kcFED Payments System Research Briefing

What Consumer Surveys Say about the Design of a U.S. CBDC for Retail Payments

By Franklin Noll

Although researchers continue to discuss the possibility of a central bank digital currency (CBDC) for retail payments in the United States, the success of a CBDC will depend on consumer adoption. To understand how a CBDC could provide a good user experience, recent surveys in the United States and in other countries have asked consumers about their wants and needs for a potential CBDC. In the United States, a majority of respondents to these surveys seek dependability, convenience, and security.

Since the inception of a central bank digital currency (CBDC) as a potential payment method, researchers have written about the possible attributes of an ideal CBDC. But the success of a new payment system will depend on practical adoption by consumers. Recently, several surveys have asked consumers what they would look for in a CBDC for retail payments. Based on these survey results, this *Payments System Research Briefing* identifies the design attributes that may lead to widespread acceptance and use of a potential U.S. CBDC.

Learning What Consumers Want in a CBDC for Retail Payments

A CBDC is a central bank liability on par with cash and reserves, intended to be used for payments and as a store of value. It is denominated in the national currency and based on a form of electronic ledger. Although advanced economies, including the United States, have not yet decided whether to issue a CBDC, CBDCs for retail payments have been implemented in a few developing economies, including Jamaica and the Bahamas. In these countries, consumers acquire the CBDC through some form of mediated channel, such as a bank or other financial institution, and can access the CBDC through an app on a computer or a mobile device, or with a card.[1]

Although several researchers have theorized about the benefits of a CBDC for retail payments, recent consumer surveys in countries without a CBDC have shed light on what consumers might actually find beneficial. The most recent survey that focused on the United States used both in-depth interviews and broader surveys to ask over 1,400 people age 16 and older about their experiences with current U.S. payment systems and attitudes toward privacy (Gjefle and others 2021). In addition, a global survey that included the United States collected data from over 13,000 people age 16 to 75 in 12 countries (OMFIF 2020). This survey asked about consumer confidence in issuers of digital currency and attitudes toward possible attributes of digital currencies.

To help fill data gaps in these U.S. surveys, we supplement survey data on U.S. consumers with other surveys focused on western Europe or developing economies. For example, a recent study of potential CBDC users in Mexico, Nigeria, India, and Indonesia was based largely on fieldwork and interviews (Narula, Swartz, and Frizzo-Barker 2023). A study from the Netherlands surveyed an online panel of 3,293 Dutch residents age 16 and above asking them about their interest in a new CBDC and desired attributes (Bijlsma and others 2021). A 2022 study commissioned by the Austrian National Bank used a

sample of over 2,000 Austrians age 16 and above; the respondents were asked about their demand for a digital euro and key features they would like to see in this new payment method (Abramova and others 2022). Lastly, a 2022 study for the European Central Bank (ECB) looked at over 2,000 people age 18 and above across all 19 euro-area countries; respondents were asked about their attitudes to a new digital payment method and what would make them likely to adopt it (Kantar Public 2022).

Attributes of U.S. CBDC for Retail Payments

A review of both U.S. and non-U.S. surveys suggests that if a CBDC for retail payments were created in the United States, consumers would want it to have three basic attributes: dependability, convenience, and security. Consumers in other countries have mostly similar concerns.

Dependability

A majority of polled consumers would prefer a CBDC that is reliable, certain, and trustworthy.

Survey results from Gjefle and others (2021) imply that U.S. consumers prefer a CBDC that is ready and operational 24/7, with constant and steady access. A consumer does not want to suddenly find that a CBDC payment platform is inoperable or shut down. However, U.S. surveys do not provide information on which party—central banks, commercial banks, or nonbanks—U.S. consumers consider reliable. Past surveys from other countries may offer some clues. Respondents to the ECB survey, for example, saw banks as more "reliable" (Kantar Public 2022). In addition, respondents to the Netherlands survey thought that a CBDC managed by banks would be less likely to have system outages or operational problems (Bijlsma and others 2021).

Potential U.S. CBDC users also want their transactions to be certain and clearly executed. Indeed, the most recent U.S. survey found that "uncertainty" was the "most persistent pain point for Americans" in making payments (Gjefle and others 2021). In a CBDC transaction, consumers want to know how much of their money is being moved where and when—in other words, consumers want a real-time tracking capability, especially in the case of remittances, and to know what their balance is at any time (Gjefle and others 2021).

U.S. consumers may also want their CBDC to be trustworthy, although survey data do not reveal whether they would have greater confidence in a CBDC or a digital currency issued by a large payment service provider (OMFIF 2020). Consumer responses from other countries may again offer some insight into U.S. consumers' preferences. Consumers across the globe generally prefer a CBDC over a digital currency issued by a payment service provider, commercial bank, or nonbank. In particular, consumers see a central bank as more trustworthy because it is more experienced and more regulated, making it safer and more stable. European consumers especially prefer a CBDC to a private digital currency and want it managed by a bank or the central bank rather than a big technology company (Kantar Public 2022).

Convenience

A majority of polled consumers would prefer a CBDC for retail payments that is simple, fast, free, supported, and cash-like.

Surveyed consumers in the United States want CBDC transactions to be easy and intuitive. Many of these consumers believe that using a CBDC payment app should not require a bank account, a credit history, or extensive background identification—though in practice, these consumer preferences may not be fully met because CBDC design attributes would have to comply with laws that combat laundering money and financing terrorism. U.S. surveyed consumers also want the terms of use to be clear and unchanging, so they can easily understand what to expect from CBDC services (Gjefle and others 2021). European consumers and those in developing economies agree (Kantar Public 2022; Narula, Swartz, and Frizzo-Barker 2023).

Worldwide, surveyed consumers also want a CBDC that will expeditiously execute transactions. In particular, they want transactions to be 10 seconds or less, especially in peer-to-peer transactions and remittances (Gjefle and others 2021; Narula, Swartz, and Frizzo-Barker 2023). Some Europeans note a desire for instant peer-to-peer payments, especially across different payment platforms (Kantar Public 2022).

To switch from current payment methods, both U.S. and non-U.S. survey respondents generally want the incentive of free or low-cost CBDC transactions. This view was particularly prevalent among respondents who reported being financially underserved or using cash generally (Gjefle and others 2021; Narula, Swartz, and Frizzo-Barker 2023). Respondents to the Netherlands survey indicated they would be attracted to a payment method that had low fees or was free (Bijlsma and others 2021).

Potential U.S. CBDC users want a supported CBDC with a high degree of customer service, especially in handling transaction disputes. In particular, they want customer support to include the option to speak to a real person (Gjefle and others 2021). Respondents in other countries have a similar preference: in Europe, consumers want a “robust customer support system” with a face-to-face component (Kantar Public 2022).

In addition, U.S. survey respondents desire for a CBDC to be cash-like. To meet this bar, they would like a CBDC to be free to use and widely accepted, to be settled quickly, to allow for person-to-person payments, to provide for a degree of anonymity, and to be usable offline or without an internet connection (OMFIF 2020).[2] U.S. consumers would also like a CBDC to have expedited ways to move between cash and digital currency (Gjefle and others 2021). Consumers in developing economies and Europe agree (Kantar Public 2022; Narula, Swartz, and Frizzo-Barker 2023; Abramova and others 2022).

Security

A majority of polled consumers would prefer a CBDC to be secure. In particular, they want their money to be safe, their personal data protected, and their transactions to have a degree of privacy.

Survey respondents in both the United States and Europe indicated that they would prefer to have an account with a bank or other third party to custody their funds and guard against a loss of their money if they lose their credentials. Few of these consumers want to custody their own funds.

Most of the U.S. survey respondents also want a CBDC to keep their personal data protected from hackers or unapproved use. For many respondents, this meant maintaining a CBDC account, preferably with a bank (Gjefle and others 2021). Dutch consumers show a similar preference: respondents indicated that "protection of the money in your account" was more important than "privacy protection" (Bijlsma and others 2021).

Although security is the most desired feature for a digital currency, potential U.S. CBDC users may be less concerned about transaction privacy. When asked to rank the top desired features for a digital money, U.S. consumers responded with security as the most-desired feature, followed by ease of use, privacy, and cost (Gjefle and others 2021). Respondents indicated that they were generally comfortable with government access to their transactional and financial data if it was clear what information the government could access and under what circumstances (Gjefle and others 2021). European consumers responded similarly, indicating that they do not have particular concerns about an issuer of a payment instrument knowing their transaction details and that a "medium level of financial privacy" is acceptable. At this level of privacy, non-detailed transaction data is stored by the bank and only shared with the government as legally required (Kantar Public 2022).[3]

Summary

Based on survey data, a CBDC designed to appeal to U.S. consumers would have the following attributes:

- A robust infrastructure that allows consumers to see their balance and track their transactions in real time.
- An app without fees that is simple to use, with extensive customer support and full offline capabilities.
- Strong data protection that provides a "medium level of privacy" in transactions.

Overall, a majority of polled consumers prefer a CBDC to be dependable, secure, and convenient—a reliable and secure digital payment method that is simple, fast, and makes their lives easier.

Endnotes

[1] The Federal Reserve Board has stated in its white paper that it supports an intermediated model U.S. CBDC where "commercial banks and regulated nonbank financial service providers" would provide consumers with a CBDC through accounts or digital wallets (Board of Governors of the Federal Reserve System 2022).

[2] Compared with cash, a CBDC could provide for a lower level of anonymity because CBDC design attributes would have to comply with regulations meant to counter money laundering and the financing of terrorism.

[3] In the study, potential users were given three options for financial privacy: high, medium, and low. All involved tradeoffs between usability and the bank's tracking of transactions. The high privacy option provided for minimal transaction recording, but online shopping was not allowed and a spending cap of €150 was imposed. The medium privacy option had no spending cap and transactions could be online or in shops. Non-detailed transaction data would be stored by the bank and only shared with the government as legally required. The low privacy option was much like the medium level, but the bank would store detailed transaction data, which the user could access, and the bank could use the data for marketing and advertising purposes. Of the three, the medium privacy option was the most popular among respondents (Kantar Public 2022).

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