ECB DIGITAL EURO USER RESEARCH

EUROPEAN PUBLIC AFFAIRS

Ipsos

1. INTRODUCTION AND EXECUTIVE SUMMARY

Digitalisation is reshaping the way payments are made, with cash usage steadily declining as online shopping and digital transactions continue to grow. In response to this shift, the Eurosystem is working on the development of the digital euro, a digital form of cash that would be issued by the European Central Bank (ECB).

The digital euro would be accessible to everyone across the euro area, enabling seamless transactions in physical and online shops, as well as between individuals. It would be designed to coexist with physical cash and the digital payment methods already in use, providing consumers with greater flexibility and choice in how they pay.

On 1 November 2023, the Eurosystem launched a two-year preparation phase aimed at laying the groundwork for the potential issuance of a digital euro. This phase focused on experimentation and on collecting insights to enhance both the technical design and user experience of the digital euro for consumers and merchants alike. The Eurosystem strives to design a product that will meet the needs and expectations of all end-users, and research plays a pivotal role in gathering the insights to inform the design and value proposition of a digital euro.

As part of this two-year preparation phase, the ECB commissioned Ipsos to conduct research in the 20 euro area countries to understand the needs, preferences and challenges of diverse user groups. Two research strands were conducted in each country in December 2024:

- **Focus groups with small merchants**, defined as sole traders or employees in businesses with 1–7 employees with a physical and/or online shop, representing a segment often underserved by complex payment infrastructures.

  Two online focus groups were conducted among four **small merchants** in each of the 20 euro area countries to gather insights on the payment methods they accepted, the challenges they faced with existing payment methods, their expectations for potential new payment methods and their perception of the digital euro.

- **Interviews with vulnerable consumers**, defined based on the vulnerability dimensions set by the European Commission[1]. These dimensions included having limited ability to maximise one's wellbeing; having difficulty obtaining or assimilating information; being less able to buy, choose or access suitable products; and being more susceptible to certain marketing practices.

  Eight in-depth interviews were conducted with **vulnerable consumers** in each of the 20 euro area countries. Half of the interviews were conducted online, while the other half were conducted in person[2]. The interviews examined payment preferences, drivers of adoption, and desired features in future payment methods.

[1] *Consumer vulnerability across key markets in the European Union:* https://commission.europa.eu/publications/understanding-consumer-vulnerability-eus-key-markets_en.
This definition takes into account that consumer vulnerability is situational, meaning that a consumer can be vulnerable in one situation but not in others, and that some consumers may be more vulnerable than others.

[2] In Latvia and Slovenia, five interviews were conducted online, and three were conducted face-to-face. Conversely, in Slovakia, three interviews were conducted online and five were conducted face-to-face. This was to accommodate the preferences of the vulnerable consumers concerned.

This research reflects the Eurosystem's commitment to continuous engagement with the public and with key stakeholders. It provides valuable insights that will contribute to the development of a digital euro that is inclusive, accessible and tailored to the diverse needs of its end-users. The findings emphasised the digital euro's potential for acceptance among small merchants and vulnerable consumers. Overall, participants reacted positively to the features that are to be included as part of a digital euro and generally expressed confidence in the introduction of a new payment method by established banks and/or public bodies, such as National Central Banks and the ECB.

A summary of the key findings from each research strand can be found in the two boxes below.

KEY FINDINGS: FOCUS GROUPS WITH SMALL MERCHANTS

1. **The main drivers for acceptance of a payment method by small merchants were customer preference and low fees.** Administrative efficiency and security were also important.
2. **Offering a wide range of payment methods gave small merchants a sense of security** by providing alternative options to complete transactions in the event of payment disruption – e.g., lack of internet connectivity.
3. **Overall, small merchants preferred having a single payment service provider to reduce administrative burden.** They aimed to choose the provider best suited to their business needs.
4. **Small merchants' current main pain points in relation to payment methods accepted included high costs, technical malfunction (notably connectivity issues), and administrative burden (e.g. due to the extended period between a customer's purchase and the funds becoming available to the merchant).**

   The number of issues encountered varied depending on business model (physical and/or online shop), payment methods accepted (cash and/or digital), transaction volume and/or amount (high, medium, low), and number of payment service providers used.
5. **Small merchants were generally cautiously optimistic about the digital euro.** They particularly appreciated features like offline functionality, instant settlement, and its potential to serve as a tool for negotiating better terms with their payment service providers, possibly reducing fees.
6. **The role of the ECB as the issuer of the digital euro increased small merchants' confidence in the payment method,** as it was seen as a guarantee of high security levels for payment transactions.

KEY FINDINGS: INTERVIEWS WITH VULNERABLE CONSUMERS

1. **Vulnerable consumers reported using a mix of payment methods,** primarily debit/credit cards, cash and mobile wallets.
2. **Across all methods, vulnerable consumers valued security, ease of use, reliability and control, as well as acceptance across the euro area, real-time monitoring of spending and a straightforward, intuitive user experience.**
3. **Key pain points mentioned included concerns about theft, loss and fraud;** availability and acceptance, like occasional refusal of cash or card payments by merchants; usability issues, like small font size on mobile banking apps; and technical and system failures. Older participants, and those with lower digital skills, also reported issues with budget tracking and with setting up and managing digital payment methods.
4. **Vulnerable consumers identified specific features that would make a new payment method appealing**. **These included universal acceptance across merchants, Europe-wide coverage, and offline functionality in case of low connectivity.** Onboarding support, especially in-person assistance at banks and easy-to-follow written instructions, was seen as critical for encouraging adoption.
5. **Vulnerable consumers' ideal payment method was characterised by enhanced security, speed, simplicity and intuitiveness**. Older and less tech-savvy participants also mentioned an absence of fees and an ease of monitoring their spending.
6. **While they were generally satisfied with their current payment methods, vulnerable consumers expressed interest in new payment methods**, especially if these addressed some of their pain points by including the aforementioned features. Social influence, especially recommendations from friends and family, played a significant role in willingness to adopt new payment methods.
7. **In terms of provider preferences for new payment methods**, **European payment service providers were favoured** for their perceived higher data security and consumer protection standards. Vulnerable consumers preferred an established bank or public body due to their perceived trustworthiness.

2. FOCUS GROUPS WITH SMALL MERCHANTS

2.1. Overview and methodology

The research was conducted through online focus groups in all 20 euro area countries. Two 45-minute groups were conducted in each country among four participants, resulting in a total of 40 focus groups and 162[3] participants overall. One group comprised merchants with a physical shop only or both physical and online shops. Whenever possible, the second group comprised small merchants with an online shop only.

Within each focus group, participants were recruited to ensure diverse representation in terms of business size; business sector; payment methods currently accepted; volume of transactions processed on an average day; and region[4].

The research with small merchants sought to understand:

- Current payment practices
- Reasons for accepting specific payment methods
- Preference in payment service provider
- Payment devices and platforms used
- The perceived importance of some aspects of the digital euro

At the start of each focus group, small merchants were asked about their current payment practices, including the payment methods they accepted, reasons behind acceptance, and whether they had a preference for certain payment methods over others. They were also asked about their payment service provider(s) and about their payment acceptance devices/platforms.

Afterwards, small merchants were asked about their impressions and opinions on the digital euro. They were shown some statements describing a few aspects of the digital euro and were asked how important each statement was for them. Small merchants who only had a physical shop and those who had both physical and online shops were presented with a visual illustration of how the offline functionality of the digital euro might work. They were then asked a series of questions to gather their thoughts on it.

At the end of the focus group, all small merchants were asked about their perception of the digital euro, in terms of benefits and concerns.

[3] A few groups consisted of five participants instead of four: one group in Estonia, one in Greece, and both groups in Ireland. Conversely, due to last-minute cancellations, two groups comprised only three participants - one in Latvia and one in Lithuania.

[4] In addition to the above quota, individuals who had *fairly* or *very* negative views towards the EU were excluded from participating to minimise the risk of the interviews becoming side-tracked by expressions of anti-EU sentiment.

2.2. Current payment practices

Small merchants accepted a wide range of payment methods, often adapting to customer preferences to maximise chances of sales and increase customer satisfaction. Offering a wide range of payment methods also gave them a sense of security, as it meant that transactions could still go through if one payment method did not work. However, not all payment methods were equally accepted:

- **Debit and credit cards were the most commonly accepted payment methods, both among merchants with physical and/or online shops**. Small merchants tended to accept debit cards more than credit cards since the latter often had higher transaction fees.
- **Cash was commonly accepted by small merchants with a physical shop.** Some of these merchants actually mentioned that they did not accept any payment method other than cash for low-value transactions, to avoid paying commission fees. While significantly less common, cash was also very occasionally accepted by small merchants with an online shop for payment-upon-delivery.
- **Digital wallets and mobile payment apps were also commonly accepted, especially among small merchants with an online shop.** However, within the latter group, small merchants with few daily transactions were less likely to accept these payment methods, as the setup effort did not seem worth the benefit gained.
- **Bank transfers were also accepted, although generally less frequently than the aforementioned payment methods**. Bank transfers tended to be more accepted by small merchants with an online shop, especially for high-value transactions or when dealing with older customers. Other small merchants found bank transfers too cumbersome for regular, low-value transactions.
- **In some instances, small merchants reported accepting additional forms of payment,** often tailored to local preferences or specific business needs such as buy-now-pay-later services, QR codes, voucher-based payments, cheques, pay-by-link and peer-to peer transfers through banking apps.

When asked about transaction value thresholds for digital payments, small merchants said that they observed a shift in payment behaviour in recent years, towards greater use of digital payments, including for low-value purchases. This shift impacted the minimum limit they held on low-value digital transactions. They believed this shift was linked to two main reasons:

- Having a minimum threshold for digital payments could hurt sales, as more customers now use cards or mobile payments even for low-value purchases.
- Payment service providers have lowered their fees for low-value transactions, reducing the impact that these transactions would have on small merchants' profit.

Many small merchants subsequently reported accepting digital payments without imposing a minimum limit.

2.3. Reasons for accepting specific payment methods

When discussing the main reasons for accepting specific payment methods, small merchants mentioned customer preference, security, administrative efficiency and costs.

- **Customer preference was seen as crucial to maximise chances of sales.** Small merchants adapted their payment methods to cater to a diverse customer base, ranging from younger, digitally savvy individuals to older, more traditional customers. Prioritising customer preference often took precedence, even when it resulted in higher costs for the merchants. This adaptability was closely linked to their drive to remain competitive in the market. Accepting certain payment methods, particularly widely adopted local payment methods and newer ones such as digital wallets and payment apps, was seen as essential to attract and retain customers, especially younger ones.
- **Security and protection for both small merchants and customers played a significant role in merchants' payment method selection.** Well-known payment platforms were seen as crucial for serving a global customer base and facilitating efficient payments and refunds.
- **Various administrative factors were also considered,** with small merchants prioritising improved operational efficiency, cash flow management, and the simplification of their business processes. Key considerations included the speed of fund transfer and refund processing, the impact on cashflow, and the ease of transaction reconciliation. Transparency and ease of payment tracking were also highly valued, especially for merchants with an online shop.
- **Efforts were also made to keep transaction costs and fees as low as possible to safeguard profit margins.** However, while minimising these expenses was seen as important, small merchants also considered the overall cost-benefit of each payment method before deciding whether to accept it or not. For example, card payments were generally seen as necessary despite transaction fees, although debit cards were more widely accepted than credit cards due to their lower fees.

2.4. Choosing a payment service provider

Participants were then asked about their payment service provider(s). Overall, small merchants preferred using a single payment service provider, especially those with a physical shop. However, some small merchants reported using multiple providers, especially those with an online shop or those with both physical and online shops.

For small merchants using multiple providers, one typically acted as their main provider, managing most of their transactions. This main provider formed the foundation of their payment infrastructure, while additional providers were used to meet specific needs or to offer alternative payment options. The decision to use multiple providers was largely driven by practical considerations, such as meeting diverse customer needs, and by a desire for enhanced reliability and operational flexibility.

Regardless of the number of providers used, small merchants often chose a traditional bank as their main provider, seeing them as trustworthy and reliable. For many small merchants,

relying on a bank also helped streamline operations, especially for those aiming to keep their provider setup simple.

Several considerations impacted small merchants' choice of payment service provider(s), and generally more than one reason was mentioned:

- Costs
- Reputation and trustworthiness
- Reliability and customer service
- User-friendly interfaces and straightforward implementation processes
- Speed of payment

The relative significance of the aforementioned reasons in the decision-making process depended on small merchants' business model and needs.

Once payment service providers were selected, small merchants reported facing a "take-it-or-leave-it" situation with regard to fee models. They felt they had minimal ability to negotiate, especially if they had a low-value and/or low-volume of daily transactions. Generally, small merchants struggled identifying benefits or drawbacks of their fee models. They generally thought that fee models were unavoidable and had therefore not considered specific advantages or disadvantages.

2.5. Predominant methods of payment acceptance

Small merchants were also asked about the devices and payment gateways they used. Payment acceptance medium varied by type of operation.

For small merchants with a physical shop only, traditional point-of-sale (POS) terminals were the primary payment acceptance device. These small merchants generally received POS terminals from their primary payment service provider, typically their bank. These terminals were generally valued for their reliability and the ease with which they integrated with existing banking systems. Mobile-based payment solutions were also mentioned, especially by small merchants with low and medium sales volumes.

Small merchants with an online shop tended to rely on established, globally available payment platforms, although other region- or country-specific solutions also appeared to be gaining popularity. These platforms provided security for both merchants and customers, being equipped with security features that protected data and reduced the risk of fraud.

Regardless of the predominant method of payment acceptance, most small merchants had access to various devices and payment platforms, ensuring transaction completion even during system failures, while also offering customers flexible payment options. While this agility protected merchants and facilitated sales, it also had the added benefit of maximising flexibility for customers, providing them with a range of ways to pay.

Small merchants generally expressed satisfaction with their payment devices and platforms, noting that the systems were usually reliable and efficient. Small merchants who were pleased with their devices and platforms mentioned low fees, prompt issue resolution, and responsive customer service as key contributors to their positive experiences.

2.6. Challenges encountered

Small merchants faced various challenges with the payment methods they accepted. These differed by method (cash and/or digital), business model (physical and/or online shop), transaction volume and/or amount (high, medium, low), and number of payment service providers used.

Among the small merchants who faced challenges, common themes emerged:

- **High costs:** The cost of accepting payments was the main challenge mentioned by small merchants, especially those linked to digital methods like cards, digital wallets and payment apps. One aspect related to transaction costs, especially fees for card payments. This was particularly mentioned by small merchants with frequent low-value transactions. Another aspect related to rental and maintenance costs for the devices, and fees related to payment platforms (i.e. set-up, maintenance, ad-hoc).
- **Technical malfunction:** Network unreliability primarily affected small merchants with a physical shop. Connectivity issues were especially prominent among merchants who either worked in, or travelled to rural areas, where network access tended to be more challenging. Disruptions due to connectivity issues resulted in lost sales when customers did not have cash on them, or when the merchant could not offer an alternative (digital) payment method. This could also result in customer dissatisfaction, and to the customer not returning to the store. Issues linked to system maintenance were also mentioned for POS terminals and payment platforms.
- **Administrative burden:** For digital payment methods, delays in payment were the most commonly mentioned challenge. There was a consensus that the extended period between a customer's purchase and the funds becoming available to the merchant created cash flow issues and complicated financial management, particularly for card payments and transfers. In some cases, small merchants also experienced unique challenges with the technical integration of the device with their existing systems.

2.7. Perceptions of the digital euro

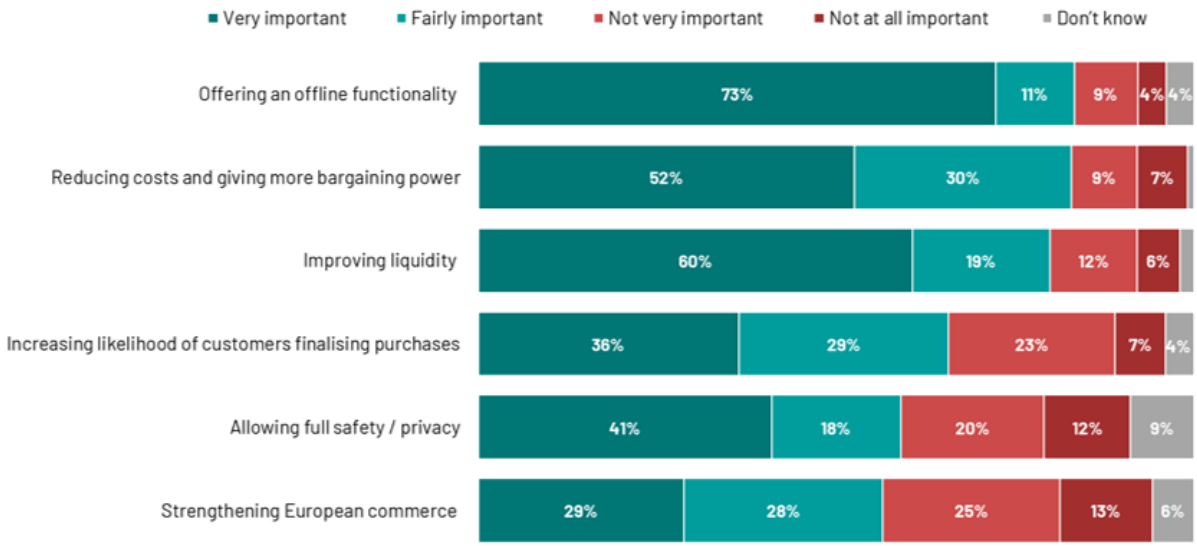
The last part of the focus group centred on the digital euro, which was introduced to small merchants as a ‘new payment method’. The following information was given to participants:

The digital euro would offer European merchants a cheaper and easy-to-use payment solution accepted everywhere across the euro area. It would complement current payment options, increasing competition in the payment sector, and consequently reducing fees.

Small merchants were then presented with six statements on various aspects of the digital euro and asked to rate the importance of each statement on a scale, ranging from very important to not at all important. One statement, about the offline functionality of the digital euro, was only presented to small merchants with a physical shop since the functionality would be more relevant to them than to their counterparts.

Converting answers into percentages[5], as shown in Figure 1 below, more than half of the small merchants rated each statement as *very* or *fairly* important. In relative terms, the highest level of importance was attached to the statements concerning offline functionality; reducing costs/increasing their bargaining power; and improving liquidity. Lower majorities attached importance to finalising purchase, safety/privacy and European commerce.

Figure 1: Perceived importance of various aspects of the digital euro[6,7]



Sample size: All participants in the 20 euro area countries, except for the statement about the offline functionality, which was asked only to merchants with a physical shop

Q: How important is each of the following aspect of the digital euro for you?

It is important to note that small merchants generally had very little prior knowledge and understanding of the digital euro, outside of what was discussed during the focus group. The conversation aimed to get small merchants' views on specific aspects of the digital euro, rather than introducing it to them, and insights in the following sections should be interpreted with this in mind.

2.7.1. Statement 1

The digital euro could provide a safety net for merchants by offering an offline functionality that would allow payments to take place even during a network or power outage.

A large majority (84%) of small merchants with a physical shop rated this statement as *very* important (73%) or *fairly* important (11%), considering the offline functionality as a vital feature for ensuring business continuity. These small merchants appreciated the offline functionality

[5] Please note that the sample size is extremely low since the research was conducted via qualitative focus groups, and that results should therefore be seen as indicative only. Please also note that results are not representative of small merchants at euro area and/or country level.

[6] The statements have been shortened to fit on the chart in a readable way.

[7] Sample size between 160 and 162 participants for all statements except the one about the offline functionality (102 participants). The difference in sample size for the other statements was linked to connectivity issues, with some participants having dropped from the conversation by this point.

as it addressed a significant operational pain point they had, namely disruptions caused by internet connectivity issues or system maintenance. The functionality was deemed particularly valuable for small merchants operating in rural areas, where such disruptions were more frequent. These small merchants therefore viewed the offline functionality as a critical safety net to prevent lost sales and to maintain operations during technical difficulties, without the need for additional devices and/or payment methods.

The small minority of small merchants (13%) who viewed the offline functionality as unimportant mentioned not facing connectivity issues; already relying on alternative solutions to overcome these issues; concerns over security and fraud; and scepticism regarding its technical implementation and reliability.

This variation in perspectives underscored how the perceived importance of the offline functionality was shaped by merchants' unique circumstances and operational contexts.

2.7.2. Statement 2

The digital euro will reduce costs for merchants and give them more bargaining power by increasing competition in the payment sector.

A large majority (82%) of small merchants rated this statement as *very* (52%) or *fairly* (30%) important. These small merchants viewed the digital euro as a potential tool for negotiating better terms with their payment service providers and having their fees reduced. They also saw the digital euro as a means to ensure there was broader competition among providers.

Small merchants who rated the statement as unimportant (16%) often did not think that their current costs were too high; expressed a preference for existing payment methods; and were unsure about the potential savings the digital euro could offer them.

2.7.3. Statement 3

The digital euro will improve liquidity for merchants by enabling them to receive payments instantly without delays or additional costs, unlike many current payment options.

Over three-quarters of participants (79%) rated this statement as *very* (60%) or *fairly* (19%) important. These small merchants recognised the potential benefits of instant settlement, especially with regards to lowering costs, both in terms of fees but also overhead costs coming from managing cashflow and checking that payments were received, which could result in a higher profit margin and time saved. Small merchants who mentioned having cashflow issues or current delays in payments from their provider were more likely to rate the statement as important.

The small minority (18%) who rated the statement as unimportant were content with the efficiency and speed of their current payment methods. They viewed the statement with scepticism, raising questions about potential hidden fees, the reliability of the system, and how much banks would be willing to cooperate.

2.7.4. Statement 4

The digital euro will increase the likelihood of customers finalising their purchases, contributing to higher conversion rates for merchants, by being available to all consumers throughout the whole euro area, for payments in stores and online.

Nearly two thirds (65%) of small merchants rated this statement as important, with 36% considering it *very* important and 29% *fairly* important. Small merchants with an online shop generally found the statement more important than those with a physical shop only, seeing greater potential benefits for themselves, particularly in the ability to streamline payment processes for international customers and lower transaction barriers, thereby reducing friction in cross-border transactions.

The minority of small merchants who rated the statement as unimportant (30%) tended to have a physical shop only. They saw less added value in the digital euro as a means to increase conversion rates, feeling that customers who came into their store were often locals already committed to making a purchase, should they need something and/or see something that caught their eye.

No matter the rating they gave, many small merchants had questions about the practical implementation of the digital euro and how it would compare with existing payment methods. They emphasised the importance of ensuring broad accessibility, highlighting the risk of primarily appealing to tech-savvy customers.

2.7.5. Statement 5

The digital euro will allow merchants to pursue their business in full safety and privacy, by using state-of-the-art technology that pseudonymises data, ensuring that personal data is not visible, in full compliance with EU privacy regulations.

A smaller majority of small merchants (59%) rated this statement as important, with 41% rating it as *very* important, and 18% rating it as *fairly* important. Small merchants who rated the statement as important regarded strict security measures as a fundamental requirement rather than merely a distinguishing feature of the digital euro. They stressed that safety threats were becoming increasingly prevalent, making robust security indispensable.

The minority who rated the statement as unimportant (32%) often worried that enhanced privacy features would hinder their ability to conduct business effectively, for instance by limiting access to important transaction data. This was specifically mentioned by participants with an online shop. Some small merchants expressed concerns about the digital euro's perceived anonymity, which they thought could increase the risk of money laundering, fraud, and other illegal activities[8].

[8] It is important to note that while the digital euro would offer high privacy levels, it would not be anonymous. Furthermore, banks would continue to be in charge of the know-your-customer (KYC) and anti-money laundering (AML) checks which they already perform on a regular basis, ensuring that the ECB will not be able to connect any transaction with a private individual. In the case of offline payments, transaction details would be known only to the payer and the payee.

2.7.6. Statement 6

The digital euro will strengthen European commerce by making Europe's payment systems more resilient, more innovative, and fully built with European technology and infrastructure.

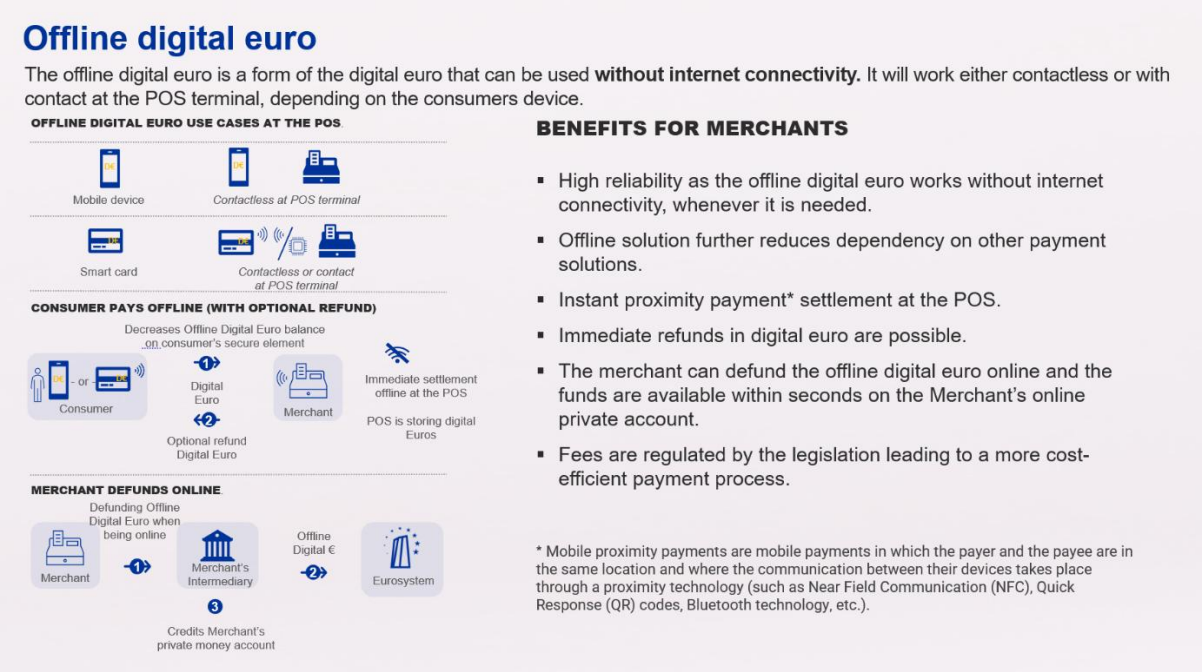
A small majority of small merchants (57%) found the statement *very* (29%) or *fairly* (28%) important. These small merchants highlighted the importance of European technological sovereignty and unified commerce, even if they did not see direct personal benefits. They viewed it as a vital measure to enhance Europe's competitiveness on a global scale. Small merchants with an online shop only generally found the statement more important than those with a physical shop only, or than those with both online and physical shops. Small merchants with an online shop emphasised the importance of resilient payment systems to prevent disruptions during high-traffic periods. They believed that if the digital euro was designed to be more robust, they would face fewer outages, ensuring smoother transactions and an improved customer experience. Additionally, they appreciated the potential for increased resilience and innovation to result in better tools and services, such as more flexible payment options and easier integration with existing systems. Small merchants engaged in cross-border trade within the EU also saw significant potential in the digital euro to make cross-border transactions smoother and more efficient.

Conversely, small merchants who rated the statement as unimportant (38%) often found it too vague or irrelevant to them. They questioned its implementation and had doubts about Europe's ability to achieve technological competitiveness.

2.8. Delving into the offline functionality

Small merchants with a physical shop were asked questions around the offline functionality of the digital euro. To help them answer these questions, they were first shown a visual (Figure 2) which explained how the offline functionality would work in practice, and the benefits it could have.

Figure 2: Visual example of how the offline digital euro would work



After reading the information provided on the visual, small merchants with a physical shop were asked about the differences they perceived between an offline digital euro payment and a card or mobile payment, as well as whether they believed this functionality could benefit their business.

The ability to process payments without internet connectivity emerged as the key distinguishing feature of the offline digital euro. However, the perceived value of this feature varied based on how frequently merchants experienced connectivity issues.

In some countries, small merchants described the offline digital euro as a modern equivalent of cash, enabling customers to make payments even during connectivity disruptions or terminal maintenance. Additionally, small merchants across various countries indicated that the offline digital euro would be particularly advantageous to them if it provided cost savings (i.e. reduced or no transaction fees and lower or eliminated POS terminal costs) and time savings (i.e. immediate fund transfers, streamlined administrative processes and faster refunds).

These perceived benefits generally resulted in the offline functionality being received with a high level of enthusiasm, although many merchants were curious about how it would work in practice.

2.9. Concluding thoughts on the digital euro

At the end of each focus group, small merchants were asked what they saw as the benefits of the digital euro. Their limited knowledge and understanding of the digital euro meant they commonly found it difficult to discuss benefits. Among those who voiced their opinion, the main benefits mentioned were generally linked to challenges they encountered with their current payment methods. As such, **reduced transaction costs was the most commonly mentioned benefit.** Small merchants felt that the reduced costs and increased bargaining power could result in both higher profits for their business, and potentially also lower prices for customers, depending on the scale of the transaction cost saving.

The offline functionality was also commonly mentioned by small merchants with a physical shop for its potential to decrease reliance on the internet and to increase payment efficiency, therefore reducing administrative burden and helping with cashflow.

The opportunity to promote greater European market integration and enhance the euro's strength as a currency was also mentioned, seen as a means of promoting competitiveness across the region. In certain countries, small merchants also believed that the digital euro could help attract customers from other countries within the euro area, helping them expand their customer base and grow their business.

The backing of the ECB was also spontaneously mentioned as a benefit. This was all the more significant since the digital euro was not introduced as being issued by the ECB during the focus groups[9]. The digital euro having the ECB's "seal of approval" increased their trust in the product, especially with regards to the security of payments. These small merchants also thought that the ECB issuing the digital euro would positively impact uptake among the general public, although most merchants remained wary about their customers' openness to new means of payment.

Despite a general sense of excitement, small merchants raised questions about how the digital euro would function in practice and what implications it might have for their business. This led them to raise further questions especially on privacy/security, and technical implementation (i.e. how the digital euro would be integrated within existing systems and platforms; how reliable those systems and platforms would be; whether platforms and devices could be made compatible in all countries of the euro area; and whether they would be forced to have another provider).

Some small merchants also emphasised the importance of ensuring that the offline digital euro worked on all smartphones. They felt this inclusivity was essential to enable all customers to use it.

[9] It should be noted that, while this was not mentioned during the focus groups, participants were informed during the recruitment and in the study privacy notice that the ECB was commissioning the research.

3. INTERVIEWS WITH VULNERABLE CONSUMERS

3.1. Overview and methodology

The research was conducted through a series of in-depth interviews across all 20 euro area countries. In each country, eight interviews were carried out with vulnerable consumers aged 18 and over, resulting in a total of 160 interviews. Each interview lasted approximately 40 minutes. To ensure an inclusive approach, half of the interviews in each country were conducted online, whilst the other half were conducted in person[10].

To further ensure a relevant and diverse sample, quotas were set for each country based on gender, age, education, region, internet usage, and payment methods[11].

The research aimed to understand:

- Vulnerable consumers' current payment practices
- What they valued in a payment method
- Their pain points, struggles and friction with current payment methods
- Their needs and expectations around future payment methods and services

3.2. Current payment practices

Vulnerable consumers were asked about the payment methods they currently used, and what they specifically liked and disliked about those methods. They often reported using several payment methods, each serving a specific purpose.

- **Debit and credit cards were the predominant payment method for daily transactions, with debit cards being significantly more popular than credit cards.** Vulnerable consumers viewed cards as a convenient and secure way to make their payments. Regarding physical card usage, they showed a mixed preference for contactless and chip-and-PIN payments. Some preferred entering a PIN for the perceived security benefits, while others favoured contactless payments for their ease and speed.
- **Cash remained an important payment method for certain settings and purchases.** Vulnerable consumers often preferred to use cash when making small purchases or when shopping in more traditional venues, such as markets or small shops. They also highlighted the necessity of cash in situations where cards were not accepted. Furthermore, some noted that paying in cash helped them to keep control of their finances.

[10] In Latvia and Slovenia, five interviews were conducted online, and three were conducted face-to-face. Conversely, in Slovakia, three interviews were conducted online and five were conducted face-to-face. This was to accommodate the preferences of the vulnerable consumers concerned.

[11] In addition to the above quota, people who had *fairly* or *very* negative views towards the EU were excluded from participating to minimise the risk of the interviews becoming side-tracked by expressions of anti-EU sentiment.

- **Usage of digital wallets and mobile payment apps varied significantly across demographic groups**, with younger vulnerable consumers and those with higher digital literacy being the most likely to use these methods. In some countries, participants also reported using local payments apps or wallets for various forms of payments.
- **General banking apps were commonly used for checking balances, monitoring spending, or making transfers, rather than for daily transactions.** In certain situations where other payment methods were not accepted, a minority of vulnerable consumers made payments directly from their apps. As in the case of other mobile payment apps and digital wallets, younger and more digitally literate participants expressed greater comfort with general banking apps than other groups.
- **Bank transfers were regularly used for recurring or larger-scale payments.** Bank transfers were mentioned primarily in the context of bill payments, person-to-person transfers, larger purchases, or regular payments like rent and utilities. While most participants said they preferred to conduct transfers via mobile or online banking, the oldest demographic tended to prefer in-person visits to their bank branch.
- **In a few countries, participants mentioned using prepaid credit cards. These were sometimes used to minimise the risk of fraud or debt** and sometimes to provide adolescents with a means to make online purchases. Other methods mentioned included setting up standing orders at the bank for known, recurring payments, or paying bills through postal orders.

3.3. What vulnerable consumers value in a payment method

When asked what features they valued the most in payment methods, vulnerable consumers mentioned:

- **Speed, ease of use and convenience.** Participants tended to value payment methods that worked quickly and were simple to use, especially those that streamlined transactions by minimising time spent at checkouts. They also highly valued the convenience of readily available payment methods, like cards or mobile wallets, that decreased the need to carry cash or a physical wallet and allowed for spontaneity or agility in making purchases.
- **Security features.** This included the ability to block lost or stolen cards, PIN protection for larger transactions, fraud protection from banks, and general payment notifications**.** Vulnerable consumers valued feeling that they were protected from malicious activities and deliberately opted for payment methods and providers that they considered trustworthy or reputable in this regard. Banking apps and online banking were commonly seen as the most secure options for important payments such as rent or utility bills. This trust stemmed from the regulatory oversight that banks were subject to and the transparency offered by their apps, which displayed detailed records of each transaction.
- **Efficient and real-time spending monitoring.** Vulnerable consumers who preferred cash commonly did so because they could see how much money they had in their

wallet at any given moment. This group was mainly composed of individuals aged 50 or older and those less digitally engaged. Participants who preferred digital payment methods often appreciated receiving immediate transaction notifications and spending summaries. These participants tended to have a medium or high level of education.

- **Wide acceptance, both in terms of geographical coverage and different payment contexts**. Vulnerable consumers appreciated being able to use their preferred payment method anywhere, anytime – whether on domestic or international trips, online or offline, or for large or small transactions. This was especially important for urban residents and those who travelled frequently.
    - Cash was seen as the closest approximation of a truly universally accepted form of payment, though not always the most accessible.
    - Debit cards and bank transfers were perceived as an extension of cash and often seen as the most accessible form of payment, though not necessarily always accepted by merchants.
- **Integration of payment methods with modern technology, such as banking apps and digital wallets.** Vulnerable consumers appreciated features like instant notifications, the ability to link multiple cards, and seamless integration with other financial tools. Several participants appreciated budgeting tools connected to their cards or banking apps; apps that could connect directly with their bank accounts; and/or messaging platforms that simplified peer-to-peer transfers. These capabilities were particularly important for younger users (aged 18-49) and those with higher levels of digital literacy.
- **Established routines and familiarity with specific methods.** Some vulnerable consumers reported that they valued or trusted methods simply because they were accustomed to them and felt these met their needs. This was especially the case among some of the older participants (above the age of 65), who were less inclined to changing their established payment habits than younger, more digitally literate, participants.

3.4. Pain points and barriers

Vulnerable consumers identified pain points and barriers in payment methods that closely mirrored the qualities they valued most in their preferred methods. Whereas they enjoyed the simplicity, security, accessibility, familiarity of their trusted payment methods, barriers to trying new methods included security and safety concerns; availability and acceptance; digital literacy or system complexity; technical and system failures; spending control and tracking challenges; and fees/charges.

- **Security and safety concerns: Vulnerable consumers across all countries raised fears regarding theft, loss, or fraud, occasionally with reference to past personal experiences of such incidents**. This fear applied to all payment methods, with each raising specific security concerns.
    - With cash, they worried about physical theft or loss with no recourse for recovery.

- With cards and other digital payment methods they worried about fraud, unauthorised transactions and, to a lesser extent, data theft.
- Contactless payments were seen as particularly risky because of the ability to make small transactions without PIN verification and the potential for card skimming, cloning and scraping.

Though security anxieties were a common theme, they were especially pronounced among females and older age groups (65+), who expressed greater fear of being targeted for theft.

- **Availability and acceptance:** Vulnerable consumers also mentioned perceived – and actual – barriers related to the availability and acceptance of different payment methods.
  - Cash users noted that accessing banknotes had become more burdensome, expressing frustration at having to travel further to retrieve cash or at incurring withdrawal fees when using other banks' ATMs.
  - Card users expressed frustration at some businesses' reluctance to accept card payments and complained about having to sometimes use cash even if they did not want to.
  - General banking app users raised a small number of complaints about user interface design, particularly small font sizes that caused readability issues, and perceived complex navigational systems.

  Vulnerable consumers also mentioned cross-border barriers. Some participants had experienced difficulties using, or had been entirely unable to use, their preferred payment methods when travelling in another country, or when trying to make global transfers.

  For some older participants and people living in more rural areas, digital payment methods pushed access boundaries even within their own borders, by requiring internet connection and 'smart' devices that they did not always have.

- **Digital literacy or system complexity: While most vulnerable consumers used digital payments, some of them – particularly those who were older or had lower levels of digital literacy – said that setting up and managing digital payment systems could be overwhelming.** Specific issues mentioned related to the need for manual entry of details/figures (e.g. when transferring money), app installation/setup, multi-step authentication processes, as well as a general fear of something going wrong. System updates appeared to intensify these challenges, making it harder for vulnerable consumers to keep pace with the evolution of what for them was already confusing technology. Many older participants explained that they tended to rely on younger family members for support when making digital payments. Others said that they simply avoided some forms of digital payments (especially apps and wallets) altogether.

  At the same time, **some vulnerable consumers who were more comfortable with technology expressed concerns about the potential for human error with some digital payment methods**. In particular, they mentioned how easy it was to type an

incorrect account number when making bank transfers in the absence of a QR code or similar automated mechanisms. Some even recounted specific occasions when they themselves had made such an error.

- **Technical and system failures: Threats and experiences of operational failures caused fear and frustration in users of various payment methods**. With respect to contactless card transactions or payments via apps or mobile wallets, vulnerable consumers feared connectivity issues, system outages, POS terminal malfunctions, declined transactions and delays in transaction visibility. For chip-and-PIN card payments, technical glitches, worn-out cards, or network problems were mentioned as potential challenges. Participants noted that these issues were particularly stressful in public settings like at shop payment counters, where they had the potential to create embarrassment and inconvenience. Less digitally literate users expressed the most anxiety about technical failures, whereas the more digitally engaged or highly educated appeared more resilient to such challenges, typically having alternative payment methods at the ready.
- **Spending control and tracking challenges: Some vulnerable consumers felt that electronic or digital payment methods were not as intuitive and transparent as cash since they gave them less immediate visibility on their spending and account balances.** Concerns about overspending led many participants to avoid credit cards, as they made it easier to defer payments. Payment-tracking concerns were more pronounced in older users and those with lower digital financial engagement than among other groups.
- **Fees and charges: Vulnerable consumers across several countries mentioned that fees associated with credit cards were an irritating drawback**. Annual fees required simply to maintain a credit card were unpopular, as were occasional foreign transaction charges and other surcharges. These fees and charges reinforced participants' pre-existing preferences for debit cards over credit cards.

3.5. Openness to new payment methods

Vulnerable consumers were asked about their general openness to new payment methods and the extent to which specific factors might influence their likelihood of adopting a new method.

Participants generally felt that existing payment methods met their needs and/or could not imagine better alternatives. **Despite this, in most countries at least half of vulnerable consumers were still willing to try a new payment method** and seemed to wonder not "Why?", but "Why not?" when presented with the prospect. Younger, more tech-savvy participants tended to be more curious about what new methods might bring, while older and less digitally literate participants were sometimes less open to change. Current digital wallet or apps users also showed more interest in learning about new payment methods compared to non-users.

Four broad attitudes were apparent in terms of vulnerable consumers' openness towards new payment methods, ranging from optimistic curiosity to reluctance, with varying degrees of openness in between:

- **Optimistic curiosity**: A minority of vulnerable consumers felt no reservations at all about trying new payment methods, whether due to a general open-mindedness, a desire to stay up to date with technological trends, or because they hoped to benefit from improved features.
- **Conditional openness**: Other vulnerable consumers said they would consider trying a new payment method only if it had clear benefits over existing methods. Advanced security features were seen as particularly enticing in this regard, as were possibilities of lower fees, improved convenience (especially in terms of ease of use and real-time transfers), or some form of financial incentive, such as loyalty rewards. Others in this group said they would try a new payment method primarily to avoid feeling left out. In essence, they thought that if social and behavioural norms around payment methods shifted, they would feel compelled to follow suit.
- **Cautious curiosity**: Some vulnerable consumers expressed interest in new payment methods but suggested they would take a 'wait-and-see' approach. These participants did not see themselves as early adopters but said they might be convinced to explore new methods if others did so first and experienced demonstrable benefits as a result.
- **Reluctance**: This attitude – more common among older participants and those with lower digital literacy – was shaped by familiarity with existing methods and a sense of trust, reliability and adequacy. Some participants assumed that new payment methods would rely heavily on mobile technology, which they viewed as less intuitive or secure than other means of payment.

When asked how aware they felt of new payment methods, most vulnerable consumers across all countries said they knew little. While younger participants sometimes showed slightly more familiarity with emerging methods, they still admitted to not feeling fully up to speed. The only participants who did know about more cutting-edge payment technologies tended to cite cryptocurrency, payment via QR codes or biometric identification.

Across the countries, vulnerable consumers who felt they had some awareness of payment innovations said they mainly gained this knowledge passively and informally, via friends and family or media exposure. None of them had proactively sought out this information themselves.

Reflecting this limited awareness, vulnerable consumers generally reported limited uptake of new payment methods in the last two years. On average, only two to three participants per country said they had tried a new way to pay. Many of them had adopted well-established technologies that were just new to them personally, rather than trying a more cutting-edge payment method. For instance, many participants referenced trying contactless or mobile payments for the first time, and others mentioned experimenting with regional payment methods. Only one participant had personally tried an innovative payment method beyond payment apps and digital wallets.

3.6. Expectations towards future payment methods

Vulnerable consumers were asked what their 'ideal' payment method would look like. They were then probed on the extent to which specific factors might influence their likelihood of adopting a new payment method.

Initially, many of the participants, especially older ones, found it challenging to come up with any concrete suggestions as to what their ideal payment method would look like. This was sometimes because they found the question too abstract in nature, but more often because they could not envisage how a future payment method could differ to, or improve on, what was already available.

Despite such comments, many other vulnerable consumers spontaneously identified desirable characteristics of an ideal payment method, namely:

- **Security:** This was seen as fundamental across all countries, with participants specifically emphasising the importance of protection against fraud and unauthorised access.
- **Speed, simplicity and user-friendliness:** Participants consistently emphasised the need for a quick, straightforward, intuitive payment solution that required minimal effort to install or use. This theme was particularly strong among older participants and those with lower digital literacy.
- **Integration and universal acceptance:** Many participants expressed a desire for a payment method that integrated or synced well with existing financial tools and services. Generally, participants favoured a solution that would be accepted in different countries and payment contexts, including for both online and offline payments.
- **Cost and financial incentives:** The absence of fees emerged as another crucial factor.
- **Monitoring and retaining control over their spending:** Participants again mentioned the importance of their transactions being immediately visible on their account, of being able to set spending limits, and of having access to other financial management tools.
- **Round-the-clock user support**: Across the countries, vulnerable consumers were unanimous that their ideal payment method would come with 24/7 support to facilitate speedy problem resolution, particularly in emergency situations like lost cards, or suspicious or failed transactions. Some participants, most of whom were older, also spontaneously mentioned the need for support with onboarding to a new payment method.
- **Universal acceptance:** Vulnerable consumers were also unanimous about the fact that new payment methods should be offered by all merchant types, from large retailers to small local shops, as well as both online and offline. Most also expected Europe-wide acceptance, with many favouring global coverage. This reflected a desire for convenience when travelling, but also to avoid commission and exchange fees.

3.6.1. Views on the providers of new payment methods

Most vulnerable consumers expressed a strong belief (or assumption) that a new payment method should be offered by an established bank or financial institution. This belief stemmed partly from a general perception of banks as trustworthy institutions with financial expertise, with a proven history of providing financial services and products. More personal factors were also at play, with vulnerable consumers frequently citing their existing relationships with, and trust in, their own banks.

At the same time, participants in more than half of the countries spontaneously suggested that the provider could also be a public sector entity. National Central Banks and the ECB were the main public sector entities mentioned, with the participants variously describing these as more trustworthy, accountable, safer, or more secure than some private sector entities. This trust was grounded in a belief that public institutions prioritised citizens' interests over profit motives.

Most participants said they would be more inclined to try a new payment method if the provider was European. Indeed, a clear hierarchy of provider locations emerged spontaneously: European providers were trusted most, followed by US providers, with Asian providers trusted least.

The higher trust in European providers stemmed in part from familiarity with EU consumer and data protection regulations (including GDPR), which were commonly seen as stronger than comparable frameworks operating in other countries. The oldest group of participants (65+) and those with a high or medium level of education were particularly likely to emphasise this point.

Another reason many vulnerable consumers felt more comfortable with European providers was on the grounds of shared cultural values or geographical proximity, which they believed would facilitate the speedy resolution of any issues they might experience with a new payment system.

3.6.2. Preferred format for new payment methods

Vulnerable consumers were divided on the question of whether their ideal payment method would be card-based, phone-based or something else.

Those who favoured a **card-based solution** – mainly older participants and the less digitally engaged – often felt that cards were more secure than phone-based solutions, especially in the event of a phone being lost or stolen. Other concerns about phone-based solutions related to reliability and dependency on mobile battery life and internet connectivity.

Those who favoured a **phone-based solution** – typically, the youngest and more digitally engaged participants – emphasised convenience and the ubiquity of smartphones in daily life.

A significant number of participants across the countries favoured a **mixed-mode** payment system offering both card- and phone-based options. They felt this would provide maximum flexibility, addressing various needs and preferences.

Some of the participants went further, commenting that they "needed" both options, or were used to having both, and so would not want that to change.

3.6.3. Factors affecting likelihood of use and adoption of new payment methods

Vulnerable consumers shared a range of views on specific features that could influence their willingness to adopt new payment methods, including offline access, onboarding support, endorsements from trusted sources and fees.

- **Offline access: Participants often commented that offline access could be useful in specific situations where internet access was an issue** – such as when travelling, when in rural areas, or in emergencies. This received particular mention among those who had past experiences of being unable to make a payment due to poor connectivity or a power cut. Another potential benefit of offline access mentioned, albeit less commonly, was that it could reduce the likelihood of users being exposed to hacking and data breaches.

  At the same time, across all countries some struggled to understand how offline payments would technically work. This knowledge gap affected their ability to fully evaluate the feature's potential benefits or led them to express doubts about its practicality or security.

- **Onboarding support: While welcomed across countries, the availability of onboarding support was widely viewed as a fundamental or expected requirement rather than a motivational factor for adoption**. This perspective was advanced particularly strongly by older participants, whereas younger ones often said that they themselves would be unlikely to need support, but that it should nonetheless be there for people who were less comfortable with digital payment methods.

  Some of the older participants mentioned the importance of such support being available at local venues, such as their own bank. At the same time, a few also expressed a preference for clear, written instructions that they could retain for future reference.

- **Endorsement from trusted sources: Most vulnerable consumers also said that endorsements from trusted personal connections would significantly influence their willingness to adopt a new payment method.** Older participants commonly described how younger family members – either children or grandchildren – had been instrumental in encouraging them to start using particular payment methods. Younger participants were sometimes more inclined to say that friends, rather than family, were their main influence.

  Beyond mere endorsements, it was clear that vulnerable consumers, especially the oldest ones, valued the practical support and demonstrations that friends and family could provide, emphasising the importance of having someone to guide them through the process.

  Participants also showed some openness to endorsements from relevant experts – including academics, economists and financial or technology experts – as well as from other respected authorities, such as government representatives.

- **Fees: Overall, the possibility of lower fees did not strongly motivate vulnerable consumers to consider adopting a new payment method**. These participants believed that their current payment methods (especially debit cards and cash) were

free or had very low fees**.** Some participants did not know the fee levels associated with their current payment methods, so felt unable to evaluate how a different fee level might impact their choice of method. Still, there were other participants who said that the promise of lower fees would be a strong motivator to trying a new payment method.

3.6.4. Perceptions by vulnerable consumers on privacy

The topic of privacy rarely emerged spontaneously, either during discussions about the challenges of existing payment methods, or when brainstorming features for an ideal payment solution. When probed directly on the issue, many vulnerable consumers expressed a high level of comfort with sharing personal data for a new means of payment. This was driven by the belief that banks already held extensive personal data, which some saw as necessary for account protection and effective service delivery.

As the discussion progressed, more nuanced views also emerged:

- Some expressed more comfort sharing data with established banks and public institutions compared to private or unknown organisations.
- Some expressed varying levels of comfort when it came to sharing personal data with payment service providers. While many were comfortable sharing basic identification details, such as their name, they were less at ease with disclosing their address and date of birth; and showed an even lower level of comfort with sharing financial or credit history, tax numbers, or identification documents.

4. CONCLUSIONS

The qualitative research conducted with small merchants and vulnerable consumers across all euro area countries provided valuable insights into the payment landscape and expectations surrounding future payment methods. Specifically, these findings offered a nuanced understanding of the needs, preferences, and concerns of small merchants and vulnerable consumers.

The insights showed that the digital euro has the potential to be accepted, provided it is designed to address the needs and pain points of future users. Both small merchants and vulnerable consumers responded positively to features that are to be included as part of a digital euro and generally expressed confidence in a new payment method being introduced by trusted and established banks or public bodies, such as National Central Banks and the ECB.

The discussions revealed a common need for simplicity, affordability, and broad usability, including offline access and seamless integration into existing payment habits. Technical reliability was seen as essential to fostering trust and encouraging uptake.

When discussing the digital euro, small merchants reiterated the importance of all these aspects and generally showed openness to the idea of a digital euro. Their openness stemmed from its potential to streamline payment processes and reduce costs, by enabling them to negotiate better terms with their payment service providers, but also to provide an offline functionality, which could ensure business continuity in case of connectivity disruptions. These features could directly improve their business operations and enhance their customers' satisfaction. While they were generally receptive to the concept, they emphasised the importance of receiving clearer information about the digital euro, of setting realistic expectations and of effectively assessing how it would be integrated within their business model.

Some vulnerable consumers expressed willingness to engage with new payment methods, especially if supported with clear information and user-friendly onboarding. However, other vulnerable consumers, especially older individuals and those with limited digital skills, emphasised the importance of intuitive design and hands-on support when adopting new payment methods. Their concerns centred around fraud risks and usability barriers, which often led to avoidance or dependence on others for digital transactions.

Despite these challenges, vulnerable consumers mentioned features of an "ideal" payment method that would align with a new solution such as the digital euro, particularly if it includes features that enable them to control their finances and that make it accessible even when there is poor network connection, as well as if it is backed by an established bank or public institution. Social influence – especially guidance from family and peers – could also play a significant role in shaping willingness to explore new payment options.

Overall, the user research offered valuable insights into the needs, preferences, and challenges faced by small merchants and vulnerable consumers, and highlighted the importance of continued dialogue with diverse stakeholder groups.

As the Eurosystem continues to develop the technical foundations for the digital euro, with its issuance contingent on the adoption of the corresponding legislation[12], the insights obtained will play a crucial role in shaping its future design, ensuring the digital euro is inclusive, accessible, and suited to the diverse demands of its potential users.

[12] Draft digital euro legislation.

ANNEX: INTERPRETING THE DATA

Qualitative research aims to explore and identify themes and issues related to the subject being investigated. The assumption is that themes and issues raised by participants reflect those in the wider population(s). The *precise extent* to which they apply to those wider population(s), or specific sub-groups, cannot be quantified nor generalised beyond participants in the study (as is possible with representative survey research). The value of qualitative research rather lies in identifying the range of relevant perspectives and experiences that exist, the considerations underpinning them, the ways in which people construct meanings and understand specific issues, and the potential impact of these insights.

For the reasons outlined above, the qualitative findings reported in this document should not be treated as statistically representative of the perspectives and preferences of the populations concerned. Equally, although the report includes commentary on apparent differences in perspectives and preferences based on age-group, geography and other socio-demographic characteristics, these differences too should be seen as indicative only – that is they *might* provide indications that certain perspectives and preferences are more dominant among specific countries, age groups, or other sub-groups.