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Dimitris Georgarakos, Geoff Kenny,
Luc Laeven, Justus Meyer

Consumer attitudes towards a central bank digital currency

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Abstract: We field a series of experiments in a survey of European consumers to examine attitudes towards the introduction of a digital euro. We find that providing information via a short video explaining its key features significantly increases the immediate likelihood of adoption, although these effects largely dissipate after three months. Our findings underscore the role of effective and repeated communication for CBDC adoption. We also show that the introduction of a digital euro would lead to only limited broad portfolio reallocation. Additionally, varying holding limits between €1,000 and €10,000 does not materially affect the composition of liquid asset holdings.

JEL Classifications: E41, E58, D12, D14, G51

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Non-technical summary

In October 2023, the European Central Bank started preparations aimed at establishing the rules and infrastructure for the possible rollout of a central bank digital currency (CBDC) in the euro area. We use novel information collected in a population-representative survey of European consumers to examine their attitudes towards the possible introduction of a digital euro.

First, we investigate the effectiveness of providing information about key CBDC features in affecting consumers' willingness to adopt the digital euro. To this end, we implement a randomized controlled trial in a population-representative survey where we show a short video to respondents in the treatment group and compare their responses with those of an untreated control group. In this setup, we can identify the causal effect of exposure to this video communication on consumer attitudes towards CBDC adoption.

Second, we examine how consumers would allocate their funds across existing financial assets and the digital euro from a modest wealth shock. We fielded a randomized portfolio experiment in which respondents were assigned either to a set of standard assets or to the same assets with the digital euro added as an additional option. Respondents were also randomized to windfall amounts of €1,000, €10,000, or €50,000. This allows us to study stated substitution across asset classes. Third, we implement another survey experiment to estimate the causal effect of different holding limits on the propensity to adopt the digital euro and the amount allocated to it compared with other liquid assets. Moreover, we provide insights into the main reasons that discourage households from adopting this new form of payment, thereby identifying important communication challenges that central banks are likely to encounter.

We find evidence that consumers who are shown a short video providing concise and clear information about the key features of the digital euro report a significantly higher immediate likelihood of adopting it compared to an untreated control group. However, these effects largely dissipate after three months. In addition, when consumers are given the cost-free option to learn more about CBDC after the short video, most choose not to do so. Consumers interested in learning more about the digital euro are mainly the more financially literate and better-educated

respondents for whom information acquisition costs tend to be lower compared to their less literate and less well-educated counterparts.

Our results also highlight the significant role of habit persistence in consumers' payment preferences. We demonstrate that a substantial share of consumers report that they are unlikely to adopt the digital euro, primarily due to a strong preference for an existing payment method. These results suggest that providing information about the key practical features of the digital euro is essential for fostering broader adoption. However, for such a communication strategy to be effective, it may need to be repeated and carefully targeted at groups that are not inherently inclined to seek out information about this new payment option. Furthermore, communication efforts should take into account the strong influence of existing preferences and payment habits that consumers have developed through their routine use of current payment methods.

We also show that when presented with a positive wealth shock of €10,000, consumers tend to allocate only a small portion of this additional liquidity to the digital euro. When the digital euro is added to the available set of assets, only a minority of respondents allocate any positive amount to it, and the average unconditional portfolio share allocated to digital euro remains small compared to established asset classes. Larger windfalls do not lead to a proportional increase in the share allocated to digital euro, suggesting that respondents view it primarily as a transactional or liquidity-oriented instrument rather than as a scalable savings or investment vehicle. In addition, our findings show that holding limits within the range of €1,000 to €10,000 have relatively small effects on the composition of consumers' liquid asset portfolios. Moreover, there is virtually no bunching of the digital euro holdings at thresholds of €3,000 or more. At current levels of stated demand, moderate variation in holding limits appears unlikely to bind for most households.

1. Introduction

Several central banks are exploring the introduction of a central bank digital currency (CBDC) alongside physical money (Auer et al. 2023). These developments arise amid a fast-changing payment landscape marked by reduced usage of cash, increasing use of non-cash payments (ECB 2022 and Agarwal et al. 2024), and a rise of stablecoins and FinTech (Berg et al. 2020). In October 2023, the European Central Bank started a preparatory phase that aims to set up the relevant rules and infrastructure for the possible rollout of a retail-oriented digital euro. The introduction of a CBDC raises important questions concerning the consumer demand for CBDC (e.g., Li 2023; Nocciola and Zamora-Pérez 2024; Claessens et al. 2024) and its implications for financial disintermediation and financial stability risks (e.g., Andolfatto 2021; Agur et al. 2022; Piazzesi and Schneider 2022; Keister and Sanches 2023; Whited et al. 2023; Schilling et al. 2024).

We contribute to this growing literature on CBDCs by examining three key issues related to the introduction of a digital euro in the euro area. First, we field a novel information experiment embedded in a population-representative survey. Respondents in the treatment group watch a short video explaining the key features of the digital euro, and their subsequent responses are compared with those of an untreated control group. This Randomized Controlled Trial (RCT) design enables us to identify the causal effect of a central bank information campaign on consumers' willingness to adopt the digital euro. Second, we study how the introduction of a digital euro may affect household financial portfolios by examining how consumers would allocate a modest positive wealth shock across existing financial assets and the digital euro. We also examine the effects of the video treatment on the propensity to allocate such windfall money into the digital euro. This part of the analysis provides evidence on how households allocate incremental liquidity across traditional financial assets and the digital euro when the latter becomes available as a new asset class. Third, we examine the potential reallocation of existing liquid balances into digital euro, focusing on the role of different holding limits, which are an important design feature of the digital euro intended to mitigate the risk of financial disintermediation. To this end, we implement another survey experiment to estimate the causal effect of different holding limits on the propensity to adopt the digital euro and the amount allocated to it compared with other liquid assets. One concern regarding high holding limits is that they could encourage reallocations out of bank deposits into CBDC.

For our analysis, we use data from about 19,000 households collected in eleven euro area countries from a number of survey rounds of the Consumer Expectations Survey (CES), a nationally representative panel survey administered by the ECB. This survey, described in detail in ECB (2021) and Georgarakos and Kenny (2022), collects microdata on a monthly basis via the internet in a fully harmonized way since 2020. We use the CES to describe key features of the socio-demographic heterogeneity associated with awareness about and adoption of a digital euro in the euro area. To overcome the challenges of identification usually associated with observational studies, we field several new survey experiments in the March 2024 round of the CES. We complement this data with follow-up questions related to consumers' interest in the digital euro in the June 2024 wave of the CES.

Our starting point is a divergent pattern observed in the data over the past two years. While awareness of the digital euro increased substantially over the sample period, the initial rise in consumers' reported adoption propensity between 2022 and mid-2023 subsequently plateaued. This divergence suggests that mere awareness about CBDC may not automatically translate into consumer adoption and that there may be a role for information acquisition and effective central bank communication about CBDC. However, estimating the causal effect of a central bank information campaign on consumer demand for CBDC is empirically challenging and cannot be addressed with standard econometric methods. This is the case because the propensity to adopt the digital euro is partly determined by idiosyncratic unobserved factors and beliefs (e.g., economic sentiment, skepticism about new financial technologies) that in turn correlate with consumers' propensity to search for as well as the type of information they choose to receive about the digital euro.

We report three novel findings. First, consumers exposed to a short persuasive video about the digital euro report a significantly higher immediate likelihood of adopting this new payment instrument than those in an untreated control group. We conduct a range of robustness checks and show that these findings are not driven by survey demand effects (Haaland et al. 2023). However, the effects are short-lived and largely dissipate three months after our video experiment.¹ This suggests that effective communication to promote the digital euro may need to be not only persuasive but also repeated. In addition, when consumers are given the cost-free

¹ Such relatively short-lived effects are also a common finding in information RCTs (e.g., Coibion et al. 2024).

option to learn more about the digital euro after the short video, most choose not to do so. Consumers interested in learning more about the digital euro are mainly the more financially literate and better-educated respondents for whom information acquisition costs tend to be lower compared to their less literate and less well-educated counterparts. Our results also highlight the significant role of habit persistence in consumers' payment preferences. A substantial fraction of consumers report that they would likely not adopt the digital euro, primarily because they prefer existing payment methods.

Second, we build on recent advances in survey methodology that ask consumers to make hypothetical choices within realistic scenarios (Stantcheva 2023). When presented with a positive wealth shock of €10,000, consumers tend to allocate only a small portion of this additional liquidity to the digital euro, while their portfolio allocation across alternative, traditional liquid assets, including cash, current accounts, and savings accounts, changes only modestly on average. We also find that consumers who received the video treatment have a 13 percentage points (pp) higher propensity to allocate part of the windfall to digital euro relative to the control group. Taken together, these results suggest that communication and information may play an important role in CBDC adoption and that, in this virtual portfolio setting, the digital euro is associated with only limited reallocations across other asset classes.

Third, to assess the causal effects of different holding limits on consumers' liquid wealth allocation, we field another survey experiment in which we randomly assign different holding limits to respondents and ask them to indicate how much of their current liquid wealth they would allocate to the digital euro. This randomization helps to address concerns about reverse causality and endogeneity associated with unobserved consumer traits and beliefs, such as liquidity preferences or shopping behavior. Our findings show that holding limits between €1,000 and €10,000 are associated with relatively modest differences in the composition of consumers' liquid asset portfolios, relative to the baseline category of €3,000. Moreover, there is little evidence of bunching at thresholds of €3,000 and above, which corresponds to the holding limits frequently discussed in policy debates (e.g., Bindseil et al. 2021). Overall, the results suggest that moderate variation in holding limits is associated with relatively small differences in households' reallocations of liquid wealth into CBDC.

The introduction of CBDCs is a relatively recent development, and there are naturally very few empirical studies that use data to assess their potential implications. Most research to

date has examined the impact of CBDC on the financial system and the macroeconomy from a theoretical angle.² This theoretical literature presents mixed findings on the welfare effects of introducing CBDCs, as they may pose potential threats to financial stability. Some studies highlight the potential of disintermediation risks if a significant number of consumers exchange their bank deposits for CBDCs (e.g., Keister and Sanches 2023; Whited et al. 2023). Other studies argue that disintermediation could enhance welfare by alleviating incentive problems within commercial banks (e.g., Williamson 2022, Niepelt 2024).

Our paper contributes to a rapidly expanding body of empirical research on the potential introduction and future adoption of CBDCs. Most empirical studies rely on survey data that elicits consumer intentions and beliefs. For example, Li (2023) calibrates a structural model for Canadian consumers based on survey data on cash and bank deposit holdings, estimating that between 4% and 52% of household liquid assets could potentially shift to CBDCs. While this study highlights a substantial potential demand, it also points to considerable uncertainty, depending on the specific design features of the digital currency. Similarly, Nocciola and Zamora-Pérez (2024) use payment surveys from the euro area to assess CBDC demand and find that consumers may hesitate to adopt a newly introduced CBDC due to switching costs. They also point to a role of information dissemination in shaping CBDC adoption. Using data from the Indian CBDC pilot, Di Maggio et al. (2024) find that consumers substitute away from bank deposits when presented with the option to invest in CBDC. Bidder et al. (2024) show that especially during periods of banking stress consumers would be prone to substitute money out of banks into CBDC.

Other studies have examined consumers' intention to adopt a CBDC by directly surveying their willingness to adopt such a currency. Four studies closely related to ours are country-specific investigations focusing on Austria (Abramova et al. 2022), Germany (Bidder et al. 2024), the Netherlands (Bijlsma et al. 2023), and Slovakia (Cupak et al. 2024). These studies explore consumer intentions to adopt CBDCs and their attitudes toward different aspects

² Detailed recent reviews of this broad literature include Bindseil and Senner (2025), Chapman et al. (2023), Infante et al. (2022), Ahnert et al. (2024) and Zamora-Pérez et al. (2022). For a review of motivations for CBDC, including a geopolitical dimension, see Berg et al. (2024).

of CBDC. Taken together, these papers suggest potential for CBDC adoption in the context of retail payments.

Our paper contributes to the literature in at least three ways. First, we are the first to investigate the impact of information conveyed through central bank communication on consumers' intention to adopt a CBDC, using RCT methods to establish causality. Second, we show that adoption is associated with relatively limited reallocations across existing assets in household portfolios. Third, we study how experimentally assigned holding limits affect households' reallocations of liquid wealth into CBDC. Our findings provide evidence on household-level demand responses to alternative holding-limit scenarios. More broadly, to the best of our knowledge, this study is the first to employ RCT methods to examine CBDC adoption and one of the few economic studies to employ a video-based information treatment within a survey framework.³

The remainder of the paper is organized as follows: Section 2 outlines the survey design, focusing on the treatment selection and the experimental framework. Section 3 presents the empirical analysis, including robustness tests to ensure the integrity of the experimental design and robustness of our findings. Section 4 concludes by discussing the implications of our findings.

2. Data and experimental design

2.1 The Consumer Expectations Survey

We use micro-level data from the ECB's Consumer Expectations Survey (CES). This internet-based survey is fielded every month in the eleven largest euro area countries offering nationally representative data of the underlying populations.⁴ The CES was launched in a pilot phase in January 2020 interviewing households every month in the six largest euro area economies (Belgium, France, Germany, Italy, the Netherlands, Spain). Since January 2022, the

³ Videos have been used in RCT settings primarily in the field of medicine (e.g., El-Jawahri et al. 2010). A recent use of videos in finance has been by Schoar and Sun (2024) in the context of financial advice for retail investors.

⁴ The CES is stratified to be representative across four key dimensions: age, gender, education, and country. It also features a mixed sample approach, where a portion of respondents are recruited via random dialing to mitigate self-selection issues.

survey has been expanded to cover five additional countries (Austria, Greece, Finland, Ireland, and Portugal). The survey covers about 19,000 consumers each month and is described in detail by Georgarakos and Kenny (2022) and ECB (2021).

The flexible survey design, the very large number of observations, and its online nature make the CES especially suitable for our research purposes. The CES allows us to field survey experiments and special-purpose questions in a fully harmonized way across the euro area while also making use of rich background information on individual socio-demographic characteristics.

2.2 Survey information on the digital euro and experimental design

Information about the digital euro was collected in the CES for the first time in September 2021, two months after the ECB's announcement on 14 July 2021 to launch the investigation phase of a digital euro project. During the subsequent investigation phase, the CES elicited information about the digital euro on an ad-hoc basis to keep track of consumer awareness and the propensity to adopt this new digital form of payment. In particular, in August 2022 and June 2023 consumers were asked about their awareness and their intention to adopt a digital euro.

In this paper, apart from this earlier information we mainly use data from a special purpose module fielded in March 2024 and a follow-up survey fielded in June 2024 with the purpose of uncovering consumers' attitudes towards the digital euro. In addition, we fielded several experiments in the March special purpose module to address specific research questions.⁵

At the beginning of the March 2024 survey, we elicited awareness about the digital euro by asking respondents if they had *ever heard about it*. As we show in Section 3.3, this information allows us to shed light on the underlying mechanism regarding the portfolio allocation of funds into digital euro and other assets. Additional background information, such as socio-economic characteristics, are collected in earlier survey rounds, or the regular monthly survey in March, fielded before the special purpose module. In what follows we discuss the experimental design, while Figure 1 provides an overall illustration of our experimental setup.

⁵ See Appendix D for all related survey questions.

a. Information treatment via a video

In the first part of the survey, we aim to investigate whether information provision through central bank communication about key features of the digital euro can encourage consumers to adopt it. To this end, we fielded a randomized controlled trial, where we randomly split the entire sample into two groups. Half of the sample receives no information about the digital euro and serves as the control group. The other half of respondents receive some information about the digital euro. A novel feature of our experiment is that we use a short video to provide information to treated respondents. Recent research demonstrates the effectiveness of audiovisual communication over static mediums (e.g., text) that are typically used in survey experiments.⁶ Indeed, as we discuss below, the vast majority of respondents in the treatment group watched the entire video and found it quite engaging.

Following the information-provision stage, we further randomized respondents in the treatment group into two equally-sized subgroups (i.e., 25% of the total sample each) where the first proceeded with the rest of the survey while the second was given the option to receive additional information about the digital euro. Within this second treatment group, we examine who seeks additional information (at virtually zero cost) about the digital euro after viewing the video. This provides an indication of how much information consumers demand and which subgroups are more likely to seek it. However, since the decision to access more information is endogenous, our primary analysis of the causal effects of the video will focus on the control group and the first treatment group, which lacked this option.

The treatment video is publicly available via the ECB's webpage and the ECB YouTube channel since October 18, 2023. However, it is quite unlikely that survey participants had watched it as it had only 12,000 views by end-February 2024 (i.e., shortly prior to fielding our experiment).⁷ The video combines informational content about the digital euro's functionality with positively framed messaging emphasizing convenience, safety, speed and reliability. While the video provided factual explanations about the digital euro, it also contained some persuasive elements aimed at increasing familiarity and perceived usefulness. The video begins by explaining that the digital euro functions like physical cash, but in a digital format accessible

⁶ E.g., Ash et al. (2026) show that video treatments induce stronger expectation adjustments than text transcripts.

⁷ The video is accessible here: <https://www.youtube.com/watch?v=cNJis8BEieo>.

via smart devices. It then demonstrates practical applications, such as contactless payments using Near Field Communication (NFC) technology and seamless peer-to-peer money transfers through a wallet function. Key design features are also shown, including no transaction fees, euro area-wide availability, and both offline and online capabilities.⁸ With a concise runtime of 1:33 minutes, the video is ideal for a survey experiment, as longer videos risk not receiving attention. To maintain the survey flow, the video was fully embedded within the survey environment. Since the CES is fielded simultaneously and fully harmonized across eleven euro area countries, we used Dubverse.ai, an industry-best-practice AI-based dubbing tool, to provide local language voice-over to the original video file.⁹ Translations are sourced from YouTube subtitles to ensure consistency with publicly available information.¹⁰ We also ensure that treated respondents do not skip the video by implementing a minimum screen time for the duration of the video.

To examine who seeks more information on the digital euro, the second treatment group was offered the option to receive further details. After the video, they saw the following message on a separate screen:

If you want, you can learn more about the digital euro on the next screen. There we will show the answers to some of the most frequently asked questions about the digital euro. Would you be interested to learn more about the digital euro?

Respondents who requested more information were shown a follow-up screen with answers to ten Frequently Asked Questions regarding the digital euro's design, use, and implementation goals.¹¹ For each of the ten FAQ items, respondents were able to indicate if they had read it.

⁸ See https://www.ecb.europa.eu/euro/digital_euro/html/index.en.html.

⁹ Dubverse.ai has also been used by large corporate brands to reach audiences in their local language. See Appendix E for a detailed protocol of how the videos were processed.

¹⁰ Local language experts at the ECB reviewed both the text translations and voice-overs for accuracy. Subtitles were included to align translations with the video's pace, enhancing accessibility.

¹¹ These FAQs were displayed on one screen as unfolding items. The FAQ text shown remains available on the ECB webpage but has been updated in the meantime. The official translation to local languages from the ECB webpage was used. We obtained the version shown in February 2024 (i.e., the most recent version available before

After the information provision stage, we ask all respondents about their propensity to adopt a digital euro with reference to four main usage dimensions. In particular, respondents answered the following question on a five-point Likert scale.

The European Central Bank is considering the introduction of a digital euro. It would be a digital form of cash issued by the central bank and available to everyone in the euro area. If a digital euro is introduced, how likely is it that you would take the following decisions? I would use the digital euro:

- (i) *to make in-person day-to-day payments (e.g., in shops, including supermarkets or restaurants)*
- (ii) *for online purchases*
- (iii) *in peer-to-peer transactions (e.g., with family and friends)*
- (iv) *to receive my salary / wage in digital euro*

The ordering of these four questions was randomized to mitigate potential primacy bias. As a final step in this first part, we aim to better understand the reasons why some consumers report limited willingness to use the digital euro for day-to-day retail payments. To this end, we asked all respondents who did not indicate a positive likelihood of adopting the digital euro for day-to-day payments at the end of the survey about their reasons.¹²

Three months after the initial treatment intervention we asked all respondents of the June 2024 wave if they were aware of a digital euro and whether they had searched for any relevant information in the past 3 months. In addition, we repeat the same question asking about the intended adoption of a digital euro. The resulting panel structure allows us to assess the

survey fieldwork started, see Appendix D for the detailed question wording). The current set of FAQs was last updated in March 2026: https://www.ecb.europa.eu/euro/digital_euro/faqs/html/ecb.faq_digital_euro.en.html

¹² Respondents are asked to provide the most important reason: *Earlier you said that it would not be likely that you adopt the digital euro for day-to-day payments. Why is it not likely that you will adopt a digital euro for making in-person day-to-day payments?* And could choose from the following list: (i) *It will be less secure compared to alternative (non-cash) means of payment* (ii) *It will have lower degree of anonymity or privacy compared to alternative (non-cash) means of payment* (iii) *Shops currently not accepting alternative (non-cash) means of payment will not accept it* (iv) *It will come with additional transaction costs compared to alternative (non-cash) means of payment* (v) *I use alternative payment methods that meet my needs* (vi) *Another reason not listed above.*

persistence of the initial information experiment on consumers' awareness, subsequent information acquisition, and propensity to adopt it.

b. Portfolio allocation

Following the treatment provision stage, we invite respondents to allocate a hypothetical windfall of €10,000 across various financial assets, including the option to hold (part of) their portfolio in digital euro. As we discuss, this portfolio scenario is a modified version of a similar question asked in earlier studies to study the causal effects of macroeconomic uncertainty on investment decisions (see Coibion et al. 2024). This part of the analysis will provide insights into whether and how the introduction of the digital euro will affect consumers' portfolio allocation across different financial assets, and to what extent consumers will substitute digital euros for bank deposits and other liquid assets, which is a key open question in the literature. More specifically, we ask the following question:

Imagine that you receive a one-off windfall of €10,000 to store in cash, save or invest in financial assets. Please indicate in which of the following asset categories you would store/save/invest this amount.

- (i) Cash/physical money at home*
- (ii) Digital euro in an application or digital wallet on a mobile device*
- (iii) Current accounts or savings accounts*
- (iv) Individual stocks or shares in publicly traded companies*
- (v) Mutual funds and collective investments (incl. exchange-traded funds (ETFs))*
- (vi) Government or corporate bonds*
- (vii) Crypto-assets (e.g., Bitcoin)*
- (viii) Other financial assets (e.g., retirement assets) not included above*

As this question was asked in the post-video-treatment part of the survey our baseline analysis will be carried out using the control group only. In addition, we will compare the responses of those in the treatment group relative to the control group to study the extent to which information provision via the video about the digital euro could influence portfolio rebalancing.

c. Holding limits

A key open question in the design of a CBDC concerns the calibration of holding limits, which define the maximum balance consumers may hold in CBDC at any given time. The primary justification for imposing holding limits is to mitigate the risk of excessive disintermediation of commercial bank deposits. In the third part of the survey, we ask respondents to report ownership and amounts held in their liquid and safe financial assets, including physical cash, current accounts, and savings accounts. Subsequently, we ask respondents the following question:

Imagine that a digital euro is introduced with a holding limit of $\{L\}$ euro per person.

Taking into account the money you (your household) currently hold on your current and savings accounts and in cash, how much money would you allocate into your digital euro account?

We aim to estimate the causal impact of varying holding limits on the fraction of liquid assets that consumers would allocate to the digital euro, while controlling for their baseline amounts of safe financial assets. To this end, we randomly assign different holding limits to respondents (€1,000, €3,000, €5,000, €10,000, €50,000, €120,000), ensuring that these limits are orthogonal to both observed and unobserved consumer characteristics. Our estimates identify average household-level reallocations under experimentally assigned holding limits. They should therefore not be interpreted as direct estimates of aggregate deposit outflows, which may depend on equilibrium responses of the banking system.

Given that we fielded this experiment after the video information provision, we can also examine whether such intervention impacts the estimated relationship between the limits and the allocated funds into the digital euro. Finally, we gathered data on consumers' assessment of the digital euro's offline functionality and included questions to test for potential survey demand effects influencing our results (details on these questions are shown in Appendix D).

3. Empirical strategy and results

3.1 Knowledge and adoption

On 14 July 2021, the Governing Council of the ECB announced the launch of the investigation phase of the digital euro project. According to the CES data collected back then,

about 9% of respondents had heard about the digital euro (see Ehrmann et al. 2025).¹³ In August 2022, CES respondents were again asked to report whether they had heard about the digital euro. Only about 18% of consumers reported that they had heard about it, increasing to about 40% in March 2024 (Figure 2).

Following the question on awareness, respondents were provided, starting in 2022, with the following brief, two-sentence information:

The European Central Bank is considering the introduction of a digital euro. It would be a digital form of cash, issued by the central bank and available to everyone in the euro area.

We used this brief and rather neutral information as a common background to ask survey respondents how likely they would be to adopt the digital euro, in case it is introduced, for any of the following four specific uses: daily purchases, online payments, peer-to-peer transactions, or as a salary depository.

About 29% of respondents reported that they would adopt (for at least one of the four possible uses) this new digital payment instrument in August 2022. This fraction increased to 45% in March 2024 (Figure 3, Panel A) which signals a high demand for digital euro, although it stands below the fraction of households that own a bank or savings account (97% according to November 2024 CES). In any case, the propensity to adopt digital euro remained virtually unchanged between June 2023 and March 2024.

This ‘flattening’ in adoption rates between 2023 and 2024 contrasts sharply with the considerable increase in awareness about the digital euro recorded over the same period. There may be various factors behind these divergent patterns. For example, higher awareness is likely to reflect a higher information provision from multiple sources (media, the ECB, etc.) and/or more information acquisition on behalf of consumers, but, at the same time, the propensity to adopt may have begun to hit a ‘ceiling’ where more than 50% of consumers are not willing to embrace the new payment instrument.¹⁴ Another possibility could be that the kind of information about the digital euro consumers have received has increased their awareness. Still,

¹³ See Bindseil and Senner (2025) for an overview of key design considerations of the digital euro project.

¹⁴ Appendix Table B1 provides some suggestive evidence of a decline in the conditional correlation between having heard about the digital euro and the propensity to adopt it.

it may not be sufficient to encourage adoption among many. To isolate the effects of shifts in beliefs from innate preferences, we use an information RCT to investigate the extent to which new information conveyed through central bank communication affects the propensity to adopt this new digital form of payment. The premise is that any shift in the propensity to adopt in response to the treatment can be interpreted as a shift in beliefs because consumer beliefs tend to respond to new information and effective communication while more deeply ingrained preferences are harder to change (cf. Coibion et al. 2024).

We first estimate reduced-form regressions and show correlations between various socio-economic characteristics, awareness about the digital euro, and the propensity to adopt it (Table 1).¹⁵ We observe that awareness about the digital euro and the propensity to adopt it are negatively correlated with being a woman and positively correlated with education, while financial literacy correlates with awareness rather than with the propensity to adopt. Age, employment, and income do not correlate with awareness. Still, the likelihood of adopting is more prevalent among consumers who are younger, have more income, and are more affluent and non-employed. Taken together, these correlations suggest that there are different factors underlying the two outcomes and adoption should not be seen as an automatic outcome of awareness. To establish causality, in the next section we turn to RCT methods.

3.2 Information treatment, preferences and beliefs

The propensity to adopt the digital euro is not only determined by observed socio-economic characteristics, but also by idiosyncratic unobserved factors and beliefs that are likely time varying (e.g., skepticism about new technologies, privacy concerns, familiarity with digital payments, etc.). Such unobservables most likely correlate with consumers' choices to search for and the type of information they wish to receive about this new digital form of payment. Moreover, a consumer may choose to receive more information *because* she intends to adopt the digital euro. As a result, estimating the causal effect of information that explains the key features of the digital euro on consumers' propensity to adopt it is empirically challenging and cannot be addressed with standard econometric methods.

¹⁵ We report here results for any use of the digital euro across the different dimensions (retail, online, peer-to-peer or receiving wages). Appendix Table B2 reports the results by dimension.

Against this background, we use RCT methods to investigate whether providing information about key features of the digital euro through a relevant video can influence consumers' propensity to adopt it. To the extent it does, it will imply that information and effective communication can change people's beliefs about this new means of payment and foster adoption. However, if adoption is mainly determined by innate consumer preferences, providing information will not have much of an effect.

To be clear, our RCT does not aim to provide insights into which is the most effective way to communicate a given message to the public, as this may involve different communication channels. Instead, we test whether engaging consumers with a brief and carefully produced video that provides information about the main features of the digital euro encourages adoption. More specifically, we estimate the following probit model:

$$Prob(P_{iz}) = Prob(\alpha_{c,s} + \beta_1 T_i + \gamma_1 X_i + \varepsilon_{iz} > 0) \quad (1)$$

where P_{iz} is a binary indicator that takes the value 1 if respondent i reports that he/she will adopt the digital euro for each of the four possible uses z (i.e., daily purchases, online payments, peer-to-peer transactions, or as a salary depository) and 0 otherwise. T_i is the dummy variable of interest denoting respondents who received the video treatment (i.e., takes the value 1 if respondent i was assigned to the treatment group and 0 otherwise). β_1 is the regression coefficient of interest. $\alpha_{c,s}$ is a set of dummy variables accounting for country and sample type (probabilistically or non-probabilistically recruited) dummies.¹⁶ ε_{iz} is an error term. Apart from this parsimonious specification, we also estimate a specification that takes into account a set of additional controls X_i (such as age, education, income, financial literacy, etc.) that serve to increase the efficiency of our estimated treatment effect. Estimated average marginal treatment effects from (1) for specifications with and without household controls and per intended use are shown in Table 2.¹⁷

We find that the video treatment has sizeable and statistically significant positive effects on adoption likelihood for all four potential uses. Overall, the treatment increases the likelihood

¹⁶ Given that all randomizations are stratified by country and sample type, we include dummy variables representing the respective strata in all our baseline specifications (see Gerber and Green 2012).

¹⁷ Results from linear probability models estimated using OLS are virtually identical to those we present and are available upon request.

of adoption by 12 pp. However, the estimated effects vary across intended uses, as shown in Figure 3 (Panel B). In particular, the treatment has a smaller impact (7 pp) on the likelihood of using the digital euro to receive monthly wages, which is also the least popular use among respondents in the control group. Notably, this use case is not explicitly mentioned in the video. The positive effect therefore suggests that the treatment does more than merely persuade consumers about the featured uses; it also conveys informational content that encourages adoption beyond the specific use cases highlighted in the intervention. The second least popular use of the digital euro among non-treated consumers regards its use for person-to-person transactions. We estimate the largest treatment effect for such use, possibly because a large part of the video is devoted to this particular feature, including transfers offline.¹⁸ In contrast, the estimated treatment effect on online purchases (representing the most popular possible use) is relatively modest. Overall, these underlying differences per intended use are consistent with the video content and provide additional support to the evidence discussed previously about a high number of respondents who found the video engaging.¹⁹ Further analysis of the treated subgroup that was offered access to additional information reveals that relatively few respondents opted for it, primarily younger, male, and better-educated consumers (see Appendix C.2 and Appendix Table B10).

In view of these sizeable effects of the video, it is worth exploring further which aspects of the digital euro are most attractive to consumers, particularly in comparison to existing digital payment options. Although digital transactions have recently gained in popularity in the euro area, consumers are in general less familiar with digital payments compared to their US counterparts. According to the Study on the Payment Attitudes of Consumers in the Euro Area (SPACE) survey, in 2024 about 60% of European households already use digital payments. However, such digital payments have limitations, which may partly explain why 40% of households do not use them. First, these forms of payment generally require credit cards for

¹⁸ In Appendix C.1 and Appendix Table B3, we provide additional analysis on consumers' willingness to use digital euro for offline transactions.

¹⁹ We have run several tests to assess the experimental integrity of the video, including formal tests for potential survey demand effects influencing our results (Appendix C.3 provides details on all robustness checks). These tests support the experimental setup.

online transactions and credit cards often carry fees (Apple Pay can be used with debit cards but only for in-store purchases). Moreover, because of the high fees, many merchants either do not accept these payment methods or accept them only for purchases above a certain amount. In addition, the virtual payments landscape in Europe is quite fragmented, with many apps limited to payments within a single member state rather than across the entire euro area. Finally, there are major privacy and security concerns among European consumers regarding the use of digital forms of payment. The digital euro is supposed to address some of these limitations by being cost-free, offering a higher degree of privacy, being issued by the central bank to alleviate security concerns, and providing offline capability. The rationale for the digital euro cannot be faster payments (“fast rail”), since the Single Euro Payments Area (SEPA) already provides instant payments via bank transfers.

In August 2022, we asked respondents in our survey to rate the importance of eight features of the digital euro in order to adopt it. Specifically, respondents were asked to indicate on a scale from one (*‘not important at all’*) to five (*‘very important’*) the significance they attach to each of the following features: privacy, ease of use, security, acceptability, cross border use, digital use, speed of transaction, and transaction fees. The prevalence of responses is shown in Figure 4. Consumers consider security as the most valuable feature followed by the absence of transaction costs. Three additional features (privacy, ease of use, and acceptability by local sellers) that can foster the digital euro use for regular transactions are also seen as important. On the other hand, consumers are less interested in cross-border acceptability and whether it will be used via a digital device or plastic card.

While information provision via the video shows a sizable treatment effect encouraging the adoption of a digital euro for retail payments, not everybody would use it. The majority of consumers (~58%) in the treated group and even more in the untreated group (~69%) report that it is (very) unlikely that they would make retail payments with a digital euro, suggesting that its widespread use will not be straightforward. When respondents in the control group are asked why this is the case, the most prevalent answer by far (~43%) is that they prefer an alternative means of payment (see Figure 5).²⁰ This result suggests a high degree of habit persistence in payment preferences. While information provision and one-time communication

²⁰ A similar pattern is displayed by the treatment group, see Appendix Figure A1.

might temporarily shift beliefs and encourage adoption of CBDC for some consumers, it might not convince the majority to switch to using such a new payment method.²¹

Three months after the initial video treatment, in June 2024, we asked all CES respondents whether they were aware of the digital euro. Like in previous studies (e.g., Coibion et al. 2024), we also find evidence that the information provided seems to fade away quickly. This is consistent with the widespread evidence on memory loss and consumer inattention mentioned previously. We then estimate the effect of the video treatment on awareness three months later, shown in the Appendix Table B4 (columns 1 and 2). We observe a statistically significant impact of a 3 pp higher likelihood on awareness. Moreover, we find no effects on information acquisition over the past 3 months (Table B4, columns 3 and 4), pointing to some limits in encouraging independent consumer search for information (see Ehrmann et al. 2025).

Regarding adoption, our findings indicate that after 3 months, there is a statistically significant (at the 10 percent level) but modest positive effect of 2 pp on the propensity to use the digital euro for peer-to-peer payment (Table B4, columns 11 and 12). This positive effect on the adoption of peer-to-peer payments could be related to its prominence during the video. In turn, consumers might have updated their beliefs about a possible use for peer-to-peer payments more strongly, in line with the more substantial immediate treatment effect (17 pp). We do not find any statistically significant impact for overall adoption or intended use for day-to-day payments or receiving wages.

Overall, our findings suggest that information conveyed through central bank communication about the digital euro's core functionality can stimulate immediate interest and a greater willingness to adopt it. To maintain efficacy, however, such communication would need to be repeated, as the initial effects fade away and largely dissipate after a few months. In what follows we take a closer look at the possible role of information in adopting the digital euro as part of household portfolios.

²¹ About 85% of consumers choose reasons from the list and not the residual option “other”, which we see as evidence for having captured most of people's concerns that might hold back CBDC adoption.

3.3 Portfolio allocation across assets and CBDC

One important question linked to the introduction of CBDC is how (if at all) the availability of an unremunerated, highly liquid, and safe asset, directly issued by the central bank, other than physical cash, would affect consumers' choice to allocate their savings across various financial assets.

Following recent developments in survey methodology, we ask respondents to think of a modest wealth gain that can realistically relate to a bonus, an inter vivos transfer, or a small bequest and make hypothetical portfolio choices.²² In our baseline survey (March 2024), we ask all respondents such a portfolio allocation question where, beyond the standard asset classes (e.g., cash, bank accounts, stocks etc.), they are also given the option to allocate (at least part of) the €10,000 windfall into digital euro.

Our setup provides a way to identify new insights into the mechanisms underlying the decision to hold CBDC as part of a household portfolio. Numerous studies in household finance emphasize the role of participation costs in household decisions to hold financial assets (e.g., Mankiw and Zeldes 1991; Haliassos and Bertaut 1995; Vissing-Jorgensen 2002; see Campbell 2006, Guiso and Sodini 2013, and Badarinza, Campbell and Ramadorai 2016 for reviews). Based on this literature, consumers considering the adoption of a CBDC can be expected to face analogous frictions. A significant component of participation costs in financial markets stems from limited information about the properties and the associated benefits of holding risk-free and risky financial assets. More broadly, limited information can also reflect limited familiarity with a given asset class and/or misperceptions about its properties. In the context of a CBDC, participation costs are likely to include information costs related to CBDC properties (e.g., ease of payment, privacy and security features, etc.), lack of familiarity with digital payments, and misperceptions about its usefulness relative to alternative payment methods. When formalized in a participation model, these informational frictions may limit the demand for CBDC and need to be offset by the expected utility gains from adopting CBDC.

²² Several studies have fielded hypothetical scenarios to examine the consumption response from positive wealth shocks (e.g., Shapiro and Slemrod 2003, Jappelli and Pistaferri 2014, Christelis et al. 2019, Fuster et al. 2021). More recently, studies have used scenario portfolio questions to assess, e.g., the impact of macroeconomic uncertainty, various consumer beliefs, and inflation expectations and uncertainty on portfolio investment (e.g., Coibion et al. 2024 and Georgarakos et al. 2024).

The informational participation costs faced by households are unobserved. The existing literature typically assesses these costs by estimating the role of proxies for knowledge and the ability to efficiently acquire and process information, e.g. as captured by measures of financial literacy, on the likelihood of holding specific asset classes. This approach has been applied to both risky financial assets, such as stocks and equity funds (e.g., van Rooij et al. 2011) as well as safe assets, such as interest-bearing savings accounts (e.g., Deuflhard et al. 2019). However, a recurring empirical challenge in these studies is the endogeneity of information acquisition, which complicates the estimation of the causal effect of lack of information on holding particular financial assets.

It is important to recognize that participation costs in CBDC do not only depend on information about its properties, but they likely include widespread ignorance about the availability of CBDC as a means of payment. Prior research has highlighted how ignorance about financial instruments amplifies participation costs, leading to low adoption rates.²³ We attempt to assess the relevance of such ignorance using survey responses on CBDC awareness that we elicit prior to the video-based information treatment.

In view of the above, we estimate the following specification:

$$W_{ik} = \alpha_{c,s} + \beta_1 T_i + \gamma_1 X_i + \omega_{ik} \quad (2)$$

We first estimate (2) using a set of probit models where W_{ik} is an indicator variable that takes the value 1 if the respondent i would choose to own the respective asset category k (i.e., cash, digital euro, bank accounts, stocks, mutual funds, bonds, crypto and other assets). Like in specification (1), T_i represents the video treatment dummy, X_i a vector of demographics, $\alpha_{c,s}$ a set of country and sample type dummies, and ω_{ik} an error term.

First, we examine the effects of the video treatment on the propensity to allocate money out of a wealth gain into digital euro. The random assignment of the treatment ensures that the information provision via the video is orthogonal to observed consumer characteristics (including prior awareness) and unobserved individual traits, allowing causal inference. We find a roughly 13pp higher propensity to allocate some of the wealth shock to digital euro for

²³ For example, Guiso and Jappelli (2005) document that in the 1990s, approximately 35% of prospective investors in Italy were unaware of stocks, and nearly 50% were unaware of mutual funds, contributing to the persistently low equity market participation rates among Italian households.

consumers who received the video treatment compared to the control group (column 1, Table 3). This is a sizeable effect that underscores the importance of broadly defined information costs in consumers' decision to include CBDC in their portfolios. This estimate is also in line with the effect on the propensity to use the digital euro for either retail payments, online purchases, peer-to-peer transactions or receiving a wage / salary that we estimated in Section 3.2 and highlights the consistency of responses across different experimental settings.²⁴ The estimated treatment effect remains virtually unchanged when employing a richer specification that includes various demographic controls (column 2, Table 3). This is expected, as additional controls should improve the efficiency without affecting the consistency of the estimate of interest. Moreover, there is little evidence that the video treatment systematically alters allocations across other asset categories (see Appendix Table B5). This suggests that a focused information provision on a digital euro is unlikely to trigger investment into other assets, including digital ones such as crypto.

The video may have differential effects across people with varying awareness levels, as its content facilitates awareness about the digital euro and provides practical information regarding its use. Our setup also allows estimating such heterogeneous treatment effects. Specifically, we re-estimate our baseline specification in equation (2) by adding an interaction term between the video treatment and prior awareness about the digital euro. Results from this specification are shown in columns 3 and 4 of Table 3. The video increases the likelihood of adopting the digital euro, in line with our baseline finding. However, the video is substantially more effective for adoption among the previously unaware consumers compared to their counterparts that were already aware of the digital euro. This is not surprising, as the video facilitates both awareness and information about the digital euro's features for the previously unaware consumers. This result also provides some quantification as regards the role of

²⁴ Table B6 in the Appendix compares the average treatment effects of the video treatment and shows overall quantitatively comparable effects. Differences in digital euro adoption on the extensive margin in the control group might in part be caused by different question wording, response scale and the context of the question (use for a specific purpose, sizable wealth shock, reallocation of household's current asset holdings). A particular strength of our approach is that it allows a comparison of the treatment effects across all three design choices and yields both qualitatively and quantitatively comparable results.

awareness and additional information about the digital euro's features in consumers' propensity to adopt it.

Overall, the portfolio allocation exercise suggests that the introduction of a digital euro would be associated with relatively modest reallocations across existing asset classes, rather than large concentrated shifts away from specific forms of savings. Instead, portfolio allocations following a wealth shock indicate that it is likely to serve primarily as a transactional instrument, rather than as a vehicle for investment or savings. Furthermore, consistent with an important role for information-related participation costs, information about its core features significantly boosts consumer adoption, particularly among individuals who are unaware of the digital euro.

To obtain consistent evidence on portfolio substitution through the availability of a CBDC we fielded an additional portfolio-allocation experiment in December 2025. Respondents were randomly assigned either to a typical asset menu without a digital euro option or to an otherwise identical menu that additionally included a digital euro option. Independently, respondents were randomly assigned to a hypothetical windfall that varied by size (€1,000, €10,000, or €50,000). This way we can gain insights into the possible 'spillover' effects that the introduction of the digital euro may have on the structure of household portfolios and assess whether spillovers scale with the size of the underlying windfall.

The information collected facilitates the analysis of portfolio dynamics along two dimensions: the extensive margin, assessing the selection of asset classes, and the intensive margin, evaluating the capital allocation within those chosen classes. Figure 6 summarizes the results. About 16% of respondents allocate at least part of the windfall to the digital euro when the option is available (Panel A). For comparison, the corresponding fractions are about 49% for cash and 73% for bank accounts. In Panel B of Figure 6, we report unconditional portfolio shares. On average, respondents allocate approximately 3-4% of the windfall to digital euro, substantially below the corresponding shares allocated to bank accounts, mutual funds, or cash. Importantly, the introduction of the digital euro option is not associated with notable reductions in any individual asset category, suggesting relatively limited portfolio reallocation overall.²⁵

²⁵ These patterns are in line with those derived from a series of hypothetical portfolio experiments fielded in earlier waves. In Figure A2 in the Appendix, we show ownership rates per asset class from an assumed €10,000 windfall

Next, Table 4 formally examines how portfolio allocations vary with the randomized windfall amount among respondents offered the digital euro option.²⁶ Two findings stand out. First, although larger windfalls increase participation across most asset categories, the increase in digital euro allocations remains economically modest. Relative to a €1,000 windfall, a €10,000 windfall increases the unconditional digital euro portfolio share by only around 1 percentage point, while there appears to be virtually no additional effect of the larger €50,000 windfall. Second, larger windfalls primarily increase allocations towards riskier financial assets such as stocks and mutual funds rather than towards digital euro or bank accounts. This pattern suggests that households predominantly view the digital euro as a transactional or liquidity-oriented instrument rather than as a scalable investment or savings vehicle.

Overall, our portfolio choice experiment shows that the introduction of a digital euro would likely be associated with relatively modest wealth allocation into this new asset rather than substantial shifts away from existing forms of savings. Even when respondents are presented with larger hypothetical windfalls, allocations towards digital euro remain economically limited and do not scale proportionally with the size of the windfall. Instead, households appear to view a digital euro primarily as a transactional and liquidity-oriented instrument rather than as an investment vehicle. Furthermore, consistent with an important role for information-related participation costs, providing information about the digital euro substantially increases adoption intentions, particularly among previously unaware consumers.

3.4 Holding limits and portfolio allocation into CBDC

A key design feature of CBDCs with potential consequences for bank disintermediation concerns the calibration of holding limits. Academic evidence on this important issue is quite scarce. One exception is Bidder et al. (2024), who use a theoretical model matched with a

using responses to September 2022, December 2023 surveys (without the digital euro option) and March 2024 (with the digital euro option) which yields qualitatively similar results. The ownership rates reported in September and December waves of previous years across the various asset classes are quite comparable. When these are compared to the control group in March 2024 that was given the additional digital euro option, it is apparent that there are few but relatively small differences in some asset classes.

²⁶ See also Figure A3 in the Appendix.

sample of German consumers and find that a holding limit between €1,500 and €2,500 would increase welfare and ensure financial stability.

Deriving consistent estimates of the effect of different holding limits on the propensity to adopt and allocate money into digital euros is empirically challenging as the underlying amounts likely correlate with unobserved consumer traits and beliefs (e.g., demand for liquidity, shopping behaviour). To address these endogeneity concerns we design another survey experiment to estimate the causal effect of different holding limits on consumers' demand for the digital euro and thereby assess the likely 'spillover' effects of these limits for bank deposits and other safe and liquid financial assets in household portfolios.

More specifically, we estimate the following specification:

$$Y_i = \alpha_{c,s} + \sum_{j=1}^M \pi_j L_{ji} + \gamma_1 X_i + \varepsilon_i \quad (3)$$

where Y_i denotes: either i) an indicator variable that takes the value 1 if the respondent i would choose to hold some digital euro (i.e., the extensive margin); or ii) the fraction of liquid assets that they would allocate into the digital euro (i.e., the intensive margin). We estimate i) using a probit model, while we estimate ii) using a Tobit model with lower limit 0 to account for the fact that a significant (non-random) number of respondents would not choose to hold any digital euro. L_{ji} are dummy variables representing different holding limits j that are randomly assigned to each respondent (where j is €1,000, €5,000, €10,000, €50,000 and €120,000, with €3,000 being the omitted category). ε_i is an error term. As before, X_i consists of a set of demographics that help to improve efficiency of the treatment effects of interest (π_j) and $\alpha_{c,s}$ a set of country and sample type dummies.

Given that the random assignment of holding limits is orthogonal to the random allocation into the control and video treatment group that took place earlier in the survey, we can derive consistent estimates of π_j either using the entire sample of respondents or the control group only (for completeness we show results for both samples). We also exploit the fact that the scenario question on limits was fielded after the video-based information experiment and test whether the various limits imply a differential demand for digital euros between the control group who did not receive the video and those that did receive the information in the video.²⁷

²⁷ See Appendix Figure A4 for a comparison.

In general, consumers are willing to reallocate at least some money into digital euro. About 63% of consumers in the control group would reallocate some liquid assets (cash or bank account savings) into digital euros (Table 5, Panel A). The higher rate of usage compared to the different scenarios discussed before can be rationalized as we ask respondents in this scenario to suppose a digital euro is already introduced today. That is, we specify a (randomly assigned) holding limit and ask more broadly about the allocation of their liquid assets into the digital euro (and not their intended use per specific purpose or asset class).

Our results indicate only limited differences in the reallocation of liquid assets across holding limits at the extensive margin, as illustrated in Figure 7. We test this result more formally by using a probit model to estimate equation (3). Results in Table 5 (Panel A) suggest no significant differences between higher or lower holding limits compared to the baseline category of €3,000.

Conditional on investing some liquid wealth into digital euros, respondents allocate 16% of their liquid assets (cash or money in bank accounts) to digital euros on average (Table 5, Panel B).²⁸ The scenario responses also suggest that respondents would reallocate part of their liquid asset holdings, including cash and bank deposits, into digital euro. Next, we assess the effect of different holding limits on the (conditional) share of liquid wealth allocated into digital euro by estimating a Tobit model. We report average marginal treatment effects conditional on digital euro ownership in Table 5, Panel B (columns 5 and 6). Our results suggest that a holding limit of €1,000 leads to 1pp less liquid wealth allocated to the digital euro, compared to the baseline category. In contrast, a €5,000 limit is associated with no systematic increase in liquid wealth allocation to the digital euro relative to the baseline limit. Limits of €50,000 and €120,000 are associated with an equal rise of 1pp more liquid wealth allocated into digital euro, respectively. However, turning to those respondents who received the video treatment, we find some evidence for larger conditional effects on the share of liquid wealth allocated into digital euro. Overall, our results show that holding limits within the €1,000 to

²⁸ In Table 5, we use random draws of a uniform distribution from the ranges respondents choose (see Appendix D for the question) for each asset type to impute their total liquid asset holdings. In Appendix Table B7, we use the upper bound for each asset type instead with very similar results.

€10,000 range exert relatively small and insignificant effects on the composition of liquid asset holdings relative to the baseline limit of €3,000.²⁹

Another question concerns the extent to which different holding limits bind depending on the state of the economy and, in particular, whether a financial crisis might give rise to more substantial disintermediation and substitution into digital euro. In this context, we can also use information from the main CES questionnaire on respondents' expectations about the likelihood of a financial crisis affecting the financial system and their country's economy over the next twelve months. In particular, we re-estimate the specifications shown in Table 5 by interacting the holding limit dummies with a dummy denoting a relatively high expectation (more than 50%) of a financial crisis. Results of this specification are reported in Appendix Table B9. In general, with the exception of some small positive effects at the largest holding limits, we do not find any significant effect for the interaction terms. This suggests that idiosyncratic beliefs about a financial crisis episode are unlikely to drive the estimated effects of holding limits on liquid wealth re-allocation.

Moreover, if the digital euro is adopted despite its non-remunerated status and low holding limit, its transactional utility (from such features as universal acceptance, security, and offline accessibility) must be substantial. Since our findings indicate that holding limits are not binding for most consumers, it follows that they must value its transactional utility.

4. Conclusion

How people make payments has drastically changed in recent years and will change further in the years to come. The use of physical cash for euro area retail payments declined from 79% in 2016 to 59% in 2022 (ECB 2022). In contrast, contactless cards and smart payments are on the rise. As a response to these rapid developments and the expansion of digitalization in payment via private entities, many central banks across the world are now investigating or piloting CBDCs (BIS 2023).

²⁹ Appendix Table B8 shows the share of consumers that would allocate into digital euro more than 90% of their assigned limit at various possible thresholds. In addition, we estimate the likelihood of allocating such a high share close to the threshold as a function of the various limits and demographics and find some evidence for bunching at the lowest limit of €1,000, but no bunching at thresholds of €3,000 and above (Appendix Table B9).

Our paper uses data on consumers for the euro area, where the ECB is preparing for a possible introduction of a digital euro. In doing so, we provide new evidence that speaks to the emerging literature on the development and implementation of CBDCs around the globe.

We provide several novel findings. First, we show that providing information through central bank communication about key features of the digital euro can affect consumers' propensity to adopt it, although effects dissipate over time. Second, we find that consumers would allocate a relatively small fraction out of a positive wealth shock in digital euro, leaving reallocations to other asset classes broadly unaffected. Third, holding limits between €1,000 and €10,000 are associated with relatively small differences in households' reallocations of liquid wealth into digital euro. At currently observed levels of intended CBDC demand, moderate variation in holding limits may often be non-binding for households.

Overall, our results suggest that information provision through effective and repeated central bank communication campaigns can foster demand for the digital euro. Moreover, while the digital euro would result in some substitution away from cash and bank deposits, the overall impact on household portfolio allocation and liquid asset shares is estimated to be quite modest.

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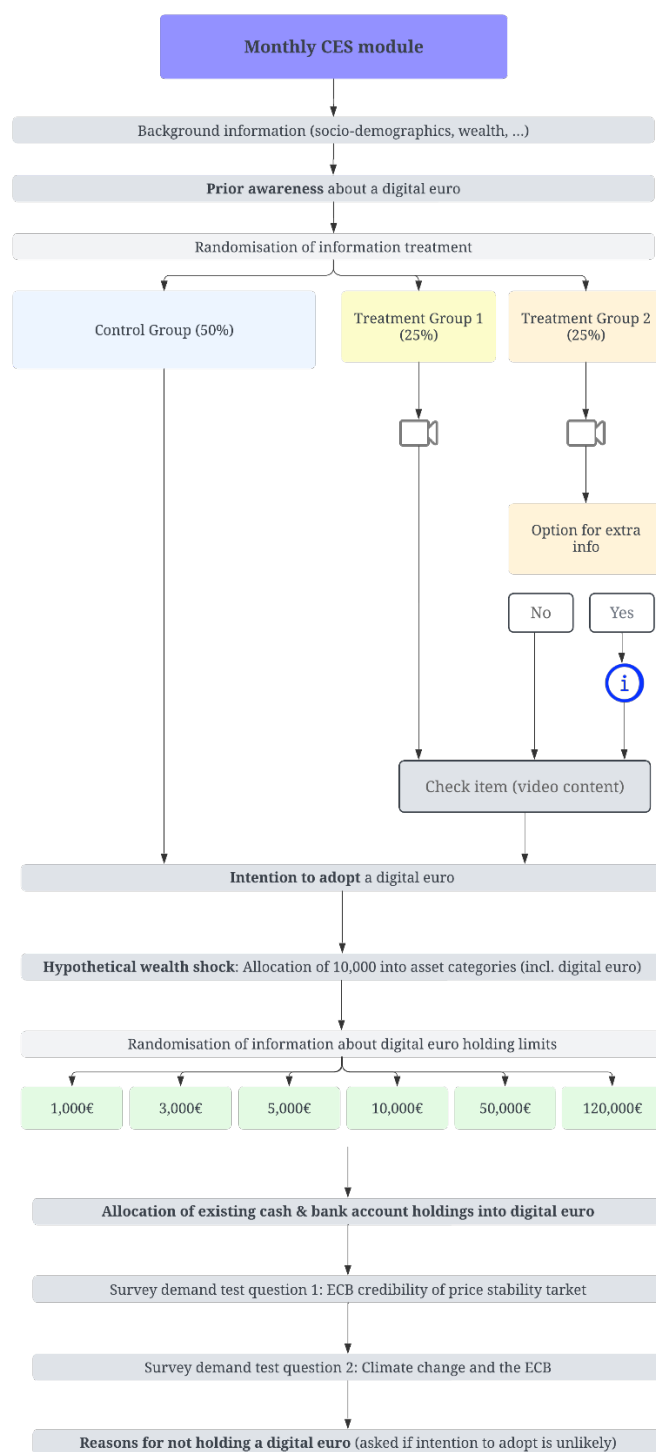
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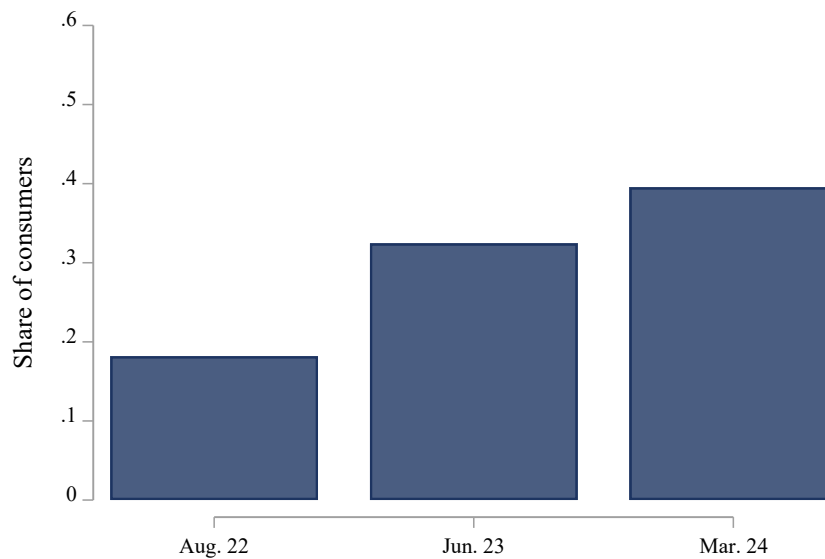
Figure 1. March 2024 question flow and experimental design



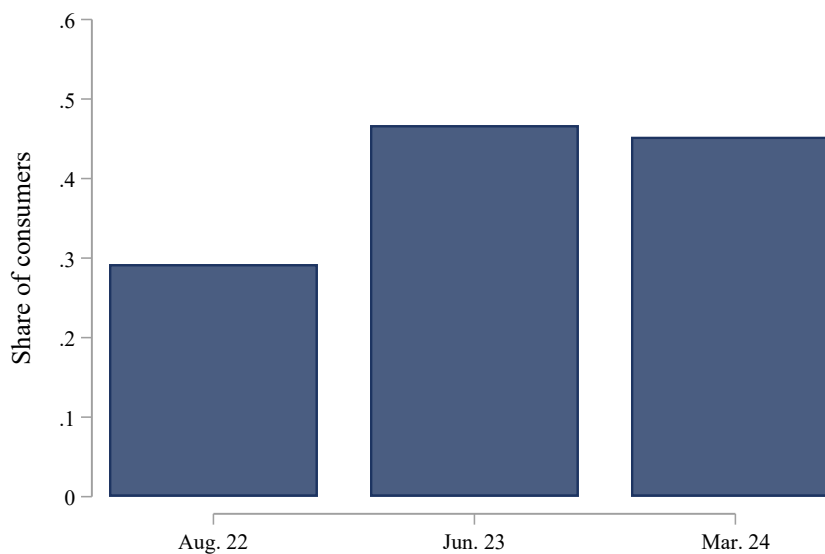
Notes: The figure shows the stylized questionnaire flow of the special purpose CES module fielded in March 2024, containing the main experiment used in this paper. See Appendix D for a detailed overview of the question wording.

Figure 2. Awareness of and propensity to adopt a digital euro

Panel A: Awareness about the digital euro

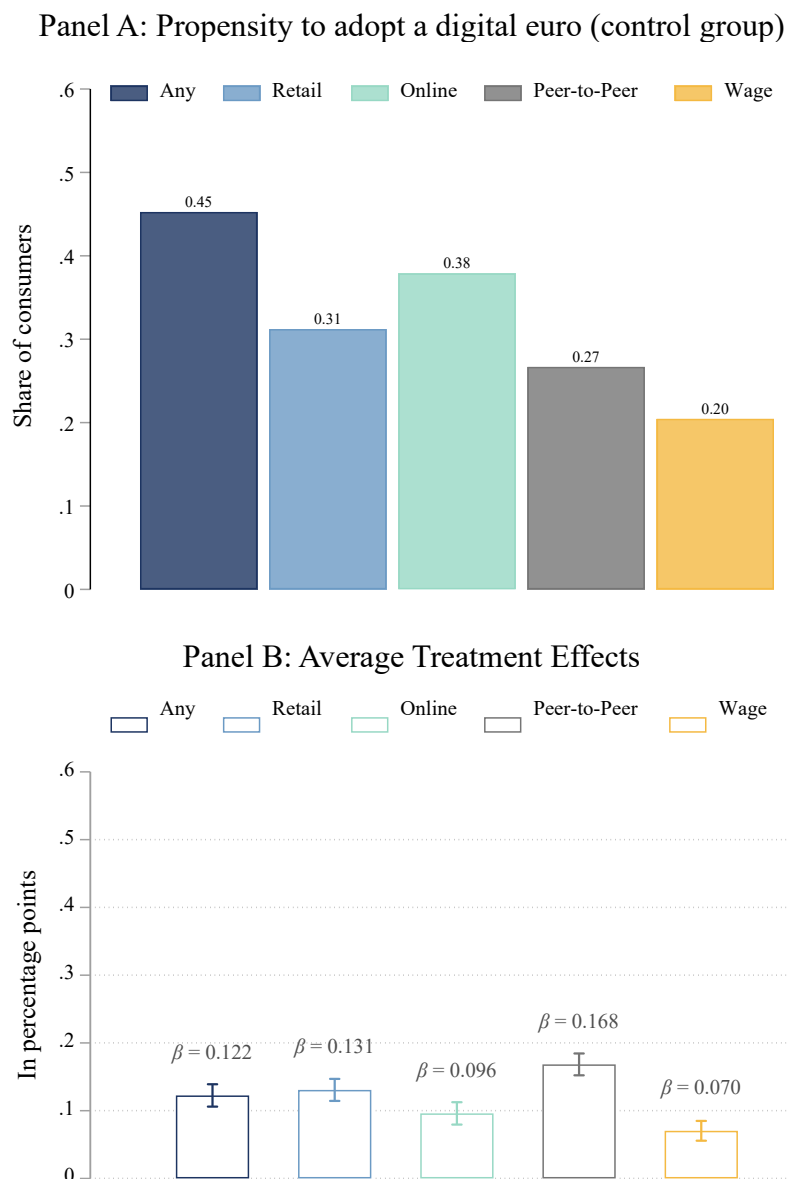


Panel B: Propensity to adopt a digital euro



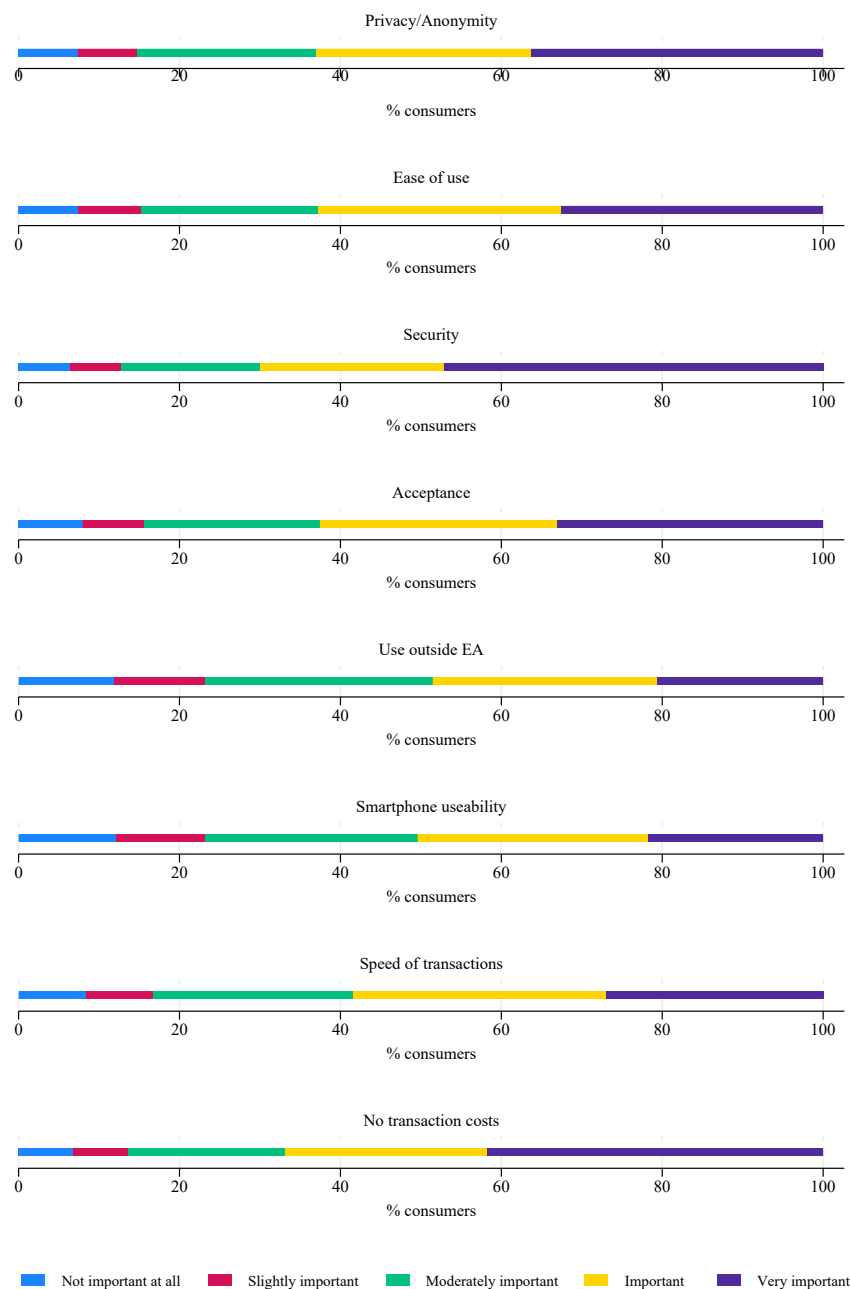
Notes: This figure shows consumers' awareness of and stated propensity to adopt a digital euro across three survey waves of the ECB Consumer Expectations Survey (CES). **Panel A** reports the share of consumers who state that they have heard about the digital euro prior to participating in the survey; consumers answering "*do not know*" are classified as not aware. **Panel B** plots the share of consumers "*likely*" or "*very likely*" to use a digital euro for at least one use case (retail payments, online payments, peer-to-peer transactions, or wages received in digital euros). Responses in Panel B are elicited after all respondents (aware or unaware) receive a short neutral text description of the digital euro, which might also make some previously unaware consumers willing to adopt it, leading to higher adoption than ex-ante awareness. In August 2022, the survey asked about a store of value instead of online and peer-to-peer transactions. Using only the overlapping categories (retail payments and receiving wages in digital euro) yields a comparable pattern. Statistics are population-weighted. Data from the March 2024 survey round includes only the control group.

Figure 3. Propensity to adopt a digital euro by use case and average treatment effects



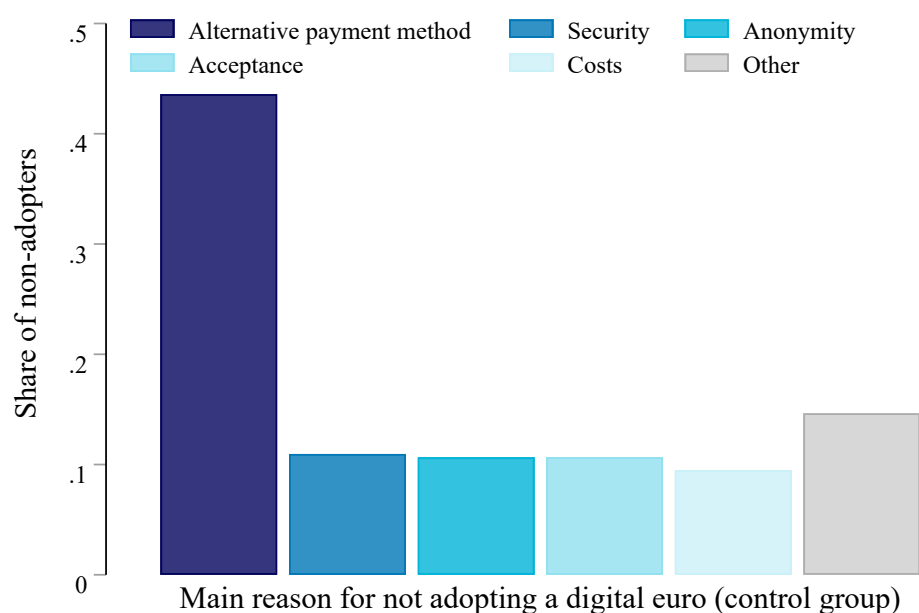
Notes: This figure reports consumers’ stated propensity to adopt a digital euro by intended use case using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). **Panel A** shows the population-weighted share of consumers in the control group who report being “*likely*” or “*very likely*” to use a digital euro for specific purposes: retail payments, online payments, peer-to-peer transactions, or receiving wages in digital euros. The category “any” indicates any use of a digital euro for at least one of these use cases. **Panel B** reports average treatment effects of the video information treatment on the propensity to adopt a digital euro, estimated separately for each use case and for the “any” indicator using probit regressions. Bars represent average marginal effects expressed in percentage points; whiskers denote 95 percent confidence intervals. All regressions include country fixed effects and sample-type dummies.

Figure 4. Consumers' perceived importance of digital euro design features



Notes: This figure shows how respondents rate the importance of CBDC design features for their willingness to adopt it, using data from the August 2022 wave of the ECB Consumer Expectations Survey (CES). Respondents were asked to assess the importance of eight features (privacy/anonymity, ease of use, security, acceptance by merchants, usability outside the euro area, usability via digital devices, speed of transactions, and transaction costs) on a five-point Likert scale ranging from “not important at all” to “very important”. Bars report the population-weighted distribution of responses for each feature. The figure shows that security and the absence of transaction costs are rated as the most important features, followed by privacy, ease of use, and merchant acceptance, while cross-border usability and the mode of access (digital device versus card) are considered less important features.

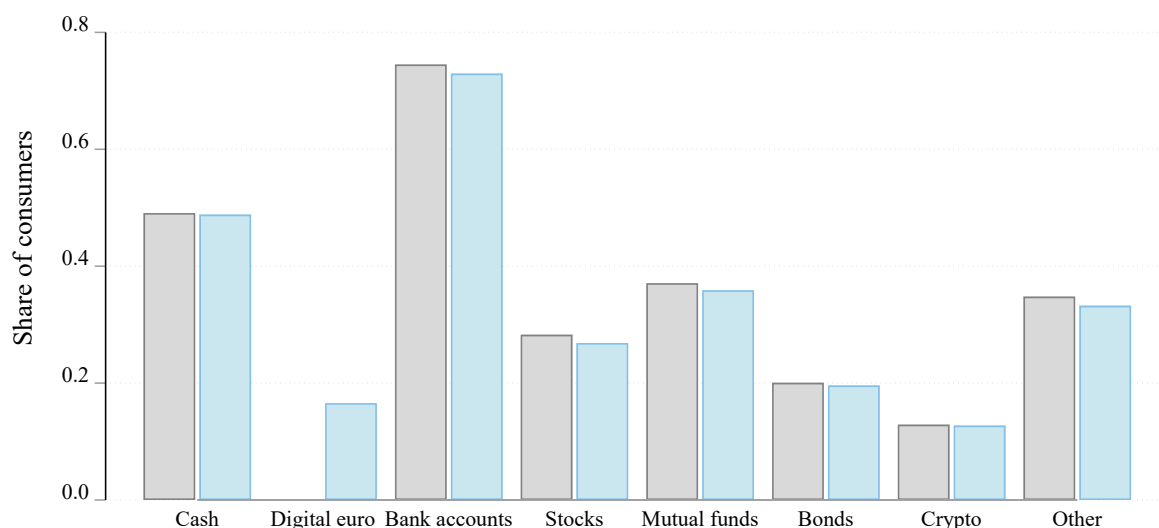
Figure 5. Reasons for not adopting a digital euro for retail payments



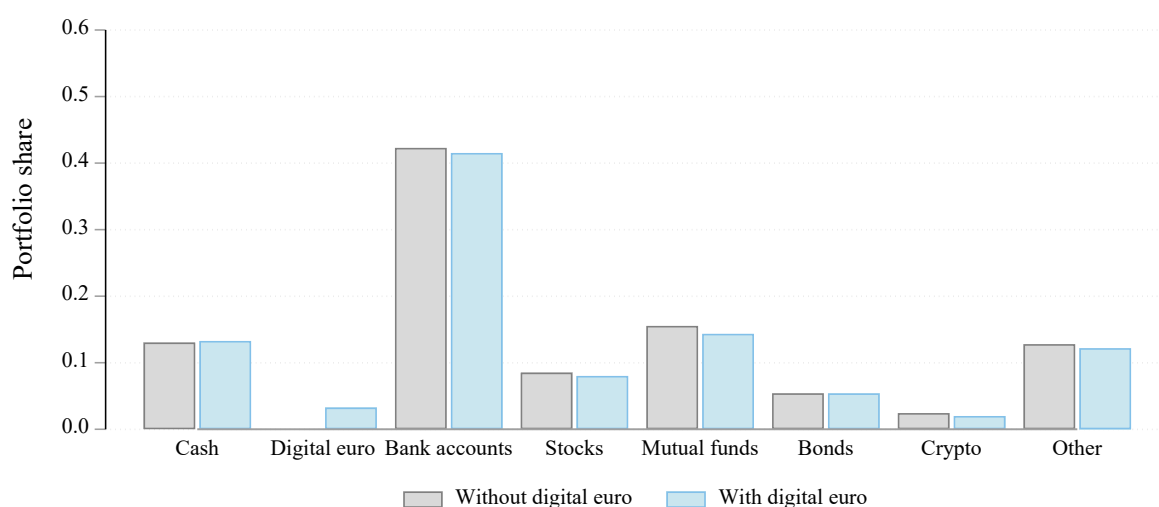
Notes: This figure shows the population-weighted share of consumers in the control group who report that they are “not likely” to adopt a digital euro for in-person day-to-day payments, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Consumers were asked, at the end of the survey, to indicate their main reason for not intending to adopt a digital euro when making in-person day-to-day payments. Response options included: concerns about security, anonymity or privacy, acceptance by merchants, transaction costs, satisfaction with existing alternative payment methods, and other reasons (see Appendix D for the full wording). Each respondent selected one option and the order of response items was randomized to mitigate order effects.

Figure 6. Portfolio allocation with and without a digital euro option

Panel A: Proportion of consumers investing in asset category

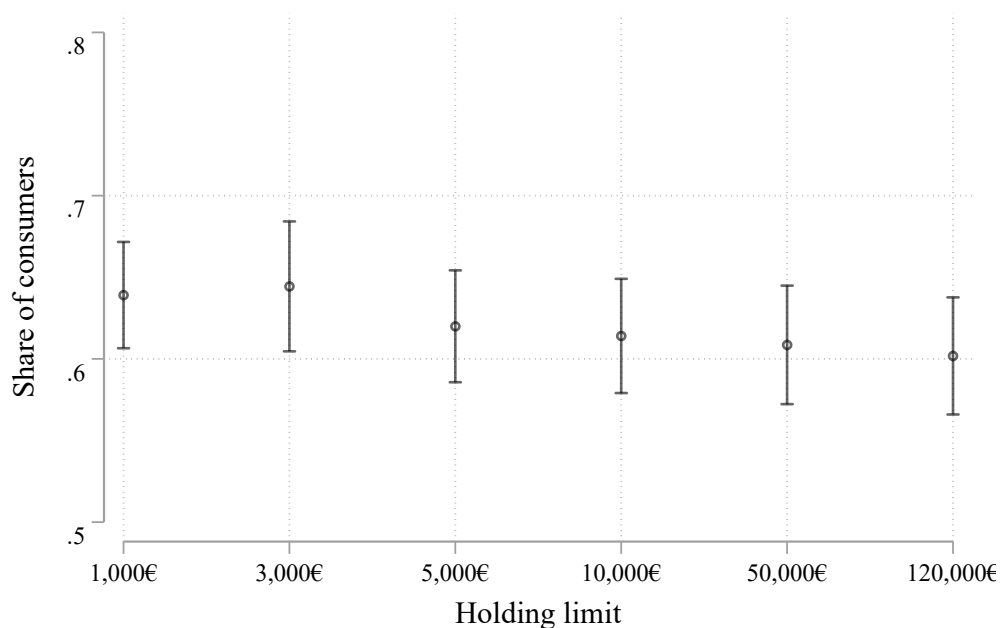


Panel B: Share of windfall allocated to asset category



Notes: This figure reports results from the December 2025 wave of the ECB Consumer Expectations Survey. Respondents were randomly assigned to one of two hypothetical portfolio-allocation tasks. In the control group, respondents (in grey) allocated a one-off windfall across standard financial asset categories. In the treatment group (in blue), respondents faced the same allocation task with a digital euro option added to the menu. The randomized windfall amount was €1,000, €10,000, or €50,000; the figure pools across these amounts. **Panel A** reports the share of consumers allocating any positive amount to each asset category. **Panel B** reports the unconditional mean share of the windfall allocated to each asset category. Voluntary retirement and pension products or whole life insurance are grouped under “Other”. The sample is restricted to respondents whose allocations sum to the randomized windfall amount. Statistics are population-weighted.

Figure 7. Holding limits and propensity to allocate liquid assets in digital euro



Notes: The figure shows the population-weighted share of consumers in the control group who indicate that they would allocate any positive amount of their liquid assets into a digital euro account (y-axis), conditional on a randomly assigned holding limit. Data are drawn from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Respondents were asked after the information experiment: “*Imagine that a digital euro is introduced with a holding limit of {L} euros per person. Taking into account the money you (your household) currently hold in cash and on current and savings accounts, how much money would you allocate to your digital euro account?*”. The holding limit {L} was randomly varied across respondents, as shown on the horizontal axis. Points shown denote mean shares of consumers; whiskers indicate 95 percent confidence intervals.

Table 1. Awareness and propensity to adopt a digital euro

Probit, average marginal effects					
	Digital euro Awareness (0/1)		Digital euro propensity to adopt (any use) (0/1)		
	(1)	(2)	(3)	(4)	(5)
Mean of dep. var. (control group)	0.40		0.45		
Digital euro awareness					0.095*** (0.010)
Age 35 to 49	-0.000 (0.010)	-0.003 (0.010)	-0.074*** (0.013)	-0.073*** (0.013)	-0.074*** (0.013)
Age 50 to 64	0.017* (0.010)	0.004 (0.010)	-0.105*** (0.013)	-0.118*** (0.013)	-0.117*** (0.013)
Age > 64	0.012 (0.012)	-0.009 (0.013)	-0.144*** (0.017)	-0.184*** (0.017)	-0.182*** (0.017)
Household size	0.003 (0.003)	0.005 (0.003)	0.026*** (0.004)	0.018*** (0.005)	0.018*** (0.005)
Women	-0.157*** (0.007)	-0.137*** (0.007)	-0.074*** (0.010)	-0.070*** (0.010)	-0.056*** (0.010)
University education	0.065*** (0.007)	0.040*** (0.007)	0.049*** (0.010)	0.041*** (0.011)	0.037*** (0.011)
Employed		-0.006 (0.008)		-0.055*** (0.012)	-0.054*** (0.012)
2nd income quartile		-0.013 (0.010)		0.036** (0.014)	0.037** (0.014)
3rd income quartile		-0.018* (0.010)		0.053*** (0.015)	0.053*** (0.015)
4th income quartile		-0.007 (0.011)		0.093*** (0.016)	0.092*** (0.016)
Hand-to-mouth		-0.081*** (0.008)		-0.003 (0.012)	0.005 (0.012)
High financial literacy		0.083*** (0.007)		0.006 (0.011)	-0.001 (0.011)
Pseudo R ²	0.06	0.07	0.05	0.05	0.06
No. Observations	19,937	19,828	9,994	9,936	9,936
	Full sample		Control group		

Notes: This table reports average marginal effects from probit regressions estimated using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Columns (1) and (2) use the full sample and show awareness of the digital euro as the dependent variable, which equals one if the respondent reports having heard about the digital euro prior to the survey. This information is elicited before the information video treatment. Columns (3) to (5) restrict the sample to respondents in the control group and use consumers' stated propensity to adopt a digital euro as the dependent variable, which equals one if the respondent reports being "*likely*" or "*very likely*" to use a digital euro for at least one use case (retail payments, online payments, peer-to-peer transactions, or receiving wages in digital euros). Digital euro awareness is included as a regressor only in column (5), and awareness is observed prior to eliciting adoption intentions. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table 2. Information treatment effects on the propensity to adopt a digital euro

Dimension of adoption	Probit, average marginal effects									
	Dep. Var. propensity to adopt a digital euro (0/1)					Peer-to-peer				
	Any use	Retail	Online	Wages						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Mean of dep. var. (control group)	0.45			0.31		0.38		0.27		0.20
Video treatment	0.122*** (0.008)	0.122*** (0.008)	0.131*** (0.008)	0.132*** (0.008)	0.096*** (0.008)	0.096*** (0.008)	0.168*** (0.008)	0.169*** (0.008)	0.070*** (0.007)	0.071*** (0.007)
Control variables	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes
Pseudo R ²	0.04	0.06	0.04	0.06	0.03	0.05	0.04	0.06	0.03	0.05
No. Observations	14,973	14,873	14,973	14,873	14,973	14,873	14,973	14,873	14,973	14,873

Notes: This table reports average marginal effects from probit regressions estimating the impact of an informational treatment on consumers' stated propensity to adopt a digital euro, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The sample includes only consumers assigned to the control group or to the video information treatment, excluding consumers assigned to another experimental arm with endogenous information acquisition after this video treatment. This explains the smaller sample size relative to columns (1) and (2) of Table 1, which use the full sample. The dependent variable equals one if the respondent reports being “*likely*” or “*very likely*” to use a digital euro for at least one use case (“Any use,” columns 1 and 2) or for the specific use case indicated at the column header (columns 3 to 10). Odd-numbered columns report specifications without additional controls while even-numbered columns include the full set of individual-level control variables used in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table 3. Information treatment effects on portfolio allocation following a wealth shock

Probit, average marginal effects				
Probability to allocate any money in digital euro (0/1)				
	(1)	(2)	(3)	(4)
Mean of dep. var. (control group)	0.26			
Video treatment	0.130*** (0.008)	0.130*** (0.008)	0.154*** (0.010)	0.152*** (0.010)
CBDC aware			0.103*** (0.009)	0.101*** (0.009)
Video treatment × CBDC aware			-0.059*** (0.017)	-0.055*** (0.017)
Control variables	No	Yes	No	Yes
Pseudo R ²	0.06	0.06	0.06	0.07
No. Observations	14,735	14,638	14,735	14,638

Notes: This table reports average marginal effects from probit regressions estimating the impact of the informational video on consumers' likelihood of allocating funds to a digital euro following a hypothetical positive wealth shock, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The sample is restricted to consumers who either did not receive the video (control group) or were exposed to the informational video and subsequently not offered the option to access additional information, which explains the smaller number of observations relative to Tables 1 columns 1 to 2. The dependent variable equals one if the respondent allocates any positive amount of the hypothetical €10,000 windfall to a digital euro. Columns (1) and (2) estimate the average treatment effect of the video; columns (3) and (4) additionally control for prior awareness of the digital euro and include an interaction between video treatment and CBDC awareness. Odd-numbered columns report specifications without additional controls; even-numbered columns include the full set of individual-level control variables listed in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table 4. Portfolio allocation responses to randomized windfall sizes

Panel A: Extensive margin: any allocation to asset category								
Probit, average marginal effects								
	Cash	Digital euro	Bank accounts	Stocks	Mutual funds	Bonds	Crypto	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var.	0.478	0.150	0.653	0.206	0.261	0.133	0.099	0.228
Windfall amount (base: €1,000)								
€10,000	0.034*** (0.012)	0.048*** (0.009)	0.105*** (0.011)	0.079*** (0.010)	0.099*** (0.011)	0.075*** (0.009)	0.044*** (0.008)	0.123*** (0.011)
€50,000	0.038*** (0.012)	0.052*** (0.009)	0.127*** (0.011)	0.131*** (0.011)	0.169*** (0.011)	0.124*** (0.009)	0.063*** (0.008)	0.210*** (0.011)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	0.08	0.09	0.05	0.04	0.11	0.08	0.08	0.05
No. Observations	9,838	9,838	9,838	9,838	9,838	9,838	9,838	9,838
Panel B: Intensive margin: portfolio shares								
Tobit, average marginal effects								
	Cash	Digital euro	Bank accounts	Stocks	Mutual funds	Bonds	Crypto	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var.	0.204	0.037	0.418	0.072	0.117	0.039	0.020	0.093
Windfall amount (base: €1,000)								
€10,000	-0.030*** (0.004)	0.010*** (0.003)	0.006* (0.003)	0.018*** (0.003)	0.020*** (0.003)	0.024*** (0.003)	0.011*** (0.002)	0.029*** (0.003)
€50,000	-0.039*** (0.004)	0.009*** (0.003)	-0.001 (0.003)	0.028*** (0.003)	0.035*** (0.003)	0.036*** (0.003)	0.014*** (0.002)	0.048*** (0.003)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Pseudo R ²	0.09	0.10	0.03	0.04	0.12	0.09	0.09	0.10
No. Observations	9,838	9,838	9,838	9,838	9,838	9,838	9,838	9,838

Notes: This table reports estimates from the December 2025 randomized wealth shock experiment. The sample is restricted to the randomized sample of respondents that were offered the choice to allocate money into a digital euro and whose allocations sum to the randomized windfall amount. The omitted category is a windfall of €1,000. **Panel A** reports average marginal effects from probit regressions where the dependent variable equals one if the respondent allocates any positive amount to the asset category. **Panel B** reports average marginal effects from Tobit regressions for portfolio shares, with lower and upper limits at zero and one. All specifications control for demographic characteristics, income, financial literacy, country fixed effects, and recruitment-method dummies. Robust standard errors are reported in parentheses. Voluntary retirement and pension products or whole life insurance are grouped under “Other”. Means are reported for the €1,000 treatment group.

Table 5. Holding limits and allocation to digital euro

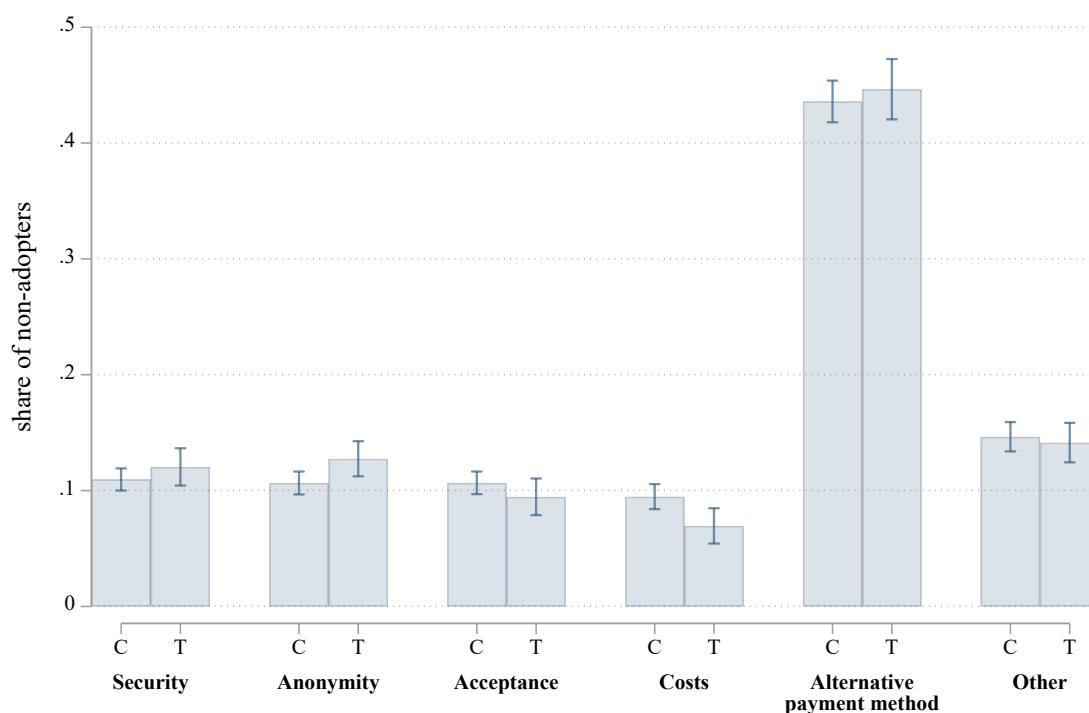
Panel A: Any liquid wealth reallocated to digital euro (0/1)						
Probit, average marginal effects						
	Control group		Video treatment		Pooled sample	
	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var. mean (control only)	0.63					
Holding limit (base category: €3,000)						
€1,000	-0.002 (0.016)	-0.001 (0.016)	0.022 (0.021)	0.024 (0.021)	0.007 (0.013)	0.007 (0.013)
€5,000	-0.016 (0.016)	-0.015 (0.016)	-0.009 (0.022)	-0.004 (0.022)	-0.016 (0.013)	-0.014 (0.013)
€10,000	-0.007 (0.016)	-0.003 (0.016)	-0.012 (0.022)	-0.007 (0.022)	-0.011 (0.013)	-0.008 (0.013)
€50,000	-0.025 (0.016)	-0.024 (0.016)	-0.019 (0.022)	-0.017 (0.021)	-0.024* (0.013)	-0.023* (0.013)
€120,000	-0.026 (0.017)	-0.028* (0.016)	-0.004 (0.021)	0.001 (0.021)	-0.019 (0.013)	-0.019 (0.013)
Control variables	No	Yes	No	Yes	No	Yes
Pseudo R ²	0.03	0.05	0.05	0.07	0.03	0.05
No. Observations	10,005	9,936	4,968	4,937	14,973	14,873
Panel B: Share of liquid wealth reallocated to digital euros						
Tobit model, average marginal effects						
	Control group		Video treatment		Pooled sample	
	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var. mean (control only)	0.16					
Holding limit (base category: €3,000)						
€1,000	-0.010*** (0.003)	-0.010*** (0.003)	0.003 (0.005)	0.002 (0.005)	-0.006** (0.003)	-0.006** (0.003)
€5,000	-0.003 (0.004)	-0.002 (0.004)	0.009* (0.005)	0.009* (0.005)	0.001 (0.003)	0.001 (0.003)
€10,000	0.005 (0.004)	0.006 (0.004)	0.006 (0.005)	0.006 (0.005)	0.005* (0.003)	0.006* (0.003)
€50,000	0.005 (0.004)	0.005 (0.004)	0.015*** (0.006)	0.015*** (0.006)	0.008** (0.003)	0.009*** (0.003)
€120,000	0.003 (0.004)	0.004 (0.004)	0.021*** (0.006)	0.022*** (0.006)	0.009*** (0.003)	0.009*** (0.003)
Control variables	No	Yes	No	Yes	No	Yes
Pseudo R ²	0.06	0.07	0.13	0.14	0.08	0.09
No. Observations	8,583	8,529	4,234	4,211	12,817	12,740

Notes: This table reports average marginal effects from regressions estimating how randomly assigned holding limits affect consumers' allocation of liquid assets to a digital euro, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Respondents were randomly assigned to one of several holding limits; the omitted reference category is a limit of €3,000. **Panel A** reports results from probit regressions where the dependent variable equals one if the respondent reallocates *any positive amount* of liquid wealth (cash and current and savings accounts) to a digital euro. **Panel B** reports results from Tobit regressions where the dependent variable is the *share of liquid wealth* allocated to a digital euro, bounded between zero and one. Columns (1) and (2) use the control group only, columns (3) and (4) use the video treatment group only, and columns (5) and (6) pool control and treatment groups. Odd-numbered columns report specifications without additional controls; even-numbered columns include the full set of individual-level control variables listed in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Differences in the number of observations across panels reflect the distinction between the extensive margin (any allocation) and the intensive margin (share of liquid wealth allocated). For the share of liquid wealth, ratios above one and a small number of cases with item non-response are treated as missing observations. The reported mean in Panel B refers to the conditional mean (share of liquid wealth reallocated to digital euros > 0) in the control group. Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Internet Appendix

Appendix A. Additional Figures

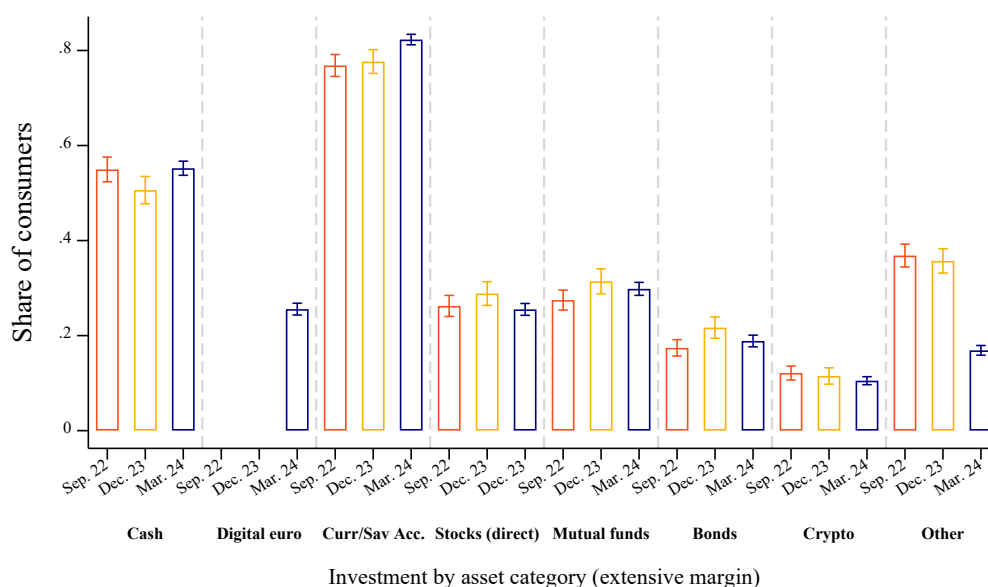
Figure A1. Reasons for not intending to adopt a digital euro for in-person payments, by treatment status



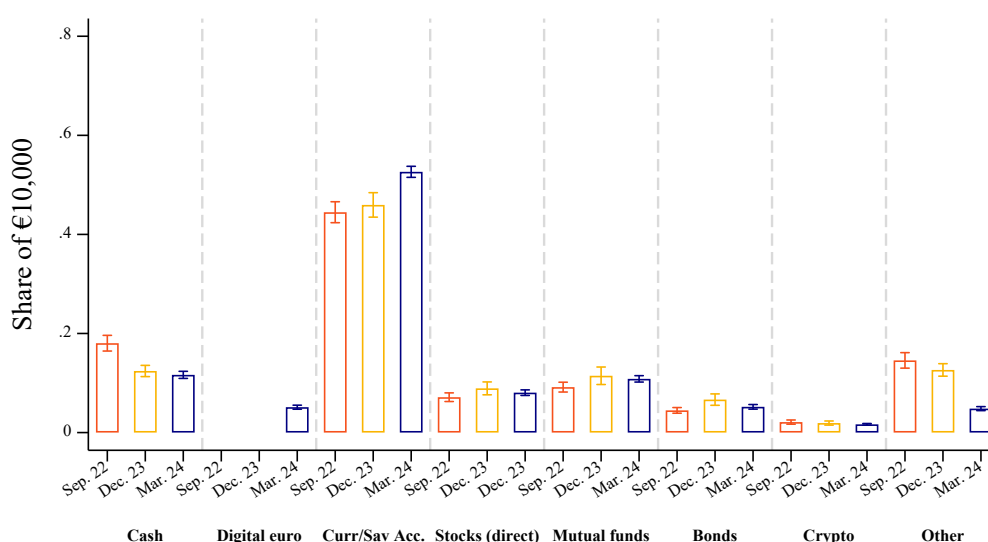
Notes: This figure shows the population-weighted share of consumers who report that they are “*not likely*” to adopt a digital euro for in-person day-to-day payments, separately for the control group (C) and the video information treatment group (T), using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Consumers were asked, at the end of the survey, to indicate their main reason for not intending to adopt a digital euro. Response options include concerns about security, anonymity or privacy, acceptance by merchants, transaction costs, satisfaction with existing alternative payment methods, and other reasons. Each respondent selected one option and the order of response items was randomized to mitigate order effects. Whiskers indicate 95 percent confidence intervals. Statistics are population-weighted.

Figure A2. Consumers' allocation of money from a positive wealth shock in digital euro

Panel A: Proportion of consumers investing in asset category



Investment by asset category (extensive margin)

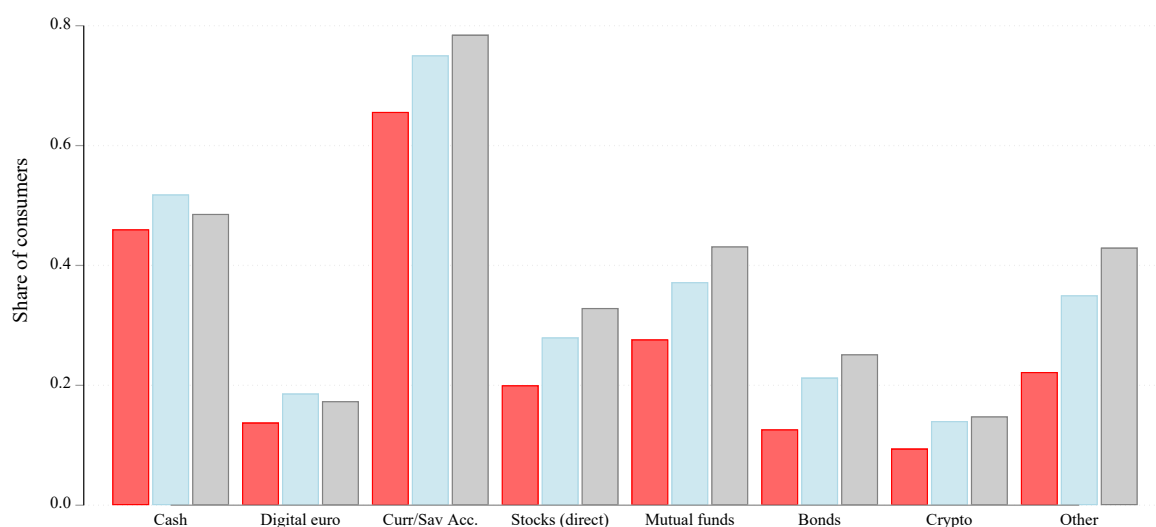


Share of wealth shock invested, by asset category (unconditional, intensive margin)

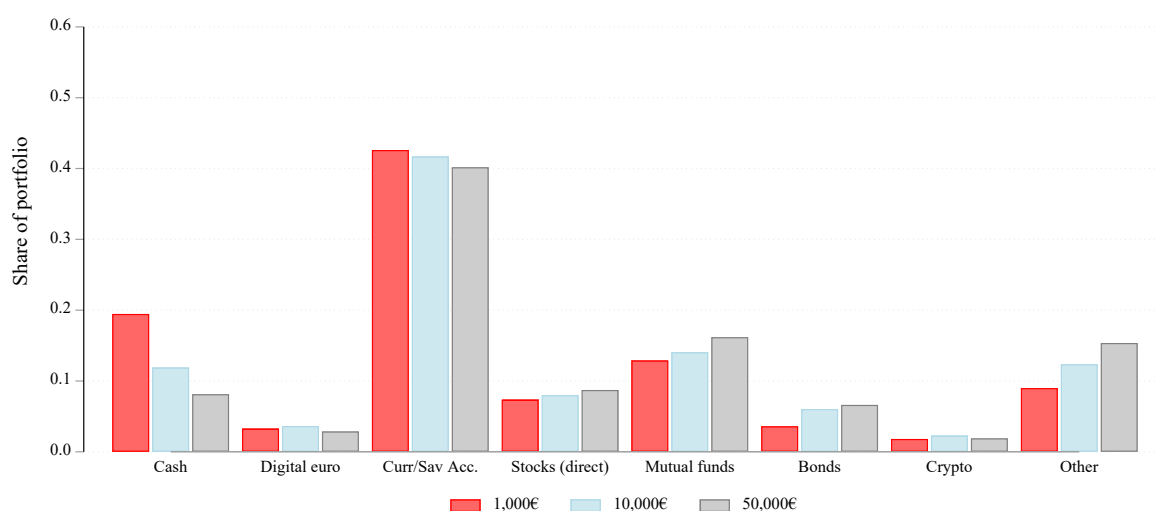
Notes: This figure shows how consumers allocate a hypothetical €10,000 windfall gain across asset categories in three survey waves: September 2022, December 2023, and March 2024. **Panel A** reports the population-weighted share of consumers who allocate any positive amount to a given asset category (extensive margin). **Panel B** reports the population-weighted unconditional share of the €10,000 invested in each asset category (intensive margin). The option to allocate funds to a digital euro was introduced in March 2024 and was not available in earlier survey waves. In September 2022 and December 2023, respondents could allocate funds to “voluntary retirement and pension products or whole life insurance”. To ensure comparability across survey waves, this category is grouped under “Other” in all panels, consistent with the broader “Other” category used in March 2024. Data from March 2024 include only respondents assigned to the control group; observations from September 2022 and December 2023 are likewise restricted to control-group respondents from survey experiments conducted in those waves. Statistics are population-weighted.

Figure A3. Consumers' allocation of money from a positive wealth shock in digital euro, by wealth shock size

Panel A: Proportion of consumers investing in asset category

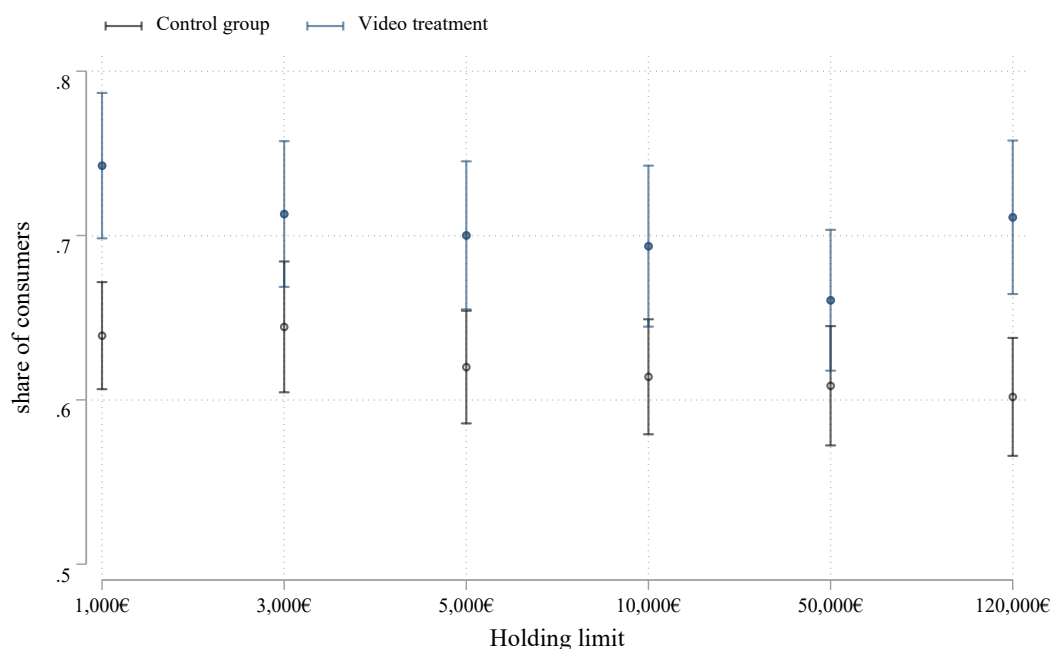


Panel B: Share of windfall allocated to asset category



Notes: This figure reports portfolio allocations in the December 2025 wave of the ECB Consumer Expectations Survey. The sample is restricted to respondents randomly assigned to the allocation menu that includes a digital euro option and whose allocations sum to the randomized windfall amount. Respondents were independently randomized to allocate a windfall of €1,000, €10,000, or €50,000. **Panel A** reports the share of consumers allocating any positive amount to each asset category. **Panel B** reports unconditional mean portfolio shares. Voluntary retirement and pension products or whole life insurance are grouped under “Other”. Statistics are population-weighted.

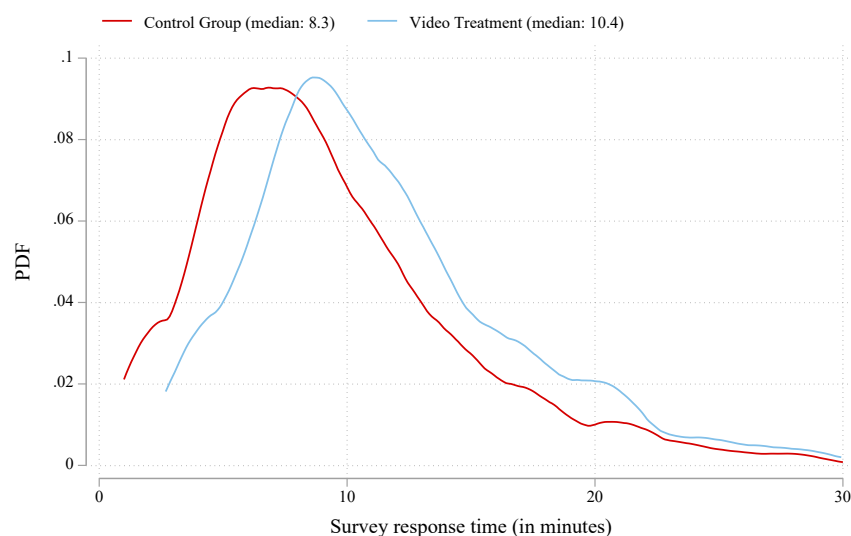
Figure A4. Holding limits and propensity to allocate liquid assets to a digital euro, by treatment status



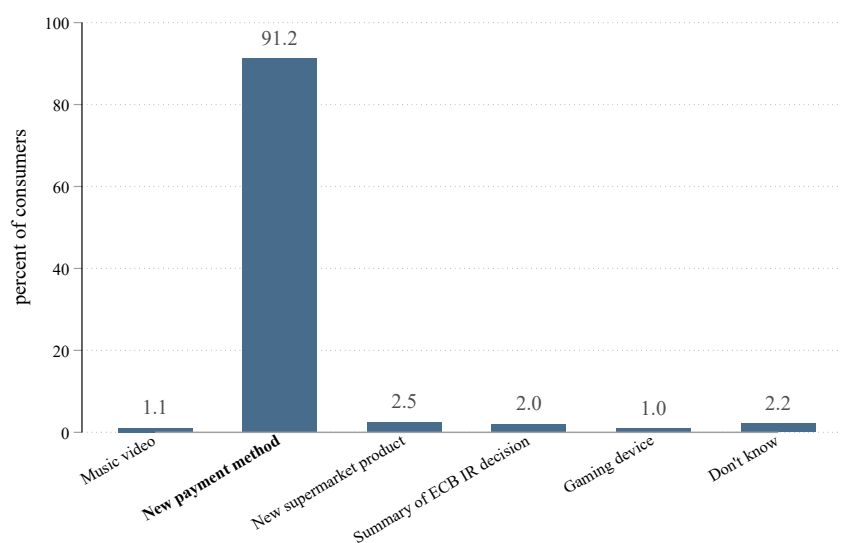
Notes: This figure shows the population-weighted share of consumers who indicate that they would allocate any positive amount of their liquid assets (cash and current and savings accounts) to a digital euro account, plotted separately for the control group and the video information treatment group. Respondents were asked: “*Imagine that a digital euro is introduced with a holding limit of $\{L\}$ euros per person. Taking into account the money you (your household) currently hold in cash and on current and savings accounts, how much money would you allocate to your digital euro account?*” The holding limit $\{L\}$ was randomly assigned across respondents and is shown on the horizontal axis. Points denote mean shares and whiskers indicate 95 percent confidence intervals. Data are from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Statistics are population-weighted.

Figure A5. Treatment take-up and attention

Panel A: Survey response time distribution



Panel B: Post-treatment attention check



Notes: This figure provides descriptive evidence on respondents' exposure to and engagement with the informational video treatment in the March 2024 wave of the ECB Consumer Expectations Survey (CES). **Panel A** shows the distribution of time spent (in minutes) answering the survey in March 2024, plotted separately for respondents in the control group and in the video information treatment group with reported medians shown in the legend. **Panel B** reports responses to a post-treatment attention check administered to respondents who were assigned to the video treatment only. These respondents were asked: "Think back to the video you just saw. What would you say was the main topic of that video?". Bars report the percentage distribution of responses across answer options. Statistics are population-weighted.

Appendix B. Additional Tables

Table B1. Association between CBDC awareness and adoption over time

Probit, average marginal effects						
Propensity to adopt a digital euro, any dimension (0/1)						
	August 2022		June 2023		March 2024	
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of dep. var. (control group)	0.29		0.47		0.45	
CBDC awareness	0.185*** (0.009)	0.157*** (0.009)	0.138*** (0.010)	0.124*** (0.010)	0.108*** (0.010)	0.092*** (0.010)
Age 35 to 49		-0.050*** (0.008)		-0.027** (0.013)		-0.074*** (0.013)
Age 50 to 64		-0.058*** (0.008)		-0.062*** (0.013)		-0.118*** (0.013)
Age > 64		-0.093*** (0.011)		-0.111*** (0.018)		-0.182*** (0.017)
Household size		0.016*** (0.003)		0.014*** (0.004)		0.016*** (0.005)
Women		-0.065*** (0.007)		-0.040*** (0.010)		-0.059*** (0.010)
University education		0.042*** (0.007)		0.053*** (0.010)		0.040*** (0.011)
Employed		-0.010 (0.008)		-0.008 (0.012)		-0.060*** (0.012)
2nd income quartile		-0.004 (0.009)		0.040*** (0.014)		0.041*** (0.014)
3rd income quartile		0.022** (0.010)		0.053*** (0.014)		0.059*** (0.015)
4th income quartile		0.047*** (0.011)		0.079*** (0.016)		0.106*** (0.016)
Hand-to-mouth		-0.038*** (0.007)		-0.006 (0.011)		0.006 (0.012)
High financial literacy		0.002 (0.007)		0.022** (0.010)		0.001 (0.011)
Pseudo R ²	0.03	0.05	0.04	0.06	0.03	0.05
No. Observations	19,649	19,496	10,393	10,318	10,005	9,936

Notes: This table reports average marginal effects from probit regressions estimating the association between prior awareness of a central bank digital currency (CBDC) and consumers' stated propensity to adopt a digital euro across three waves of the ECB Consumer Expectations Survey (CES): August 2022, June 2023, and March 2024. The dependent variable equals one if the respondent reports being "*likely*" or "*very likely*" to use a digital euro for at least one use case (retail payments, online payments, peer-to-peer transactions, or receiving wages in digital euros). The number of observations across columns differs for the following reasons: Columns (1) and (2) report results for August 2022 using the full survey sample, columns (3) and (4) for June 2023 omitting respondents used in another survey experiment, and columns (5) and (6) for March 2024 using only the control group. Odd-numbered columns include CBDC awareness only while even-numbered columns additionally control for individual-level socio-demographic characteristics. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B2. Drivers of digital euro adoption by use case

Probit, average marginal effects							
Propensity to adopt a digital euro (0/1)							
	Retail payments		Online purchases		Peer-to-peer transactions		Receiving wages
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mean of dep. var. (control group)	0.31		0.38		0.27		0.20
Digital euro awareness		0.089*** (0.010)		0.105*** (0.010)		0.081*** (0.009)	0.082*** (0.009)
Age 35 to 49	-0.043*** (0.012)	-0.043*** (0.012)	-0.046*** (0.013)	-0.047*** (0.013)	-0.053*** (0.012)	-0.053*** (0.012)	-0.034*** (0.011)
Age 50 to 64	-0.067*** (0.013)	-0.067*** (0.012)	-0.078*** (0.013)	-0.077*** (0.013)	-0.078*** (0.012)	-0.077*** (0.012)	-0.056*** (0.011)
Age > 64	-0.107*** (0.016)	-0.105*** (0.016)	-0.130*** (0.017)	-0.129*** (0.017)	-0.140*** (0.014)	-0.139*** (0.014)	-0.084*** (0.013)
Household size	0.009** (0.004)	0.008* (0.004)	0.009** (0.005)	0.009* (0.005)	0.007* (0.004)	0.006 (0.004)	0.017*** (0.004)
Women	-0.067*** (0.009)	-0.054*** (0.009)	-0.055*** (0.010)	-0.040*** (0.010)	-0.043*** (0.009)	-0.031*** (0.009)	-0.072*** (0.008)
University education	0.041*** (0.010)	0.038*** (0.010)	0.037*** (0.010)	0.033*** (0.010)	0.031*** (0.010)	0.028*** (0.010)	0.029*** (0.009)
Employed	-0.018 (0.011)	-0.018 (0.011)	-0.034*** (0.012)	-0.033*** (0.012)	-0.023** (0.011)	-0.023** (0.011)	-0.024** (0.010)
2nd income quartile	0.047*** (0.014)	0.048*** (0.014)	0.042*** (0.014)	0.042*** (0.014)	0.056*** (0.014)	0.056*** (0.014)	0.026** (0.013)
3rd income quartile	0.052*** (0.015)	0.052*** (0.015)	0.051*** (0.015)	0.052*** (0.015)	0.049*** (0.014)	0.049*** (0.014)	0.017 (0.013)
4th income quartile	0.096*** (0.016)	0.095*** (0.016)	0.105*** (0.016)	0.104*** (0.016)	0.096*** (0.016)	0.096*** (0.016)	0.054*** (0.014)
Hand-to-mouth	-0.019* (0.011)	-0.011 (0.011)	-0.030*** (0.011)	-0.021* (0.011)	-0.007 (0.010)	-0.000 (0.011)	0.003 (0.010)
High financial literacy	0.013 (0.010)	0.006 (0.010)	0.030*** (0.010)	0.023** (0.010)	0.014 (0.009)	0.008 (0.009)	-0.013 (0.009)
Pseudo R ²	0.04	0.05	0.04	0.05	0.04	0.05	0.04
No. Observations	9,936	9,936	9,936	9,936	9,936	9,936	9,936

Notes: This table reports average marginal effects from probit regressions estimating the correlates of consumers' stated propensity to adopt a digital euro for different use cases, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The dependent variable equals one if a consumer reports being “*likely*” or “*very likely*” to use a digital euro for the specific use case indicated by the column header (retail payments, online purchases, peer-to-peer transactions, or receiving wages in digital euros). All specifications are estimated on the control group only. Odd-numbered columns include socio-demographic controls only while even-numbered columns additionally include an indicator for prior awareness of the digital euro. All regressions include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B3. Treatment effect on the share of offline payments

	OLS	
	Share of payments using offline technology, 0 to 100	
	(1)	(2)
Mean of dep. var. (control group)	32.86	32.96
Treatment (base: control group)		
Video treatment	4.350*** (0.537)	4.344*** (0.537)
Video treatment + FAQ option	3.367*** (0.534)	3.303*** (0.534)
Control variables	No	Yes
Adjusted R-Squared	0.02	0.03
No. Observations	19,948	19,810

Notes: This table reports coefficients from ordinary least squares (OLS) regressions estimating the effect of information treatments on consumers' stated share of payments conducted using offline technology, measured on a scale from 0 to 100. Respondents were asked: "*If you had to use the digital euro in some of your transactions, what fraction (in percent) of your total payments would you make offline?*". The omitted reference category is the control group. "*Video treatment*" indicates assignment to the informational video, while "*Video treatment + FAQ option*" indicates assignment to the video followed by the option to access additional frequently asked questions. OLS coefficients can be interpreted as percentage-point changes relative to the control group. Column (1) reports estimates without additional controls and column (2) includes the full set of individual-level control variables listed in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Data are from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B4. Persistence of information treatment effects on awareness, information acquisition, and adoption of a digital euro

	Probit, average marginal effects													
	Propensity to adopt a digital euro (0/1)													
	Digital euro Awareness, (0/1)	Information acquisition (March to June), (0/1)				Any use	Retail	Online	Peer-to-peer	Wages				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
Mean of dep. var. (control group)	0.56		0.12		0.42		0.28		0.36		0.24		0.19	
Video treatment (t-3)	0.029*** (0.010)	0.032*** (0.010)	-0.000 (0.008)	-0.002 (0.008)	0.016 (0.010)	0.015 (0.010)	0.016* (0.009)	0.014 (0.009)	0.013 (0.010)	0.012 (0.010)	0.018* (0.009)	0.017* (0.009)	0.009 (0.008)	
Control variables	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No	
Pseudo R ²	0.04	0.07	0.02	0.05	0.04	0.06	0.03	0.05	0.04	0.05	0.02	0.05	0.02	
No. Observations	10,461	10,388	5,962	5,926	10,458	10,385	10,458	10,385	10,458	10,385	10,458	10,385	10,458	

Notes: This table reports average marginal effects from probit regressions estimating the persistence of the informational video treatment three months after exposure, using data from the June 2024 wave of the ECB Consumer Expectations Survey (CES). The key explanatory variable, Video treatment (t-3), indicates whether the respondent was assigned to the video information treatment in the March 2024 survey wave. Columns (1) and (2) show results for digital euro awareness, where the dependent variable equals one if the respondent reports having heard about the digital euro prior to the survey. Columns (3) and (4) examine active information acquisition, where the dependent variable equals one if the respondent reports having actively looked for information about the digital euro between March and June 2024, conditional on being aware of it. Columns (5) to (14) show results for consumers' propensity to adopt a digital euro, where the dependent variable equals one if the respondent reports being "likely" or "very likely" to use a digital euro for at least one use case ("Any use", columns 5 to 6) or for the specific use case indicated in the column header (retail payments, online purchases, peer-to-peer transactions, or receiving wages in digital euros). Odd-numbered columns report specifications without additional controls while even-numbered columns include the same set of individual-level control variables as in Table 1. All specifications include country fixed effects (not reported). Differences in the number of observations across outcome blocks reflect question routing, wave-to-wave attrition and conditioning on treatment assignment where applicable. Robust standard errors are shown in parentheses. Statistical significance is denoted by *** p < 0.01, ** p < 0.05, and * p < 0.10.

Table B5. Portfolio allocation from a wealth shock

Panel A: Treatment effects on extensive margin								
Probit, average marginal effects								
<i>Allocate any money into ... (0/1)</i>								
	Cash	Digital euro	Bank accounts	Stocks	Mutual Funds	Bonds	Crypto	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var. (control group)	0.55	0.26	0.82	0.26	0.30	0.19	0.11	0.17
Video treatment	0.014* (0.008)	0.130*** (0.008)	0.019*** (0.006)	-0.003 (0.007)	-0.001 (0.008)	-0.005 (0.007)	0.006 (0.005)	-0.001 (0.007)
<u>Socio-Demographics</u>								
Age 35 to 49	-0.010 (0.011)	-0.058*** (0.010)	-0.016* (0.009)	-0.091*** (0.009)	-0.079*** (0.009)	-0.027*** (0.009)	-0.048*** (0.006)	-0.021** (0.008)
Age 50 to 64	-0.011 (0.011)	-0.060*** (0.010)	-0.015* (0.009)	-0.124*** (0.009)	-0.103*** (0.009)	-0.024*** (0.009)	-0.098*** (0.006)	-0.039*** (0.009)
Age > 64	0.008 (0.016)	-0.105*** (0.013)	0.008 (0.012)	-0.125*** (0.011)	-0.107*** (0.012)	-0.015 (0.012)	-0.103*** (0.005)	-0.082*** (0.011)
Household size	0.020*** (0.004)	0.018*** (0.004)	-0.001 (0.003)	0.006* (0.003)	0.002 (0.003)	0.006** (0.003)	0.009*** (0.002)	-0.001 (0.003)
Women	0.009 (0.008)	-0.024*** (0.008)	0.041*** (0.006)	-0.067*** (0.007)	-0.041*** (0.007)	-0.036*** (0.006)	-0.040*** (0.005)	0.018*** (0.007)
University education	-0.050*** (0.009)	-0.010 (0.008)	0.004 (0.007)	0.028*** (0.008)	0.026*** (0.008)	0.013* (0.007)	-0.004 (0.006)	0.000 (0.007)
Employed	0.047*** (0.010)	0.009 (0.009)	0.026*** (0.007)	0.017** (0.009)	0.030*** (0.009)	0.015* (0.008)	0.021*** (0.006)	0.039*** (0.008)
2nd income quartile	-0.069*** (0.012)	-0.005 (0.011)	0.013 (0.009)	-0.001 (0.011)	0.012 (0.011)	-0.000 (0.009)	-0.024*** (0.007)	-0.030*** (0.009)
3rd income quartile	-0.082*** (0.012)	-0.008 (0.011)	0.001 (0.009)	-0.016 (0.011)	0.016 (0.012)	-0.010 (0.010)	-0.034*** (0.007)	-0.033*** (0.009)
4th income quartile	-0.150*** (0.013)	-0.001 (0.012)	-0.025** (0.010)	0.021* (0.012)	0.057*** (0.012)	-0.004 (0.010)	-0.016** (0.008)	-0.032*** (0.010)
Hand-to-mouth	0.032*** (0.009)	-0.020** (0.009)	-0.057*** (0.008)	-0.041*** (0.008)	-0.077*** (0.008)	-0.037*** (0.007)	0.012** (0.006)	0.014* (0.008)
High financial literacy	-0.024*** (0.009)	-0.017** (0.008)	0.009 (0.006)	0.025*** (0.008)	0.101*** (0.008)	0.040*** (0.007)	-0.005 (0.006)	-0.019*** (0.007)
Pseudo R ²	0.06	0.06	0.03	0.04	0.07	0.07	0.07	0.04
No. Observations	14,638	14,638	14,638	14,638	14,638	14,638	14,638	14,638
Panel B: Treatment effects on intensive margin								
Tobit, average marginal effects								
<i>Share of total wealth shock (€10,000) allocated in ... (conditional on investment)</i>								
	Cash	Digital euro	Bank accounts	Stocks	Mutual Funds	Bonds	Crypto	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Mean of dep. var. (control group)	0.21	0.20	0.64	0.32	0.36	0.28	0.16	0.29
Video treatment	0.002 (0.002)	0.031*** (0.002)	-0.002 (0.002)	-0.003 (0.002)	-0.002 (0.002)	-0.003 (0.002)	0.001 (0.002)	-0.003 (0.002)
<u>Socio-Demographics</u>								
Age 35 to 49	0.008*** (0.003)	-0.011*** (0.002)	0.008** (0.003)	-0.024*** (0.003)	-0.018*** (0.003)	-0.005* (0.003)	-0.014*** (0.002)	-0.004 (0.003)
Age 50 to 64	0.002 (0.003)	-0.010*** (0.003)	0.010*** (0.003)	-0.032*** (0.003)	-0.021*** (0.003)	0.001 (0.003)	-0.032*** (0.003)	-0.008*** (0.003)
Age > 64	0.006 (0.004)	-0.023*** (0.004)	0.018*** (0.005)	-0.035*** (0.004)	-0.024*** (0.004)	0.005 (0.004)	-0.040*** (0.003)	-0.024*** (0.004)
Household size	0.005*** (0.001)	0.005*** (0.001)	-0.003** (0.001)	0.001 (0.001)	-0.001 (0.001)	0.001 (0.001)	0.003*** (0.001)	-0.001 (0.001)
Women	-0.001 (0.002)	-0.006*** (0.002)	0.024*** (0.002)	-0.022*** (0.002)	-0.013*** (0.002)	-0.010*** (0.002)	-0.014*** (0.002)	0.007*** (0.002)
University education	-0.016*** (0.002)	-0.004* (0.002)	0.003 (0.003)	0.008*** (0.002)	0.010*** (0.002)	0.004* (0.002)	-0.002 (0.002)	-0.000 (0.002)
Employed	0.009*** (0.003)	-0.003 (0.002)	-0.006* (0.003)	-0.001 (0.003)	0.008*** (0.003)	0.004* (0.003)	0.007*** (0.002)	0.014*** (0.003)
2nd income quartile	-0.023*** (0.003)	0.002 (0.003)	0.011*** (0.004)	0.002 (0.003)	0.006* (0.003)	0.003 (0.003)	-0.007*** (0.002)	-0.011*** (0.003)
3rd income quartile	-0.027*** (0.003)	-0.000 (0.003)	0.011*** (0.004)	-0.001 (0.003)	0.009*** (0.003)	0.000 (0.003)	-0.010*** (0.002)	-0.011*** (0.003)
4th income quartile	-0.043*** (0.003)	0.003 (0.003)	-0.004 (0.004)	0.010*** (0.004)	0.024*** (0.004)	0.004 (0.003)	-0.003 (0.003)	-0.010*** (0.003)
Hand-to-mouth	0.032*** (0.003)	0.002 (0.002)	-0.010*** (0.003)	-0.010*** (0.003)	-0.027*** (0.003)	-0.015*** (0.002)	0.006*** (0.002)	0.004* (0.002)
High financial literacy	-0.016*** (0.002)	-0.008*** (0.002)	-0.011*** (0.003)	0.005** (0.002)	0.035*** (0.002)	0.016*** (0.002)	-0.000 (0.002)	-0.006*** (0.002)
Pseudo R ²	0.08	0.07	0.04	0.04	0.09	0.09	0.08	0.03
No. Observations	14,638	14,638	14,638	14,638	14,638	14,638	14,638	14,638

Notes: This table reports average marginal effects from regressions analyzing how consumers allocate a hypothetical €10,000 windfall gain across asset classes, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). All specifications are estimated on respondents assigned to either the control group or the video information treatment. Respondents who received the endogenous information acquisition option are not considered in this table. **Panel A** reports results from probit regressions where the

dependent variable equals one if the respondent allocates any positive amount of the windfall to the asset class indicated at the column header (extensive margin). **Panel B** reports results from Tobit regressions where the dependent variable is the share of the €10,000 windfall allocated to the respective asset class, conditional on allocating a positive amount (intensive margin). Asset categories include cash, digital euro, bank accounts, stocks, mutual funds, bonds, crypto-assets, and other assets. The key explanatory variable is assignment to the video information treatment, with the control group as the omitted reference category. All regressions include country fixed effects and sample-type dummies (not reported), as well as the full set of individual-level control variables listed in Table 1. Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B6. Treatment effects on digital euro adoption across alternative measures

	Probit, average marginal effects			
	Choose to adopt digital euro (all 3 questions), 0/1	Use digital euro for any purpose, 0/1	Allocate wealth in digital euro from wealth shock, 0/1	Reallocate any liquid wealth in digital euro, 0/1
	(1)	(2)	(3)	(4)
Mean of dep. var. (control group)	0.18	0.45	0.26	0.62
Video Treatment	0.125*** (0.008)	0.122*** (0.008)	0.130*** (0.008)	0.086*** (0.008)
Video Treatment + FAQ	0.137*** (0.008)	0.122*** (0.008)	0.127*** (0.008)	0.089*** (0.008)
Control variables	Yes	Yes	Yes	Yes
Pseudo R ²	0.07	0.06	0.06	0.06
No. Observations	19,513	19,828	19,513	19,828

Notes: This table reports average marginal effects from probit regressions estimating the impact of information treatments on alternative extensive-margin measures of digital euro adoption, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The dependent variable differs across columns: Column (1) equals one if the respondent indicates adoption of a digital euro consistently across all three adoption questions in the survey; column (2) equals one if the respondent reports being “*likely*” or “*very likely*” to use a digital euro for at least one purpose (retail payments, online purchases, peer-to-peer transactions, or receiving wages); column (3) equals one if the respondent allocates any positive amount of a hypothetical €10,000 wealth shock to a digital euro; and column (4) equals one if the respondent reallocates any positive amount of existing liquid assets (cash and current and savings accounts) to a digital euro. The omitted reference category is the control group. “*Video treatment*” indicates assignment to the informational video, while “*Video treatment + FAQ*” indicates assignment to the video followed by the option to access additional frequently asked questions. All specifications include country fixed effects and sample-type dummies (not reported), as well as the same set of individual-level control variables used in Table 1 (columns 2 and 4). Differences in the number of observations across columns reflect question routing and question-specific non-response. Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

**Table B7. Holding limits and wealth reallocation
(robustness under top-coded liquid asset bands)**

Share of liquid wealth reallocated to digital euros						
Tobit model, average marginal effects						
	Control group		Video treatment		Pooled sample	
	(1)	(2)	(3)	(4)	(5)	(6)
Mean of dep. var. (control only)	0.14					
Holding limit (base category: €3,000)						
€1,000	-0.010*** (0.003)	-0.010*** (0.003)	-0.002 (0.004)	-0.003 (0.004)	-0.009*** (0.002)	-0.009*** (0.002)
€5,000	-0.003 (0.003)	-0.003 (0.003)	0.009* (0.005)	0.009** (0.005)	0.000 (0.002)	0.001 (0.002)
€10,000	0.004 (0.003)	0.005 (0.003)	0.006 (0.005)	0.006 (0.005)	0.004 (0.002)	0.004* (0.002)
€50,000	0.009** (0.004)	0.010** (0.004)	0.014*** (0.005)	0.014*** (0.005)	0.011*** (0.003)	0.011*** (0.003)
€120,000	0.007* (0.004)	0.007* (0.004)	0.020*** (0.005)	0.021*** (0.005)	0.011*** (0.003)	0.011*** (0.003)
Control variables	No	Yes	No	Yes	No	Yes
Pseudo R ²	0.08	0.09	0.18	0.19	0.11	0.12
No. Observations	8,778	8,724	4,336	4,313	17,464	17,357

Notes: This table reports average marginal effects from Tobit regressions estimating how randomly assigned holding limits affect the share of liquid wealth reallocated to a digital euro, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Respondents were randomly assigned to one of several holding limits; the omitted reference category is a limit of €3,000. The dependent variable, the share of liquid assets allocated to a digital euro, is calculated as: € digital euro / € (Cash + Bank Acc. + Stocks + Crypto), which is bounded between zero and one. Columns (1) and (2) use the control group only, columns (3) and (4) use the video information treatment group only, and columns (5) and (6) pool all units (including those who received the FAQ option). Odd-numbered columns report specifications without additional controls; even-numbered columns include the full set of individual-level control variables listed in Table 1. This table differs from Table 5 in that asset values are constructed using the upper bounds of the reported asset brackets (top-coding) rather than random draws within each bracket, providing a robustness check for this measurement assumption. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Population-weighted estimates are reported. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B8. Portfolio reallocation (amounts) across different holding limits

	Control Group		Video treatment		Pooled sample	
	(1)	(2)	(3)	(4)	(5)	(6)
Holding limit	Median € allocation (in €)	> 90% of limit (share of consumers)	Median € allocation (in €)	> 90% of limit (share of consumers)	Median € allocation (in €)	> 90% of limit (share of consumers)
1,000 €	100	0.22	300	0.25	200	0.23
3,000 €	500	0.11	500	0.11	500	0.11
5,000 €	300	0.12	500	0.11	500	0.11
10,000 €	400	0.06	500	0.05	500	0.06
50,000 €	200	0.02	500	0.01	345	0.02
€120,000	200	0.01	1000	0.02	500	0.01

Notes: This table summarizes the amounts allocated to a digital euro across different randomly assigned holding limits, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Results are reported separately for the control group (columns 1 and 2), the video information treatment group (columns 3 and 4), and the pooled sample (columns 5 and 6). Columns (1), (3), and (5) report the median euro amount allocated to a digital euro, calculated unconditionally across all respondents facing a given holding-limit scenario (including respondents who allocate zero). Columns (2), (4), and (6) report the share of respondents allocating more than 90 percent of the applicable holding limit to a digital euro. All statistics are population-weighted.

Table B9. Consumers close to the holding limit

Share of consumers allocating more than 90% of the assigned limit (0,1)						
OLS (Linear Probability Model)						
	Control group		Video treatment		Pooled sample	
	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var. mean (control only)	0.09					
Holding limit (base category: €3,000)						
€1,000	0.100*** (0.013)	0.110*** (0.015)	0.114*** (0.018)	0.102*** (0.020)	0.104*** (0.010)	0.107*** (0.012)
€5,000	-0.009 (0.011)	-0.010 (0.012)	-0.016 (0.015)	-0.019 (0.017)	-0.011 (0.009)	-0.013 (0.010)
€10,000	-0.053*** (0.010)	-0.059*** (0.011)	-0.068*** (0.013)	-0.065*** (0.016)	-0.057*** (0.008)	-0.060*** (0.009)
€50,000	-0.092*** (0.009)	-0.099*** (0.010)	-0.091*** (0.012)	-0.093*** (0.014)	-0.092*** (0.007)	-0.098*** (0.008)
€120,000	-0.104*** (0.008)	-0.111*** (0.009)	-0.098*** (0.012)	-0.109*** (0.013)	-0.101*** (0.007)	-0.110*** (0.008)
Financial crisis likely (next 12m)		-0.006 (0.018)		0.005 (0.025)		-0.003 (0.014)
Holding limit # Financial crisis likely (next 12m)						
1,000€ # Financial crisis likely (next 12m)		-0.042 (0.028)		0.046 (0.042)		-0.010 (0.024)
5,000€ # Financial crisis likely (next 12m)		0.009 (0.025)		0.014 (0.036)		0.012 (0.020)
10,000€ # Financial crisis likely (next 12m)		0.025 (0.022)		-0.012 (0.030)		0.014 (0.018)
50,000€ # Financial crisis likely (next 12m)		0.036* (0.021)		0.010 (0.028)		0.027 (0.017)
120,000€ # Financial crisis likely (next 12m)		0.033* (0.020)		0.043 (0.030)		0.037** (0.016)
Control variables	No	Yes	No	Yes	No	Yes
Adjusted R-2	0.07	0.07	0.08	0.08	0.08	0.08
No. Observations	9,936	9,933	4,937	4,937	14,873	14,870

Notes: This table reports coefficients from linear probability model (OLS) regressions estimating how randomly assigned holding limits affect the likelihood that consumers allocate an amount close to the digital euro holding limit, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The dependent variable equals one if the respondent allocates more than 90 percent of the assigned holding limit to a digital euro, and zero otherwise. The omitted reference category for holding limits is €3,000. Columns (1) and (2) use the control group only, columns (3) and (4) use the video information treatment group only, and columns (5) and (6) pool both groups. Columns (2), (4), and (6) additionally include respondents' expectations of a financial crisis in the next 12 months and interactions between this indicator variable and the randomly assigned holding-limit. Respondents are classified as expecting a financial crisis to be likely if they report a probability greater than 50 percent in response to the question: *"What is the probability that there will be a financial crisis affecting the financial system and the economy in your country in the next 12 months?"*. A linear probability model is used to facilitate the interpretation of interaction effects. Odd-numbered columns report specifications without additional controls while even-numbered columns include the full set of individual-level control variables listed in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Differences in the number of observations across columns reflect treatment assignment and item non-response. Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B10. Additional information acquisition about a digital euro

	Probit, average marginal effects			
	Choosing to see additional information (0/1)		Confirmed reading of additional information (0/1)	
	(1)	(2)	(3)	(4)
Mean of dep. var.	0.36	0.36	0.51	0.51
CBDC awareness		0.082*** (0.015)		-0.007 (0.025)
Age 35 to 49	-0.008 (0.020)	-0.007 (0.020)	-0.037 (0.033)	-0.037 (0.033)
Age 50 to 64	-0.044** (0.020)	-0.044** (0.020)	-0.020 (0.034)	-0.020 (0.034)
Age > 64	-0.073*** (0.027)	-0.073*** (0.027)	-0.127** (0.050)	-0.126** (0.050)
Household size	0.012* (0.007)	0.012* (0.007)	0.003 (0.011)	0.003 (0.011)
Women	-0.073*** (0.014)	-0.062*** (0.015)	0.020 (0.025)	0.019 (0.025)
University education	0.056*** (0.015)	0.055*** (0.015)	0.064** (0.027)	0.064** (0.027)
Employed	-0.017 (0.017)	-0.017 (0.017)	-0.018 (0.030)	-0.018 (0.030)
2nd income quartile	0.020 (0.021)	0.023 (0.021)	0.014 (0.036)	0.013 (0.036)
3rd income quartile	0.016 (0.022)	0.018 (0.022)	0.015 (0.037)	0.015 (0.037)
4th income quartile	0.015 (0.023)	0.017 (0.023)	0.013 (0.039)	0.013 (0.039)
Hand-to-mouth	-0.025 (0.017)	-0.017 (0.017)	-0.086*** (0.030)	-0.087*** (0.030)
High financial literacy	0.034** (0.015)	0.026* (0.015)	0.088*** (0.027)	0.088*** (0.027)
Pseudo R ²	0.04	0.05	0.03	0.03
No. Observations	4,582	4,582	1,717	1,717

Notes: This table reports average marginal effects from probit regressions of consumers' demand for additional information about a digital euro, using data from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The sample is restricted to consumers who were exposed to the informational video and subsequently offered the option to access additional information, which explains the smaller number of observations relative to Tables 1 and 2. In columns (1) and (2), the dependent variable equals one if the respondent chooses to access additional information about the digital euro when given the option. In columns (3) and (4), the dependent variable equals one if the respondent confirms having read the additional information by ticking a box, conditional on having chosen to access it. All specifications include country fixed effects and sample-type dummies (not reported). Respondents who failed the survey attention check are excluded (359 cases, corresponding to less than 8 percent of respondents eligible to choose additional information). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B12. Testing for survey demand effects of the information treatment

	OLS		Probit, average marginal effects	
	Perceived probability of price stability, over the next 3 years (likelihood, 0 to 100)		ECB takes climate-related risks into consideration for monetary policy (0/1)	
	(1)	(2)	(3)	(4)
Mean dep. var (control only)	41.87	41.88	0.29	0.29
Video treatment	0.247 (0.472)	0.373 (0.461)	0.005 (0.008)	0.005 (0.008)
Control variables	No	Yes	No	Yes
R-Squared	0.01	0.07	0.00	0.01
No. Observations	14,970	14,870	14,973	14,873

Notes: This table reports regression estimates testing whether the informational video treatment affects consumers' answers to survey questions unrelated to digital euro adoption, providing evidence on potential survey demand effects. Data are drawn from the March 2024 wave of the ECB Consumer Expectations Survey (CES). Columns (1) and (2) report coefficients from ordinary least squares (OLS) regressions where the dependent variable is the respondent's perceived probability (from 0 to 100) that price stability will be achieved over the next three years. Columns (3) and (4) report average marginal effects from probit regressions where the dependent variable equals one if the respondent agrees that the ECB takes climate-related risks into consideration in its monetary policy. The key explanatory variable is assignment to the video information treatment, with the control group as the omitted reference category. Odd-numbered columns report specifications without additional controls while even-numbered columns include the same set of individual-level control variables used in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Columns (1) and (2) report adjusted R-squared values, while columns (3) and (4) report Pseudo R² values. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B13. Testing for spillover effects of the information treatment to crypto assets

	Probit, average marginal effects	
	Plans to purchase crypto assets, over the next 12 months (0/1)	
	(1)	(2)
Mean dep. var (control only)	0.10	0.10
Video treatment	0.005 (0.005)	0.004 (0.005)
Control variables	No	Yes
Pseudo R ²	0.01	0.06
No. Observations	14,972	14,872

Notes: This table reports average marginal effects from probit regressions testing whether the informational video treatment affects consumers' plans to purchase crypto-assets, providing evidence on potential spillover effects of the information treatment beyond consumers' stated propensity for digital euro adoption. Data are drawn from the March 2024 wave of the ECB Consumer Expectations Survey (CES). The dependent variable equals one if the respondent reports that they or a member of their household plan to buy or buy more crypto-assets in the next 12 months, based on the survey question: "*In the next 12 months, do you (or a member of your household) plan to buy / buy more crypto-assets?*" The omitted reference category is the control group which did not receive any video information treatment. Column (1) reports estimates without additional controls while column (2) includes the same set of individual-level control variables used in Table 1. All specifications include country fixed effects and sample-type dummies (not reported). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B14. Effects of the video treatment on survey attrition

Probit, average marginal effects			
<i>Respondent participates in March 2024 and wave t+ x (0/1)</i>			
	(1)	(2)	(3)
	April 2024 (t+1)	May 2024 (t+2)	June 2024 (t+3)
Dep. var. mean (control only)	0.83	0.79	0.72
Treatment (base: control)			
Video	-0.003 (0.007)	0.004 (0.007)	-0.003 (0.008)
Video + FAQ option	-0.008 (0.007)	-0.004 (0.007)	-0.009 (0.008)
Control variables	Yes	Yes	Yes
Pseudo R ²	0.05	0.06	0.06
No. Observations	19,966	19,966	19,966

Notes: This table reports average marginal effects from probit regressions testing whether assignment to the information treatments affects subsequent survey participation, using data from the ECB Consumer Expectations Survey (CES). The dependent variable equals one if a respondent who participated in the March 2024 wave also participated in a subsequent wave: April 2024 (t+1), May 2024 (t+2), or June 2024 (t+3), as indicated by the column header. The omitted reference category is the control group. “*Video*” indicates assignment to the informational video treatment, while “*Video + FAQ option*” indicates assignment to the video followed by the option to access additional frequently asked questions. All specifications include country fixed effects and sample-type dummies (not reported), as well as the same set of individual-level control variables used in Table 1 (columns 2 and 4). Robust standard errors are shown in parentheses. Statistical significance is denoted by *** $p < 0.01$, ** $p < 0.05$, and * $p < 0.10$.

Table B15. Balance statistics and random assignment of holding limits

Limit (randomly allocated):		1,000€	3,000€	5,000€	10,000€	50,000€	120,000€	P-value	Test
Number of Observations (March 2024)		3,318	3,328	3,324	3,338	3,323	3,335		
Variable									
<i>Treatment group</i>									
Group A (control)		1656 (49.9%)	1641 (49.3%)	1727 (52.0%)	1701 (51.0%)	1646 (49.5%)	1634 (49.0%)	0.22	Pearson's chi-squared
Group B (Video)		861 (25.9%)	842 (25.3%)	795 (23.9%)	788 (23.6%)	830 (25.0%)	852 (25.5%)		
Group C (Video+ FAQ)		801 (24.1%)	845 (25.4%)	802 (24.1%)	849 (25.4%)	847 (25.5%)	849 (25.5%)		
<i>Time spent on regular monthly (in minutes), median (IQR)</i>		11 (7.3, 16)	11 (7.5, 16)	11 (7.4, 16)	11 (7.3, 16)	11 (7.6, 16)	11 (7.3, 16)	0.92	Kruskal-Wallis
<i>Has heard info about ECB month before</i>		1540 (46.4%)	1544 (46.4%)	1574 (47.4%)	1555 (46.6%)	1542 (46.4%)	1572 (47.1%)	0.95	Pearson's chi-squared
<i>CBCD awareness prior to survey</i>		1336 (40.3%)	1309 (39.3%)	1353 (40.7%)	1317 (39.5%)	1347 (40.5%)	1361 (40.8%)	0.72	Pearson's chi-squared
<i>Probability of a financial crisis next 12 months, median (IQR)</i>		30 (10, 50)	30 (10, 50)	30 (11, 50)	30 (10, 50)	30 (10, 50)	30 (12, 50)	0.77	Kruskal-Wallis
<i>Age (in years), median (IQR)</i>		49 (37, 59)	48 (38, 58)	48 (37, 58)	49 (38, 59)	48 (37, 59)	48 (37, 59)	0.045	Kruskal-Wallis
<i>Household size, median (IQR)</i>		2 (2, 3)	2 (2, 4)	2 (2, 4)	2 (2, 4)	2 (2, 4)	2 (2, 4)	0.97	Kruskal-Wallis
<i>Women</i>		1578 (47.7%)	1670 (50.3%)	1641 (49.4%)	1614 (48.4%)	1634 (49.2%)	1713 (51.4%)	0.039	Pearson's chi-squared
<i>University education</i>		1912 (57.6%)	1913 (57.5%)	1907 (57.4%)	1955 (58.6%)	1906 (57.4%)	1899 (56.9%)	0.85	Pearson's chi-squared
<i>Employed</i>		2091 (63.0%)	2101 (63.1%)	2146 (64.6%)	2096 (62.8%)	2072 (62.4%)	2120 (63.6%)	0.53	Pearson's chi-squared
<i>Income (thsd.), median (IQR)</i>		33 (22, 48)	33 (22, 48)	34 (22, 49)	34 (22, 50)	33 (22, 48)	34 (22, 48)	0.51	Kruskal-Wallis
<i>Hand-to-mouth</i>		1041 (31.4%)	1006 (30.2%)	983 (29.6%)	1027 (30.8%)	960 (28.9%)	941 (28.2%)	0.050	Pearson's chi-squared
<i>High financial literacy</i>		1715 (52.0%)	1725 (52.1%)	1754 (53.0%)	1743 (52.5%)	1742 (52.7%)	1796 (54.1%)	0.60	Pearson's chi-squared
<i>Country</i>		162 (4.9%)	167 (5.0%)	177 (5.3%)	196 (5.9%)	176 (5.3%)	167 (5.0%)	0.42	Pearson's chi-squared
BE		510 (15.4%)	548 (16.5%)	545 (16.4%)	554 (16.6%)	513 (15.4%)	516 (15.5%)		
DE		579 (17.5%)	544 (16.3%)	505 (15.2%)	553 (16.6%)	563 (16.9%)	569 (17.1%)		
ES		539 (16.2%)	541 (16.3%)	559 (16.8%)	560 (16.8%)	514 (15.5%)	568 (17.0%)		
FR		547 (16.5%)	554 (16.6%)	577 (17.4%)	550 (16.5%)	575 (17.3%)	536 (16.1%)		
IT		151 (4.6%)	152 (4.6%)	165 (5.0%)	160 (4.8%)	160 (4.8%)	169 (5.1%)		
NL		130 (3.9%)	161 (4.8%)	163 (4.9%)	150 (4.5%)	156 (4.7%)	163 (4.9%)		
AT		172 (5.2%)	168 (5.0%)	157 (4.7%)	169 (5.1%)	187 (5.6%)	166 (5.0%)		
FI		174 (5.2%)	156 (4.7%)	142 (4.3%)	155 (4.6%)	172 (5.2%)	147 (4.4%)		
EL		179 (5.4%)	156 (4.7%)	149 (4.5%)	138 (4.1%)	137 (4.1%)	135 (4.0%)		
IE		175 (5.3%)	181 (5.4%)	185 (5.6%)	153 (4.6%)	170 (5.1%)	199 (6.0%)		
PT									

Notes: Data are drawn from the ECB Consumer Expectations Survey (CES) in March 2024. Statistics are population weighted. Kruskal–Wallis tests for continuous variables and Pearson chi-squared tests for categorical variables. The number of observations differs across variables.

Appendix C. Additional analysis

Appendix C.1 Offline functionality

One important motivation for setting up the digital euro regards the declining use and acceptance of cash in day-to-day payments and an increasing digitalization of the payment landscape (see Cipollone 2024). However, a distinct feature of cash compared to existing digital means of payment such as debit cards, credit cards or smartphone/-watch apps is its offline functionality. Cash as a means of payment offers thereby additional resilience even if network coverage is limited or in the (rare) event of a power cut. One key feature of the digital euro would be to be able to operate in situations with limited connectivity (as a physical cash equivalent). To gain insights into the importance of this feature, we ask respondents to indicate, using a slider that ranges from 0 to 100, the share of offline payments that they would be willing to perform with the digital euro:

A digital euro would offer both online and offline functionalities, anticipating situations of limited connectivity. When digital euro payments are made offline, payment information would only be known to the payer and the payee, providing the highest possible level of privacy. If you had to use the digital euro in some of your transactions, what fraction (in percent) of your total payments would you make offline?

The video shown to the treatment group explicitly highlights the feature of offline usability. In additional background analysis, we find that respondents from the treatment group report to conduct a roughly 4 pp larger share of their digital euro transactions offline relative to the control group (Table B3). Given consumers in the control group would use this feature for about one-third of transactions this represents a non-trivial and statistically highly significant treatment effect. This result suggests that information provision about key features of the digital euro that point to the similarity to cash might be one factor for encouraging adoption.

Appendix C.2 Who chose additional information on the digital euro?

Following the video treatment, half of the treatment group was also given the option to acquire additional information on the digital euro. However, only about 38% of those respondents chose to receive some extra information in the form of an official FAQ from the ECB's digital euro page. This finding suggests that a majority of consumers display limited motivation to learn more about this new form of payment, even when they are given such an opportunity with seemingly minimal search costs. Furthermore, we correlate the choice of seeking more information with various socioeconomic characteristics. Results, shown in Appendix Table B10, suggest that older consumers and women are less likely to acquire more

information. In addition, having low education and low financial literacy negatively correlates with the likelihood of acquiring more information. This is striking as these two groups typically have limited knowledge about new payment methods and face higher information costs, nonetheless they choose not to learn more about the digital euro. These findings are consistent with widespread consumer inattention and inertia documented by various household finance studies and characterize a variety of consumer financial choices (see Campbell 2006 and Badarinza, Campbell and Ramadorai 2016 for reviews). Communication efforts can encourage digital euro adoption, but its widespread use is unlikely to be straightforward. According to our evidence, communication that is targeted and carefully designed (e.g., towards groups that are not only less likely to adopt it but are also unwilling to learn more about it) can be quite effective.

Appendix C.3 Experimental integrity and robustness

We use a number of ways to assess the experimental integrity of the information provision experiment via the video. First, we examine the balance of key socio-economic characteristics between the control and treatment groups (Table B11). We find no evidence of a systematic difference between treatment and control groups across countries or along key characteristics such as age, education, gender, income, financial literacy, and household size or the perceived likelihood of a future financial crisis. Moreover, the treatment and control groups do not systematically differ in terms of time spent to complete the regular monthly survey, awareness about a digital euro reported prior to the treatment or having received any type of news, including about a digital euro, that regard the ECB over the one month preceding the interview. We only find a statistically significant (at the 5% level) but quantitatively small difference for the share of hand-to-mouth consumers in Treatment arm 2. Overall, we conclude from these tests that the randomization has worked as intended.

Second, we take advantage of the web survey's automatically collected para-data and analyse the time respondents spent on the screen of the video. It turns out that respondents found the video quite engaging, as most of them spent more time than the duration of the video (1:33 minutes) watching. On average, consumers spent 1:58 minutes on the video screen³⁰, which is 27% more than the original video time. 25% of respondents spend 1:36 minutes or less on the video screen, close to the minimum time, and another 25% spent 1:51 on the video. There was no restriction on the number of times people could watch the video, so this might reflect the number of respondents who re-watched sections of the video.³¹

Third, we directly test for attention by following the common practice of including an attention check question (see Haaland et al. 2023 and Stantcheva 2023). Almost all respondents (91%) answered a follow-up check question about the video content correctly.³² In our baseline

³⁰ We winsorised the most extreme two percentiles to account for outliers.

³¹ See Figure A5 (Panel A) in the appendix for the distribution of response times to the special-purpose module.

³² We ask respondents “Think back to the video you just saw. What would you say was the main topic of that video?” and they can choose from (i) A music video on a new European Anthem (ii) A possible new payment method for euro area consumers (iii) A new product available in supermarkets for consumers (iv) A summary of recent interest rate decisions by the European Central Bank (v) A soon to be available new handheld gaming device. See Figure A5 (Panel B) for the distribution of responses.

analysis we do not eliminate respondents who failed the attention check to avoid introducing any sample bias by selecting on post treatment variables.³³

One concern regarding our findings might be that they are mainly driven by the so-called survey (or experimenter) demand effects. In our context, demand effects would imply that treated respondents may tend to over-report that they will adopt the digital euro when they realise that they receive information about an ECB project in a survey that the ECB sponsors.³⁴ However, we implement a formal test to assess demand effects directly. To this end, we ask respondents in the post-treatment stage about their views regarding the ECB's role in two different contexts. First, we ask how credible respondents think the ECB is in delivering price stability. Responses are recorded on a 0 to 100 scale using a slider question.³⁵

How likely do you think it is that the European Central Bank will maintain price stability in the euro area economy over the next 3 years?

Second, we ask on a 5-point ordinal Likert scale about climate risks.

Please indicate how much you agree with the following statement:

The European Central Bank works to better understand, monitor, and manage climate-related risks in monetary policy and investment operations, and in the financial system.

Thus, we ask how people view the ECB with explicit reference to its key mandate (price stability) as well as to a policy challenge (climate risks) that represents one possible threat for price stability and many people can easily relate to. If survey demand effects were important, the treatment group should have reported a higher perceived likelihood that the ECB would achieve price stability and should have displayed a more positive view of the ECB's climate stance. However, differences between the treatment and control groups for both these questions are statistically insignificant and quantitatively unimportant (Table B12). For example, the difference in the perceived likelihood of price stability is close to zero and statistically insignificant at any conventional statistical level. Similarly, respondents who belong to the treatment group are not more or less likely to agree that the ECB is taking climate change into consideration. In both cases, we find no evidence that respondents who received information

³³ See, for example, Varaine (2023) for a discussion of omitting respondents who failed the attention check as a source for bias in estimates. In any case, our results remain virtually unchanged when we drop those few 'inattentive' respondents.

³⁴ In line with European regulation, the European Central Bank is disclosed to the respondent at the recruitment stage and are available at all times in a publicly accessible [online FAQ](#).

³⁵ This question was first introduced by Ehrmann et al. (2025).

about the digital euro purposefully reported more positive assessments of the ECB's role. Taken together, we assess the video treatment to have been successfully administered without any signs of inattention during the treatment or survey demand effects being present. The combination of randomized information provision and the absence of broader pro-ECB attitudinal shifts suggests that the treatment effects are more consistent with changes in consumers' understanding and evaluation of the digital euro than with purely generalized positive attitudes towards the ECB.

One additional consideration could be that the video treatment did not only encourage people's propensity to adopt a digital euro but also changed their beliefs of the attractiveness of digital assets more generally. We test for this by asking respondents post-treatment about their plans to purchase any (or any additional) crypto assets over the next 12 months. While about one out of ten consumers report planning to purchase crypto assets over this period, we find no meaningful or statistically significant differences between the control group and respondents who received information about the digital euro.³⁶ We conclude from this that the video treatment triggered effects that relate to its content and did not create any spillovers to other existing digital assets.

Another concern could be that the video treatment may have irritated some respondents and triggered survey attrition. Through the panel dimension of the CES we can test this hypothesis by comparing the attrition in the following month (April 2024) as well as in subsequent waves (May and June 2024). In results shown in Appendix Table B14 we do not find any statistically significant difference in attrition rates between the untreated and treated respondents. We view this as additional evidence for a successful treatment implementation that did not increase the overall survey burden beyond a point that would have caused differential attrition.

Last, we also check the balance of key socio-economic characteristics across the six possible CBDC limits that were randomly assigned across respondents. As intended, overall socio-demographic characteristics are well balanced across the randomly assigned limits (Appendix Table B15). In three instances we observe statistically significant but quantitatively small differences (age, gender, hand-to-mouth), likely reflecting the high statistical power of the sample and the large number of balance comparisons conducted. In any case, as shown, our results are resilient to controlling for these characteristics in our regression analysis. We

³⁶ See Table B13 in the appendix for the results.

conclude that our results on holding limits are not driven by systematic differences across treatment groups.

Additional References (online Appendix only)

Cipollone, P. (2024) Innovation, integration and independence: taking the Single Euro Payments Area to the next level. Speech at the ECB conference on “An innovative and integrated European retail payments market”, 24 April.

Varaine, S., 2023. How dropping subjects who failed manipulation checks can bias your results: An illustrative case. *Journal of Experimental Political Science*, 10(2), 299-305.

Appendix D. Survey Questions

The below background information was collected from recruitment, background and monthly CES survey modules fielded before the special purpose module including the survey experiment.

Background information

The below information is collected once respondents join the survey the first time.

Variable: A1020

Filtering: All respondents

Question wording:

What is your gender?

Coding:

[Single response]

1	Male
2	Female
3	Other

Variable: B2101

Filtering: All respondents

Question wording:

What is the highest level of school you have completed, or the highest degree you have received?

Coding:

[Single response]

1	Primary or no education
2	Lower secondary education
3	High school diploma (or equivalent professional degree)
4	Some college but no academic degree (for example: no BA, BS)
5	Bachelor's Degree (for example: BA, BS) or equivalent professional degree
6	Master's Degree (for example: MA, MBA, MS, MSW) or equivalent
7	Doctoral Degree (for example: PhD) or equivalent

Scripting instruction: country-specific scale to be inserted (from excel file 'education'), recode to International Standard Classification of Education (ISCED, 2011) → add hidden variable 'ISCED' that contains this recode to 8 categories (see excel file)

Skipped notification: Please provide an answer to this question. Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: B1000

Filtering: All respondents

Question wording:

How many people – including children and yourself – normally live with you as members of this household? By household we mean everyone who usually lives at your main place of residence (including yourself) and, that shares a common budget (that is, excluding flatmates and lodgers).

Coding:

[Numeric]

Valid range: 1-20

Skipped notification: Please provide an answer to this question. Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Introduction to B5020

The next section is more like a quiz. The questions are not designed to catch you out, so if you think you have the right answer, you probably do. If you don't know the answer, simply tick the "don't know" box.

Scripting instruction: Show on a separate screen

Variable: B5020

Filtering: All respondents

Question wording:

Suppose you had €100 in a savings account and the interest rate was 2% per year. After five years, how much do you think you would have in the account if you left the money to grow?

Coding:

[single response]

1	More than €102
2	Exactly €102
3	Less than €102
4	Don't know

-888	Skipped
------	---------

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Scripting instruction: rotate 1 to 3 by random group

Skipped notification: [none] (respondents can move to next question without notification)

Hard/soft check: no

Variable: B5030

Filtering: All respondents

Question wording:

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, how much would you be able to buy with the money in this account?

Coding:

[single response]

1	More than today
2	Exactly the same
3	Less than today
4	Don't know
-888	Skipped

Scripting instruction: rotate 1 to 3 by random group

Skipped notification: [none] (respondents can move to next question without notification)

Hard/soft check: no

Variable: B5040

Filtering: All respondents

Question wording:

Do you think the following statement is true or false?

Buying shares in a single company usually provides a safer return than buying shares in a mutual fund.

Coding:

[single response]

1	True
2	False
3	Don't know
-888	Skipped

Scripting instruction: rotate 1 to 2 by random group

Skipped notification: [none] (respondents can move to next question without notification)

Hard/soft check: no

Variable: B5050

Filtering: All respondents

Question wording:

Suppose you owe €1,000 on a loan and the interest rate you are charged is 20% per year, compounded annually. If you didn't pay anything off, at this interest rate, how many years would it take for the amount you owe to double?

Coding:

[single response]

1	Less than 2 years
2	At least 2 years but less than 5 years
3	At least 5 years but less than 10 years
4	At least 10 years
5	Don't know
-888	Skipped

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Scripting instruction: rotate 1 to 4 by random group

Skipped notification: [none] (respondents can move to next question without notification)

Hard/soft check: no

Variable: B7030

Filtering: All respondents

Question wording:

This question is about your household total **net** income. To respond, you may choose between your **monthly** or **yearly** household total **net** income.

Please note that any information you provide will remain strictly confidential.

We would be grateful for a response, as it assists us with our research.

Coding: [single response]

1	I prefer a question about my monthly household total net income.
2	I prefer a question about my yearly household total net income.

Skipped notification: Please provide an answer to this question. If you prefer not to answer the questions that follow (on the next screens), you will be able to choose the response option "prefer not to answer". Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: B7040

Filtering: All respondents

Question wording:

What was your household total **net** income (i.e. after tax and compulsory deductions) from all sources [SCRIPTER: if B7030=1, show: **over the past month** if B7030=2, show: **over the past 12 months**]?
If you don't know the exact figure, please give a best estimate.

Instruction: Please consider the income of all household members, and from all sources: wages or salaries; income from self-employment or farming; pensions; unemployment/redundancy benefit; any other social benefits or grants; income from investment, savings, insurance or property; income from other sources.

_____/month < if B7030=1 >
_____/year < if B7030=2 >

Coding:

[Numeric]

-666	Prefer not to answer
-999	Don't know

Valid range: 0 – 999999

Warning message:

- Show if monthly provided and value is above €10,000 OR if yearly provided and value is below €5,000.
- Show once, if respondent clicks “next” or changes to another implausible value, move to next question.
- Message, if yearly: you selected yearly income. If this is your household yearly total net income, please proceed by clicking “next”.
- Message, if monthly: you selected monthly income. If this is your household monthly total net income, please proceed by clicking “next”.

Skipped notification: Please provide an answer to this question. Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: B7050_1

Filtering: if B7030=1 and (B7040 = -666 or B7040 = -999)

Question wording:

Perhaps you can provide the approximate range instead. Which category best matches your household total **net** income (i.e. after tax and compulsory deductions) **over the past month**?

We would be grateful for a response and assure you that any information you provide will remain strictly confidential.

Coding: [single response]

1	Less than €500
2	€500-€999
3	€1,000-€1,499
4	€1,500-€1,999
5	€2,000-€2,499
6	€2,500-€2,999
7	€3,000-€3,999
8	€4,000-€4,999
9	€5,000-€6,999
10	€7,000-€9,999
11	€10,000 or more

-666	Prefer not to answer
-999	Don't know

Skipped notification: Please provide an answer to this question. If you prefer not to answer, you can select the option “Prefer not to answer” at the bottom of the list. Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Variable: B7050_2

Filtering: if B7030=2 and (B7040 = -666 or B7040 = -999)

Question wording:

Perhaps you can provide the approximate range instead. Which category best matches your household total **net** income (i.e. after tax and compulsory deductions) **over the past 12 months**?

We would be grateful for a response and assure you that any information you provide will remain strictly confidential.

Coding: [single response]

1	Less than €10,000
2	€10,000-€14,999
3	€15,000-€19,999
4	€20,000-€24,999
5	€25,000-€29,999
6	€30,000-€39,999
7	€40,000-€49,999
8	€50,000-€59,999
9	€60,000-€74,999

10	€75,000 or more
----	-----------------

-666	Prefer not to answer
-999	Don't know

Skipped notification: Please provide an answer to this question. If you prefer not to answer, you can select the option “Prefer not to answer” at the bottom of the list. Please be assured that the information you give us will be treated confidentially.

Hard check: respondent cannot proceed without answering

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

The below information is, at the time of writing, collected each month in the regular monthly CES module.

Variable: C7010

Filtering: **All respondents**

Question wording:

Please think about your available financial resources, including access to credit, savings, loans from relatives or friends, etc. Suppose that you had to make an unexpected payment equal to one month of your household income. Would you have sufficient financial resources to pay for the entire amount?

Question type: [single response]

Coding:

1	Yes
2	No

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: H2020

Filtering: **All respondents**

Question wording:

In the past month, have you seen or heard information about the European Central Bank (ECB) from any of the following sources?

Question type: [multiple response]

1	Newspapers and magazines
2	TV and radio
3	The ECB's websites and publications
4	The ECB's social media accounts, e.g. Twitter and LinkedIn
5	Websites and social media accounts not run by the ECB
6	Other sources not listed above
7	No, I didn't get any information

Coding:

0	No
1	Yes

Scripting instruction:

- randomize order of 1 – 5 (not 6 and 7)
- option 7 should be exclusive, that is when option 7 is selected all other options should be unselected.

Skipped notification: Please provide an answer to this question. Please be assured that there is no right or wrong answer.

Hard check: respondent cannot proceed without answering

The following information was collected on ad-hoc basis in selected months following the usually fielded monthly CES survey module.

In August 2022, respondents were asked in a 10 minute special purpose survey module following the regular 20 minute survey module the following questions on digital euro:

Variable: X7010

Filtering: All respondents

Question wording:

Have you heard of the digital euro?

Coding:

[Single response]

1	Yes
2	No
-999	Don't know

Scripting instruction: Randomize order of items 1 to 2, Version 1: Yes, No; Version 2: No, Yes. Please include a variable indicating the version (X7010version).

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

Variable: X7020_1-3

Filtering: All respondents

Question wording:

The European Central Bank (ECB) is thinking about the **possibility of introducing a digital euro**, which would be just like euro coins and banknotes, but in digital form. A digital euro would not replace cash but would give everyone an additional payment option. The digital euro would be fully backed by the ECB's commitment to keeping its value stable over time.

If a digital euro is introduced, what do you think is the likelihood that you would take the following decisions?

Instruction: Please rate the likelihood of taking each decision on a scale from 1 to 5, where 1 is very unlikely and 5 is very likely.

Coding:

[grid question]

[question items]

1	I would use digital euro in most day-to-day transactions
2	I would transfer more than half of my current savings into the digital euro
3	I would be happy for my salary / wage to be paid in digital euro

[response scale]

1	1 – Very unlikely
2	2 – Unlikely
3	3 – Undecided
4	4 – Likely
5	5 – Very likely

Scripting instruction:

- labelled slider for response scale
- Randomize the order items 1-3 appear.

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

In June 2023, respondents were again asked in a 10 minute special purpose survey module following the regular 20 minute survey module the following questions on digital euro:

Variable: AI3010

Filtering: All respondents

Question wording:

Have you ever heard of the digital euro?

Question type: [single response]

Coding:

1	Yes
0	No
-999	Don't know

Scripting instruction:

- Randomize order of items 1 to 2, Version 1: Yes, No; Version 2: No, Yes. Please include a variable indicating the version (AI3010version).

Skipped notification: Please provide an answer to this question. There is no right or wrong answer

Hard check: Respondent cannot proceed without answering.

Half of the sample received then the following question:

Variable: AI3110

Label: Hypothetical Digital Euro - Usage

Filtering: If AI3100 = 1

Question wording:

Screen 1 – Info screen (minimum screen timer 6 seconds)

Currently, you can access money via coins and banknotes issued by the central bank and the money you hold on your current and savings accounts at commercial banks.

The European Central Bank (ECB) is considering whether to introduce a **digital euro**. It would be just like euro coins and banknotes, but in digital form. A digital euro would not replace cash. It would give everyone an additional payment option. The ECB would be committed to keeping its value stable over time.

With this digital euro, you would be able to make payments in different ways, just as you do with euro coins and banknotes or the money from your current account at a bank.

Screen 2 – Question screen

If a digital euro is introduced, how likely is it that you would take the following decisions?

Instruction: Please rate the likelihood of using a digital euro for payments on a scale from 1 to 5, where 1 is very unlikely and 5 is very likely.

Question type: [grid question]

1	I would use the digital euro to make in-person day-to-day payments (e.g. in shops, including supermarkets or restaurants)
2	I would transfer more than half of my current savings into the digital euro
3	I would be happy for my salary / wage to be paid in digital euro
4	I would use the digital euro for online purchases
5	I would use the digital euro for regular and recurring payments (e.g. rent or subscription fees)
6	I would use the digital euro in peer-to-peer transactions (e.g. with family and friends)

Coding:

1	1 – Very unlikely
2	2 – Unlikely
3	3 – Undecided
4	4 – Likely
5	5 – Very likely

Scripting instruction:

- labelled slider for response scale
- Randomize the order items 1-6 appear.

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

The following information was collected after the monthly CES survey module in March 2024:

Pre-treatment (March 2024 special purpose module)

Variable: AL3110

Filtering: **All respondents**

Question wording:

Do you (or anyone in your household) currently **have any** of the following?

Instruction: *The info buttons give you an explanation of the terms.*

Question type: [grid question]

1	Current account
2	Savings account
3	Cash at home or in your wallet
4	Crypto-assets (e.g. Bitcoin)

Coding:

1	Yes
0	No

Scripting instruction:

- If the respondent clicks next without answering, show the question again, but add a “don’t know” option. Show the skipped notification.

-666	Prefer not to answer
-999	Don’t know

- Show info buttons: Display the following definitions when cursor goes on account category

Current account	An account where your salaries, pension or benefits are paid in. You can use it to make day-to-day payments or payments you have to make regularly.
Savings account	An account set up for accumulating savings (including long-term savings plans with a notice period). A savings account is not used to make day-to-day payments.
Crypto-assets (e.g. Bitcoin)	These are sometimes known as cryptocurrencies. They are a new type of asset for which ownership and transactions are recorded digitally by means of cryptography. Examples include Bitcoin, XRP, Litecoin and Ether.

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: AL3120

Filtering: **If at least one of AL3110_1-4=1**

Question wording:

How much do you and your household currently have in total in each of the following categories?

Instruction: *If you’re not sure, please choose the answer that fits your best estimate for each category.*

Question type: [grid question]

1	Current accounts	<drop-down menu>
2	Savings accounts	<drop-down menu>
3	Cash at home or in your wallet	<drop-down menu>
4	Crypto-assets (e.g. Bitcoin)	<drop-down menu>

Coding AL3120_1:

- <drop-down menu> for category 1 only (current accounts)

-555	Negative balance (overdraft)
1	Up to €99
2	€100-€499
3	€500-€999
4	€1,000-€1,999
5	€2,000-€2,999
6	€3,000-€4,999
7	€5,000-€9,999
8	€10,000-€14,999
9	€15,000-€19,999
10	€20,000-€29,999
11	€30,000-€39,999

12	€40,000-€49,999
13	€50,000-€69,999
14	€70,000-€99,999
15	€100,000-€149,999
16	€150,000-€199,999
17	€200,000 or more

Coding AL3120_2:

- **<drop-down menu>** for category **2** only (savings accounts)

1	Up to €99
2	€100-€499
3	€500-€999
4	€1,000-€1,999
5	€2,000-€2,999
6	€3,000-€4,999
7	€5,000-€9,999
8	€10,000-€14,999
9	€15,000-€19,999
10	€20,000-€29,999
11	€30,000-€39,999
12	€40,000-€49,999
13	€50,000-€69,999
14	€70,000-€99,999
15	€100,000-€149,999
16	€150,000-€199,999
17	€200,000 or more

Coding AL3120_3:

- **<drop-down menu>** for category **3** only (cash at home or in your wallet)

1	Up to €99
2	€100-€299
3	€300-€499
4	€500-€699
5	€700-€999
6	€1,000-€1,999
7	€2,000-€2,999
8	€3,000-€4,999
9	€5,000 or more

Coding AL3120_4:

- **<drop-down menu>** for category **4** only (Crypto-assets (e.g. Bitcoin))

1	Up to €99
2	€100-€299
3	€300-€599
4	€600-€999

5	€1,000-€1,499
6	€1,500-€2,499
7	€2,500-€4,999
8	€5,000-€9,999
9	€10,000-€14,999
10	€15,000-€19,999
11	€20,000-€29,999
12	€30,000-€49,999
13	€50,000-€69,999
14	€70,000-€99,999
15	€100,000 or more

Scripting instruction:

- Generate a list of unfolding items (drop-down menu) depending on the categories AL3110_1-4 with yes answer.
- If the respondent clicks next without answering, show the question again, but add a “don’t know” option (for each of the categories/dropdown menu). Show the skipped notification.

-666	Prefer not to answer
-999	Don’t know

Skipped notification: Please provide an answer to this question. If you prefer not to answer, you can select the option “Prefer not to answer” at the bottom of the drop-down list. All your answers will be treated confidentially.

Variable: AL4110

Filtering: **All respondents**

Question wording:

Which of the following payment options do you use to pay for an amount of approximately €50 or less, for a day-to-day transaction (e.g. in shops, restaurants)?

Coding:

[Multiple response]

1	Debit or credit card (excluding contactless)
2	Contactless debit or credit card
3	Smartphone or smartwatch
4	Cash
5	Other (e.g. food voucher or other means)

Coding:

0	No
1	Yes

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Scripting instruction: Randomize order of the items 1 to 4.

Hard check: respondent cannot proceed without answering

Variable: AL4410

Filtering: **All respondents**

Question wording:

Have you ever heard of the digital euro?

Question type: [single response]

Coding:

1	Yes
0	No
-999	Don’t know

Scripting instruction:

- Randomize order of items 1 to 2, Version 1: Yes, No; Version 2: No, Yes. Please include a variable indicating the version (AL4410version).

Skipped notification: Please provide an answer to this question. There is no right or wrong answer

Hard check: Respondent cannot proceed without answering.

Treatment Information (March 2024 special purpose module)

Group	Statement for screen:
A	No additional screen
B	Video

	Screen 1: On the next screen, you will see a short video (less than 2 min). Please turn on your sound or connect your headphones (if possible) before proceeding. Don't worry if you cannot turn on your sound or if you do not have your headphones, subtitles will be available. Screen 2: {insert video} SCRIPTER: insert the following <insert video>: <table border="1"> <tr> <td>Filename - To be provided later</td><td><i>If Country=1 and language=11 (Dutch – Belgium)</i></td></tr> <tr> <td></td><td><i>If Country=1 and language=12 (French – Belgium)</i></td></tr> <tr> <td></td><td><i>If Country=2 (France)</i></td></tr> <tr> <td></td><td><i>If Country=3 (Germany)</i></td></tr> <tr> <td></td><td><i>If Country=4 (Italy)</i></td></tr> <tr> <td></td><td><i>If Country=5 (Netherlands)</i></td></tr> <tr> <td></td><td><i>If Country=6 (Spain)</i></td></tr> <tr> <td></td><td><i>If Country=7 (Austria)</i></td></tr> <tr> <td></td><td><i>If Country=8 (Finland)</i></td></tr> <tr> <td></td><td><i>If Country=9 (Greece)</i></td></tr> <tr> <td></td><td><i>If Country=10 (Ireland)</i></td></tr> <tr> <td></td><td><i>If Country=11 (Portugal)</i></td></tr> </table>	Filename - To be provided later	<i>If Country=1 and language=11 (Dutch – Belgium)</i>		<i>If Country=1 and language=12 (French – Belgium)</i>		<i>If Country=2 (France)</i>		<i>If Country=3 (Germany)</i>		<i>If Country=4 (Italy)</i>		<i>If Country=5 (Netherlands)</i>		<i>If Country=6 (Spain)</i>		<i>If Country=7 (Austria)</i>		<i>If Country=8 (Finland)</i>		<i>If Country=9 (Greece)</i>		<i>If Country=10 (Ireland)</i>		<i>If Country=11 (Portugal)</i>
Filename - To be provided later	<i>If Country=1 and language=11 (Dutch – Belgium)</i>																								
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	<i>If Country=10 (Ireland)</i>																								
	<i>If Country=11 (Portugal)</i>																								
C	Video + FAQ information Screen 1: On the next screen, you will see a short video (less than 2 min). Please turn on your sound or connect your headphones (if possible) before proceeding. Don't worry if you cannot turn on your sound or if you do not have your headphones, subtitles will be available. After watching the video, you will also have the possibility to learn more about the topic, if you choose to do so (not mandatory). Screen 2: {insert video} Scripting instruction - Same language specific insert of the video as above In addition, respondents should see the below questions (see filtering)																								

Variable: AL5001

Label: Digital euro - information Treatment (self-selection)

Filtering: **If AL5000 = 3**

Question wording:

If you want, you can learn more about the digital euro on the next screen. There we will show the answers to some of the most frequently asked questions about the digital euro.

Would you be interested to learn more about the digital euro?

Instruction: *Note that you can leave this info page whenever you like, to continue with the rest of the survey.*

Question type: [single response]

Coding:

1	Yes, I would like to learn more information about the digital euro
0	No, I would not like to learn more information about the digital euro

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering.

Technical filtering: If AL5000 = 3.

Variable: AL5002

Label: Digital euro - information Treatment (treatment text – FAQ)

Filtering: **If AL5001 = 1**

Question wording:

FAQ on a digital euro (Source: The European Central Bank Webpage)

Below you can learn more about the digital euro and its possible features.

Instruction: Please go through the information according to your preference. After you have read an answer to a question, please tick the box underneath it.

Question type: [multiple response]

Why would Europe need a digital euro?

1	Digitalisation is changing the way we pay. The use of cash to make payments is declining and the coronavirus (COVID-19) pandemic has accelerated the shift towards online shopping and digital payments. A digital euro would be an electronic form of cash for the digitalised world. It would give consumers the option to use central bank money in a digital format, complementing banknotes and coins. A digital euro would make people's lives easier by providing something that does not currently exist: a digital means of payment universally accepted throughout the euro area, for payments in shops, online or from person to person. Like cash, a digital euro would be risk-free, widely accessible, user-friendly and free for basic use. Moreover, a digital euro would strengthen the strategic autonomy and monetary sovereignty of the euro area by boosting the efficiency of the European payments ecosystem as a whole, fostering innovation and increasing its resilience to potential cyberattacks or technical disruptions, such as power outages.
---	--

Would a digital euro replace cash?

2	No. A digital euro would complement cash, not replace it. A digital euro would exist alongside cash in response to people's growing preference to pay digitally, in a fast and secure way. Cash would continue to be available in the euro area, as would the other private electronic means of payment currently being used.
---	--

Who would be able to use a digital euro?

3	As stated in the legislative proposal presented by the European Commission, a digital euro would be made available to people, businesses and public entities that reside or are established in a euro area Member State on a temporary or permanent basis. People who travel to the euro area for personal or professional purposes, or who used to reside or be established in a euro area country, might also have access to the digital euro. Moreover, people, businesses and public entities residing or established outside the euro area may access the digital euro by opening digital euro accounts with payment service providers established or operating in a country which is a Member of the European Economic Area or in a third country, subject to a prior agreement concluded between the EU and third countries, and/or arrangements concluded between the European Central Bank and national central banks in non-euro area Member States and in third countries.
---	--

Would people have to pay to use a digital euro?

4	A digital euro would be a public good. It would therefore be free for basic use by the people who want to use it. Nevertheless, supervised intermediaries, including banks, could use the basic functionalities of a digital euro as a basis to further develop their own platforms and solutions. These intermediaries could then potentially go on to offer their customers other value-added services at a cost.
---	---

How would a digital euro work?

5	A digital euro would allow people to make secure instant payments in physical and online stores and between individuals, irrespective of the euro area country they are in or the payment service provider they have an account with. The European Central Bank is currently exploring how this could work in practice. For instance, the Eurosystem would develop a dedicated digital euro app that everyone could have equal access to. Alternatively, intermediaries, including banks, could integrate digital euro services within their existing apps, which their customers are already familiar with. In any case, people without access to a bank account or digital devices would also be able to pay with a digital euro using a physical card provided by public intermediaries, such as post offices. In any case, a digital euro would offer both online and offline functionalities, anticipating situations of limited connectivity. When digital euro payments are made offline, personal transaction details would only be known to the payer and the payee.
---	--

How private would a digital euro be?

6	Privacy is one of the most important design features of a digital euro. The Eurosystem has no interest in people's personal payment data or payment habits. The Eurosystem would not be able to identify people based on their transactions. A digital euro would allow people to make online payments without sharing their data with third parties, other than those that are required to prevent illicit activities, in line with European regulations. Offline digital euro payments would provide an even higher level of privacy. Personal transaction details would only be known to the payer and the payee.
---	---

How would the European Central Bank ensure that a digital euro is inclusive?

7	A digital euro would be a public good, like banknotes and coins are today – but in a digital form. A digital euro would be free for basic use, via a mobile app or a physical card, by people who want to use it. A digital euro would also work offline, in case users have limited connectivity.
---	--

	The draft legislation presented by the European Commission establishes that credit institutions distributing a digital euro would be required to provide basic digital euro payment services when requested by their customers. Moreover, to ensure that everyone – including people with disabilities, those with functional limitations or limited digital skills, and elderly people – can pay using digital euro, public entities, such as post offices, will be identified in each euro area country. These entities would provide people vulnerable to digital financial exclusion with free support and access to digital euro services, such as face-to-face support and dedicated assistance when opening a digital euro account and using all basic digital euro services. Free access to the basic services of a digital euro would also be offered to people without a bank account. Moreover, a particular focus will be placed on the inclusion of vulnerable groups, such as individuals with no fixed address, asylum seekers or beneficiaries of international protection. A digital euro would be designed to accommodate the needs of everyone, leaving no one behind.
--	---

How would the European Central Bank ensure that people can pay with digital euro in the same way throughout the euro area?

8	Supervised intermediaries would be in charge of distributing a digital euro in the euro area. To ensure harmonious implementation, the Eurosystem is designing a digital euro scheme that consists of a single set of rules, standards and procedures for the standardisation of digital euro payments across the euro area, ensuring pan-European reach. This single set of rules, standards and procedures is currently being developed in close collaboration with market representatives, including users, retailers and intermediaries, by the Rulebook Development Group.
---	---

What would be the link between instant payments and a digital euro?

9	Today, consumers rarely have the option to use instant payments when paying in shops, which also means that merchants don't receive their money immediately. A digital euro would change that – all digital euro payments would be instant. The single set of rules, standards and procedures developed and, if approved, implemented for a digital euro would mean that instant payment solutions could be further developed to reach all euro area countries. This would reduce the dependence on private non-European companies that are currently dominating the payments sector.
---	---

How would a digital euro be different from stablecoins and crypto-assets?

10	A digital euro would be central bank money. This means that it would be backed by a central bank and designed to meet the needs of the people using it. As such it would be risk-free. Moreover, it would respect privacy and data protection. Central banks have a mandate to maintain the value of money, whether it be in physical or digital form. The stability and reliability of stablecoins ultimately depend on the entity that issues them and the credibility and enforceability of their pledge to maintain the money's value over time. Private issuers may also use personal data for commercial purposes. There is no identifiable entity that is liable for crypto-assets, which means that claims cannot be enforced.
----	---

Coding:

1	I have read this text.
---	------------------------

- Fill with 0 if a box is not ticked

Scripting instruction:

- Show the header above an unfolding item for each header
- Randomise the order headers and items 1 to 10 appear
- For each item show the tickbox underneath the unfolding item text at the end
- People can tick as many items as they want and

Technical filtering: If AL5001 = 1

Post treatment (March 2024 special purpose module)

Variable: AL5010

Filtering: **Only asked for treated individuals**

Question wording:

Think back to the video you just saw.

What would you say was the **main topic** of that video?

Question type: [single response]

Coding:

1	A music video on a new European Anthem
2	A possible new payment method for euro area consumers
3	A new product available in supermarkets for consumers
4	A summary of recent interest rate decisions by the European Central Bank
5	A soon to be available new handheld gaming device
-999	Don't know

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Scripting instruction:

- Randomise the order items 1 to 5 appear with the non-response option always ordered last.

Hard check: respondent cannot proceed without answering.

Variable: AL5020

Filtering: **All respondents**

Question wording:

The European Central Bank is considering the introduction of a digital euro. It would be a digital form of cash, issued by the central bank and available to everyone in the euro area.

If a digital euro is introduced, how likely is it that you would take the following decisions?

Instruction: *Please rate the likelihood of using a digital euro for payments on a scale from 1 to 5, where 1 is very unlikely and 5 is very likely.*

Question type: [grid question]

1	I would use the digital euro to make in-person day-to-day payments (e.g. in shops, including supermarkets or restaurants)
2	I would use the digital euro for online purchases
3	I would use the digital euro in peer-to-peer transactions (e.g. with family and friends)
4	I would use the digital euro to receive my salary / wage in digital euro

Coding:

1	1 – Very unlikely
2	2 – Unlikely
3	3 – Neither likely nor unlikely
4	4 – Likely
5	5 – Very likely

Scripting instruction:

- labelled slider for response scale
- Randomise the order items 1-4 appear.

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

Variable: AL5210

Filtering: **All respondents**

Question wording:

Imagine that you receive a one-off windfall of €10,000 to store in cash, save or invest in financial assets. Please indicate in which of the following asset categories you would store/save/invest this amount.

Instruction: *You can allocate €10,000 by typing an amount in each box. (Note that your answers should total to €10,000 – if your total exceeds €10,000, you should first decrease the amount in one option before you increase the amount in another).*

1	Cash/physical money at home	
2	Digital euro in an application or digital wallet on a mobile device	
3	Current accounts or savings accounts	
4	Individual stocks or shares in publicly traded companies	
5	Mutual funds and collective investments (including exchange-traded funds (ETFs))	
6	Government or corporate bonds	
7	Crypto-assets (e.g. Bitcoin)	
8	Other financial assets (e.g. retirement assets) not included above	
	Total (the values should total to €10,000)	€10,000

Question type: [numeric grid]

Coding: **numerical with range 0 – 10000**

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Error message: Note that the amounts in the column should total to €10,000. Please check your answer or click "Next" if you are happy with your answer.

Skipped notification:

Please provide an answer to this question. All your answers will be treated confidentially.

Soft check: skipping notification shown once, if respondent clicks 'next' again, move to next question

Scripting instruction:

- Show info buttons: Display the following definitions when cursor goes on financial instruments (please note there might be two info buttons per response item).

Digital euro	A digital form of cash, issued by the central bank and available to everyone in the euro area.
Current accounts	An account used for receiving salaries, pensions and regular benefits and for making day-to-day or frequent transactions .
Savings accounts	An account set up for accumulating savings (including long-term savings plans with a notice period). A savings account is not used to execute day-to-day transactions.
Individual stocks or shares in publicly traded companies	These are typically traded on a stock exchange and held by investors directly. Stocks and shares refer to the ownership of part of a company. They give the owner of the stocks or shares the right to receive dividends from it.
Mutual funds and collective investments (including exchange-traded funds (ETFs))	Collective investment schemes, typically a portfolio (basket of assets) of stocks, bonds, other securities and/or real estate, that is often professionally managed.
Government or Corporate bonds	Securities which essentially are loans to the government or large corporations. A bond pays back the principal amount at a future date.
Crypto-assets (e.g. Bitcoin)	These are sometimes known as cryptocurrencies. A new type of asset for which ownership and transactions are recorded digitally by means of cryptography. Examples include Bitcoin, XRP, Litecoin and Ether.

Variable: AL6000

Filtering: **All respondents**

Question type: [Single value]

Coding:

1	Group A
2	Group B
3	Group C
4	Group D
5	Group E
6	Group F

Scripting instruction:

- Random assignment of groups, with equal groups for country (DE, FR, IT, ES, NL, BE, FI, PT, AT, IE, GR) x recruitment method (CATI/CAWI).

Group	Z (insert)
A	1,000 €
B	3,000 €
C	5,000 €
D	10,000 €
E	50,000 €
F	120,000 €

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Variable: AL6010

Filtering: **All respondents**

Question wording:

Imagine that a **digital euro** is introduced with a **holding limit of {L}** euro per person.

Taking into account the money you (your household) currently hold on your current and savings accounts and in cash, how much money would you allocate into your digital euro account?

Question type: [numeric]

___ €

Coding: numeric with range 0 to {L}

Scripting instruction:

- Please display the following error message if the value entered is above {L}: “Please review your answer. The maximum value you can allocate can be {L}.”

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: AL6020

Label: Hypothetical digital euro - fraction offline/ online payments

Filtering: **All respondents**

Question wording:

A digital euro would offer both online and offline functionalities, anticipating situations of limited connectivity. When digital euro payments are made offline, payment information would only be known to the payer and the payee, providing the highest possible level of privacy.

If you had to use the digital euro in some of your transactions, what fraction (in percent) of your total payments would you make offline?

Instruction: *Use the slider below to indicate your response.*

Question type: [slider]

Coding: slider without anchoring with range: 0%-100%.

Scripting instruction:

- Please include anchor labels at 0%, 50% and 100%.
- If the respondent clicks next without answering, show the question again, but add a “don’t know” option. Show the skipped notification.

-999	Don’t know
------	------------

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

Technical filtering: All respondents

Variable: AL5110

Filtering: **If AL5020_1=1 OR AL5020_1=2 OR AL5020_1=3**

Question wording:

Earlier you said that it would not be likely that you adopt the digital euro for day-to-day payments.

Why is it **not likely** that you will **adopt a digital euro** for making in-person **day-to-day payments**?

Instruction: *Please choose only the most important reason.*

Question type: [single response]

Coding:

1	It will be less secure compared to alternative (non-cash) means of payment
2	It will have lower degree of anonymity or privacy compared to alternative (non-cash) means of payment
3	Shops currently not accepting alternative (non-cash) means of payment will not accept it
4	It will come with additional transaction costs compared to alternative (non-cash) means of payment
5	I use alternative payment methods that meet my needs
6	Another reason not listed above

Scripting instruction:

- Randomise the order of items 1 to 5, item 6 should always be ordered last.
- If the respondent clicks next without answering, show the question again, but add a “don’t know” option. Show the skipped notification.

-666	Prefer not to answer
-999	Don’t know

Skipped notification: Please provide an answer to this question. All your answers will be treated confidentially.

Hard check: Respondent cannot proceed without answering.

Variable: AL7010

Filtering: **All respondents**

Question wording:

In the next 12 months, do you (or a member of your household) plan to {if AL3110_4 = -666 or AL3110_4 = -999 or AL3110_4 = 0, **SHOW: buy**} {if AL3110_4 = 1, **SHOW: buy more**} crypto-assets?

Question type: [single response]

Coding:

1	Yes
0	No

Scripting instruction:

- If the respondent clicks next without answering, show the question again, but add a “don’t know” option. Show the skipped notification.

Coding:

-666	Prefer not to answer
-999	Don’t know

- Show info buttons. Display the following definition of crypto-assets

crypto-asset	These are sometimes known as cryptocurrencies. They are a new type of asset for which ownership and transactions are recorded digitally by means of cryptography. Examples include Bitcoin, XRP, Litecoin and Ether.
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- Randomise the order of items 0 and 1. Include a variable indicating the version (AL7010version).

Skipped notification: Please provide an answer to this question. If you prefer not to answer, you can select the option “Prefer not to answer”.

All your answers will be treated confidentially.

Hard check: respondent cannot proceed without answering

Variable: AL7020

Filtering: **All respondents**

Question wording:

How likely do you think it is that **the European Central Bank will maintain price stability in the euro area economy over the next 3 years?**

Instruction: Use the slider below to indicate your response.

Question type: [slider]

Coding: **slider without anchoring with range: 0-100.**

Scripting instruction: If the respondent clicks next without answering, show the question again, but add a “don’t know” option. Show the skipped notification.

-999	Don’t know
------	------------

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

Variable: AL8010

Filtering: **All respondents**

Question wording:

Please indicate how much you agree with the following statement:

The European Central Bank works to better understand, monitor, and manage **climate-related risks** in monetary policy and investment operations, and in the financial system.

Question type: [single response]

Coding:

1	Strongly agree
2	Agree
3	Neither agree nor disagree
4	Disagree
5	Strongly disagree

Scripting instruction:

- Please change the order with two versions 1: “Strongly agree” to “Strongly disagree” and version 2, with inverse order: “Strongly disagree” to “Strongly agree”. Save the version in AL8010version.

Skipped notification: Please provide an answer to this question. We appreciate your opinion.

Follow-up survey (June 2024)

Variable: AM1010

Label: Hypothetical digital euro – Awareness prior to survey

Filtering: **All respondents**

Question wording:

Have you ever heard of the digital euro?

Question type: [single response]

Coding:

1	Yes
0	No
-999	Don't know

Scripting instruction:

- Randomise order of items 1 to 2, Version 1: Yes, No; Version 2: No, Yes. Please include a variable indicating the version (AM1010_version).

Skipped notification: Please provide an answer to this question. There is no right or wrong answer

Hard check: Respondent cannot proceed without answering.

Technical filtering: All respondents

Variable: AM1020

Label: Hypothetical digital euro - Usage

Filtering: **All respondents**

Question wording:

The European Central Bank is considering the introduction of a digital euro. It would be a digital form of cash, issued by the central bank and available to everyone in the euro area.

If a digital euro is introduced, how likely is it that you would take the following decisions?

Instruction: Please rate the likelihood of using a digital euro for payments on a scale from 1 to 5, where 1 is very unlikely and 5 is very likely.

Question type: [grid question]

1	I would use the digital euro to make in-person day-to-day payments (e.g. in shops, including supermarkets or restaurants)
2	I would use the digital euro for online purchases
3	I would use the digital euro in peer-to-peer transactions (e.g. with family and friends)
4	I would use the digital euro to receive my salary / wage in digital euro

Coding:

1	1 – Very unlikely
2	2 – Unlikely
3	3 – Neither likely nor unlikely
4	4 – Likely
5	5 – Very likely

Scripting instruction:

- labelled slider for response scale
- Randomise the order items 1-4 appear.

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering

Technical filtering: All respondents

Variable: AM1030

Label: Digital euro - information acquisition (self-selection)

Filtering: **If AM1010 = 1**

Question wording:

During the last three months, have you actively searched for information about the digital euro?

Instruction: Please consider any source of information, including TV/radio, newspapers or the internet.

Question type: [single response]

Coding:

1	Yes
0	No

Scripting instruction:

- Please randomise the order the response options appear, version 1: Yes, I have actively looked for information on the digital euro; No, I have not actively looked for information on the digital euro, version 2: No, I have not actively looked for information on the digital euro; Yes, I have actively looked for information on the digital euro. Record the version in a separate variable: AM1030_version.

Skipped notification: Please provide an answer to this question. There is no right or wrong answer.

Hard check: respondent cannot proceed without answering.

Technical filtering: If AM1010 = 1

December 2025 survey round

Variable: FC_72_2110

Label: Financial assets portfolio - hypothetical

Filtering: If FC_72_2010 = 1

Question wording:

Imagine you receive a one-off windfall of *W* to save or invest in financial assets. Please indicate in which of the following asset categories you would save/invest this amount.

Instruction: You can allocate *W* by typing an amount in each box. (Note that your answers should total *W* – if your total exceeds *W*, you should first reduce the amount in one option before you increase the amount in another.)

1	Cash/money at home	
2	Current accounts or savings accounts	
3	Individual stocks or shares in publicly traded companies	
4	Mutual funds or other collective investments, including exchange-traded funds (ETFs)	
5	Voluntary retirement and pension products or whole life insurance	
6	Government or corporate bonds	
7	Crypto-assets (e.g. bitcoin)	
8	Other financial assets not included above	
	Total (the values should total <i>W</i>)	<i>W</i>

Question type: [numeric grid]

Coding: numerical with range 0 – *W*

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Error message: Note that the amounts in the column should total to *W*. Please check your answer or click "Next" if you are happy with your answer.

Skipped notification:

Please provide an answer to this question. All your answers will be treated confidentially.

Soft check: skipping notification shown once, if respondent clicks 'next' again, move to next question

Hard check: respondent cannot proceed without answering (show if no fields answered); respondent can proceed if at least one field answered.

Scripting instruction:

- Show info buttons: Display the following definitions when cursor goes on financial instruments (please note there might be two info buttons per response item).

Current accounts	An account used for receiving salaries, pensions and regular benefits and for making day-to-day or frequent transactions .
Savings accounts	An account used for building up savings (including long-term savings plans with a notice period). A savings account is not used for day-to-day transactions.
Individual stocks or shares in publicly traded companies	These are typically traded on a stock exchange and held by investors directly. Stocks and shares refer to the ownership of part of a company. They give the owner of the stocks or shares the right to receive dividends from it.
Mutual funds or other collective investments, including exchange-traded funds (ETFs)	Collective investment schemes, typically a portfolio (basket of assets) of stocks, bonds, other securities and/or real estate, which is often professionally managed.
Voluntary retirement and pension products	A non-occupational and non-mandatory pension plan for voluntarily setting aside money to be spent after retirement.
Whole life insurance	An insurance policy which is guaranteed to remain in force for the lifetime of the policyholder or until the maturity date.
Government or corporate bonds	Securities which are essentially loans to the government or large corporations. The principal amount of a bond is repaid at a later date.
Crypto-assets (e.g. bitcoin)	These are sometimes known as cryptocurrencies. A new type of asset for which ownership and transactions are recorded digitally by means of cryptography. Examples include bitcoin, ripple, litecoin and ether.

Variable: FC_72_2120

Label: Financial assets portfolio – hypothetical (added CBDC)

Filtering: If FC_72_2010 = 2

Question wording:

Imagine you receive a one-off windfall of *W* to save or invest in financial assets. Please indicate in which of the following asset categories you would save/invest this amount.

Instruction: You can allocate *W* by typing an amount in each box. One of the possible categories, is the digital euro. The European Central Bank is currently considering to introduce a digital euro. It would be a digital form of cash, issued by the central bank and available to everyone in the euro area.

(Note that your answers should total *W* – if your total exceeds *W*, you should first reduce the amount in one option before you increase the amount in another.)

1	Cash/money at home	
2	Digital euro in an application or digital wallet on a mobile device	
3	Current accounts or savings accounts	
4	Individual stocks or shares in publicly traded companies	
5	Mutual funds or other collective investments, including exchange-traded funds (ETFs)	
6	Voluntary retirement and pension products or whole life insurance	
7	Government or corporate bonds	
8	Crypto-assets (e.g. bitcoin)	
9	Other financial assets not included above	
	Total (the values should total W)	W

Question type: [numeric grid]

Coding: numerical with range 0 – W

Translation instruction: Placement of the euro symbol varies across countries. Please place the euro symbol (before or after value) as customary in the local context.

Error message: Note that the amounts in the column should total to **W**. Please check your answer or click "Next" if you are happy with your answer.

Skipped notification:

Please provide an answer to this question. All your answers will be treated confidentially.

Soft check: skipping notification shown once, if respondent clicks 'next' again, move to next question

Hard check: respondent cannot proceed without answering (show if no fields answered); respondent can proceed if at least one field answered.

Scripting instruction:

- Show info buttons: Display the following definitions when cursor goes on financial instruments (please note there might be two info buttons per response item).

Digital euro	A digital form of cash, issued by the central bank and available to everyone in the euro area. The digital euro would be stored in an electronic wallet set up with your bank or with a public intermediary. This would allow you to make all your usual electronic payments – in your local store, online, to a friend – with your phone or card, online and offline.
Current accounts	An account used for receiving salaries, pensions and regular benefits and for making day-to-day or frequent transactions .
Savings accounts	An account used for building up savings (including long-term savings plans with a notice period). A savings account is not used for day-to-day transactions.
Individual stocks or shares in publicly traded companies	These are typically traded on a stock exchange and held by investors directly. Stocks and shares refer to the ownership of part of a company. They give the owner of the stocks or shares the right to receive dividends from it.
Mutual funds or other collective investments, including exchange-traded funds (ETFs)	Collective investment schemes, typically a portfolio (basket of assets) of stocks, bonds, other securities and/or real estate, which is often professionally managed.
Voluntary retirement and pension products	A non-occupational and non-mandatory pension plan for voluntarily setting aside money to be spent after retirement.
Whole life insurance	An insurance policy which is guaranteed to remain in force for the lifetime of the policyholder or until the maturity date.
Government or corporate bonds	Securities which are essentially loans to the government or large corporations. The principal amount of a bond is repaid at a later date.
Crypto-assets (e.g. bitcoin)	These are sometimes known as cryptocurrencies. A new type of asset for which ownership and transactions are recorded digitally by means of cryptography. Examples include bitcoin, ripple, litecoin and ether.

Appendix E. Protocol for dubbing of the treatment video

Step 1 – Source Video

The video was obtained for EN (screen filming, with subtitles) on 02.02.2024.

<https://www.youtube.com/watch?v=cNJis8BEieo>

For record keeping this video was also kept by doing a screen filming with the EN subtitles.

Step 2 – Obtain translated textual input

The eight language-translated scripts were obtained from the ECB YouTube channel (see Table C1).

(Notes: EN uses the default subtitles from YouTube)

Note that the following CES sample countries received the same language as others:

- DE and AT both received one version of German (video + subtitles)
- BE-FR and FR both received one version of French (video + subtitles)
- BE-NL and NL both received the exact translation but different voice-overs because of feedback from local language experts on the accessibility (pronunciation) (video + subtitles)

This is akin to the translations used by the ECB webpage for these countries regarding country-specific webpages (e.g. the FAQ on the digital euro).

Step 3 – Dubbing / Voice Over and subtitles in local languages

The input for dubbing (voice-over) of the original video was the YouTube link above each time.

At the time, no changes to the video were made compared to 02.02.2024.

The dubbing was done in two instances on 10.02.2024 (DE, ES, FR, GR, NL, and IT) and 14.02.2024 (the remaining languages: PT and FI).

Software: <https://webapp.dubverse.ai/> (Version: 0.8.0), as of 10.02. and 14.02.2024.

Licence used: All dubbing was performed under the Pro licence (for a cost of 13 USD) which allows for commercial use.

Text (spoken word and subtitles): For all videos, language-specific edits to the Dubverse translation were made in their proprietary editing platform using the YouTube scripts from Step 2.

Voices: The voices in all countries were “Bella” an advanced dubbing voice Dubverse uses from “Elevenlabs”; Some countries used another voice, “Iris,” due to the non-availability of previously mentioned voices (GR) and “Evelien” (NL, BE-NL).

The voice-over thereby mimics the voice of the original EN video.

Background music: Different from the EN original (which has a soundtrack underlying it), we refrained from using background music due to potential issues with the licencing of the music used in the original video at the time of conducting the research.

Video content: The entire video was shown to respondents. No further edits were made to the video.

Step 4 – Testing with language experts

A team of native speakers was consulted for all languages to confirm the translation.

Step 5 – Web Implementation in the CES survey platform

Ipsos N.V. implemented the videos on the web platform. The ECB team and the team from Ipsos N.V. tested the survey links on multiple desktop and mobile devices, including the subtitles and voice-over. The implementation was without issues. No errors were identified before, during or after the fieldwork. No errors were raised by respondents who can provide feedback to Ipsos N.V. at the end of each round of the survey.

Table C1. Translated text used for the voice-over and video subtitles

	EN (Source)	DE	ES	FR	IT	NL	GR	PT	FI
Sheet	000 Imagine a digital single payment solution	001 Stellen Sie sich eine einheitliche digitale Zahlungslösung vor,	001 Imagina una solución de pago digital única	001 Imaginez une solution de paiement numérique unique	001 immagina una soluzione di pagamento digitale unica	001 Stel je voor: één digitaal betaalmiddel	001 Εννοείται μια ψηφιακή ενιαία λύση πληρωμών	000 Imagine uma solução de pagamento digital única	001 Mikä jos kaikki maksut voit hoitaa euroalueella samalla tavalla?
	004 that could be used for any kind of payment	003 die für jede Art von Zahlung in gesamten Euroraum genutzt werden kann.	003 que pueda utilizarse para cualquier tipo de pago en toda la zona del euro.	003 utilisable pour tout type de paiement dans l'ensemble de la zone euro.	003 utilizzabile per ogni tipo di pagamento	003 dat je kunt gebruiken voor elke betaling die je wil doen	003 mikä mitä joutuu käytettäväksi eurojen käytössä	004 utilizável para qualquer pagamento	008 Eurosta kaavillaan sähköistä versiota, joka nimitetään digitaaliseksi euroksi.
	006 throughout the euro area.	006 in the entire Eurozone.	006 que pueda utilizarse para cualquier tipo de pago en toda la zona del euro.	006 dans l'ensemble de la zone euro.	006 pagamento	006 elke betaling die je wil doen	006 yhteisöalueen alueella	007 no conjunto da área do euro.	014 Sähköinen maksaminen olisi nopeaa, helppoa ja turvallista.
	009 Guess what? It could become a reality:	009 Genau das könnte Realität werden.	009 ¿Sabes qué? Podría hacerse realidad.	009 Eh bien, cela pourrait bientôt voir le jour !	009 Sai che potrebbe diventare realtà?	009 Nou ... dat zou zo maar eens mogelijk kunnen worden:	009 Μπορεί να γίνει πραγματικότητα.	009 Sabe que mais? Pode vir a acontecer.	019 Euroopan keskuspankki jättäisi siitä huolta, kuten eteiletä ja kolhoistakin.
	012 A digital euro	012 Ein digitales Euro	012 Un euro digital	012 Un euro numérique	012 Un euro digitale	012 een digitale euro	012 Digitaalinen euro	010 Pod vir a acontecer.	019 Euroopan keskuspankki jättäisi siitä huolta, kuten eteiletä ja kolhoistakin.
	014 easy, safe, fast, reliable.	014 einfach, sicher, schnell, zuverlässig.	014 fácil, seguro, rápido, fiable.	014 simple, sûr, rapide et fiable.	014 facile, sicuro, veloce, affidabile.	014 gemakkelijk, veilig, snel en betrouwbaar.	014 Eurykko, turvallinen, nopea, luotettava.	013 Um euro digital fácil, seguro, rápido, fiável.	027 Rahaa olisi helppo siirtää esimerkiksi puhelinsovelluksella maassa kuin maassa.
	019 Digital money from the ECB at your fingertips, whenever you need it.	019 Digitales Geld von der EZB jederzeit verfügbar.	019 Dinero digital del BCE a tu alcance siempre que lo necesites.	019 Un euro numérique émis par la BCE, disponible à tout moment.	019 Moneta digitale della BCE a portata di mano, ovunque e per ogni necessità.	019 Digitaal geld van de ECB bij de hand, waar en wanneer maar wil.	019 Ψηφιακό χρήμα από την ΕΚΤ στα χέρια σου, όποτε το χρειάζεσαι.	019 Moeda digital do Banco Central Europeu ao seu alcance, quando precisar.	034 Siirtoamuaa valitessa pitäisi vain huolehtia, että digitaalisia euroja on tarpeeksi.
	026 But how would it work?	026 Wie würde das funktionieren?	026 Pero, ¿cómo funcionaría?	026 Comment cela fonctionnerait-il ?	026 Ma come funzionerebbe?	026 Maar hoe zou dat werken?	026 Αλλά πώς θα λειτουργούσε;	026 Mas como funcionaria?	040 Kun maksun varmistaisi, se olisi jo saman tien perillä saajan sovelluksessa.
	028 Say you've gone for a meal with a friend and you want to split the bill.	028 Sie wollen sich im Restaurant die Rechnung teilen?	028 Imagina que vas a comer con una amiga y quieres dividir la cuenta.	028 Vous souhaitez partager l'addition de votre repas avec une amie ?	028 Sei al ristorante con amici e vuoi dividere il conto?	028 Stel, je gaat met iemand uit eten en wil de rekening delen.	028 Ας πούμε ότι έχετε πάει για φαγητό με φίλοι και θέλετε να μοιραστείτε τον λογαριασμό.	029 Suponha que sai com alguém e quer dividir a conta.	046 Eikä rahansirto maksaisi mitään, pankissa tai muusta palveluntarjoajasta riippumatta.
	032 Simple!	032 Ganz einfach!	032 Fácil	032 C'est facile !	032 Semplice!	032 Stel, je gaat met iemand uit eten en wil de rekening delen.	032 Eurykko.	033 E simples!	049 Pikamaksut onnistuisivat jopa ilman verkkoyhteyttä aina ja kaikkialla.
	033 Open the digital euro wallet on your smartphone	033 Sie öffnen die Wallet für digitale Euro auf Ihrem Smartphone.	033 Abre tu cartera de euros digitales en el móvil.	033 Vous ouvrez votre portefeuille en euros numériques sur votre smartphone.	033 Apri il wallet in euro digitali sul tuo smartphone	033 Open de digitale europortemonnee op je smartphone.	033 Eiivä avaa!	034 Abra a sua carteira de euros digitais no telemóvel.	058 Maksupäätteellä joutuisi todennäköisesti varmuuden vuoksi vahvistamaan maksun.
	036 Check your balance, enter the amount to pay your friend	036 Prüfen Ihr Guthaben und geben den Betrag ein.	036 Comprueba tu saldo e introduce el importe que deseas pagar a tu amiga.	036 Vérifiez votre solde, entrez le montant à payer à votre amie.	036 controlla il saldo, inserisci l'importo da pagare	036 Open de digitale europortemonnee op je smartphone.	036 Ανοίξτε το πορτοφόλι ψηφιακού ευρώ στο έξυπνο κινητό σας.	037 verifique o saldo, indique o montante a pagar.	1.06 Halutessaan sähköisiä euroja voisi käyttää puhelimen sijasta maksukortilla.
	040 Confirm your transfer	040 Sie bestätigen die Überweisung.	040 Confirma la transferencia.	040 et confirmez le virement.	040 la tua quota sarà trasferita all'istante, senza costi aggiuntivi.	040 Bevestig je betaling.	040 Επιβεβαιώστε τη μεταφορά των πληρωμών σας.	040 confirme a transferência.	1.09 Digitaalisilla euroilla voisi tehdä ostoksia myös verkossa.
	042 Your friend will receive the money instantly, free of charge.	042 Ihre Freundin erhält das Geld sofort gebührenfrei.	042 Tu amiga recibirá el dinero al instante sin costes adicionales.	042 Votre amie recevra le paiement instantanément et gratuitement.	042 Non importa in quale paese ti trovi o chi sia il tuo fornitore dei servizi di pagamento.	042 Bevestig je betaling.	042 Η φίλη σας θα λάβει αμέσως, χωρίς κόστος.	042 O dinheiro é recebido de imediato, gratuitamente.	1.17 Tai ne voisi vaihtaa euroasetteiksi. Näiden arvo ei muuttuisi mihinkään.
	046 It doesn't matter which country you're in or who your payment provider is.	046 Auch in Geschäften können Sie einfach mit dem digitalen Euro bezahlen.	046 No importa en qué país estés o quién sea tu proveedor de pagos.	046 quel que soit le pays dans lequel vous vous trouvez ou votre prestataire de paiement.	046 La tua quota sarà trasferita all'istante, senza costi aggiuntivi.	046 Bevestig je betaling.	046 Δεν έχει σημασία σε ποια χώρα βρίσκεσαι ή τον πάρογο πληρωμών.	046 Não importa o país em que está ou qual é o seu prestador de serviços de pagamento.	1.22 Euroopalla olisi oma yhteinen sähköinen raha.
050 Payments are still made instantly. Even offline.	050 Sie entsperren Ihr Gerät, halten es an das Zahlungsterminal, authentifizieren sich und bezahlen, online oder offline.	050 También es fácil utilizar el euro digital en tus tiendas favoritas.	050 Vous pourriez aussi utiliser l'euro numérique facilement chez vos commerçants de proximité.	050 Potrai usare facilmente l'euro digitale anche nel tuo negozio di fiducia.	050 Bevestig je betaling.	050 Αν πληρώσεις, ακόμα κι αν είσαι offline.	050 Os pagamentos continuam a ser imediatos, mesmo sem ligação à internet.	1.29 Euroopan keskuspankki Eurojärjestelmää firmih	
053 It's also easy to use the digital euro at your favourite local shops.	053 Sie können auch eine physische Karte verwenden.	053 Si lo deseas, también puedes usar un tarjeta física.	053 Desverrouillez votre téléphone ou votre montre et authentifiez-vous sur le terminal de paiement. Puis effectuez votre transaction, en ligne ou hors ligne.	053 Sblocca il tuo dispositivo, posizionalo sul terminale, autenticali, effettua il pagamento, online oppure offline.	053 Bevestig je betaling.	053 Μπορείς ακόμα να χρησιμοποιήσεις το ψηφιακό ευρώ στο αγαπημένο σου κατάστημα.	053 Basta desbloquear o dispositivo e cobrá-lo no terminal.	1.01 Käytännössä se on sama kuin tavallisen eurokassan käyttö.	

For this financial video, we edited subtitles so the subtitles are available on YouTube different assembly than the English original.

058	Unlock your device, place it on the terminal, authenticate.	109	Und was ist mit ECommerce?	109	¿Qué pasa con el comercio electrónico?	105	Puo anche usare una carta fisica.	Plaats je apparaat op de terminal, bereid je identiteit en betaal online of offline.	Σεικλεύστε τη συσκευή σας, τοποθετήστε την στο ταμειακό, επιβεβαιώστε, κάντε την πληρωμή σε σύνδεση ή εκτός σύνδεσης.	autenticarse e fazer o pagamento, com ou sem ligação à Internet.
102	make the payment, online or offline	110	Bei Online-Käufen können Sie ebenfalls mit dem digitalen Euro bezahlen.	110	El euro digital también puede utilizarse para comprar en Internet.	109	E il commercio elettronico?	105	105	105
105	If you want, you can also use a physical card.	115	Ob digital oder physisch, „ein Euro ist immer ein Euro“, unabhängig von der Zahlungsart.	115	Digitalo físico, «un euro siempre será un euro» y tendrá el mismo valor independientemente de su formato.	110	L'euro digitale è utilizzabile anche per gli acquisti online.	105	105	Se quiser, também pode usar um cartão físico.
108	What about ecommerce?	121	Mit dem digitalen Euro ins digitale Zeitalter!	121	Entremos en la era digital con un euro digital	121	Ché sia físico o digitale, "un euro sarà sempre un euro" e avrà lo stesso valore indipendentemente dal formato.	109	109	E no comércio eletrônico?
110	The digital euro is also available when you're buying something online					121	Abbacciamo l'era digitale con un euro digitale!	110	110	O euro digital também pode ser usado para compras na Internet.
115	Be it digital or physical, "a euro will always be a euro"					115	En digital of fysiek: één euro is altijd één euro waard, ongeacht de vorm.	115	115	Sêja digital ou físico, "um euro será sempre um euro"
119	and have the same value irrespective of format.					122	Laten we het digitale tijdperk onamen met een digitale euro.	121	121	119
122	Let's embrace the digital era with a digital euro							122	122	e terá sempre o mesmo valor, independentemente do formato.
English										Abacemos a era digital, com um euro digital!

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Dimitris Georgarakos

European Central Bank, Frankfurt am Main, Germany; Centre for Economic Policy Research, London, United Kingdom;
email: dimitris.georgarakos@ecb.europa.eu

Geoff Kenny

European Central Bank, Frankfurt am Main, Germany; email: geoff.kenny@ecb.europa.eu

Luc Laeven (corresponding author)

European Central Bank, Frankfurt am Main, Germany; Centre for Economic Policy Research, London, United Kingdom;
email: luc.laeven@ecb.europa.eu

Justus Meyer

European Central Bank, Frankfurt am Main, Germany; University of Glasgow, Glasgow, Scotland, United Kingdom;
email: justus.meyer@ecb.europa.eu

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Postal address 60640 Frankfurt am Main, Germany

Telephone +49 69 1344 0

Website www.ecb.europa.eu

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