

QR Code Payments:

An Offensive Strategy
for Instant Payments

How financial institutions can get started
with QR code payments today

matera

INTRODUCTION

\$13M is what it cost Coinbase to [crash their website](#) during the 2022 Super Bowl. Their ad, featuring a bouncing QR code that redirected people to their website, was scanned by over 20M people causing their website to go down.

Perhaps most surprising is that nearly 1 in 5 people watching the Super Bowl scanned that QR code.

QR codes in the U.S. have come a long way since the 2012 creation of “WTF QR Codes,” a Twitter account that celebrated the “ridiculousness that is QR codes.” Thanks to COVID, U.S. consumers have become far more comfortable using QR codes as [over half of restaurants](#) have switched to QR code menus.

But QR codes have much greater capability than redirecting to static information. QR codes are poised to transform the [instant payments landscape](#) in the U.S. in much the same way magnetic stripe, chip or tap changed the use of card payments.

In other countries like Brazil (Pix), India (Paytm) and Asia (WeChat), QR codes are the predominant way consumers pay **instantly** for products in-store, online and even for recurring services like utilities.

QR codes are being used in the U.S. on a limited basis to initiate credit, debit, PayPal/Venmo and bank account payments between consumers and merchants.

Instant payments initiated by scanning QR codes from a bank’s mobile app are next.

Financial institutions who offer QR codes that support instant payments unlock tremendous value for commercial clients by lowering payment processing costs and providing their client’s customers a streamlined mobile payment experience. These commercial clients also get paid faster.

While instant payments make up a small percent of U.S. payments today, the Federal Reserve launches their instant payments scheme FedNowSM in mid-2023, and [60% of debit accounts](#) are already enabled to receive instant payments via RTP®.

Banks and credit unions weary of being disintermediated by fintechs and hungry to monetize instant payments can get a head start by offering QR code payments in closed- loop environments.

QR CODE REFRESH

In its simplest form, a QR (Quick Response) code is a two-dimensional barcode that's been around for nearly 30 years. It has the ability to contain 350 times more data than a barcode, and enables swift data sharing as an image-based scanner (e.g. mobile phone camera) is all that's needed to access all this information.

Static vs. Dynamic

- **Static QR codes** are rendered one time and intended to always share the same information such as a company's website, a restaurant menu or detailed product information.
- **Dynamic QR codes** are created real-time with information relative to a specific transaction and are ideal for merchants where every transaction is unique. Dynamic QR codes may include data like the items being purchased, payment due, taxes or other fees included, the merchant's bank account and routing number, date and location of purchase, transaction identifier, etc.

The data included in QR code payment transactions enable efficient reconciliation especially compared to payment types like checks where consumers rarely reference account and invoice numbers. Plus, this information doesn't have to be manually entered by the consumer.

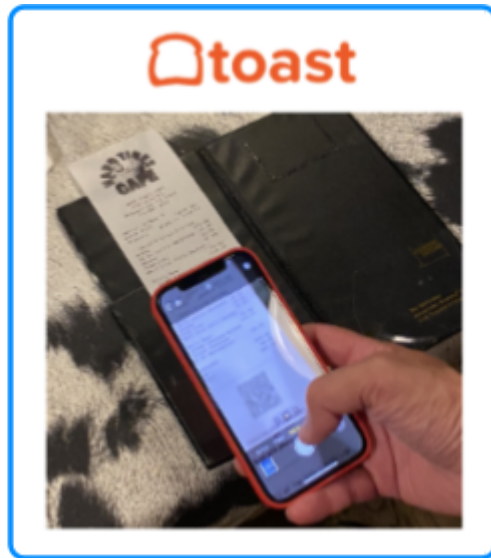
QR CODE PAYMENT EXAMPLES

U.S.

The use of QR Codes for payments is evolving, but nascent. Toast, Walmart and PayPal/Venmo are using QR codes for payments, but the customer experience involves manually entering payment credentials.

Toast is a restaurant POS and management system used by over 60,000 restaurants. They offer static and dynamic QR codes in their solution.

- Static QR codes are being used to track tables, associated orders and payments. Restaurants place static QR codes at each table that redirect customers to a menu where they order food and manually enter payment information (credit card only). Food is ordered and paid for without relying on wait staff.
- Dynamic QR codes are being used by other Toast restaurants for only the collection of payments. A dynamic QR code unique to a specific order is printed at the bottom of each bill. When scanned by a mobile phone camera, the consumer is prompted to manually add card credentials. Once approved, the customer leaves without interacting with the server for payment.



Walmart uses dynamically generated QR codes at POS to facilitate payment from the Walmart Pay mobile app. Customers can load their Walmart Pay app with a credit or debit card, EBT, PayPal, Affirm, and many other forms of payment (except bank account info). Walmart Pay users log into their app to scan the QR code at POS. They choose the method of payment and complete the transaction.

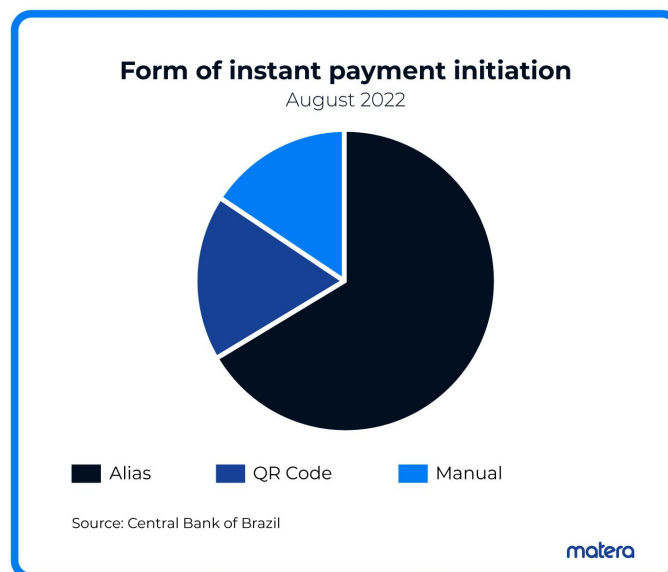


As for **PayPal/Venmo**, they generate dynamic QR codes from a consumer's apps (instead of by the merchant in the Walmart example). [Over 20 stores](#) accept PayPal/Venmo generated QR codes for payment. At checkout, a consumer's PayPal/Venmo-generated QR code is scanned, they choose to pay using their account balance, credit card, debit card or bank balance (if they were previously added to the app).



Non-U.S.

Brazil has a well-developed QR code payments ecosystem to enable payments via their instant payment scheme Pix. Nearly 20% of the over 2B instant payment transactions per month are initiated via QR code.



When a consumer pays by QR code, they log in to their mobile banking app, scan the QR code from there, are presented payment details, confirm the transaction and then pay. It takes less than 10 seconds from the time the consumer presses “pay” to when the transaction settles.

The approach in Brazil makes financial institutions central to the payments experience.



CLOSED-LOOP QR CODE PAYMENTS

While QR code payments are commonplace for instant payments in other countries, the U.S. instant payments ecosystem is far less developed. However, **QR code payments can be implemented today** in the U.S. in a closed-loop environment. This new way of initiating payments lowers payment processing costs for corporate clients. It also prepares financial institutions to pair QR codes with instant payments in support of the most lucrative use cases such as in-store/online merchant sales and recurring bill pay.

Closed-Loop Example: Monthly Billing

Financial institutions with commercial clients who operate in markets with a high percent of the bank's customers (e.g. utility companies) can leverage QR codes for invoicing. Banks and credit unions can approach these commercial clients with an opportunity to lower their cost of payments, simplify payments for customers and get their money faster. This would likely replace credit card, debit and check payments.

QR codes can be generated for consumers who are both bank and utility customers who pay their bill using a high-cost method. Consumers who convert to paying by QR code generate material savings for commercial clients and the bank. Consumers also get comfortable with QR code payments as well as bank and commercial staff to support this new form of payment initiation.

These closed QR code payments are settled as “on-us” or straight through processing transactions.

Many more closed-loop use cases are possible including, but not limited to:

- Credit card/auto loan/mortgage monthly payments for checking account customers
- University tuition payments - students who use the same bank as the school
- Local auto dealers financing customers with an account at the same bank as the dealer
- Local hospital billing customers who bank at the same bank as the hospital

Converting Closed-Loop To Open-Loop

Once any closed-loop model is proven, commercial clients can offer QR code payments to customers with an account at a different bank that accepts instant payments. Consumers who bank at a different institution can still pay via QR code, but their payments are routed through FedNow or RTP instant payment rails and settled instantly.

This does require standards so that QR codes generated from one financial institution can be read by another. These standards will likely be driven by leading financial institutions in the U.S. and their providers who can leverage the standards already established in other international markets.

THE BOTTOM LINE

QR code payments lower payment costs for commercial customers, enable them to get their money faster, make reconciliation easier and provide a seamless payment experience for their customers.

As instant payments gain adoption in the U.S., their application at POS and for bill pay will inevitably grow. QR codes are the most efficient way for these transactions to be initiated.

Financial institutions looking to offer innovative, high value payment methods to their commercial customers can test QR code payment use cases, solution providers and strategies today in a closed-loop environment. As RTP and FedNow gain traction in the U.S., financial institutions with QR code payment know-how can enhance their instant payments offering with QR codes to differentiate, and ultimately win new business.