



EVOLUTION OF PAYMENT METHODS: EMBRACING CONTACTLESS, CRYPTO AND BIOMETRICS IN RETAIL

Abstract

In a digital world where retailers need to deliver an omni-channel experience to improve overall customer satisfaction, adopting flexible and convenient payment methods will help retailers retain customers and remain competitive in a dynamic and fast-changing marketplace.



Retail payments have undergone a profound transformation in the last few years. Moving from simple and fairly rigid payment options such as just cash or cards, retailers now have a plethora of payment

options for consumers. Rapid digitisation across industries, the availability of digital solutions and rising consumer expectations have led to flexible digital payment solutions. Whether at a point of

sale, or an online shopping cart, consumers can now choose to pay using a mode most convenient to them.

The evolution of retail payments

Retail payment methods have evolved over the years, first with cash and then credit card or debit cards, being the dominant payment methods in retail.

Cash purchases were the go-to method for several years but there has been a distinct shift in consumer behaviour for several reasons. The COVID-19 pandemic created an upheaval across several industries, and the retail industry underwent a massive transformation, with online commerce leading to declining cash usage and increased adoption of digital payments. Even though cash transactions are convenient and they offer immediate convenience to both the consumer and the retailer while eliminating any transaction fees associated with intermediaries, they are expected to reduce in a digital economy. According to a McKinsey report,

there was a 16 per cent decline in cash transactions in 2020. While the pandemic sparked this change, it is expected to be fairly permanent in nature. Another form of direct payment for many years was the paper cheque, especially for larger purchases such as consumer goods. However, use of paper cheques has almost dropped off the map, and is now extinct in any retail store queue.

Debit and credit cards have offered consumers a convenient cashless payment option and their usage has become a norm. Even though there are transaction fees that retailers must pay to payment processors, the convenience of card-based payment systems to consumers requires retailers to offer it, else they stand to lose out on consumer sales.

The increasing prevalence of mobile devices and the digital economy has spurred mobile payment solutions such as mobile wallets, unified payments interface (UPI) and mobile banking apps.

- Digital wallets such as Apple Pay and Samsung Pay eliminate the need to carry a physical card or wallet, allowing the user the convenience of contactless and cashless payments. Retailers do not experience cash flow problems as the payment reaches the retailers bank account instantly or within a few days.
- Mobile payment solutions are secure, convenient and easy to use and are pretty much the norm. With [mobile banking apps](#), customers can pay directly using their bank account.

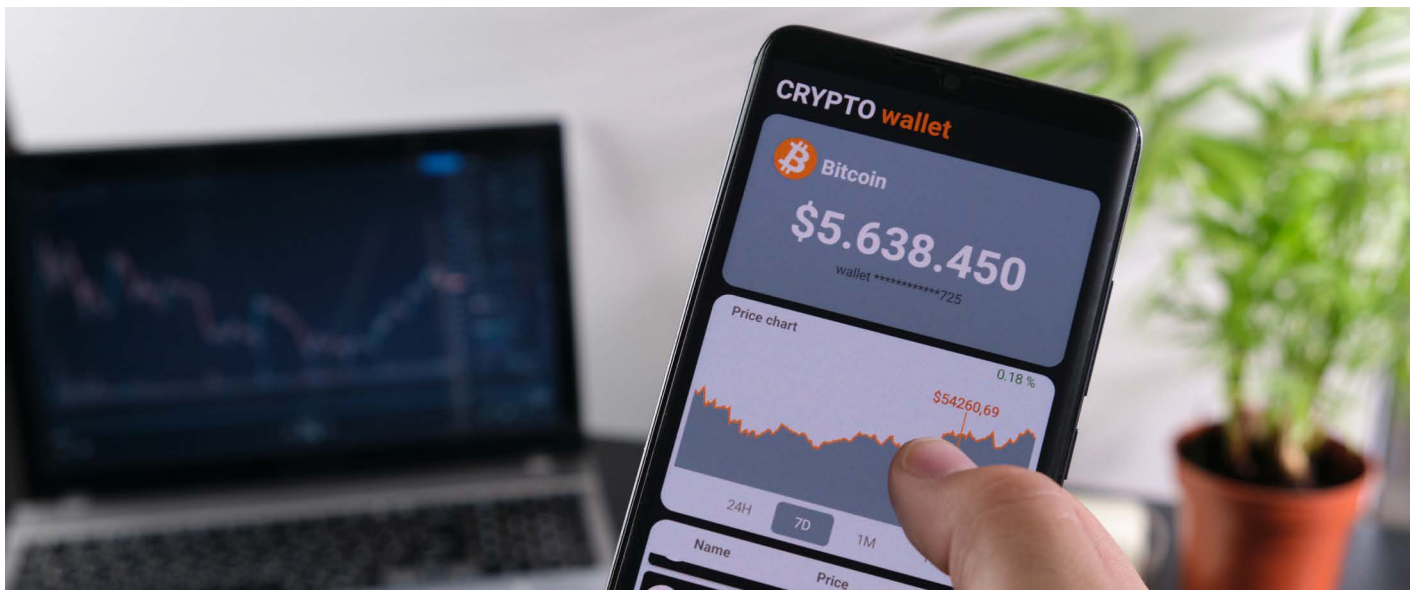
- UPI provides a single and secure mobile application to access multiple accounts of participating banks. In India, UPI solutions such as Google Pay and Phone Pe are highly popular and rapidly becoming the go-to payment mode. The retailer typically shares a QR code for scanning or a mobile number where money can be transferred directly from the customer's account to the retailer's account.
- Contactless payments that use near-field communication (NFC) technology

are also fairly popular at retail outlets. These allow cards or mobile devices to be tapped over an NFC terminal. NFC-payments are secure and convenient. For instance, Apple Pay which works with iPhones and Apple watches allows consumers to tap their device near an NFC terminal.

- Gift cards and store credits help retailers develop deeper customer relationships and bring in new customers. Consumers often spend more than the value of the gift card. Having a store credit

policy creates a safety net, wherein the customer feels comfortable making a purchase since they can return or exchange an item.

Given rising consumer expectations, and the intense competition in the retail industry, retailers need to be flexible with payment methods. Keeping tabs on upcoming payment options and offering seamless customer experience is a necessity in the digital economy.



The future of retail payments

Whether online or offline, customers expect a quick, convenient and seamless experience at the point of sale (POS). Retailers need to embrace new payment methods to attract and retain the digitally-savvy shopper.

Cryptocurrencies are digital or virtual currencies that are safe for online transactions. They are secured by cryptographic systems and are based on blockchain technology over a decentralised network. Merchants are increasingly adopting **cryptocurrencies** such as Bitcoin and Ethereum. Retailers who adopt digital currencies are expected

to have a competitive edge, increase their customer base and improve brand perception. From a business perspective, retailers expect to see improved cash flows as digital currencies would offer immediate access to funds, while blockchain-based innovations would lead to inhouse finance management. In fact, a study found that over 50 per cent of large retailers have invested over a million dollars to enable digital currency payment mechanisms. Moving away from the trend of offering digital currency payment as a mere marketing gimmick, retailers are now realising that there is long-term business

value in offering digital currency payment methods to consumers.

Peer-to-Peer (P2P) payments offer the convenience of instant transfer of funds. The payer and the payee are connected via an app or a website. The payer uses a bank account or a credit or debit card to transfer the payment directly to the payee's P2P account. The transaction may take a few days to reflect in the payee's bank account. There are several P2P platforms such as Paypal, Venmo, SquareCash and Zelle. P2P payments are simple, convenient and do not require any special equipment. P2P platforms do not require transmission

of consumer details and personally identifiable information (PII), thereby mitigating the risks associated with data breaches. At present, P2P payments do run the risk of fraud, and lack a formal dispute framework and process. Merchants need to carefully weigh the pros and cons of using this method. However, despite these challenges, P2P payments are expected to grow to \$4.93 billion by 2026.

Biometric identifiers such as fingerprint or facial recognition can be used to enable

retail payments. By integrating biometric information such as the customer's fingerprints on a chip card, and validating the fingerprint with the digital print, the transaction can be authenticated without the need for a password or security code. Biometric identification supports the European Union's Payment Services Directive 2 (PSD2) regulation which requires strict security measures such as two-factor authentication. Challenges in biometric payment systems include

infringement of user privacy due to sharing of data and possible technical errors regarding user identification.

To keep pace within a fast-evolving digital world, retailers will need to move beyond core payment methods and offer flexible payment options to customers, while prioritising security, data protection and consumer privacy. Embracing state-of-the-art payment solutions will help retailers offer a convenient and flexible customer-centric experience.

How can Infosys BPM help

Providing a customer-centric experience has become a necessity for retailers. Faced with margin pressures and a highly competitive market, retailers need to offer payment options that are convenient

and flexible for customers. The future of payment technology will include increasing prevalence of crypto payment systems, peer to peer and biometric payments. [Infosys BPMs financial services](#)

outsourcing solutions help retailers transform customer experience by offering futuristic payment solutions that are seamlessly integrated into both online and offline transactions.

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