benefits and Industry Trends*, International Trade Administration, March 2008

4.3. Case Study: The Importance of Incentivising Issuing Banks

Network for Electronic Transfers (NETS), launched to fulfill the need of a centralized e-Payment operator, is owned by three local banks in Singapore and is also the leading card processor in Singapore. Until late 2007, NETS was able to charge much lower merchant fees (ranging from 0.35% to 0.55% of transaction volume) than those charged by international players, as it did not pay any interchange fees to issuing banks. However, international players started luring away these issuing banks by paying them an interchange fee and started gaining market share from NETS. In spite of being the majority shareholders of NETS, some of these banks started issuing cards offered by international players due to higher revenue from them. Eventually NETS had to increase its merchant fees to a range of 1.5% to 1.8% of transaction volume, so as to be able to pay issuing banks and remain operational.

As the issuing banks can choose from a variety of options of cards offered by competing players, it is thus necessary to meet the needs of these banks to ensure success of a domestic payment card network.

4.4. Case Study: Establishing Domestic Payment Network in India

The Reserve Bank of India (RBI) announced its intention to launch a domestic payment card network in its document titled "Payment Systems in India – Vision 2009-12"[6]. As a part of this initiative, the RBI helped create the National Payment Corporation of India (NPCI), an organization that will overlook the launch of domestic payment cards called RuPay. The three important drivers behind this network, as mentioned by RBI, are:

- Indian banks have to bear high costs for affiliation with international card associations in the absence of a domestic price setter. In 2010, they paid more than $100 million to international network processors.
- The connection with international card associations results in the need for routing even domestic transactions, which account for 90% of the total, through a switch located outside the country.
- Currently, a large portion of the Indian population does not have access to the existing banking system and the RBI aims to make provisions to include them in the financial system with the help of RuPay cards.

While this initiative is ambitious in nature, it faces a number of challenges and opportunities.

[6] Published in July, 2009

RuPay has already issued about 10,000 debit cards with the help of rural and urban co-operative banks, and is well on the way towards achieving its stated objectives.

Opportunities

The sheer population of more than 1.1 billion people in India provides RuPay with the large user and merchant base required to be successful in the domestic market. Strong backing by the RBI will also help in early adoption of RuPay cards by Indian banks. The expected reduction in transaction settlement costs using RuPay will result in lower discounts charged to merchants and will also help attract merchants to accept RuPay cards. It can also attract traditional small retail stores in India, who still do not accept card payments because the current high merchant discount fees eat away a big chunk of their profits.

RuPay can also help the government realize its objective of greater financial inclusion among the Indian population. RuPay can tie-up with key government employment generation schemes (such as the National Rural Employment Guarantee Act) by offering cards to people receiving benefits from the government. The recent program of assigning all individuals in the country a Unique Identification Number (UID) will assist in offering RuPay cards to currently unbanked customers, and then provide them with other financial products and micro-finance solutions as well.

Challenges

All the above-mentioned opportunities are not without their challenges. While RuPay is expected to follow in the footsteps of China UnionPay, it will be facing stiff competition from existing players like Visa and MasterCard, who are already well entrenched in India. Creating brand visibility and gaining market share might prove to be a significant problem for RuPay, as customers already relate payment cards with Visa or MasterCard. Also, though RuPay will initially be routing domestic transactions only, it will still need to make the same technology infrastructure-related investments as required by other major global players to offer the same level of security and benefits provided by competing networks. There will be huge fixed costs related to the large communication networks and required fraud prevention techniques. This might make operations for RuPay economically unsustainable if it is not able to reach a vast base of users and merchants. Also, in many rural regions in India, merchants charge an extra amount called surcharge[7], for accepting payments made using cards. Though this practice is illegal, it is still prevalent in many regions and it hampers the increased adoption and usage of cards in such regions.

[7] Surcharge is an additional amount charged by merchants, over and above the actual transaction amount, to recover fees they need to pay to card network providers

5 Implications for Existing Players

International payment processors will need to adapt to any new competition that is being backed by governments and industry associations. Increased competition from new players is expected to alter the cost structures and revenue sources of existing players. They need to re-assess the whole industry to see how they are positioned in the current trend, and design a new strategy to help maintain their revenue and profitability growth. Key areas to be looked at by these players include:

- **Reducing interchange fees** –The higher cost of transactions settlement on international networks is one of the important reasons behind the launch of a domestic payment network. International players might need to look at ways to lower their interchange fees to remain competitive and also be able to attract merchants to their networks.
- **Increasing brand service fees** – The brand service fees that these players charge to issuing banks can be raised periodically to support revenue growth. Even though issuing banks might resist this move, the international network providers enjoy a high pricing power due to their highly visible and established brands.
- **Focusing on cross-border payments** – While domestic payment networks will focus on settling transactions within domestic borders, the international players will still remain dominant entities in settling cross border payments. An increased focus on this business segment, by making more products from foreign based merchants accessible in the domestic markets, can help increase their revenue.
- **Establishing domestic processing centers** – Regulations in some countries might force international players to establish domestic processing centers in these individual countries. For example, in its first draft law for payment networks, published in 2010, Russia made it mandatory to process domestic transactions within the borders of the country itself. Though this would mean setting up additional processing centers in addition to the existing ones, and also bearing the cost of increased fixed expenses, it would still be necessary to remain operational in such countries.
- **Partnering with new networks to provide the necessary technology infrastructure** – Some domestic payment networks may not be able to meet the critical mass of users and merchants required to ensure economic viability of the network. As such, they might not be able to make the required huge technological investments to increase the efficiency and security of their networks. Existing players can earn extra revenue by offering technology-related assistance to such networks.

6 Conclusion

Uncertainty over the launch of domestic payment card networks has been largely reduced in the first half of 2011. The question facing the industry is not “whether” new payment card networks will be launched, but “when”. Countries such as China, India, Malaysia, and Russia are at different stages of implementing their own payment networks, with China clearly being ahead. Even in Iraq, a small banking market, two of the biggest state owned banks, Rafidain Bank and Rasheed Bank, together launched a national credit card called ‘Qi Card’ in 2008.

While it will be interesting to see how the domestic payment card networks fare in the market, a few things can be categorically stated about the challenges they will encounter in the marketplace. Even though these networks face interesting opportunities, gathering a wide card user base and also an equally important merchant base will be a challenge initially. The next challenge will be to invest in the latest available technologies in the marketplace to remain competitive with the global players. As for the existing payment card networks, even though they are a facing an erosion in existing market share, it is highly probable that the new domestic networks would need to collaborate with these players on the technology front and also to quickly scale up their operations to an international level.

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