Spotlight on Payments Technology

Card network portability

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Introduction

Card network portability, i.e., allowing customers to switch card networks, has been gaining steady focus across the globe, similar to mobile network portability. The launch of domestic card schemes as an alternative to international players is acting as a key driver for this increased focus. Globally, over 40 countries have implemented or are in the process of implementing domestic card schemes, primarily to reduce reliance on international players, lower card-based transaction costs, and foster locally relevant innovation.

India launched its domestic cards scheme “Rupay” in 20162, which has since seen steady adoption by a number of public and private sector banks in India. However, international players still appear to dominate the Indian card market and to level up the playing field, the Reserve Bank of India (RBI), in a recent draft circular (dated 5 July 2023), made a proposal that will allow customers to select their card networks. These draft guidelines have extended the concept of portability to allow customers to select and switch between the major card networks in India: Visa, MasterCard, RuPay, Amex, and Diners. This would challenge the current status quo of bilateral agreements between the card issuer bank and network provider where the card issuer decides on the network provider, without any inputs or choice being given to the end users.

The new guidelines are expected to challenge the duopoly of the large network providers in India and will compel card networks to come up with innovative propositions to differentiate themselves, which will result in better offerings and service quality for the end customers. This can also be considered as another intervention from the central bank to further promote the adoption of the domestic card scheme (RuPay) in the country, as part of promoting fair competition.

Similar policy interventions are also being proposed in other countries, such as Durbin 2.0 in the US, which aims at improving the competition between the network providers.

In this newsletter we analyze the current commercial construct between various players in the cards lifecycle to understand who drives the selection of the network provider. We also explore other global domestic card schemes and the key drivers behind their launch. We then analyse the drivers for network selection from a customer standpoint and the high-level impact on banks in implementing the card network portability requirements.

What is card network portability?

Card network portability refers to the ability of cardholders to choose their desired network provider for their debit or credit cards. Generally, portability is the term associated with mobile networks, where a customer can change their mobile network provider while keeping the same phone number. Card portability follows the same principle, allowing the cardholder to keep the primary account number, while the card number would change as per the selected network.

The draft guidelines[1] issued by the RBI aim to provide the cardholders the option to choose their network provider of choice. Some of the key aspects highlighted in the guidelines include:

- Card issuers shall issue cards to their customers from more than one card network
- Card issuers shall provide the option of card network portability to their eligible customers either at the time of issuance or at any subsequent time
- Card issuers shall not enter into any arrangement or agreement with card networks that restrains them from availing services of other card networks

Card issuers and network providers need to adhere to the above requirements either by amending existing agreements with the cardholders or signing the new agreements during the card renewal/re-issue process. All the fresh agreements executed post the deadline will need to mandatorily adhere to the guidelines.

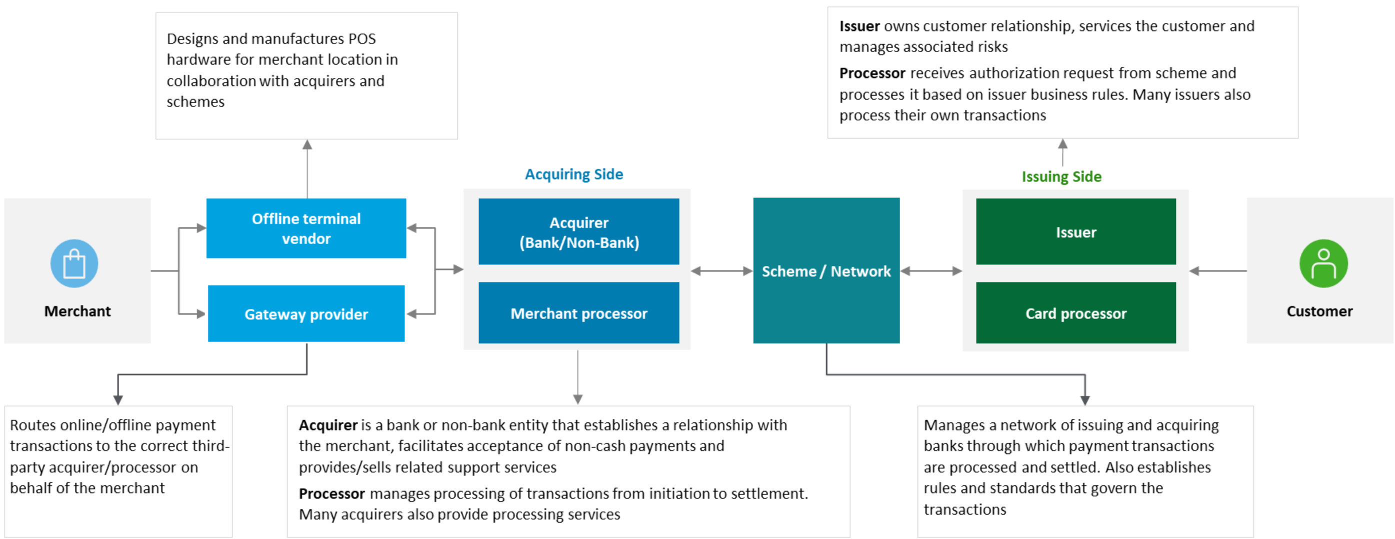
The guidelines are a result of a review where RBI observed that the existing arrangement between card networks and card issuers is non-conducive to the availability of choice for customers. Currently, the issuer decides the card network based on their preferred relationship with the network provider (basis the bilateral agreements), limiting the customers from their preferred choices.

In the subsequent section, we will explore the role of key players (issuer, acquirer, customer, network, or regulator) in selecting the card network during card issuance and how, globally, the domestic card schemes are trying to increase their market share to compete head-to-head with other leading network providers.

[1] https://www.rbi.org.in/Scripts/bs_viewcontent.aspx?Id=4280

Card transaction value chain and commercial construct

We examine the role of each player and the commercial construct between the players in a “credit card” transaction. There are five key stakeholders in the card transaction value chain: merchants, acquiring entities, schemes/ networks, issuing entities, and customers, as depicted below.



Each of these players interact with each other through the transaction authorisation, authentication, and settlement cycles. For each card transaction, the merchant is charged a percentage of the total transaction value as a fee, that gets shared between various players in the transaction value chain, called the Merchant Discount Rate (MDR). MDR includes the interchange fee, network fee, and acquirer/ processor fee which is funded by the merchant.

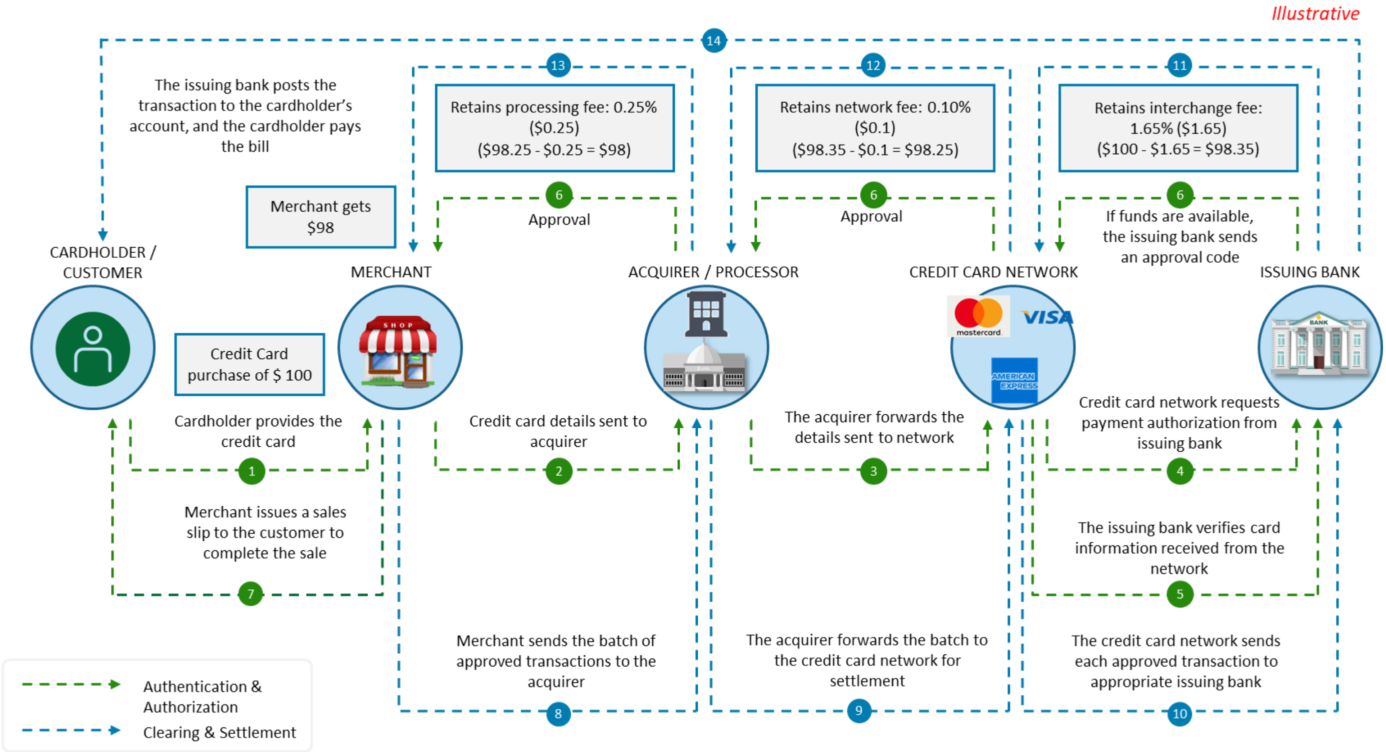
Merchant Discount Rate (MDR)

The Merchant Discount Rate, represents the fee charged to the merchants for accepting payments through credit or debit cards

Interchange Fees *Issuing Bank*	**Network Fees** *Payment Network*	**Acquiring/ Processing Fees** *Merchant Acquirer/ Processor*
Interchange is a fee paid by a merchant’s bank (acquirer bank) to the cardholder’s bank (issuer bank) by deducting the amount from the transaction value	Network Fees are the fees charged by the Networks to facilitate the transactions through their systems	Acquirer/Processor fees are those retained by acquirer/processor for authorization, clearance, and settlement of a card transaction

Card issuers hold a relationship with the end customer, and based on the spending by the end customer, all the parties in the value chain earn revenues. Hence, in most of the cases and specifically in India, the card-issuing bank gets the majority share of the MDR and drives the card network affiliation for card issuance.

The below picture depicts the share of MDR for each player in the life cycle of a credit card transaction as an illustration. For example, if the MDR is 2% (in India, for credit cards MDR is in the range of 2% to 3%)[2], the issuer bank's share is typically ~1.65%, the acquirer bank's share is ~0.25%, and the card network's share is ~0.1%.



Even though the card network has a relatively smaller share in MDR, it becomes significant considering the number of transactions that can be processed by the network. In addition, since the services provided by card networks are in essence "commodity switching services", the reliance on card issuers to use their services is key for them to get a share of MDR revenues. Therefore, the card networks provide the issuer banks with incentives to enter into bilateral arrangements to ensure they get the MDR revenue share. Card networks also give incentives to merchants to promote the usage of their network-affiliated cards to indirectly influence the cardholders to ask their banks to issue them a specific network card.

The more the number of cards issued for the network, the more they are able to grab the market share and the more they are able to offer additional incentives, thus creating a vicious cycle.

However, not all issuer banks have a one-network strategy and banks try to balance out the card issuance for 2-3 networks depending on particular card category and customer segments. Still, the decision to issue cards for a particular network is with the issuer bank and the network providers try to manipulate the issuance through incentives and bilateral agreements.

Thus, to further improve the level playing field, provide more choice to cardholders and to reduce the sole decision power of the issuer banks for selecting card networks, central banks and domestic card scheme operators are coming up with such card network portability guidelines to introduce more innovation and foster healthy competition in the ecosystem.

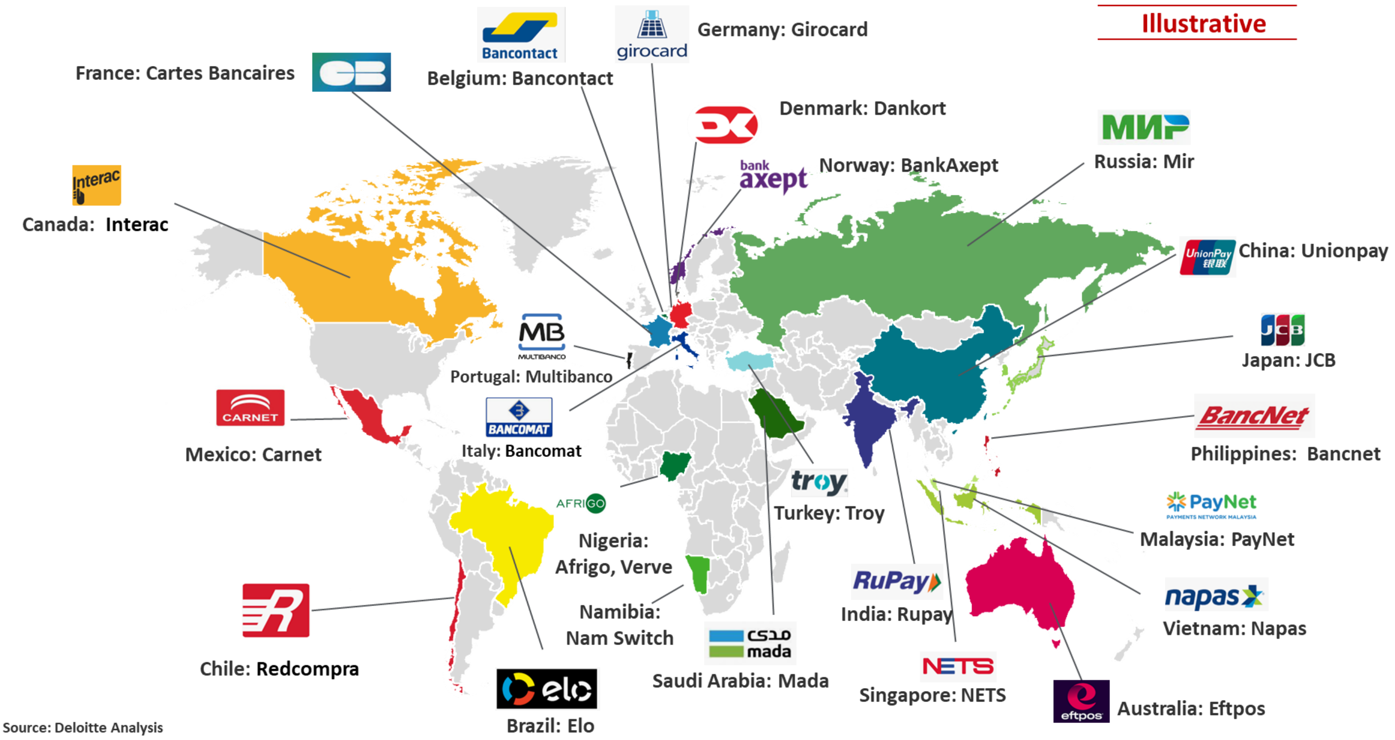
In the next section we explore the global domestic card schemes and the initiatives being taken to increase the adoption and to foster more innovation.

[2] https://www.livemint.com/industry/banking/linking-credit-cards-to-upi-to-test-the-zero-mdr-regime-11654802695701.html

Domestic card schemes

Currently, the global payments card market is dominated by international card schemes such as Visa and Mastercard; however, recently, there has been an increasing trend in many countries to establish domestic card schemes.

The primary drivers are lowering the transaction costs, promoting fair competition to foster innovation, and to reduce the reliance on foreign players.



Source: Deloitte Analysis

Earlier this month (October, 2023), NIPL (NPCI International Payments Limited, wholly owned subsidiary of National Payments Corporation of India – operator of Rupay and UPI) entered into a strategic partnership agreement with Al Etihad Payments (AEP) for the implementation of the Domestic Card Scheme (DCS) in UAE. AEP is an indirect subsidiary of the Central Bank of UAE (CBUAE). As per the agreement, NIPL and AEP will work together to build, implement, and operationalise UAE's national DCS.

Domestic card schemes are in different stages of maturity with a number of schemes having outgrown the international players in terms of transaction volumes, while others are in the early stages trying to compete for the market share. Some of these examples are covered below.

Case In Point: Domestic Card Schemes

Domestic Scheme	Key Highlights
Verve ***Country**: Nigeria* *Operated by a private player*	• Verve was introduced by the Interswitch Group to serve as a domestic card payment scheme within Nigeria and was able to capture **54% market share*** by 2021. • Verve was **designed with a strong domestic focus**, catering primarily to the Nigerian market. This approach allowed it to address the specific needs and preferences of Nigerian consumers and businesses. • Verve cards have been used for various **government initiatives and social benefit programs** in Nigeria, such as the disbursement of government subsidies and benefits. This helped in the rapid adoption of the Verve cards. • The **Central Bank of Nigeria recently launched Afrigo, a domestic card scheme** backed by the central bank to promote a cashless economy, increase card penetration, promote financial inclusion, and reduce costs. The Afrigo is a debit card scheme that can also be linked to the E-Naira (a digital currency issued by the central bank).
elo ***Country**: Brazil* *Operated by holding company formed by three state-owned banks*	• Launched in 2011, ELO was quickly able to win **market share* (21% in 2021) as it was backed by three of the largest Brazilian banks** and offered a lower fee model. • Initially, it targeted **unbanked and low-income consumer segments**, but now it has developed products for higher-income consumers. • ELO **invested heavily in increasing the number of point-of-sale terminals in the country** to increase the number of merchants who are able to accept card payments. • As ELO is **backed by state-owned banks, it has received government support** and initiatives aimed at promoting its adoption. Government employees and beneficiaries of social programs often receive ELO-branded cards, contributing to its growth.
napas ***Country**: Vietnam* *Operated by an entity licensed by central bank*	• NAPAS is developed and operated by the National Payment Corporation of Vietnam and provides switching, electronic clearing, and settlement services in Vietnam. • **Policy intervention by central bank** to combine all the domestic cards on the market into the NAPAS brand fueled the adoption and resulted in gaining substantial market share • **Started with primarily with debit card**, NAPAS has introduced domestic credit and prepaid card for members banks in 2021 and currently commands largest **market share* of 64%** (2021) • Optimized the switching fees to reduce cost and increase adoption

*Source: FIS Global Payments Report 2023

In addition, the reasons for launch of domestic card schemes vary from country to country as outlined below.

1. Reduce dependence on foreign players

- High dependence on the international schemes puts **financial infrastructure at risk of being leveraged** during unforeseen events
- For instance, due to the sanctions imposed on Russia, Visa and Mastercard suspended operations. Country relied on domestic card scheme – Mir for transactions

2. Strengthen domestic economy

- With every card transaction via international network provider, **money goes out of the native country** in form of transaction fees. Domestic card schemes save country's forex reserve
- For overseas transactions, there are **concerns related to data privacy/security** as sensitive financial information is handled and processed overseas

3. Reduce transaction costs for the participants

- Merchant discount rate (MDR) has higher **potential to be optimized for domestic schemes**
- For instance, the domestic card scheme in India was launched with the objective of reducing transaction processing costs, resulting in lower costs for both banks and end customers

4. Boost financial inclusion in the country

- A domestic card scheme can be **designed to target underserved or unbanked populations**, promoting financial inclusion
- For example, BKM Express collaborated with the Turkish government on various initiatives to promote financial inclusion and electronic payments, including the disbursement of government benefits through its platform

While Visa and Master hold the majority market share in most countries, there are specific examples where domestic card schemes were able to grab higher market share for transaction values, as outlined below.

Country	Domestic card scheme	Card network market share based on transaction value (%) (2021)[3]			
		VISA	Master	Domestic	Others
Australia	Eftpos	**47%**	28%	20%	5%
Brazil	Elo	30%	**45%**	21%	4%
Canada	Interac	**40%**	26%	31%	3%
India	RuPay	**49%**	30%	20%	1%
Japan	JCB, J-Debit	30%	21%	**47%**	2%
Nigeria	Verve	18%	28%	**54%**	0%
Norway	Bankaxept	6%	11%	**62%**	21%
Vietnam	Napas	20%	14%	**64%**	2%

One of the key reasons domestic card schemes were able to take the pole position in certain countries was strong support from local government policies and central bank interventions. The new card portability guidelines from RBI appear to be a steppingstone in the same direction to further improve the market share for Rupay. Similar policy interventions are also being proposed in the United States, commonly called Durbin 2.0 to break the duopoly of Visa and Master Card and promote competition in the space.

Durbin 2.0

- The Credit Card Competition Act of 2023, also known as "Durbin 2.0," was introduced on June 7th, 2023, to address the lack of competition and high interchange fees in the credit card payment processing industry in the United States.
- "Durbin 2.0" is named after its co-sponsor, Sen. Dick Durbin, who enacted debit card regulations following the passage of the Dodd-Frank Act in 2010 which was aimed to reduce the amount of interchange fees banks could charge merchants
- The rationale behind the act is that by providing power to merchants to select the network, it would result in increased competition between the networks and lower interchange fees for merchants, which could be passed on to consumers in the form of lower prices.
- The proposed act aims to mandate that each credit card transaction must have two networks available, with at least one of them being a network other than Visa or Mastercard, enabling merchants to have more options for routing transactions.
- With Visa and Mastercard processing more than 80% of U.S. credit card charges, the bill's stated intent is to promote competition in the space
- Key implications for financial institutions to support dual network routing:
    - Supporting two card networks on single card would require multiple BIN support and certifications
    - Support for processing rules and configurations specific to each network would require changes in systems and operations
    - Issuer bank to support multiple card personalization validation (CPV)
    - System and process changes to support multiple network on single card covering on-boarding, servicing, settlement, etc.

[3] https://www.fisglobal.com/en/global-payments-report

Similar practice / regulations in other geographies (primarily for debit card)

Australia

Around 90 percent of debit cards issued in Australia are dual-network debit cards (DNDCs), which allow domestic payments to be processed via either Eftpos or one of the international debit schemes (Debit Mastercard or Visa Debit).

Denmark

The majority of card transactions in Denmark are performed with the domestic debit scheme Dankort. There are also co-badged 'Visa Dankort' debit cards where domestic transactions are routed via Dankort, while international transactions are routed through the Visa network.

France

The domestic card scheme is Carte Bancaire, which is often used with MasterCard or Visa, where Carte Bancaire is used for domestic transactions and MasterCard or Visa is typically used for cross-border transactions.

Canada

In Canada, the Code of Conduct for the Credit and Debit Card Industry ('the Code') has provisions for dual-network cards. The domestic network Interac is usually used for point-of-sale transactions made on co-branded debit cards, while other networks on the card can be used for online payments and international payments.

Key drivers in network selection from customer standpoint

In most of the cases, the incentives provided by card networks and their agreements with the card issuer banks are the main drivers for selection of the card network by issuing banks. However, once the power of selection of the card network shifts to the customer, there will be other key drivers that will come into play in the card network selection. Some of these are outlined below:

Rewards

Issuer banks, in association with card networks, provide various reward programs such as cashbacks, discounts, lounge/golf club access, etc. Customers give preference to the cards that provide maximum rewards aligned with their lifestyle

Pricing

Pricing considerations such as markups, interest rates, penalties, joining fees, annual maintenance fees, etc. also play a key role in card selection. The higher transaction costs of a network are generally passed on to consumers

Acceptability

International acceptance is one of the important requirements for customers who frequently do international travel. They may prefer cards with a network that has global acceptability

Security

Superior and advanced security measures such as fraud prevention, dispute/chargeback mechanism, customer support and limited customer liability in case of fraud are key considerations for customers to choose their preferred card providers

Although the draft circular of the RBI has caused initial excitement, it will be interesting to see how customers will respond to this new directive and which of the drivers mentioned above will play a role in the card network selection. While the guidelines provide a choice of card network to the customer, we perceive challenges for the banks and players in the ecosystem to implement these guidelines.

Perceived high level impact on banks

Business

- Competition between networks could have an impact on overall MDR share for the banks. Business teams will have to re-evaluate the commercial models with network providers and merchants.
- Business teams will have to understand the impact on exclusive co-branded cards/partnerships with specific network providers (such as HDFC Diners, ICICI Amazon card on Visa) and devise a strategy to comply with the guidelines.

Technology

- Investments might be required to implement system and infrastructure changes to enable network portability (Infrastructure scale up, network connectivity, separate instance to support new network).
- Additional certification, authorization rule configuration, card personalization, etc. will be required to enable new networks that are currently not supported

Operations

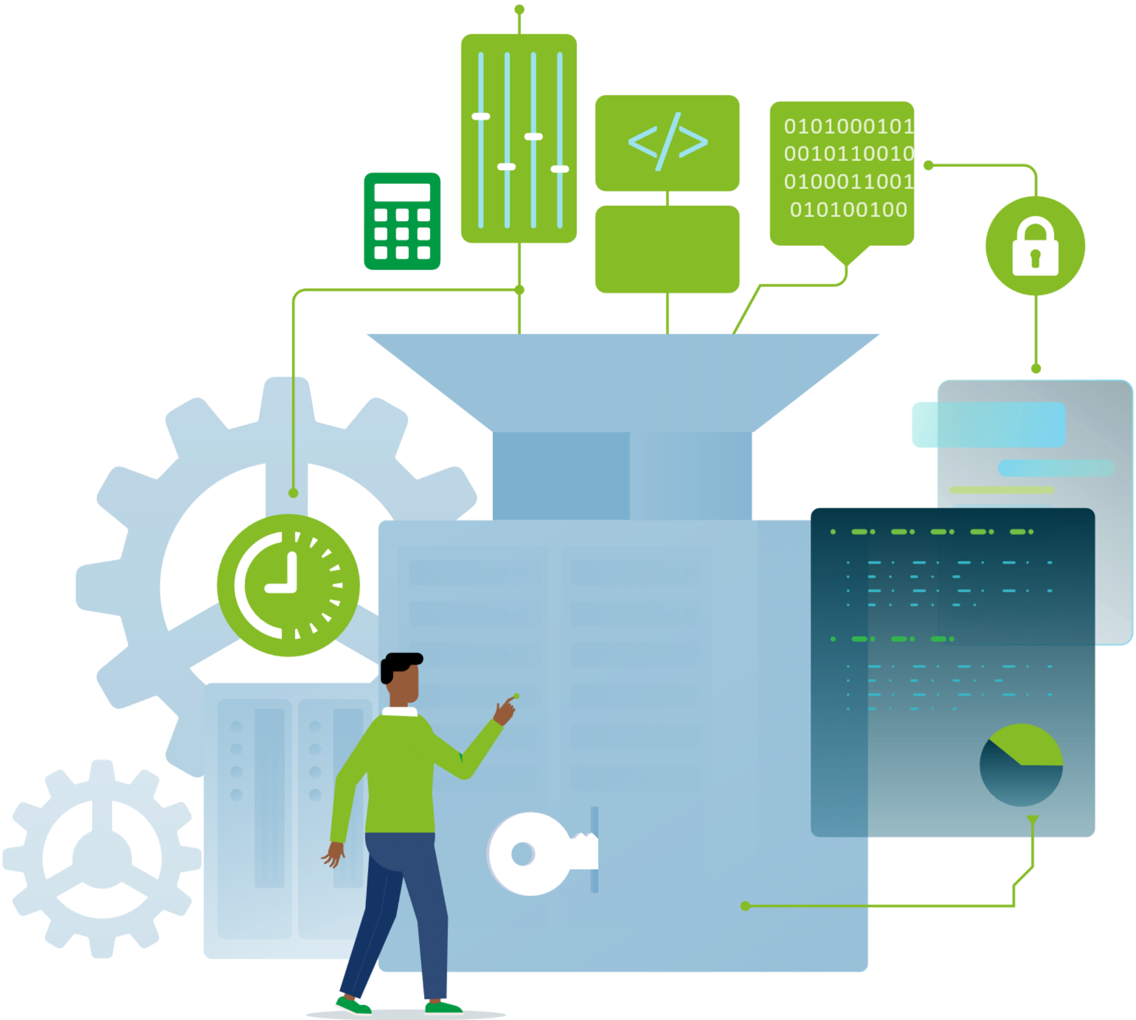
- Changes in process and associated Standard operating procedures (SOPs) to be created or updated covering customer agreement, on-boarding, transaction processing and servicing.
- Operational challenges during transition (for example, the card issuer will now deal with two different networks for a single customer. The disputed transaction will be handled as per the rules of the previous card network while any transactional dispute arising after card network portability will be handled as per the new network guidelines).
- Customer education/ communication and training of internal staff.

Key takeaways

While UPI (instant payment system in India) is becoming the dominant mode of digital payments in India, one would argue whether cards as a segment deserves all this attention and policy interventions. India has historically been a debit card-using nation; however, recent data[4] from the Reserve Bank of India shows that credit card transactions are steadily growing both in value (CAGR of 26% over FY2018 - FY2023) and volume (16% CAGR over FY2018 - FY2023) terms. In comparison, Debit cards have grown at a slower rate in value (CAGR of 9% over FY2018 - FY2023) and volume (1% CAGR over FY2018 - FY2023) terms. Another fact is that, unlike UPI, the credit card segment is still a revenue-generating proposition for all the ecosystem players.

The impact of the guidelines on the incumbent network and domestic card schemes will be realized in the coming time; however, banks will have their work cut out to implement these changes, and end customers appear to gain maximum from the card network portability guidelines.

[4] https://www.rbi.org.in/Scripts/ATMView.aspx



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How can Deloitte help?

Impact assessment of the card network portability requirements on current applications, interfaces, and data layer to identify the quantum of change required

Formulate the target state and develop an implementation roadmap for ensuring readiness of business, technology and operations teams with the requirements

Update customer journeys and document the changes in processes and SOPs

Support with program management to implement the required changes

Support the implementation of system changes in the capacity of payments / cards SMEs, business analysis, application development and testing

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Glossary

BIN	Bank Identification Number
CPV	Card Personalization Validation
DNDC	Dual Network Debit Card
ISO	Independent Sales Organization
MDR	Merchant Discount Rate
POS	Point of Sale
RBI	Reserve Bank of India
SOP	Standard Operating Procedures
UPI	Unified Payments Interface
VAR	Value Added Reseller