



BANCA D'ITALIA
EUROSISTEMA

Mercati, infrastrutture, sistemi di pagamento

(Markets, Infrastructures, Payment Systems)

Who uses 'Buy Now, Pay Later' in Italy? Evidence from Household Survey Data

by Daniele Figoli and Serena Palazzo



BANCA D'ITALIA
EUROSISTEMA

Mercati, infrastrutture, sistemi di pagamento

(Markets, Infrastructures, Payment Systems)

Who uses 'Buy Now, Pay Later' in Italy? Evidence from
Household Survey Data

by Daniele Figoli and Serena Palazzo

Number 87 – September 2026

The papers published in the 'Markets, Infrastructures, Payment Systems' series provide information and analysis on aspects regarding the institutional duties of Banca d'Italia in relation to the monitoring of financial markets and payment systems and the development and management of the corresponding infrastructures in order to foster a better understanding of these issues and stimulate discussion among institutions, economic actors and citizens.

The views expressed in the papers are those of the authors and do not necessarily reflect those of Banca d'Italia.

The series is available online at www.bancaditalia.it.

*Printed copies can be requested from the Paolo Baffi Library:
richieste.pubblicazioni@bancaditalia.it.*

Editorial Board: STEFANO SIVIERO, PAOLO DEL GIOVANE, MASSIMO DORIA,
GIUSEPPE ZINGRILLO, PAOLO LIBRI, GUERINO ARDIZZI, PAOLO BRAMINI, FRANCESCO COLUMBA,
LUCA FILIDI, TIZIANA PIETRAFORTE, ALFONSO PUORRO, ANTONIO SPARACINO.

Secretariat: YI TERESA WU.

ISSN 2724-6418 (online)
ISSN 2724-640X (print)

Banca d'Italia
Via Nazionale, 91 - 00184 Rome - Italy
+39 06 47921

Designed and printing by the Printing and Publishing Division of Banca d'Italia

WHO USES 'BUY NOW, PAY LATER' IN ITALY? EVIDENCE FROM HOUSEHOLD SURVEY DATA

by Daniele Figoli* and Serena Palazzo*

Abstract

In recent years, Buy Now, Pay Later (BNPL) services have expanded rapidly across many countries, supported by growth in digital payments and a relatively permissive regulatory environment. This paper analyses the Italian BNPL market from a demand perspective, using granular data from the 2022 wave of Banca d'Italia's Survey on Household Income and Wealth. The findings show that BNPL adoption among Italian households was limited compared with other advanced economies and concentrated among younger, financially sound and more digitally savvy users. BNPL use was also mainly associated with payments made by credit and prepaid card, in line with the widespread use of these instruments for online purchases. The evidence further suggests that BNPL served primarily as a complement to, rather than a substitute for, traditional retail financial products, particularly revolving credit cards. These services may have expanded further since 2022, potentially reaching more financially vulnerable groups. The new European regulatory framework therefore aims to promote their responsible use while supporting innovation and consumer protection.

JEL Classification: D12, G50, J33.

Keywords: BNPL, payment habits, Italian households, consumer credit.

DOI:

Sintesi

Negli ultimi anni, i servizi Buy Now, Pay Later (BNPL) si sono diffusi rapidamente in molti Paesi, sostenuti dalla crescita dei pagamenti digitali e da un contesto normativo relativamente permissivo. Il lavoro analizza il mercato italiano del BNPL dal lato della domanda, utilizzando i dati granulari dell'Indagine sui Bilanci delle Famiglie Italiane del 2022. I risultati mostrano che l'adozione del BNPL tra le famiglie italiane rimaneva contenuta rispetto ad altre economie avanzate ed era concentrata tra utenti giovani, finanziariamente solidi e più orientati all'uso delle tecnologie digitali. L'utilizzo del BNPL risultava inoltre associato soprattutto ai pagamenti con carte di credito e prepagate, riflettendo il diffuso impiego di tali strumenti negli acquisti online. Le evidenze suggeriscono che il BNPL operasse prevalentemente come complemento, piuttosto che sostituto, dei tradizionali prodotti finanziari retail, in particolare delle carte di credito revolving. Questi servizi possono essersi ulteriormente diffusi dopo il 2022, coinvolgendo anche fasce più vulnerabili della popolazione. Il nuovo quadro normativo europeo mira pertanto a promuoverne un utilizzo responsabile, sostenendo al contempo innovazione e tutela dei consumatori.

* Banca d'Italia, Payments and Market Infrastructures.

CONTENTS

1. INTRODUCTION	7
2. THE BNPL MARKET IN ITALY AND WORLDWIDE	9
3. EMPIRICAL ANALYSIS	12
3.1 Data	12
3.2 Descriptive statistics	13
3.2.1 Profile of BNPL users	13
3.2.2 BNPL and payment habits	16
3.3 Logistic regression model	18
3.3.1 Baseline specification	18
3.3.2 Alternative weighting scheme	23
3.4 Robustness analysis	25
4. CONCLUSIONS	26
REFERENCES	28
APPENDIX A. SHIW 2022: SURVEY QUESTIONS ON BNPL	31
APPENDIX B. ROBUSTNESS CHECKS	32

1 Introduction

Over the past decade, technological innovation has transformed the provision of payment instruments and the financial system more broadly, enabling new forms of digital intermediation. In this context, fintech firms have rapidly expanded their provision of ‘Buy Now, Pay Later’ (BNPL) services, a payment solution that allows consumers to defer payments through short-term, interest-free instalments, typically repaid within a few weeks (Berg, Fuster, & Puri, 2022).

From a consumer perspective, BNPL services enhance the payment experience by allowing the cost of purchases – particularly large-ticket items – to be spread over manageable instalments (Cook *et al.*, 2023). While BNPL is available for both online and in-store transactions, its use is particularly widespread in e-commerce environments (Aggarwal & Kaye, 2022; Ah Fook & McNeill, 2020; Kumar, Salo, & Bezawada, 2024; Lupşa-Tătaru *et al.*, 2023; Relja, Ward, & Zhao, 2024). In practice, these services are delivered through digital procedures integrated with widely used payment instruments, such as credit, debit and prepaid cards, as well as mobile applications, resulting in a fast and seamless user experience. Moreover, BNPL providers typically rely on simplified creditworthiness assessments, often based on personal data and payment instrument information (Gerrans, Baur, & Lavagna-Slater, 2022). Compared with traditional consumer credit, this makes BNPL more accessible, including for individuals with limited or non-established credit histories, and may therefore support financial inclusion (Jose & Kelly, 2025). At the same time, however, the ease of access and repeated use of BNPL services may lead consumers to accumulate multiple payment obligations, thereby increasing the risk of over-indebtedness (Boshoff, Grafton, Grant, & Watkins, 2022). Further concerns relate to the limited transparency of contractual terms, particularly regarding fees and penalties in the event of late or missed repayments (Chan *et al.*, 2025).

From the perspective of other market participants, BNPL platforms are embedded directly into merchants’ websites and applications, thereby streamlining the checkout process. In exchange, merchants pay fees to BNPL providers in order to boost sales and transfer credit risk (Berg, Burg, Keil, & Puri, 2025). Financial intermediaries, in turn, view BNPL both as a business opportunity and as a source of granular information on consumers’ payment behaviour, which can be leveraged in the provision of other financial services (Laudenbach, Molin, Roszbach, & Sondershaus, 2025). However, the absence of systematic reporting to credit information systems may exacerbate information asymmetries across intermediaries. Moreover, simplified – or in some cases absent – creditworthiness assessments may result in BNPL being extended to consumers who are subsequently unable to meet their financial obligations, thereby increasing default risk (Doubinko & Akana, 2023).

These developments have attracted growing attention from policymakers and regulators, who aim to assess both the benefits and the risks of BNPL for consumers, merchants and financial intermediaries, as well as its broader implications for consumer protection and financial stability. However, empirical evidence on the microstructure of the BNPL market remains limited, largely due to the lack of granular official data, as BNPL transactions are typically not reported to

We thank Guerino Ardizzi, Paola Giucca, Michele Lanotte, Andrea Nobili, Marcello Pericoli and an anonymous referee at the Banca d’Italia for helpful comments and suggestions.

central banks or supervisory authorities (Alcazar & Bradford, 2021a).

Most existing empirical studies focus on mature BNPL markets – particularly the United States, the United Kingdom and Australia – and rely on transaction-level data from private financial institutions. This literature consistently finds that BNPL usage is associated with higher consumption, increased likelihood of incurring overdraft fees and greater risks of over-indebtedness.¹ Survey-based evidence further corroborates these findings (Aidala, Mangrum, & Van der Klaauw, 2023; Akana, 2022; Akana & Doubinko, 2025; Shupe, Li, & Fulford, 2023). In response to these developments, regulators have increasingly introduced tailored regulatory frameworks (Alcazar & Bradford, 2021b; Johnson, Rodwell, & Hendry, 2021; Krause, 2025; Machura-Urbaniak & Lupinu, 2023).

Other contributions examine BNPL adoption in China. In this context, Bian, Cong, and Ji (2023) find that BNPL increases consumption without leading to higher indebtedness, suggesting that it may function more as a payment instrument than as a credit product. In addition, the introduction of credit reporting requirements has been associated with a decline in BNPL usage among individuals with a history of default (Dong, Hu, Huang, Qiu, & Zhang, 2024). More broadly, cross-country evidence shows that BNPL adoption is more widespread in economies with high e-commerce penetration, but also where banking systems are less efficient and consumer protection frameworks are weaker (Cornelli, Gambacorta, & Pancotto, 2023).

Evidence on European countries remains limited, despite increasing regulatory attention. When the first Consumer Credit Directive (CCD1, Directive 2008/48/EC) was adopted, BNPL services were still at an early stage of development and fell outside its scope. However, their rapid expansion has since raised concerns related to transparency, overspending and consumer indebtedness. In response, the second Consumer Credit Directive (CCD2, Directive (EU) 2023/2225) brings BNPL within the regulatory scope and introduces stricter requirements on information disclosure and creditworthiness assessments.² Its impact will depend on national implementation, but it is expected to contribute to a more transparent and sustainable BNPL market.

This paper contributes to the empirical literature by providing new evidence on the microstructure of the BNPL market in Italy, using granular data from the 2022 wave of Banca d’Italia’s Survey on Household Income and Wealth. Specifically, it addresses the following research questions: who uses BNPL services in Italy? How does BNPL adoption relate to payment behaviour? What is the relationship between BNPL usage and traditional forms of consumer credit? Do these instruments act as complements or substitutes?

¹For the United States, both Di Maggio, Williams, and Katz (2022) and DeHaan, Kim, Lourie, and Zhu (2024) find that BNPL users tend to be young, have low- to middle-income levels, are less likely to use credit cards and frequently incur overdraft fees. For Australia, Boshoff *et al.* (2022) show that BNPL users are predominantly young women, with a substantial share considered over-indebted, while Gerrans *et al.* (2022) find that individuals with higher financial literacy are less likely to use BNPL. For the United Kingdom, Guttman-Kenney, Firth, and Gathergood (2023) show that BNPL users are primarily aged between 18 and 39 and are more likely to charge BNPL transactions to credit cards.

²CCD2 introduces enhanced requirements concerning pre-contractual information and the transparency of contractual terms (Articles 10–14), requiring providers to disclose in a clear and standardised manner the total cost of credit, repayment conditions, applicable fees and penalties and the consequences of missed payments. It also establishes stricter obligations regarding the assessment of consumers’ creditworthiness (Article 18), requiring providers to evaluate borrowers’ repayment capacity on the basis of adequate information, including income and financial commitments, before granting credit.

Italy represents a particularly relevant case. Following the COVID-19 pandemic, households significantly changed their payment habits, accelerating the shift towards digital instruments and e-commerce (Ardizzi, Gambini, Nobili, Pimpini, & Rocco, 2021; Ardizzi, Nobili, & Rocco, 2020). These trends have persisted, alongside a broader adoption of mobile payment solutions and a reduction in disparities in the use of digital payments across population groups (Banca d'Italia, 2025; Coletti, Di Iorio, Pimpini, & Rocco, 2023). At the same time, although Italian households display relatively low levels of indebtedness, consumer credit has expanded and remains comparatively costly in the euro area (European Central Bank, 2025). In addition, BNPL services are subject to close regulatory scrutiny, as the applicable framework depends on their contractual design. In this context, Banca d'Italia (2022) has highlighted potential risks for consumers and clarified the safeguards provided under existing regulation.

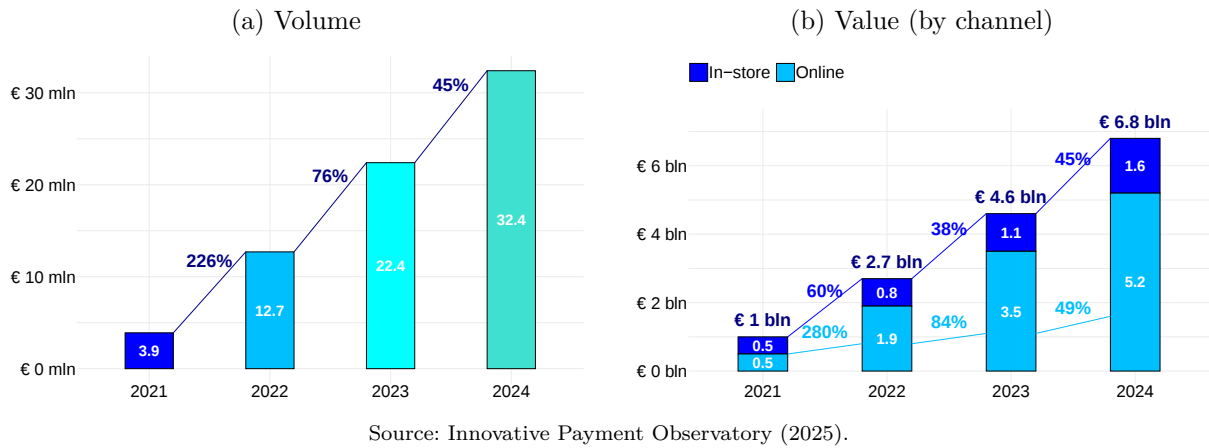
The remainder of the paper is structured as follows. Section 2 provides an overview of the BNPL market in Italy and worldwide. Section 3 presents the empirical analysis, including the data, descriptive evidence and regression results, along with robustness checks. Section 4 concludes by summarising the main findings and discussing the associated policy implications.

2 The BNPL market in Italy and worldwide

Official statistics on BNPL adoption in Italy are not yet available on a regular basis. Estimates from market observers and private-sector sources suggest that adoption expanded rapidly following the COVID-19 pandemic, which boosted online shopping and, more generally, the use of digital payment instruments (see Ardizzi *et al.* (2021, 2020)).

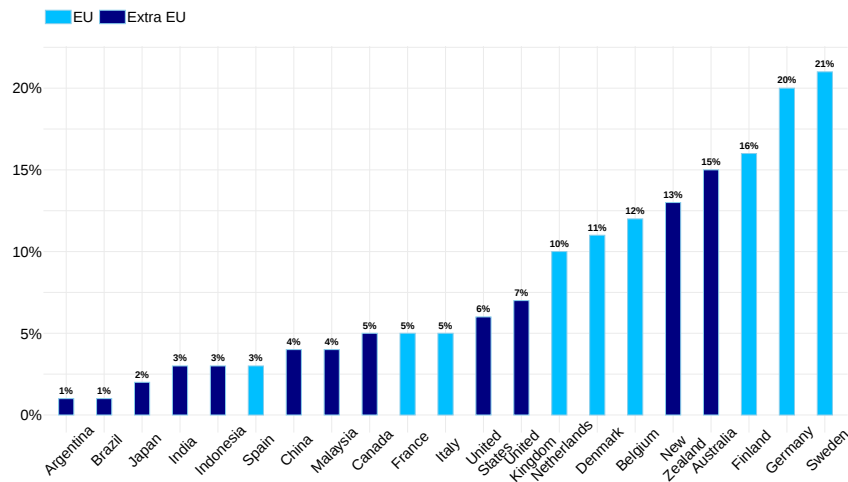
According to the Innovative Payments Observatory (2025), between 2021 and 2024 the total number of BNPL transactions rose from 3.9 million to 32.4 million (Figure 1a), while their total value increased from €1 billion to €6.8 billion, corresponding to a Compound Annual Growth Rate of around 130%. More than 75% of this transaction value was generated through online channels (Figure 1b), although BNPL adoption also expanded at physical points of sale. BNPL is primarily used for purchases in fashion and beauty, electronics and household goods, with notable differences in average transaction values across channels. In 2024, the average online purchase amounted to €171, compared with €731 in-store.

Figure 1: BNPL transaction trends in Italy (2021–2024)



Cross-country evidence indicates that BNPL adoption in Italy remains limited compared with other European countries, where digital payment solutions are more established. According to the Global Payments Report (Worldpay, 2025), Sweden and Germany have more mature BNPL markets, representing 21% and 20% of online C2B payments, respectively. Italy records a much lower share (5%), broadly comparable to France (5%) and Spain (3%). Similar variation is observed across other advanced economies, ranging from 15% in Australia to 7% in the United Kingdom and 6% in the United States (Figure 2).

Figure 2: BNPL share of online C2B payments in 2024



Source: Worldpay (2025).

The rapid growth of the Italian BNPL market has attracted a wide range of providers, including fintech firms (e.g., Klarna and Scalapay), e-money institutions (e.g., PayPal), consumer credit intermediaries (e.g., Sella, Cofidis and Compass) and major technology platforms such as Amazon. Each provider offers BNPL services under distinct contractual arrangements and with varying technological features, designed to enhance user experience and cater to specific market segments. According to CRIF (2024), the Italian BNPL market is characterised by two dominant business models (Table 1).

Table 1: Main BNPL business models in Italy

Business model	Ticket range	Duration	Onboarding	Time to cash	Credit check	Use case
<i>Pay in X</i>	€0–3,000	2–3 months	Simplified	Real time	Soft	B2C
<i>POS lending</i>	€0–7,500	3–18 months	Simplified	Real time	Hard	B2C

Sources: CRIF (2024); authors’ elaborations.

The first business model, referred to as ‘Pay in X’, allows consumers to split the cost of a purchase into a small number of instalments – typically three or four – without incurring interest or additional charges. It is generally offered by fintech firms and e-money institutions. Under this arrangement, providers are remunerated by merchants through fixed and/or variable fees, typically ranging between 2% and 5% of the transaction amount. Although these fees exceed standard credit card charges, they are often offset by higher conversion rates and increased sales volumes associated with BNPL adoption.

This model is attractive to consumers due to its ease of use and rapid onboarding process, which involves a soft credit check based on personal and payment card information. At checkout, users are redirected to the BNPL provider’s digital platform, often accessed through a dedicated mobile application. Registration is straightforward and fully compliant with the General Data Protection Regulation (Regulation (EU) 2016/679). This solution is widely perceived as a flexible payment method and may represent an alternative to credit cards for lower-value online purchases.

The second business model, known as Point-of-Sale (POS) lending, is integrated into merchants’ smart POS terminals and is typically used for higher-value purchases, with repayment periods of up to 18 months. As with ‘Pay in X’, this model is generally interest-free for consumers, although interest may apply for longer repayment horizons. POS lending is mainly offered in physical retail stores by financial intermediaries already active in the consumer credit market. Unlike standard consumer loans, it features streamlined onboarding procedures and simplified credit checks. Creditworthiness is assessed using proprietary scoring models that combine personal and financial information with data from credit bureaus.

In both business models considered, the BNPL provider assumes the credit risk by paying the merchant the full transaction amount at the time of purchase. Consumers are responsible for ensuring that sufficient funds are available to cover scheduled instalments, which are typically collected via direct debit. In the event of missed payments, providers generally allow for a short ‘grace period’ before applying late fees or other penalties, such as the temporary suspension of the user’s account. In cases of persistent default, debt collection procedures may be initiated.

Although BNPL services were originally designed for consumers, their use has increasingly expanded to business-to-business (B2B) contexts, where they allow firms to defer payments to suppliers by up to 90 days, thereby providing a new form of short-term financing within supply chains. In this segment, BNPL transactions accounted for 16% of total transaction volumes in 2023 (Innovative Payments Observatory, 2024). One notable and rapidly emerging application is reverse factoring, whereby a financially robust anchor firm facilitates suppliers’ access to credit. Through agreements with factoring providers, eligible suppliers – subject to credit assessments – can transfer receivables owed by the anchor buyer under favourable deferred payment conditions.

As a result, this arrangement improves liquidity and shortens the cash conversion cycle across the supply chain.

3 Empirical analysis

3.1 Data

This study adopts a demand-side approach and contributes to the growing literature that employs survey data to examine BNPL usage (Aidala *et al.*, 2023; Akana, 2022; Shupe *et al.*, 2023). Unlike prior studies, it relies on household-level rather than individual-level data, enabling the analysis of BNPL adoption within the broader context of household characteristics.

The analysis draws on data from the 2022 wave of Banca d’Italia’s Survey on Household Income and Wealth (SHIW 2022), conducted through Computer-Assisted Personal Interviews (CAPI) on a nationally representative sample of 9,641 households across 300 municipalities. Notably, for the first time, the survey section on payment habits included two ad hoc questions on BNPL usage. Specifically, respondents were asked: (i) whether the household had used BNPL services during 2022 – without identifying which household member used them – and (ii) which payment instrument was used to activate the service, with non-exclusive response options including credit cards, debit cards, prepaid cards and other digital solutions such as PayPal (see Appendix A).

This information is then combined with data from other sections of the SHIW 2022 to construct profiles of BNPL-using households in terms of socio-demographic characteristics, economic and financial conditions, propensity to digital innovation and payment habits. In this way, we identify the factors associated with BNPL adoption.

Socio-demographic characteristics are measured using attributes of the household head – defined as the main income earner – which serve as a proxy for the entire household. These include gender, age group, geographical area of residence and education level.³

Economic and financial conditions are assessed on the basis of total household income, the employment status of the household head – commonly used in so-called ‘soft’ creditworthiness checks – and the household consumption-to-income ratio, which serves as a proxy for borrowing propensity. In addition, as BNPL services may foster financial inclusion by providing access to credit for individuals without an established credit history, we include survey information indicating whether household applications for consumer credit were partially or fully rejected by banks or other financial intermediaries due to unmet eligibility criteria.

Propensity to digital innovation is captured using four household-level indicators: (i) use of the Internet or e-mail; (ii) use of the Twitter platform; (iii) use of remote communication channels – such as telephone, computer, smartphone, or tablet – to interact with banks or other financial intermediaries (e.g., home banking and online accounts); and (iv) receipt of loans granted through digital platforms.

³Additional information on household structure (e.g., household size) was considered in preliminary analyses but was subsequently excluded, as it did not contribute to explaining BNPL usage in the empirical model.

Finally, payment habits are measured using the following household-level indicators: (i) ownership of one or more credit cards; (ii) whether credit cards allow end-of-month balances to be repaid in instalments; (iii) ownership of a debit card; (iv) ownership of a prepaid card; and (v) monthly cash expenditure, used as a proxy for households' preference for cash over digital payments.

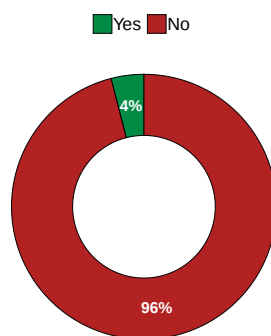
3.2 Descriptive statistics

This section provides descriptive evidence on BNPL use among Italian households, focusing on user characteristics and the relationship between BNPL use and payment habits.

3.2.1 Profile of BNPL users

As shown in Figure 3, 4% of Italian households reported using BNPL services in 2022, indicating that adoption remained limited and at an early stage.

Figure 3: Share of Italian households using BNPL in 2022

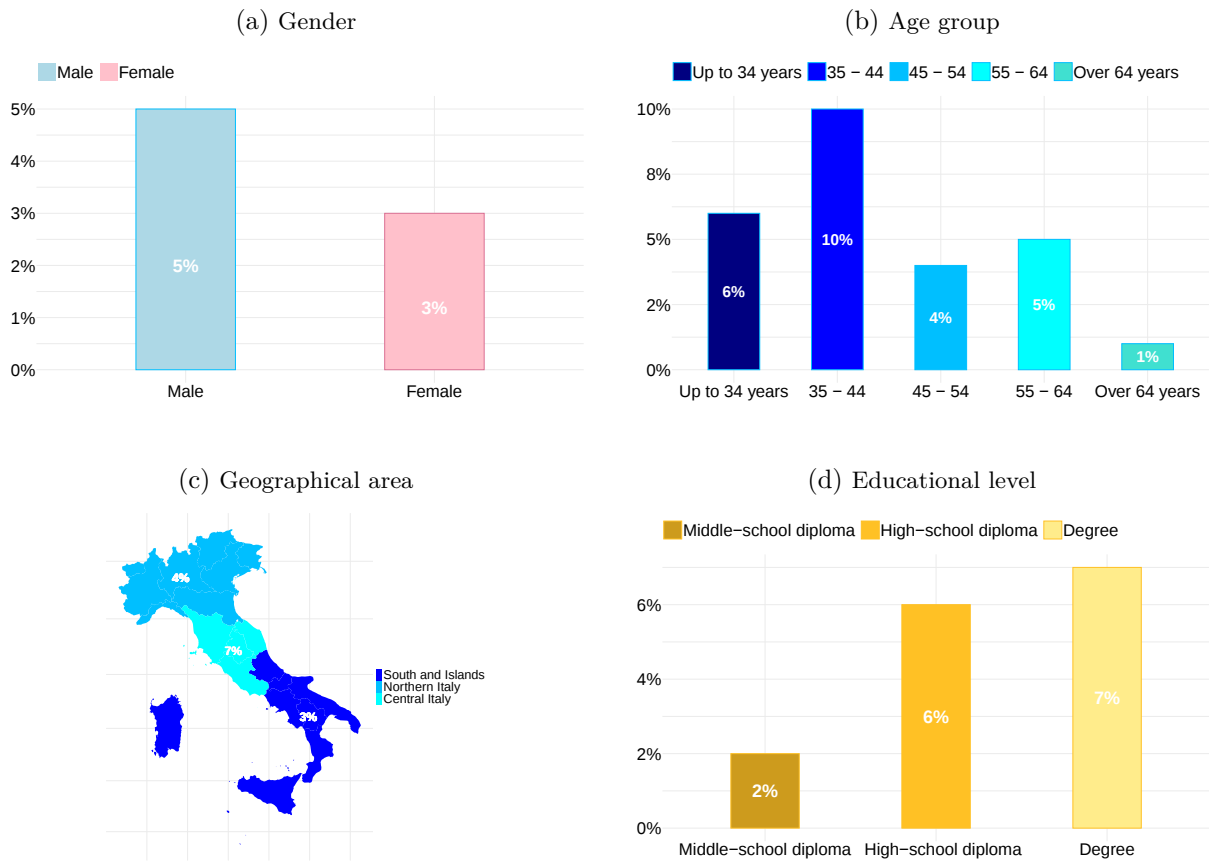


Source: Banca d'Italia, SHIW 2022.

Turning to socio-demographic characteristics, gender differences were modest: 5% of households headed by men and 3% of those headed by women reported using BNPL (Figure 4a). By contrast, adoption varied more substantially by age, peaking among households headed by individuals aged 35–44 (10%) and those under 35 (6%), before declining to 4% among 45–54 year-olds, 5% among 55–64 year-olds and 1% among those aged 65 and over (Figure 4b).

Geographically, BNPL use was highest in Central Italy (7%), compared with the North (4%) and the South and Islands (3%; Figure 4c). A similar gradient emerged across educational groups: only 2% of households headed by individuals with lower secondary education reported using BNPL, compared with 6% for upper secondary education and 8% for university graduates (Figure 4d).

Figure 4: BNPL use by socio-demographic characteristics



Source: Banca d'Italia, SHIW 2022. Note: Shares refer to heads of household reporting BNPL use within each group.

With regard to economic and financial conditions, the evidence does not suggest that BNPL users were concentrated among financially vulnerable households. In particular, usage was highest among households headed by managers (11%) and employees (9%), and lower among entrepreneurs and the self-employed (both 5%), manual workers (4%), the unemployed (3%) and retirees (1%; Figure 5a).

BNPL adoption also increased with income up to a certain threshold, peaking at 7% among households with annual net disposable income between €50,000 and €100,000 (Figure 5b), before declining at higher income levels (5% for €100,000–€500,000 and 3% above €500,000). No notable differences emerged between households whose consumption exceeded their income and those whose spending was within their means (both 4%; Figure 5c).

However, households whose consumer credit applications were partially or fully rejected by banks and other intermediaries due to unmet eligibility criteria reported higher BNPL use (12%) than those with approved applications (4%; Figure 5d). This pattern suggests that BNPL may act as an alternative for households facing limited access to traditional consumer credit.

Figure 5: BNPL use by economic and financial conditions

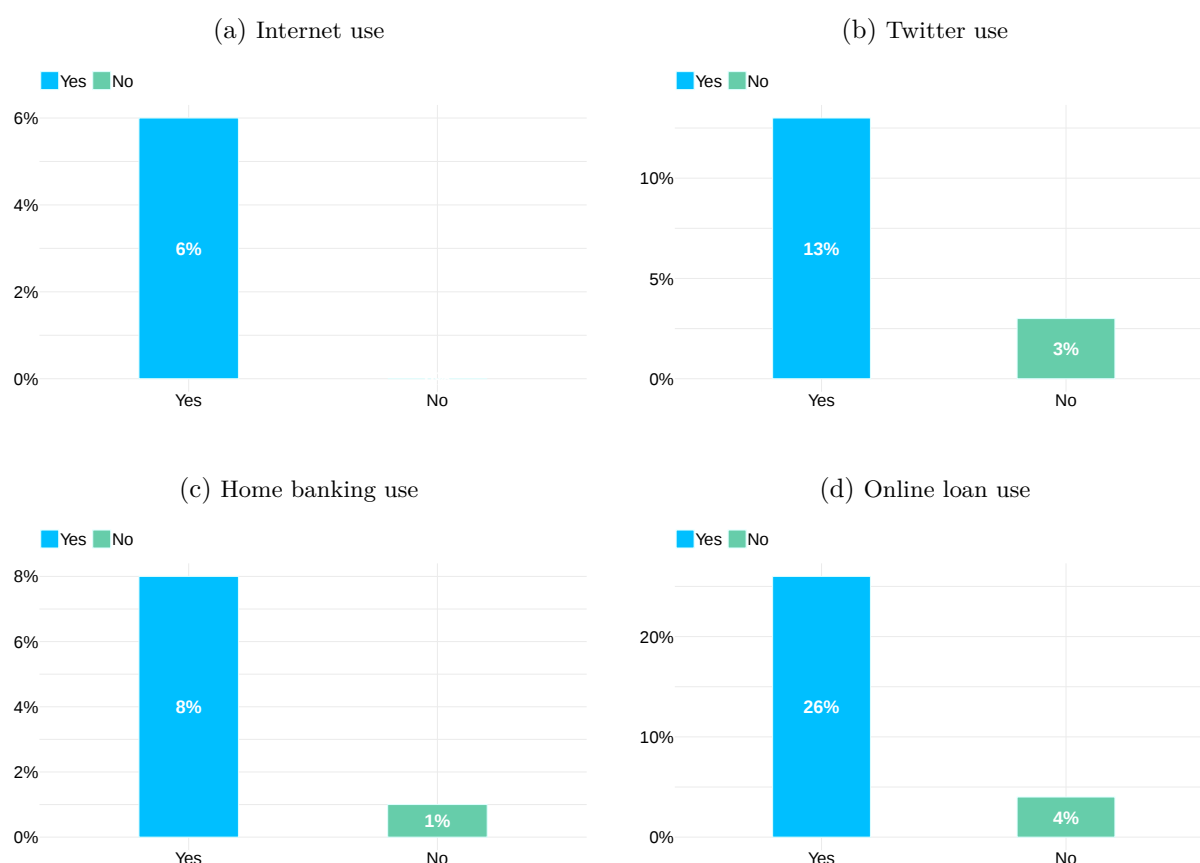


Source: Banca d'Italia, SHIW 2022. Note: Shares refer to heads of household reporting BNPL use within each group.

Finally, differences also emerged across indicators of digital engagement. In particular, no BNPL users were observed among households without internet access, highlighting the relevance of basic digital access for the use of these services. Usage was also higher among households active on Twitter (13%) and those using home-banking services (8%). BNPL use was particularly high among households that had previously applied for a loan online, 26% of which reported using BNPL (Figures 6a–6d).

Overall, these patterns are consistent with BNPL use being more prevalent among households with a higher propensity to adopt digital innovations, and especially among those already interacting with financial services through digital channels.

Figure 6: BNPL use by propensity to digital innovation



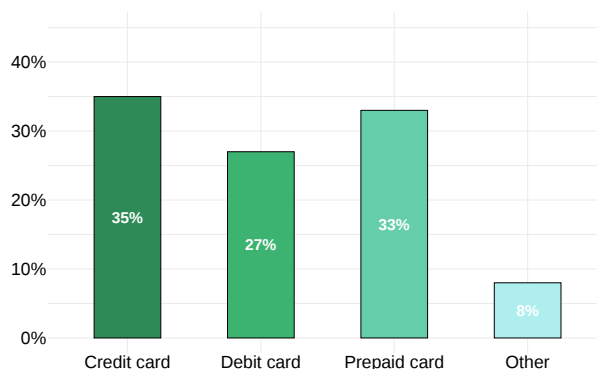
Source: Banca d'Italia, SHIW 2022. Note: Shares refer to heads of household reporting BNPL use within each group.

3.2.2 BNPL and payment habits

BNPL is typically embedded within payment instruments to complete a transaction. Data from the SHIW 2022 indicate that BNPL is most often used in combination with credit cards (35%) and prepaid cards (33%). The share of BNPL transactions involving debit cards is somewhat lower (27%), while only a small proportion of households (8%) reported using other digital payment methods, such as PayPal (Figure 7).

The higher incidence of credit and prepaid card use aligns with their longstanding role in e-commerce – the main channel through which BNPL services are accessed – whereas debit cards have only recently become widely enabled for online transactions in Italy.

Figure 7: BNPL use by payment instrument



Source: Banca d'Italia, SHIW 2022. Note: Shares refer to heads of household reporting BNPL use by payment instrument. The 'other' category refers to alternative digital payment methods, such as PayPal.

Additional indicators reinforce this pattern. BNPL use is more frequently reported among households holding a credit card (7%, compared with 3% among those that do not; Figure 8a) or a prepaid card (8%, compared with 2%; Figure 8b). By contrast, BNPL use is reported by 5% of households holding a debit card, compared with 1% among those without one (Figure 8c).

A further breakdown of credit card repayment behaviour highlights sizeable differences across repayment modalities. Among individuals who repay their credit card balances in instalments – thereby incurring interest – 24% also report using BNPL services, compared with 4% among those who do not rely on this repayment method (Figure 8d). Overall, BNPL use is more commonly reported among households already engaged in deferred payment arrangements.

Finally, BNPL use is more frequently reported among households with lower levels of cash expenditure. Specifically, 6% of households spending less than €200 in cash per month reported using BNPL services, followed by 5% among those whose monthly cash spending falls within the €500–€800 range. By contrast, BNPL use is lower among households with the highest cash expenditure, at 2% among those spending more than €800 per month (Figure 8e). Overall, this pattern is consistent with BNPL being more commonly reported among households that rely less on cash and make greater use of digital payment instruments.

Figure 8: BNPL use by payment habits



Source: Banca d'Italia, SHIW 2022. Note: Shares refer to heads of household reporting BNPL use within each group.

3.3 Logistic regression model

3.3.1 Baseline specification

We estimate a set of binary logistic regression models to analyse the factors associated with BNPL use, using SHIW 2022 data and applying household-level survey weights to ensure representativeness.

The dependent variable Y_i is a binary indicator equal to 1 if household i used BNPL services during the year and 0 otherwise. The explanatory variables, described in Table 2, cover the main dimensions identified in the descriptive analysis: socio-demographic characteristics of the household head, households' economic and financial conditions, indicators of propensity to digital innovation and payment habits.

Table 2: Explanatory variables for BNPL use

Category	Variable	Description
<i>Socio-demographic characteristics</i>	Gender	Dummy = 1 if respondent is male; 0 otherwise.
	Age group (years)	Categorical: 1 = > 64 years 2 = ≤ 34 years 3 = 35–44 years 4 = 45–54 years 5 = 55–64 years
	Geographical area	Categorical: 1 = North 2 = Centre 3 = South and Islands
	Education level	Categorical: 1 = Middle school or less 2 = High school 3 = Degree
<i>Economic and financial conditions</i>	Employment status	Categorical: 1 = Worker 2 = Employee 3 = Manager 4 = Entrepreneur 5 = Self-employed 6 = Retired 7 = Unemployed
	Disposable household income	Categorical: 1 = ≤ €10,000 2 = €10,001–25,000 3 = €25,001–50,000 4 = €50,001–100,000 5 = €100,001–500,000 6 = > €500,000
	Consumption over income	Dummy = 1 if annual household consumption exceeds income; 0 otherwise.
	Consumer credit rejection	Dummy = 1 if the loan was partially or totally refused; 0 otherwise.

Continued on next page

Table 2 (continued)

Category	Variable	Description
<i>Propensity to digital innovation</i>	Internet use	Dummy = 1 if respondent uses the Internet; 0 otherwise.
	Twitter use	Dummy = 1 if respondent uses Twitter; 0 otherwise.
	Home banking use	Dummy = 1 if respondent uses home banking; 0 otherwise.
	Online loan use	Dummy = 1 if respondent applied for a loan online; 0 otherwise.
<i>Payment habits</i>	Ownership of a credit card	Dummy = 1 if respondent does own a credit card; 0 otherwise.
	Revolving credit card use	Dummy = 1 if respondent does use a credit card with instalment payments; 0 otherwise.
	Ownership of a prepaid card	Dummy = 1 if respondent does own a prepaid card; 0 otherwise.
	Ownership of a debit card	Dummy = 1 if respondent does own a debit card; 0 otherwise.
	Monthly cash expenditure	Categorical: 1 = $\leq$ €200 2 = €201–500 3 = €501–800 4 = €801–1,000 5 = $>$ €1,000

We estimate four progressively richer specifications, labelled (1)–(4), each adding further sets of covariates. Specification (1) includes only socio-demographic characteristics and serves as a benchmark. Specification (2) augments the model with households’ economic and financial conditions. Specification (3) further incorporates indicators of propensity to digital innovation, capturing households’ involvement in digital financial environments. Finally, specification (4) adds variables related to payment habits, yielding the most comprehensive specification and the best fit among the models considered. The sequential inclusion of these covariates is motivated by existing evidence that socio-demographic characteristics, propensity to digital innovation and payment behaviour are closely interrelated (see Coletti *et al.* (2023); Di Iorio and Rocco (2022)). Estimation results are reported in Table 3.

Table 3: Survey-weighted logistic regression

Variable	Model 1	Model 2	Model 3	Model 4
<i>Socio-demographic characteristics</i>				
Gender = 1, Male	0.008 (0.008)	0.007 (0.008)	0.004 (0.008)	0.004 (0.008)
Age group = 2, Up to 34 years	0.038** (0.016)	0.028* (0.017)	0.008 (0.014)	0.005 (0.014)
Age group = 3, 35–44 years	0.070***	0.051***	0.028**	0.027**

Continued on next page

Table 3 (continued)

Variable	Model 1	Model 2	Model 3	Model 4
	(0.014)	(0.014)	(0.014)	(0.013)
Age group = 4, 45–54 years	0.019***	0.006	-0.008	-0.010
	(0.007)	(0.008)	(0.009)	(0.010)
Age group = 5, 55–64 years	0.036***	0.023**	0.013	0.007
	(0.009)	(0.009)	(0.010)	(0.010)
Geographical area = 2, Central Italy	0.023**	0.025**	0.025**	0.025**
	(0.011)	(0.011)	(0.010)	(0.010)
Geographical area = 3, Southern Italy	-0.014*	-0.011	-0.004	-0.002
	(0.008)	(0.008)	(0.008)	(0.008)
Education level = 2, High-school diploma	0.025***	0.014	0.002	0.001
	(0.008)	(0.009)	(0.010)	(0.010)
Education level = 3, Degree	0.028***	0.004	-0.009	-0.011
	(0.010)	(0.012)	(0.012)	(0.012)
<i>Economic and financial conditions</i>				
Employment status = 2, Employee		0.029**	0.019	0.021*
		(0.013)	(0.012)	(0.011)
Employment status = 3, Manager		0.045*	0.030	0.032
		(0.026)	(0.022)	(0.022)
Employment status = 4, Entrepreneur		0.015	0.004	0.004
		(0.013)	(0.012)	(0.011)
Employment status = 5, Self-employed worker		0.013	0.006	0.006
		(0.021)	(0.018)	(0.017)
Employment status = 6, Retired		-0.009	-0.005	-0.005
		(0.009)	(0.010)	(0.009)
Employment status = 7, Unemployed		0.001	0.009	0.009
		(0.017)	(0.022)	(0.023)
Household income = 2, €10,001–25,000		0.008	0.000	-0.002
		(0.012)	(0.020)	(0.022)
Household income = 3, €25,001–50,000		0.027**	0.009	0.005
		(0.013)	(0.021)	(0.023)
Household income = 4, €50,001–100,000		0.027*	0.008	0.004
		(0.015)	(0.021)	(0.024)
Household income = 5, €100,001–500,000		0.017	-0.007	-0.005
		(0.018)	(0.023)	(0.026)
Household income = 6, > €500,000		0.005	-0.014	-0.009
		(0.028)	(0.030)	(0.037)
Consumption over income = 1, Higher		0.011	0.005	0.005
		(0.014)	(0.013)	(0.013)
Rejection of consumer loan request = 1, Yes		0.083	0.091	0.119
		(0.079)	(0.080)	(0.082)
<i>Propensity to digital innovation</i>				
Internet use = Yes			0.041***	0.040***
			(0.005)	(0.005)
Twitter use = Yes			0.041***	0.031**
			(0.015)	(0.013)
Home banking use = Yes			0.039***	0.036***
			(0.006)	(0.007)
Online loan use = Yes			0.090**	0.067*
			(0.042)	(0.037)
<i>Payment habits</i>				
Credit card ownership = Yes				0.004
				(0.008)
Revolving credit card use = Yes				0.097***
				(0.031)
Prepaid card ownership = Yes				0.021***

Continued on next page

Table 3 (continued)

Variable	Model 1	Model 2	Model 3	Model 4
Debit card ownership = Yes				(0.007) -0.001 (0.021)
Monthly cash expenditure = 2, €200–500				-0.013 (0.009)
Monthly cash expenditure = 3, €500–800				0.008 (0.013)
Monthly cash expenditure = 4, €800–1000				-0.028*** (0.010)
Monthly cash expenditure = 5, Over €1000				-0.025** (0.012)
Observations	9,641	9,641	9,641	9,641
Pseudo R ²	0.087	0.109	0.175	0.212

Notes: Average marginal effects are reported. Robust standard errors are in parentheses. Reference categories are: female; age over 64; Northern Italy; lower secondary education; no internet use; no Twitter use; no home banking use; no online credit use; no credit card; no revolving credit card use; no prepaid card; no debit card; monthly cash expenditure up to €200; worker; income up to €10,000; below or equal to median income; consumer credit request accepted. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Socio-demographic characteristics. Relative to households headed by individuals aged 64 or over, those aged 35–44 exhibit a higher probability of BNPL use (+2.7 percentage points). Residence in Central Italy is also associated with a higher likelihood of BNPL use compared with Northern Italy (+2.5 percentage points). Gender is not statistically significant in any specification. Notably, the effects of education – statistically significant in the benchmark model – lose significance once variables capturing households’ economic and financial conditions are introduced. The subsequent inclusion of indicators of propensity to digital innovation does not restore significance and is accompanied by a broader attenuation of socio-demographic effects. Taken together, these patterns suggest that the relationship between socio-demographic characteristics and BNPL use is closely linked to both economic conditions and, more importantly, differences in digital engagement. Once digitalisation is taken into account, these variables display a markedly weaker association with BNPL use.

Economic and financial conditions. Variables capturing households’ economic conditions and financial vulnerability are only weakly associated with BNPL use. Being an employee is marginally significant and associated with a modest increase in the probability of use (+2.1 percentage points). Household disposable income does not display an independent association once indicators of propensity to digital innovation are included, indicating that its initial correlation with BNPL use is substantially reduced when accounting for digital behaviour. Similarly, neither the indicator for consumption exceeding income nor the variable capturing the rejection of a consumer loan application is statistically significant. Overall, traditional indicators of financial fragility appear to have limited explanatory power in this setting.

Propensity to digital innovation. Measures of digital engagement display strong, positive and statistically significant associations with BNPL use across all specifications. Internet use is associated with a higher probability of BNPL use (+4.0 percentage points), as are Twitter use (+3.1 percentage points), home banking use (+3.6 percentage points) and having applied for a loan online (+6.7 percentage points). The magnitude and robustness of these associations,

together with the attenuation of socio-demographic and economic variables, underscore the central role of digital engagement. BNPL use is strongly correlated with familiarity with digital financial services.

Payment habits. Ownership of a prepaid card is positively associated with BNPL use (+2.1 percentage points), whereas ownership of debit or standard credit cards is not statistically significant. By contrast, the use of revolving credit cards shows a large and statistically significant positive association (+9.7 percentage points). Monthly cash expenditure is negatively associated with BNPL use: relative to households spending up to €200 in cash per month, the probability of BNPL use is lower among households with monthly cash expenditure between €800 and €1,000 (−2.8 percentage points) and among those spending more than €1,000 (−2.5 percentage points). This pattern is consistent with BNPL use being more prevalent among households that rely less on cash and are more engaged with non-cash payment instruments.

Overall, the evidence indicates that BNPL use in Italy is strongly associated with digital engagement and familiarity with traditional deferred payment instruments, such as revolving credit cards, as well as with a lower reliance on cash. Importantly, there is no evidence that BNPL use is more prevalent among financially vulnerable households. Neither households whose expenditure exceeds their income nor those that have experienced consumer credit rejections exhibit a significantly higher likelihood of using BNPL.

3.3.2 Alternative weighting scheme

To assess the robustness of our findings to the relatively low prevalence of BNPL users in the sample, we re-estimate the baseline specification using an alternative weighting scheme. Specifically, we combine the original SHIW 2022 weights with an inverse-frequency adjustment based on the distribution of the dependent variable. Formally, we define class-balanced weights as follows:

$$w_i = w_i^{\text{SHIW 2022}} \times \begin{cases} \frac{1}{\Pr_s(Y = 0)} & \text{if } Y_i = 0, \\ \frac{1}{\Pr_s(Y = 1)} & \text{if } Y_i = 1, \end{cases} \quad (1)$$

where $\Pr_s(Y = 1)$ denotes the sample proportion of BNPL users and $\Pr_s(Y = 0) = 1 - \Pr_s(Y = 1)$ the proportion of non-users. This reweighting increases the relative contribution of the minority class, thereby mitigating class imbalance while preserving the population representativeness ensured by the survey weights.

The results obtained under this alternative weighting scheme, reported in Table 4, are qualitatively consistent with those of the baseline specification. The main empirical patterns in the comprehensive model (Model 4) remain unchanged: socio-demographic characteristics display a similar attenuation once the propensity for digital innovation is included, while variables capturing households' economic and financial conditions remain only weakly associated with BNPL use. Measures of the propensity for digital innovation continue to exhibit strong, positive and statistically significant associations with BNPL use, indicating that the results are not driven by class imbalance. In addition, the role of payment habits is confirmed: BNPL use remains pos-

itively associated with the use of revolving credit cards and negatively associated with higher levels of cash expenditure.

A notable difference concerns the variable capturing the rejection of a consumer loan application, which becomes statistically significant and is associated with a 21.2 percentage point higher probability of BNPL use. This evidence points to a positive association between BNPL use and consumer credit constraints, suggesting that BNPL may serve as an alternative financing channel for financially constrained households.

Overall, the alternative weighting scheme confirms the robustness of the main findings. BNPL use remains strongly associated with digital engagement and payment behaviour, while socio-demographic characteristics and economic and financial conditions display more limited associations once digital variables are taken into account. At the same time, the results provide some indication that consumer credit rejections may also play a role.

Table 4: Class-balanced weighted logistic regression

Variable	Model 1	Model 2	Model 3	Model 4
<i>Socio-demographic characteristics</i>				
Gender = 1, Male	0.081** (0.040)	0.036 (0.040)	0.014 (0.036)	0.002 (0.033)
Age group = 2, Up to 34 years	0.324*** (0.082)	0.210** (0.088)	0.025 (0.077)	-0.002 (0.071)
Age group = 3, 35–44 years	0.412*** (0.056)	0.278*** (0.074)	0.128** (0.065)	0.105* (0.063)
Age group = 4, 45–54 years	0.209*** (0.061)	0.051 (0.071)	-0.036 (0.062)	-0.043 (0.062)
Age group = 5, 55–64 years	0.287*** (0.058)	0.158** (0.065)	0.061 (0.056)	0.049 (0.055)
Geographical area = 2, Central Italy	0.108*** (0.042)	0.116*** (0.039)	0.083** (0.033)	0.083*** (0.031)
Geographical area = 3, Southern Italy	-0.120** (0.049)	-0.099** (0.046)	-0.027 (0.044)	0.009 (0.039)
Education level = 2, High-school diploma	0.157*** (0.047)	0.079 (0.048)	0.026 (0.042)	0.027 (0.038)
Education level = 3, Degree	0.175*** (0.054)	0.029 (0.064)	-0.026 (0.053)	-0.016 (0.052)
<i>Economic and financial conditions</i>				
Employment status = 2, Employee		0.153** (0.060)	0.101** (0.050)	0.091* (0.048)
Employment status = 3, Manager		0.190*** (0.072)	0.158*** (0.060)	0.178*** (0.060)
Employment status = 4, Entrepreneur		0.069 (0.067)	0.038 (0.058)	0.031 (0.057)
Employment status = 5, Self-employed worker		0.108 (0.112)	0.074 (0.112)	0.036 (0.089)
Employment status = 6, Retired		-0.082 (0.075)	-0.020 (0.067)	-0.034 (0.066)
Employment status = 7, Unemployed		0.011 (0.117)	-0.006 (0.104)	0.013 (0.105)
Household income = 2, €10,001–25,000		0.057 (0.104)	-0.018 (0.107)	-0.040 (0.107)
Household income = 3, €25,001–50,000		0.215** (0.104)	0.039 (0.107)	0.007 (0.108)

Continued on next page

Table 4 (continued)

Variable	Model 1	Model 2	Model 3	Model 4
Household income = 4, €50,001–100,000		0.221** (0.108)	0.043 (0.110)	0.029 (0.112)
Household income = 5, €100,001–500,000		0.204 (0.132)	-0.000 (0.126)	-0.016 (0.128)
Household income = 6, > €500,000		0.019 (0.209)	-0.124 (0.207)	-0.043 (0.225)
Consumption over income = 1, Higher		0.089* (0.053)	0.077 (0.052)	0.071 (0.050)
Rejection of consumer loan request = 1, Yes		0.229** (0.108)	0.172** (0.079)	0.212*** (0.063)
<i>Propensity to digital innovation</i>				
Internet use = Yes			0.444*** (0.098)	0.358*** (0.116)
Twitter use = Yes			0.137*** (0.035)	0.119*** (0.034)
Home banking use = Yes			0.248*** (0.058)	0.191*** (0.053)
Online loan use = Yes			0.197*** (0.049)	0.153*** (0.057)
<i>Payment habits</i>				
Credit card ownership = Yes				0.032 (0.032)
Revolving credit card use = Yes				0.235*** (0.040)
Prepaid card ownership = Yes				0.130*** (0.033)
Debit card ownership = Yes				0.090 (0.062)
Monthly cash expenditure = 2, €200–500				-0.059 (0.036)
Monthly cash expenditure = 3, €500–800				0.015 (0.042)
Monthly cash expenditure = 4, €800–1000				-0.181*** (0.062)
Monthly cash expenditure = 5, Over €1000				-0.088 (0.073)
Observations	9,641	9,641	9,641	9,641
Pseudo R ²	0.143	0.183	0.277	0.327

Notes: Average marginal effects are reported. Robust standard errors are in parentheses. Reference categories are: female; age over 64; Northern Italy; lower secondary education; no internet use; no Twitter use; no home banking use; no online credit use; no credit card; no revolving credit card use; no prepaid card; no debit card; monthly cash expenditure up to €200; worker; income up to €10,000; below or equal to median income; consumer credit request accepted. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

3.4 Robustness analysis

To assess the robustness of the empirical results, we conduct a set of additional checks. First, we examine the sensitivity of our results to functional form assumptions by re-estimating the comprehensive model (Model 4) using probit and complementary log–log link functions. These alternative specifications are estimated using both the survey weights and the class-balanced weighting scheme, allowing us to assess whether the results depend on the distributional as-

sumptions underlying the logit model. The estimated marginal effects remain broadly consistent across link functions (see Tables B1 and B2 in Appendix B). The stability of coefficient signs, magnitudes and statistical significance indicates that the main empirical patterns are robust to the choice of link function, with all specifications yielding the same qualitative conclusions.

We next consider the potential presence of multicollinearity among the explanatory variables. As a first step, we examine pairwise associations using Cramér’s V for nominal variables and Kendall’s tau for ordinal variables. Overall, correlations among the regressors are limited, with most coefficients below 0.3. We complement this analysis by computing the Generalised Variance Inflation Factor (GVIF) for Model 4. The resulting values fall within conventional thresholds, indicating no evidence of problematic multicollinearity.

Finally, we acknowledge that some regressors may be jointly determined with BNPL use. In particular, indicators of the propensity for digital innovation – such as home banking and online borrowing – may plausibly be correlated with BNPL use in both directions. A similar consideration applies to payment instruments – such as credit and prepaid cards – which may both influence and be influenced by BNPL use. Accordingly, the estimated relationships should be interpreted as conditional associations rather than causal effects.

To further examine the sensitivity of our findings to the inclusion of potentially endogenous controls, we analyse coefficient stability across nested specifications (Models 1–4). Following Oster (2019), we assess whether the main estimates remain stable as additional covariates are introduced. Reassuringly, the coefficients of interest remain stable in terms of sign, magnitude and statistical significance, suggesting that the results are unlikely to be driven by the omission of a limited set of observable confounders.

4 Conclusions

In recent years, BNPL services have expanded rapidly across many countries, largely driven by the growth of e-commerce and digital payments. In Italy, the BNPL market is at an early stage of development compared with other euro-area countries, but it is gaining traction, attracting a broad range of providers – from fintech firms to banks and financial intermediaries – all seeking to capture a share of this emerging segment.

While the empirical literature has largely focused on advanced economies such as the United States, the United Kingdom and Australia – where BNPL is already a mature market and concerns about overspending and consumer over-indebtedness are well documented – considerably less is known about the factors associated with BNPL adoption in euro-area countries, where the market is still evolving and the regulatory environment is undergoing substantial change.

This study contributes to addressing this gap by providing evidence on the microstructure of the Italian BNPL market, drawing on data from the 2022 wave of Banca d’Italia’s Survey on Household Income and Wealth, which includes, for the first time, ad hoc information on BNPL usage among Italian households.

Our empirical analysis shows that BNPL adoption among Italian households in 2022 remained limited – at around 4% of households – and was primarily associated with payments made using credit and prepaid cards, reflecting their widespread use in online purchases, the main channel through which BNPL services are accessed. The typical BNPL user appeared to be a household located primarily in Central Italy, headed by a relatively young individual with sound economic and financial conditions and, more importantly, a strong propensity for digital innovation. BNPL adoption was closely associated with the use of revolving credit cards and was less common among households with higher cash expenditure, suggesting that BNPL was mainly adopted by users already familiar with digital and deferred payment instruments. Unlike in other advanced economies, we find limited evidence of BNPL usage among financially vulnerable groups, although there were indications of a positive association between BNPL use and rejected consumer credit applications, suggesting that BNPL may serve as an alternative source of credit for some constrained households.

These findings should be interpreted in light of several important limitations. First, BNPL usage is recorded at the household level and cannot be attributed to a specific household member. This may lead to an underestimation of the role of younger individuals, whose use of BNPL may be more prevalent than suggested by a household-level perspective. Moreover, because the analysis refers to 2022 and the adoption of digital payment instruments has evolved rapidly, BNPL usage is likely to have increased since then. More recent industry evidence indicates that BNPL usage has continued to grow, although the profile of users appears to have remained unchanged.⁴ In contrast, evidence from the latest short-term Survey on Household Income and Wealth suggests that BNPL use has been extending to more financially vulnerable segments of the population, both for consumption purposes and for the consolidation of other forms of debt (Banca d'Italia, 2026). However, these data do not allow us to assess whether the role of digital engagement or users' payment habits has also changed over time.

Further updates of this analysis will therefore be needed to corroborate the main findings. Ongoing monitoring will be particularly important in light of the rapid expansion of the market and the forthcoming implementation of the second Consumer Credit Directive. In this context, appropriate regulatory safeguards, enhanced credit reporting and targeted financial education initiatives will be key to ensuring the safe and sustainable development of BNPL for vulnerable households.

⁴The Innovative Payments Observatory (2023), in collaboration with Ipsos, conducted an online survey between December 2023 and January 2024 on a representative sample of 2,000 individuals aged 18–75. The study reports that 13% of respondents used BNPL in 2023, with adoption particularly prevalent among younger adults aged 18–33, individuals with higher education, stable economic conditions and a strong inclination towards digital innovation (37%). CRIF (2024) provides consistent evidence, showing that BNPL users are, on average, younger than applicants for small-ticket consumer credit, are often first-time borrowers, and are associated with a risk level in 2023 less than half that of small-ticket consumer credit, with a declining trend compared with 2022.

References

- Aggarwal, N., & Kaye, D. (2022). # Fintok and financial regulation. *Ariz. St. LJ*, 54, 1035.
- Ah Fook, L., & McNeill, L. (2020). Click to buy: The impact of retail credit on over-consumption in the online environment. *Sustainability*, 12(18), 7322.
- Aidala, F., Mangrum, D., & Van der Klaauw, W. (2023). Who Uses “Buy Now, Pay Later?”. *Liberty Street Economics*.
- Akana, T. (2022). Buy now, pay later: Survey evidence of consumer adoption and attitudes. *Federal Reserve Bank of Philadelphia. Consumer Finance Institute. no. June*.
- Akana, T., & Doubinko, V. Z. (2025). 4-in-6 payment products: Buy now, pay later data from the life survey (2025). *Cfi brief, Federal Reserve Bank of Philadelphia, Consumer Finance Institute. Accessed*, 07–10.
- Alcazar, J., & Bradford, T. (2021a). The appeal and proliferation of buy now, pay later: Consumer and merchant perspectives. *The Federal Reserve Bank of Kansas City*, 10, 1–7.
- Alcazar, J., & Bradford, T. (2021b). The rise of buy now, pay later: Bank and payment network perspectives and regulatory considerations. *Payments System Research Briefing*(December 1, 2021), 1–6.
- Ardizzi, G., Gambini, A., Nobili, A., Pimpini, E., & Rocco, G. (2021). The impact of the pandemic on the use of payment instruments in Italy. *Bank of Italy Markets, Infrastructures, Payment Systems Working Paper*(8).
- Ardizzi, G., Nobili, A., & Rocco, G. (2020). A game changer in payment habits: evidence from daily data during a pandemic. *Bank of Italy Occasional Paper*(591).
- Banca d’Italia. (2022). Communication on Buy Now, Pay Later (October 28, 2022).
- Banca d’Italia. (2025). Report on the Payment Attitudes of Consumers in Italy: Results from the ECB SPACE 2024 survey.
- Banca d’Italia. (2026). Buy Now Pay Later: caratteristiche del mercato, rischiosità e sviluppi regolamentari. Note di stabilità finanziaria e vigilanza N.50 (Marzo 2026).
- Berg, T., Burg, V., Keil, J., & Puri, M. (2025). The economics of “buy now, pay later”: A merchant’s perspective. *Journal of Financial Economics*, 171, 104093.
- Berg, T., Fuster, A., & Puri, M. (2022). Fintech lending. *Annual Review of Financial Economics*, 14(1), 187–207.
- Bian, W., Cong, L. W., & Ji, Y. (2023). *The rise of e-wallets and buy-now-pay-later: Payment competition, credit expansion, and consumer behavior* (Tech. Rep.). National Bureau of Economic Research.
- Boshoff, E., Grafton, D., Grant, A. R., & Watkins, J. (2022). Buy now pay later: multiple accounts and the credit system in Australia. *Available at SSRN 4216008*.
- Chan, E., De Mauro, A., Shaw, J., Hainsworth, S., Mitchell, M., Norrgren, H., ... Sheth, J. D. (2025). *Distress deferred? The impact of Buy Now Pay Later credit on consumer indebtedness and arrears* (FCA Occasional Paper No. 69). Financial Conduct Authority.
- Coletti, G., Di Iorio, A., Pimpini, E., & Rocco, G. (2023). Report on the Payment Attitudes of Consumers in Italy: Results from the ECB SPACE 2022 survey. *Bank of Italy Markets*,

- Infrastructures, Payment Systems*(42).
- Cook, J., Davies, K., Farrugia, D., Threadgold, S., Coffey, J., Senior, K., . . . Shannon, B. (2023). Buy now pay later services as a way to pay: credit consumption and the depoliticization of debt. *Consumption Markets Culture*, 26, 245-257.
- Cornelli, G., Gambacorta, L., & Pancotto, L. (2023). Buy now, pay later: a cross-country analysis. *BIS Quarterly Review*, 61-75.
- CRIF. (2024). BNPL: Crescita, evoluzione e peculiarità del mercato italiano.
- DeHaan, E., Kim, J., Lourie, B., & Zhu, C. (2024). Buy now pay (pain?) later. *Management Science*, 70(8), 5586-5598.
- Di Iorio, A., & Rocco, G. (2022). Easier said than done: why Italians pay in cash while preferring cashless. *Bank of Italy Occasional Paper*(731).
- Di Maggio, M., Williams, E., & Katz, J. (2022). *Buy now, pay later credit: User characteristics and effects on spending patterns* (Tech. Rep.). NBER Working Papers, no 30508.
- Dong, Y., Hu, J., Huang, Y., Qiu, H., & Zhang, Y. (2024). The use and disuse of fintech credit: When buy-now-pay-later meets credit reporting. *Available at SSRN 4783923*.
- Doubinko, V. Z., & Akana, T. (2023). How does buy now, pay later affect customers' credit? *FRB of Philadelphia Payment Cards Center Discussion Paper No. DP23-1*.
- European Central Bank. (2025). *Bank interest rates – loans to households for consumption*. ECB Data Portal. (Accessed: 3 February 2025)
- Gerrans, P., Baur, D. G., & Lavagna-Slater, S. (2022). Fintech and responsibility: Buy-now-pay-later arrangements. *Australian Journal of Management*, 47(3), 474-502.
- Guttman-Kenney, B., Firth, C., & Gathergood, J. (2023). Buy now, pay later (BNPL)... on your credit card. *Journal of Behavioral and Experimental Finance*, 37, 100788.
- Innovative Payments Observatory. (2024). Buy Now, Pay Later: oltre ai volumi crescono anche i timori? (June 6, 2024).
- Innovative Payments Observatory. (2025). Innovative payments: operazione sorpasso (March 13, 2025).
- Johnson, D., Rodwell, J., & Hendry, T. (2021). Analyzing the impacts of financial services regulation to make the case that buy-now-pay-later regulation is failing. *Sustainability*, 13(4), 1992.
- Jose, A., & Kelly, J. (2025). *Who Clicks "Pay Later"? Financial Vulnerability and Buy Now Pay Later Usage* (Central Bank Staff Insights No. 7/SI/25). Central Bank of Ireland.
- Krause, D. (2025). Buy Now, Pay Later: An Analysis of Consumer Financial Protection Bureau Research and Regulatory Actions. *Pay Later: An Analysis of Consumer Financial Protection Bureau Research and Regulatory Actions (May 01, 2025)*.
- Kumar, A., Salo, J., & Bezawada, R. (2024). The effects of buy now, pay later (BNPL) on customers' online purchase behavior. *Journal of Retailing*, 100(4), 602-617.
- Laudenbach, C., Molin, E., Roszbach, K., & Sondershaus, T. (2025). Buy Now Pay (Less) Later: Leveraging Private BNPL Data in Consumer Banking. *Available at SSRN 5117651*.
- Lupşa-Tătaru, D. A., Nichifor, E., Dovleac, L., Chiţu, I. B., Todor, R. D., & Brătucu, G. (2023). Buy now pay later—a fad or a reality? A perspective on electronic commerce. *Economies*, 11(8), 218.

- Machura-Urbaniak, A., & Lupinu, M. (2023). Buy Now, Pay Later (BNPL) Payment Services: Opportunities and Legal Challenges for EU Consumers and Businesses. *Journal of European Consumer and Market Law*, 12(5).
- Oster, E. (2019). Unobservable selection and coefficient stability: Theory and evidence. *Journal of Business & Economic Statistics*, 37(2), 187-204.
- Relja, R., Ward, P., & Zhao, A. L. (2024). Understanding the psychological determinants of buy-now-pay-later (BNPL) in the UK: a user perspective. *International Journal of Bank Marketing*, 42(1), 7–37.
- Shupe, C., Li, G., & Fulford, S. (2023). Consumer Use of Buy Now, Pay Later Insights from the CFPB Making Ends Meet Survey. *Consumer Financial Protection Bureau Office of Research Reports Series*(23-1).
- Worldpay. (2025). Global Payments Report.

A SHIW 2022: survey questions on BNPL

C20. Did you or anyone in your household purchase anything online in a few instalments and interest-free ('Buy now, Pay later')? (e.g. Scalapay, Klarna, etc.) PAYLAT

- Yes 1
- No 2

C20a. (If the answer to C20 is 'Yes') What means of payment was used to set up the 'Buy now, Pay Later' service? (more than one answer possible)

Debit or ATM card: PAYLATCOME1

- Yes 1
- No 2

Credit card: PAYLATCOME2

- Yes 1
- No 2

Prepaid credit card: PAYLATCOME3

- Yes 1
- No 2

Other (specify): PAYLATCOME4

- Yes 1
- No 2

B Robustness checks

Table B1: Survey-weighted probit and log-log regressions

Variable	Probit	Log-log
<i>Socio-demographic characteristics</i>		
Gender = 1, Male	0.003 (0.008)	0.004 (0.008)
Age group = 2, Up to 34 years	0.003 (0.013)	0.006 (0.014)
Age group = 3, 35–44 years	0.027** (0.013)	0.028** (0.013)
Age group = 4, 45–54 years	-0.010 (0.009)	-0.010 (0.009)
Age group = 5, 55–64 years	0.007 (0.009)	0.007 (0.010)
Geographical area = 2, Central Italy	0.023*** (0.009)	0.025** (0.010)
Geographical area = 3, Southern Italy	-0.002 (0.008)	-0.002 (0.008)
Education level = 2, High school diploma	0.002 (0.009)	0.001 (0.010)
Education level = 3, University degree	-0.010 (0.011)	-0.012 (0.012)
<i>Economic and financial conditions</i>		
Employment status = 2, Employee	0.021* (0.011)	0.020* (0.012)
Employment status = 3, Manager	0.036* (0.021)	0.030 (0.022)
Employment status = 4, Entrepreneur	0.006 (0.011)	0.003 (0.012)
Employment status = 5, Self-employed	0.006 (0.017)	0.006 (0.017)
Employment status = 6, Retired	-0.004 (0.009)	-0.005 (0.009)
Employment status = 7, Unemployed	0.006 (0.019)	0.009 (0.024)
Household income = 2, €10,000–25,000	-0.004 (0.020)	-0.001 (0.023)
Household income = 3, €25,000–50,000	0.004 (0.020)	0.006 (0.023)
Household income = 4, €50,000–100,000	0.004 (0.021)	0.004 (0.024)
Household income = 5, €100,000–500,000	-0.004 (0.023)	-0.005 (0.026)
Household income = 6, Over €500,000	-0.010 (0.034)	-0.008 (0.038)
Consumption over income = 1, Higher	0.007 (0.013)	0.004 (0.013)
Rejection of consumer loan request = 1, Yes	0.108 (0.079)	0.125 (0.088)
<i>Propensity to digital innovation</i>		
Internet use = 1, Yes	0.034*** (0.006)	0.040*** (0.005)
Twitter use = 1, Yes	0.032** (0.013)	0.031** (0.013)
Home banking use = 1, Yes	0.033***	0.037***

Continued on next page

Table B1 (continued)

Variable	Probit	Log-log
Online loan use = 1, Yes	(0.007) 0.072* (0.040)	(0.007) 0.064* (0.033)
<i>Payment habits</i>		
Credit card ownership = 1, Yes	0.004 (0.008)	0.005 (0.009)
Revolving credit card use = 1, Yes	0.104*** (0.032)	0.093*** (0.029)
Prepaid card ownership = 1, Yes	0.022*** (0.007)	0.021*** (0.007)
Debit card ownership = 1, Yes	0.003 (0.017)	-0.003 (0.024)
Monthly cash expenditure = 2, €200–500	-0.014 (0.009)	-0.013 (0.009)
Monthly cash expenditure = 3, €500–800	0.006 (0.012)	0.009 (0.014)
Monthly cash expenditure = 4, €800–1000	-0.028*** (0.010)	-0.028*** (0.010)
Monthly cash expenditure = 5, Over €1000	-0.022* (0.012)	-0.025** (0.012)
Observations	9,641	9,641
Pseudo R^2	0.212	0.212

Notes: Average marginal effects are reported. Robust standard errors are in parentheses. Reference categories are: female; age over 64; Northern Italy; lower secondary education; no internet use; no Twitter use; no home banking use; no online credit use; no credit card; no revolving credit card use; no prepaid card; no debit card; monthly cash expenditure up to €200; worker; income up to €10,000; below or equal to median income; consumer credit request accepted. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

Table B2: Class-balanced weighted probit and log-log regressions

Variable	Probit	Log-log
<i>Socio-demographic characteristics</i>		
Gender = 1, Male	0.005 (0.032)	0.006 (0.033)
Age group = 2, Up to 34 years	0.004 (0.070)	0.026 (0.066)
Age group = 3, 35–44 years	0.109* (0.062)	0.109* (0.060)
Age group = 4, 45–54 years	-0.043 (0.060)	-0.036 (0.060)
Age group = 5, 55–64 years	0.047 (0.054)	0.043 (0.055)
Geographical area = 2, Central Italy	0.082*** (0.031)	0.080*** (0.029)
Geographical area = 3, Southern Italy	0.004 (0.039)	-0.003 (0.040)
Education level = 2, High-school diploma	0.025 (0.038)	0.023 (0.041)
Education level = 3, Degree	-0.023 (0.051)	-0.030 (0.051)
<i>Economic and financial conditions</i>		
Employment status = 2, Employee	0.094** (0.047)	0.091** (0.045)
Employment status = 3, Manager	0.170*** (0.060)	0.142** (0.058)
Employment status = 4, Entrepreneur	0.033 (0.056)	0.029 (0.053)
Employment status = 5, Self-employed worker	0.037 (0.090)	0.039 (0.090)
Employment status = 6, Retired	-0.034 (0.065)	-0.032 (0.062)
Employment status = 7, Unemployed	0.008 (0.106)	0.031 (0.113)
Household income = 2, €10,000–25,000	-0.042 (0.105)	-0.025 (0.121)
Household income = 3, €25,000–50,000	0.009 (0.106)	0.015 (0.121)
Household income = 4, €50,000–100,000	0.025 (0.110)	0.023 (0.124)
Household income = 5, €100,000–500,000	-0.019 (0.125)	-0.013 (0.137)
Household income = 6, Over €500,000	-0.059 (0.221)	-0.045 (0.239)
Consumption over income = 1, Higher	0.064 (0.048)	0.050 (0.048)
Rejection of consumer loan request = 1, Yes	0.217*** (0.066)	0.208*** (0.053)
<i>Propensity to digital innovation</i>		
Internet use = 1, Yes	0.296*** (0.094)	0.490*** (0.077)
Twitter use = 1, Yes	0.117*** (0.033)	0.099*** (0.029)
Home banking use = 1, Yes	0.199*** (0.053)	0.235*** (0.066)
Online loan use = 1, Yes	0.150***	0.129***

Continued on next page

Table B2 (continued)

Variable	Probit	Log-log
	(0.055)	(0.045)
<i>Payment habits</i>		
Credit card ownership = 1, Yes	0.033 (0.032)	0.027 (0.032)
Revolving credit card use = 1, Yes	0.228*** (0.040)	0.194*** (0.035)
Prepaid card ownership = 1, Yes	0.132*** (0.033)	0.110*** (0.032)
Debit card ownership = 1, Yes	0.082 (0.064)	0.054 (0.073)
Monthly cash expenditure = 2, €200–500	-0.062* (0.036)	-0.059* (0.035)
Monthly cash expenditure = 3, €500–800	0.014 (0.041)	0.019 (0.039)
Monthly cash expenditure = 4, €800–1000	-0.175*** (0.061)	-0.165** (0.068)
Monthly cash expenditure = 5, Over €1000	-0.075 (0.071)	-0.103 (0.075)
Observations	9,641	9,641
Pseudo R^2	0.325	0.316

Notes: Average marginal effects are reported. Robust standard errors are in parentheses. Reference categories are: female; age over 64; Northern Italy; lower secondary education; no internet use; no Twitter use; no home banking use; no online credit use; no credit card; no revolving credit card use; no prepaid card; no debit card; monthly cash expenditure up to €200; worker; income up to €10,000; below or equal to median income; consumer credit request accepted. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$.

RECENTLY PUBLISHED PAPERS IN THE 'MARKETS, INFRASTRUCTURES, PAYMENT SYSTEMS' SERIES

- n. 48 The fundamental role of the repo market and central clearing, *by Cristina Di Luigi, Antonio Perrella and Alessio Ruggieri*
- n. 49 From Public to Internal Capital Markets: The Effects of Affiliated IPOs on Group Firms, *by Luana Zaccaria, Simone Narizzano, Francesco Savino and Antonio Scalia*
- n. 50 Byzantine Fault Tolerant consensus with confidential quorum certificate for a Central Bank DLT, *by Marco Benedetti, Francesco De Sclavis, Marco Favorito, Giuseppe Galano, Sara Giammusso, Antonio Muci and Matteo Nardelli*
- n. 51 Environmental data and scores: lost in translation, *by Enrico Bernardini, Marco Fanari, Enrico Foscolo and Francesco Ruggiero*
- n. 52 How important are ESG factors for banks' cost of debt? An empirical investigation, *by Stefano Nobili, Mattia Persico and Rosario Romeo*
- n. 53 The Bank of Italy's statistical model for the credit assessment of non-financial firms, *by Simone Narizzano, Marco Orlandi and Antonio Scalia*
- n. 54 The revision of PSD2 and the interplay with MiCAR in the rules governing payment services: evolution or revolution?, *by Mattia Suardi*
- n. 55 Rating the Raters. A Central Bank Perspective, *by Francesco Columba, Federica Orsini and Stefano Tranquillo*
- n. 56 A general framework to assess the smooth implementation of monetary policy: an application to the introduction of the digital euro, *by Annalisa De Nicola and Michelina Lo Russo*
- n. 57 The German and Italian Government Bond Markets: The Role of Banks versus Non-Banks. A joint study by Banca d'Italia and Bundesbank, *by Puriya Abbassi, Michele Leonardo Bianchi, Daniela Della Gatta, Raffaele Gallo, Hanna Gohlke, Daniel Krause, Arianna Miglietta, Luca Moller, Jens Orben, Onofrio Panzarino, Dario Ruzzi, Willy Scherrieble and Michael Schmidt*
- n. 58 Chat Bankman-Fried? An Exploration of LLM Alignment in Finance, *by Claudia Biancotti, Carolina Camassa, Andrea Coletta, Oliver Giudice and Aldo Glielmo*
- n. 59 Modelling transition risk-adjusted probability of default, *by Manuel Cugliari, Alessandra Iannamorelli and Federica Vassalli*
- n. 60 The use of Banca d'Italia's credit assessment system for Italian non-financial firms within the Eurosystem's collateral framework, *by Stefano Di Virgilio, Alessandra Iannamorelli, Francesco Monterisi and Simone Narizzano*
- n. 61 Fintech Classification Methodology, *by Alessandro Lentini, Daniela Elena Munteanu and Fabrizio Zennaro*
- n. 62 The Rise of Climate Risks: Evidence from Expected Default Frequencies for Firms, *by Matilde Faralli and Francesco Ruggiero*
- n. 63 Exploratory survey of the Italian market for cybersecurity testing services, *by Anna Barcheri, Luca Bastianelli, Tommaso Curcio, Luca De Angelis, Paolo De Joannon, Gianluca Ralli and Diego Ruggeri*
- n. 64 A practical implementation of a quantum-safe PKI in a payment systems environment, *by Luca Buccella and Stefano Massi*
- n. 65 Stewardship Policies. A Survey of the Main Issues, *by Marco Fanari, Enrico Bernardini, Elisabetta Cecchet, Francesco Columba, Johnny Di Giampaolo, Gabriele Fraboni, Donatella La Licata, Simone Letta, Gianluca Mango and Roberta Occhilupo*

- n. 66 Is there an equity greenium in the euro area?, *by Marco Fanari, Marianna Caccavaio, Davide Di Zio, Simone Letta and Ciriaco Milano*
- n. 67 Open Banking in Italy: A Comprehensive Report, *by Carlo Cafarotti and Ravenio Parrini*
- n. 68 Report on the payment attitudes of consumers in Italy: results from ECB SPACE 2024 survey, *by Gabriele Coletti, Marialucia Longo, Laura Painelli, Emanuele Pimpini and Giorgia Rocco*
- n. 69 A solution for cross-border and cross-currency interoperability of instant payment systems, *by Domenico Di Giulio, Vitangelo Lasorella, Pietro Tiberi*
- n. 70 Do firms care about climate change risks? Survey evidence from Italy, *by Francesca Colletti, Francesco Columba, Manuel Cugliari, Alessandra Iannamorelli, Paolo Parlamento and Laura Tozzi*
- n. 71 Demand and supply of Italian government bonds during the exit from expansionary monetary policy, *by Fabio Capasso, Francesco Musto, Michele Pagano, Onofrio Panzarino, Alfonso Puorro and Vittorio Siracusa*
- n. 72 Statistics on tokenized financial instruments: A challenge for central banks, *by Riccardo Colantonio, Massimo Coletta, Riccardo Renzi*
- n. 73 Credit Risk Assessment with Stacked Machine Learning, *by Francesco Columba, Manuel Cugliari, Stefano Di Virgilio*
- n. 74 What if Ether Goes to Zero? How Market Risk Becomes Infrastructure Risk in Crypto, *by Claudia Biancotti*
- n. 75 The Cyber Risk of Non-Financial Firms, *by Francesco Columba, Manuel Cugliari, Marco Orlandi, Federica Vassalli*
- n. 76 Sustainability and financial innovation: The emerging role of Fintech for Good (F4G), *by Alessandro Lentini and Daniela Elena Munteanu*
- n. 77 Hydrogeological and credit risk: the Italian firms' physical risk-adjusted probability of default, *by Manuel Cugliari, Simone Narizzano and Federica Vassalli*
- n. 78 Liquidity Optimization in Gross Settlement Systems with Quantum Reordering: Application to TARGET2, *by Valerio Astuti, Adriano Baldeschi, Luca Bastianelli, Giuseppe Bruno, Ajit Desai, Danica Marsden and Riccardo Russo*
- n. 79 The expert assessment within Banca d'Italia's in-house credit assessment system, *by Lorenzo Esposito, Massimo Guglielmi, Francesco Monterisi, Simone Narizzano and Marco Orlandi*
- n. 80 Digital payments and economic performance: evidence from Italy, *by Guerino Ardizzi, Niccolò Lippi Boncambi, Cristina Demma and Alberto Leorati*
- n. 81 The euro-area repo market: structure, participants and interlinkages, *by Lorenzo Caverni, Annalisa De Nicola and Mattia Persico*
- n. 82 Siamese Networks for AI-powered Automated Banknote Quality Control, *by Salvatore Gentile, Andrea Luciani, Sabina Marchetti, Domenico Pansini and Marco Viticoli*
- n. 83 Private Equity and Innovation in the Euro Area, *by Emanuele Degani, Simone Letta and Tommaso Perez*
- n. 84 Social and Governance Factors in Default Risk Assessment, *by Manuel Cugliari, Stefano Di Virgilio, Enrico Foscolo and Alessandra Iannamorelli*
- n. 85 Household Allocation of the Next Generation of Digital Money, *by Marcello Pericoli*
- n. 86 Are Stablecoins Efficient for Remittances? Evidence from a Mystery Shopping Exercise by Banca d'Italia, *by Alberto Di Iorio, Enrica Di Stefano, Michele Mascioli and Giorgio Trebeschi*