

## Mobile Money Transfers Services

### GRANULE\_04

*Hello, I am Dr. Deepankar Roy. I am with the National Institute of Bank Management, Pune, India. I will begin my presentation by giving you an overview of mobile money transfers, thereafter we would look into the vendors who offer mobile wallets, successful examples in the world would then be discussed. Going forward I will talk on the obstacles to growth in mobile money transfers, International Money Transfer service will be discussed and finally I will take you through mobile money transfer experiences in India.*

In developing countries with a low banking and high mobile phone penetration, mobile wallets can bring basic payments services to the un/under-banked. Often starting with money transfers, these services become more sophisticated over time to include paying for bills and goods, pre-paid debit cards, ATM withdrawals, salary disbursements, etc. These are typically provided by mobile network operators using a mobile wallet.

#### Key mobile wallet/platform vendors:

- Comviva: Ex-Bharti Telesoft; provides value added services to mobile operators; deployments with Orange in Africa, Tigo in Africa and Latin Americas, and South East Asia.
- Fundamo: HQ in South Africa, acquired by VISA; mobile financial services provider; deployments with MTN in Africa.
- Gemalto: HQ in Amsterdam; provides digital security solutions, incl. for NFC; platform for mobile money transfers.
- Monetise: HQ in London; delivers mobile banking, payments and commerce networks; VISA partnership.
- Oberthur: HQ in France; provides smart cards; partnership with Utiba; deployed by e.g. airtel in Africa.
- Sybase 365: HQ in the US; SAP company; provides mobile messaging and commerce including remittances.
- Utiba: HQ in Singapore; pioneer in mobile financial services with G-Cash, deployments in Asia Pacific, Latin America.

Two examples are SMARTMoney in the Philippines (launched by SMART in 2000, over 9 million wallets, connected to 9,000 ATMs, over 4,000 cash-in/cash-out centers, 15 partner banks and 95,000 agents) and M-Pesa in Kenya (launched by Safaricom in 2007, 30,000 agents, 14 million users, 70% of all electronic transfers in Kenya, USD 1 billion transferred/month). Mobile network operators see this as an up-sell, a value-added service. Their business case comes from transaction or subscription revenues, reducing mobile subscription top-up distribution costs and increasing customer retention. They have a large agency network that can be reused. They also have a better marketing and consumer deployment experience than many banks. Whilst successful in some developing countries, these cannot be replicated as such in developed markets because of specific success factors: 1) a strong, latent demand for remittances; 2) in a country with low banking, high mobile penetration; 3) with a legal framework that enables easy customer registration and is in proportion to the risk of very low value payments; 4) starting with domestic remittances and mobile top-up; 5) by a dominant player, motivated to establish a leading position in a closed system; and 6) supported by a large agent network. This agent network is key for people to pay cash into their mobile wallet and to cash money out. The service provider must make sure the agents support its product and that there is sufficient liquidity in the network (if a person wants to cash out their salary, but the agent does not have any money, the SMS on their phone has no value, except to make other mobile purchases). Banks should consider making a bolder move in mobile money transfers. They should take an opportunistic approach and individually partner with a mobile network operator for a specific deployment in one country, as well as work together to deploy a global mobile payments service for international money transfers and remittances.

### **Obstacles to growth in mobile money transfers**

Whilst there are several domestic deployments, many still need to build their customer base or create the basic service. There are three obstacles to further growth and global adoption:

#### *1) Regulation*

In several countries there is already a regulatory framework for e-money and mobile payments, while in others it is still evolving. Conditions vary between countries on who can operate such a service, the transaction and wallet size, and the type of transaction allowed.

### Differences in legal frameworks (examples)

- MNO<sup>1</sup> friendly: Philippines (MNOs can perform banking functions), Kenya (wallet seen as transaction accounts), Nigeria, Malaysia, Thailand, Indonesia.
- Flexible: Europe (e-money directive— often taken as example, MNO can get PSD license), US (MNO to register at FinCEN as money service business), Japan (non discriminatory rules, MNO to deposit money in bank account)
- Banks only: South Africa (bank-led except for agents, lower KYC<sup>2</sup>/AML<sup>3</sup> requirements), India, Bangladesh, Tanzania, Uganda.

Regulators are concerned about mobile payments being used for money laundering and fraud. Several have adopted a proportionate approach, balancing advancing financial inclusion with ensuring the stability and soundness of the country's financial system.

### *2) Cooperation*

Not one single bank or mobile network operator covers the whole world, so there is a need for cooperation and partnerships. Joint ventures between mobile network operators may not be obvious as they are very competitive on their core voice and data business. Joint ventures with banks may not be obvious as parties have different business objectives, different perspectives on revenue sharing, and different mind sets (mobile operators are more agile, banks focus on robustness). Examples include Equity Bank with M-Pesa, State Bank of India with airtel, Banamex with América Móvil, Alfa-Bank with VimpelCom, Garanti Bank with Turkcell and Avea.

### *3) Interoperability*

Today, most mobile payments services are closed-loop systems whereby one customer cannot send a payment to a customer in another system, even within one country. Regarding interoperability the perception among different parties is that all agree it can boost volumes, but with their own company's interests taking priority, nobody wants to let anyone in whilst expanding market share. Still, interconnectivity is growing. For example: G-Cash has bilateral agreements with several other systems; Western Union links to M-Pesa; India's IMPS<sup>4</sup> is multi-

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<sup>1</sup> Mobile Network Operator

<sup>2</sup> Know your customer

<sup>3</sup> Anti money laundering

<sup>4</sup> Immediate Payment Service

bank by design and we also see this model in the UK supported by VocaLink. By and large however, mobile systems do not interconnect on a global basis.

### **International Money Transfer Service**

Today, most domestic mobile money transfer services are run by mobile network operators that have begun to target the international remittance market. For example, Vodafone Money Transfer in Qatar, which has nearly 1.7 million expatriates, can send money transfers to 10 countries. Mobile network operators also link together or connect with money transfer operators and credit card companies: e.g. G-Cash and Maxis, MoneyGram and SMART Money, Western Union and M-Pesa, MTN and VISA. Card companies are also creating their own international P2P services: e.g. Visa acquired Fundamo, American Express created Serve.

### **Mobile money transfer experiences in India:**

#### **Immediate Payment Service (IMPS) from National Payments Corporation of India (NPCI)<sup>5</sup>**

IMPS offers an instant, 24X7, interbank electronic fund transfer service through mobile phones. IMPS facilitate customers to use mobile instruments as a channel for accessing their bank accounts and put high interbank fund transfers in a secured manner with immediate confirmation features. This facility is provided by NPCI through its existing National Financial Switch (NFS).

#### *Objectives of IMPS:*

- To enable bank customers to use mobile instruments as a channel for accessing their banks accounts and remit funds
- Making payment simpler just with the mobile number of the beneficiary
- To sub-serve the goal of Reserve Bank of India (RBI) in electronification of retail payments
- To facilitate mobile payment systems already introduced in India with the Reserve

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<sup>5</sup> Reserve Bank of India, after setting up of the Board for Payment and Settlement Systems in 2005, released a vision document incorporating a proposal to set up an umbrella institution for all the RETAIL PAYMENT SYSTEMS in the country. NPCI is the umbrella institution which is functioning as a hub in all electronic retail payment systems which is ever growing in terms of varieties of products, delivery channels, number of service providers and diverse Technology solutions

Bank of India Mobile Payment Guidelines 2008 to be inter-operable across banks and mobile operators in a safe and secured manner

- To build the foundation for a full range of mobile based Banking services.

# IMPS



## Mobile Money Identifier (MMID) – Unique Concept



- MMID → 7 digit number **9002 459**
- MMID = NBIN + MAS (Mobile Account Selector)
  - NBIN → 4 digit number (National Bank Identification Number)
  - MAS → 3 digit number (Account Identifier)
- Routing code for switching transactions
- Multiple accounts can be linked
- Reduces error

NFS

CTS

NACH

A@PS

IMPS

RuPay

# IMPS P2P – Customer Initiated Transaction through Mobile



A remitter can initiate an IMPS transaction through Mobile Banking

Application / SMS:

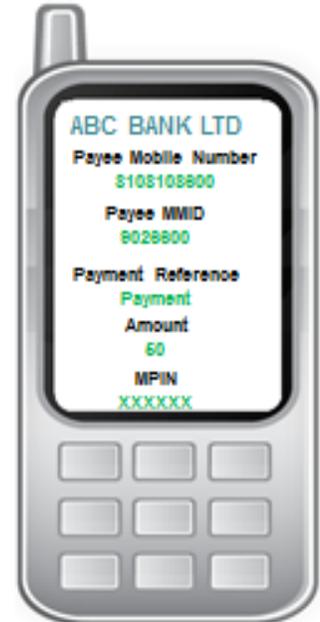
## Mobile Application

- > A customer can initiate an IMPS transaction using Mobile Banking Application/ SMS or USSD (Few banks also offer on ATM and Internet Channel)
- > In the IMPS Menu:
  - Enter the Beneficiary Mobile No.
  - Enter the Beneficiary MMID\*
  - Enter the transaction amount
  - Enter Payment Reference
  - Enter MPIN

## Through SMS

- > A customer can initiate an IMPS Merchant transaction using by sending an SMS to the Bank's short code/long code:
- > The customer needs to send:
  - IMPS <Beneficiary Mobile No.> <Beneficiary MMID> <Amount> <MPIN> <Payment Reference> to the Bank's short-code/long-code

*(Few banks also provide facility to enter payment reference details in the mobile application)*



**NES**

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**NACH**

**AOPS**

**IMPS**

**RuPay**

## IMPS P2A-Payment using IFS Code & Account number



A remitter can initiate an IMPS transaction through Mobile Banking Application / SMS:

### Mobile Application

- > A customer can initiate an IMPS transaction using Mobile Banking Application / SMS or USSD
- > In the IMPS Menu:
  - Enter the Beneficiary IFS Code
  - Enter the Beneficiary Account Number
  - Enter the transaction amount
  - Enter MPIN

### Through SMS

- > A customer can initiate an IMPS Merchant transaction using by sending an SMS to the Bank's short code/long code:
- > The customer needs to send:
  - IMPS <Beneficiary account number> <Beneficiary IFS code> <account type> <Amount> <SMS PIN/MPIN> <Remarks>

*(Few banks also provide facility to enter payment reference details in the mobile application)*



**NES**

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**A@PS**

**IMPS**

**RuPay**

## National Unified USSD Platform \*99#

### Why NUUP?



#### Benefits

- Additional channel for Banking
- Easier adoption as Mobile Application installation not required
- GPRS is not required – works on voice connectivity
- Easier promotion of one Common Code \*99#
- Reach to the masses – helps in Financial Inclusion

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**NES**

**CTS**

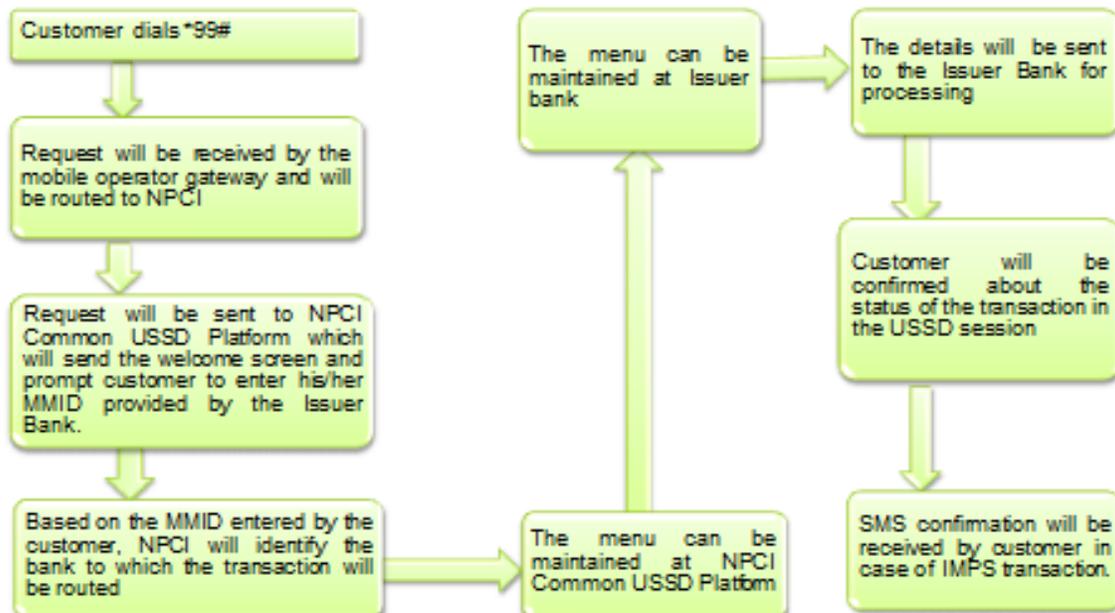
**NACH**

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**IMPS**

**RuPay**

## NUUP Transaction Flow



NFS

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NACH

A@PS

IMPS

RuPay