

CONVERGING SERVICES

The basics of mobile wallet and how it works:



Technologies used for mobile wallet transactions

- Mobile Internet (2G/3G/Wi-Fi)
- Short messaging service (SMS)
- Near-field communication (NFC)
- Quik response codes (QR codes)
- Bluetooth
- Biometrics (only in case of some smartphones)

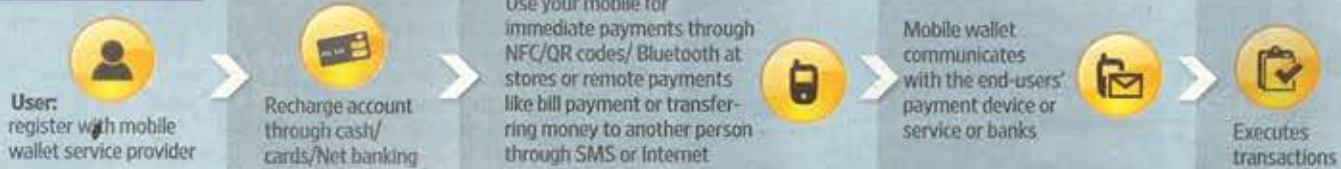
Primarily used in India for

- Recharging prepaid mobile and direct-to-home services
- Paying mobile bills and utility bills, including electricity, water and landline
- Redeeming shopping vouchers and loyalty points
- Transferring money to another person
- Internet account operation

Can soon be used for

- Paying at stores and cafes that are partners with mobile wallet service providers
- For transport services such as bus and air tickets
- At petrol pumps
- For buying movie tickets

TRANSACTION



Source: Mint research

NAVEEN KUMAR SAINI/MINT

ENDLESS POSSIBILITIES

Cashing in with m-wallets

Credit cards and debit cards may soon become redundant once the mobile wallet, a service that uses mobile phone as the mode of payment, comes to be used more widely

BY MOULISHREE SRIVASTAVA & NEHA SETHI

NEW DELHI

Going out for a coffee and using your mobile phone—rather than cash or card—to pay may soon become a reality in India. While this is already happening in other countries around the globe, making payments using mobiles for services other than utility bills or mobile card recharge is still not common here.

Mobile wallet is a service that is often confused with mobile banking, but is a much broader concept which includes using a mobile phone as a mode of payment, instead of relying on cards or hard cash.

Technology firms as well as industry experts say that the possibilities for mobile wallet applications are endless, including transport, banking, ticketing, communication, or even paying at petrol stations.

Mobile wallets are still evolving in terms of their usage, but they will be the next big thing in monetary transactions. Vijay Shekhar Sharma, chairman and managing director of **Paytm Mobile Solutions Pvt. Ltd** that provides a mobile wallet service, says credit cards and debit cards will soon become redundant once mobile wallets come to be used more widely. "Physical cards are clumsy and break easily. The process is manual," he adds.

Bipin Preet Singh, founder and chief executive of **MobiKwik Systems Pvt. Ltd**, another mobile wallet service, says that a mobile wallet is like a prepaid account on the phone. "The user creates an account, adds money to the wallet through available means like Net banking or cash or card, and then uses it to make payments or even transfer money," he explains.

The major companies providing mobile wallet services are telecom service providers such as **Vodafone Plc's** m-pesa, **Bharti Airtel Ltd's** Airtel Money, **Aircel's** Mobile Money and **Tata Teleservices Ltd's** mRuppee. Other application development firms like **Paytm** and **MobiKwik**, too, are increasing their presence in the segment. Technology companies such as **Google Inc.** and **International Business Machines Corp.** (IBM) have also been developing mobile wallet applications.

Pradeep Rao, senior vice-president and head of marketing at **Mahindra Comviva**, a subsidiary of **Tech Mahindra Ltd** and part of **Mahindra Group** that provides mobile payment platforms to telecom firms, said all one needs to get a mobile wallet is a mobile phone—"which means even an unbanked customer, one who doesn't have an account, or an under-banked customer, who has a poor access to banks, can get it and use it to do transactions".

An IBM blog on mobile wallet says: "With the rise of e-payments and e-commerce in the late 1990s, it did not take long for the so-called e-wallet to be established as an aggregator for different payment methods like credit card, direct debit and bank transfers...It has disrupted the payment market and has broken the dominance of banks as payment providers for the user. In the mobile age, a new concept is starting to break into the payments market with even more disruptive energy: the so-called mobile wallet."

Paytm's Sharma says mobile wallets use a software that can also store various discount information, offers by merchants and loyalty points, thus eliminating the need to remember which card to use in order to get the maximum benefit from a particular purchase.

He says that since the wallet is in the mobile, it is more trackable in case of theft. "There is scope to add more intelligence to the software to make it even more secure, which can't be done in the case of cards," Sharma adds. Mobile wallets use a security layer that can be in the form of passwords, biometrics or voice recognition.

A report by **Ovum Consulting**, part of **Ovum Plc**, a global information and communications technology and telecoms-focused advisory and consulting firm, and **Mahindra Comviva** says that a mobile wallet can support both mobile proximity (a shop for instance) and remote payments (utility bills). It uses a range of enabling technologies including mobile internet, which includes 2G, 3G or Wi-Fi, SMS (short messaging or texting service), NFC (near-field communication), QR (quick response) codes, Bluetooth and even biometrics.

A mobile can be assumed to have multiple layers through which it can communicate with other devices. While NFC is a set of standards for smartphones and similar devices to establish a short-range high frequency wireless communication that enables exchange of data between devices over about a 10cm distance, QR codes are barcodes that can store large amounts of information and can be read using apps on smartphones and dedicated QR reading devices. Biometrics, however, are only available in some phones like **Apple Inc.'s** iPhone.

Many mobile wallet services in India use NFC as their prime technology.

Users can register with mobile wallet service providers and recharge their ac-

counts through either cash or cards or Net banking. Once a mobile wallet is loaded with money, the mobile can be used for payments at stores through NFC, QR codes or Bluetooth as well as for remote payments like bill payment and transferring money to another person via SMS or Internet.

"Digital wallets can be implemented in a number of different ways," says the report by **Ovum**.

"Cloud-based digital wallets (mobile wallets)...carry out transaction processing and store user account information on Web based servers. Implementations of this kind play well to the multiple device scenario...PayPal, Google, MasterCard and Visa all support cloud-based implementations, as does coffee chain **Starbucks** for its digital wallet," it says. "Other digital wallet service providers have opted for device-based implementations where there are two main approaches that depend on the location of the secure service element: on NFC SIM (subscriber identity module, an integrated circuit that stores information about the mobile subscriber) cards or embedded on the device chipset."

"Mobile operators typically prefer NFC SIM implementations because it gives them optimum control over the service. However, more are starting to embrace cloud-based solutions," the report adds.

Mobile wallets are regulated by the Reserve Bank of India (RBI) except for those which are used for transactions with one merchant. Wallets can be categorized in two: open and semi-closed. A semi-closed wallet is not linked to a bank, whereas an open wallet has a bank as a shareholder.

M-pesa is an example of a semi-closed as well as an open wallet as it has both kinds of accounts—one that is linked to the bank and another that isn't.

A semi-closed wallet doesn't allow the user to withdraw cash, but an open wallet linked to a bank does. Here cash withdrawal is possible at agent outlets, retailers and even at automated teller machines.

"Earlier you could only do mobile top-ups or DTH (direct-to-home satellite TV services) recharge with **Paytm**, but since we got RBI licence for doing transactions that are semi-closed with multiple merchants, the platform has been expanded to include more utilities, service providers and merchants," says **Paytm's** Sharma.

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