

EXPLORING THE LINK BETWEEN FINANCIAL KNOWLEDGE, RISK AVERSION, AND INVESTMENT PREFERENCES: A EUROPEAN UNION ANALYSIS

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Abstract

This paper examines the relationships between financial knowledge, risk profiles, digital competence, investment preferences, and financial behaviour across EU countries. Using data from the Flash Eurobarometer 525 survey conducted in 2023, the study distinguishes between self-assessed and tested financial literacy and constructs country-level indicators of short- and long-term risk profiles, digital skills, and financial product participation. The analysis reveals a systematic pattern of underconfidence, with individuals underestimating their actual financial knowledge. Tested financial literacy is strongly associated with higher risk tolerance and engagement in long-term financial products, including housing loans, insurance, and retirement investments, while self-assessed literacy shows a weaker and less consistent link to actual risk-taking. This finding underscores the importance of objective knowledge over confidence alone in shaping financial decisions. Short- and long-term risk profiles emerge as central determinants of financial behaviour, with long-term risk aversion most strongly associated with engagement in protective and long-horizon financial products such as pensions and insurance, while short-term risk aversion (financial fragility) tracks borrowing and investment behaviour through a “gambling for resurrection” dynamic. Results suggest that improving financial behaviour requires more than increasing financial knowledge.

Keywords: risk profiles, financial literacy, financial fragility, cross-country heterogeneity, behavioural finance

JEL Classification: G40, D53, F65, G53, D81

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1. Introduction

In a time marked by rapid financial innovation, heightened economic uncertainty, and expanding digital access, individual financial decision-making has become increasingly complex. Citizens across the European Union are navigating a growing array of financial products, services, and platforms, often with varying levels of understanding and confidence. As responsibility for long-term financial planning shifts from public to private domains, the ability to make sound financial decisions, particularly those involving risk, has become an essential component of economic security and personal well-being.

Financial literacy has emerged as a key determinant of individual financial behaviour. While tested financial knowledge provides insight into individuals' ability to understand core financial concepts, self-assessed financial literacy reflects perceived competence and confidence, factors that also influence financial choices. Research indicates that a divergence between perceived and actual knowledge, particularly when confidence exceeds competence, can contribute to suboptimal behaviours such as excessive risk-taking or limited information-seeking (Asaad, 2015). Alongside financial literacy, individual risk preferences, both short-term and long-term, affect the way people approach uncertainty, allocate assets, and make investment decisions.

Moreover, digital skills are playing an increasingly central role in enabling individuals to access, understand, and act on financial information. In parallel, trust in financial advice, whether from professionals or digital platforms, also conditions how people manage financial decisions. Investment preferences, in this context, emerge as behavioural outcomes that reflect not only knowledge and risk profiles but also confidence in external sources of guidance and familiarity with digital tools.

Within this evolving context, the European Union presents a particularly rich terrain for analysis. EU Member States differ significantly in terms of financial education systems, income distribution, digital infrastructure, and financial culture. These variations provide a unique opportunity to examine how financial knowledge and confidence, attitudes toward risk, and investment behaviour manifest across diverse national and demographic contexts. While there is substantial evidence linking financial literacy to improved financial outcomes (Lusardi & Mitchell, 2014), the extent to which it

shapes individuals' risk preferences and investment choices remains an open question, particularly when financial literacy is assessed alongside other factors such as digital competence and trust in financial advice.

This study investigates the relationships between these variables self-assessed and tested financial literacy, long-term and short-term risk aversion, digital skills, investment preferences, and trust in financial advice, using data from Flash Eurobarometer 525. By employing statistical techniques such as regression analysis, the research aims to uncover patterns and associations that help explain the formation of risk profiles and investment behaviour across EU Member States.

In doing so, this study uniquely contributes to the growing body of literature on financial behaviour by offering a multidimensional perspective on financial decision-making in the EU. It offers practical implications for financial education and inclusion policies, highlighting the importance of addressing not only knowledge gaps but also confidence, digital competence, and trust in professional guidance.

2. Literature Review

Understanding how financial knowledge influences individual risk profiles (as well as investment preferences) has become a central theme in behavioural finance and financial education. A substantial body of research underscores the importance of financial literacy in shaping individuals' financial decisions, long-term planning, and overall economic resilience (Lusardi & Mitchell, 2014). Individuals who demonstrate greater financial knowledge are more likely to engage in prudent financial behaviour, such as retirement planning, portfolio diversification, and avoiding high-cost credit products (Van Rooij, Lusardi, & Alessie, 2011). In contrast, limited financial literacy has been repeatedly linked to unfavourable financial outcomes, including low savings, excessive debt, and increased susceptibility to financial fragility (Lusardi, 2015).

Risk tolerance, a key dimension of individual financial behaviour, has been found to be strongly influenced by both objective and subjective financial knowledge. Several studies have shown that individuals with higher financial knowledge tend to exhibit greater risk tolerance and a stronger inclination toward long-term investment strategies (Van Rooij, Lusardi, & Alessie, 2011). This relationship may

stem from a more accurate understanding of financial instruments and market mechanisms, which reduces ambiguity and increases confidence in decision-making (Hastings, Madrian, & Skimmyhorn, 2013). Moreover, the role of financial confidence, closely linked to self-perceived knowledge, has been increasingly examined as a mediating factor in financial behaviour. For instance, Allgood and Walstad (2016) differentiate between self-assessed and tested financial knowledge, noting that overconfidence can lead individuals to make riskier investment choices without fully understanding the associated implications. This distinction is crucial, as misalignment between perceived and actual knowledge may result in suboptimal financial behaviours.

Demographic characteristics such as age, gender, income, and education level also interact with financial knowledge and risk preferences. Empirical evidence suggests that men tend to report higher levels of financial confidence and risk tolerance than women (Bucher-Koenen et al., 2017). Younger individuals, while often more risk-tolerant, may lack the necessary financial experience or knowledge to make informed investment decisions (OECD, 2020). Income and educational attainment are consistently correlated with both financial literacy and a greater willingness to invest in diversified, higher-yield assets (Behrman et al., 2012).

Investment preferences further reflect the combined effects of knowledge and risk profile. Research indicates that individuals with higher financial literacy are more likely to favour equity investments, retirement accounts, and long-term financial products, while those with lower literacy often prefer guaranteed or low-risk instruments (Van Rooij et al., 2011; Clark et al., 2017). The tendency to avoid riskier financial products among the less financially literate may not necessarily stem from true risk aversion, but rather from a lack of understanding or exposure to such instruments.

Cross-national studies within the European Union reveal significant heterogeneity in financial knowledge and behaviour. According to the Flash Eurobarometer 525 (2023) published by the European Commission, disparities persist across Member States in terms of access to financial education, levels of digital financial engagement, and trust in financial institutions. These contextual differences influence how financial knowledge translates into risk-taking and investment behaviour. For instance, Grable and Lytton (1999) conducted a statistical segmentation of individuals using cluster

analysis, grouping them based on varying levels of risk tolerance and socio-economic attributes such as education, income, and financial awareness. Likewise, research by Gilliam et al. (2010) applied a similar methodological approach to identify distinct types of investors, linking their risk attitudes and financial planning behaviours to factors like financial literacy and demographic background. These studies collectively emphasise how personal and societal factors shape how individuals approach financial risk. More recently, Demertzis et al. (2024), drawing on the same Flash Eurobarometer 525 instrument exploited in this study, provide the first harmonised comparative assessment of financial knowledge across the EU-27 and identify pronounced cross-country variation in objective competence, with Northern European Member States consistently outperforming Southern and Central-Eastern peers.

While these contributions establish the cross-country distribution of financial knowledge and partially illuminate its behavioural correlates, they typically examine each construct in isolation. The joint mapping of tested literacy, self-assessment, dual-horizon risk profiles, digital competence, trust in advice, and product participation, conducted on a single harmonised pan-European dataset, remains absent from the literature.

Other determinants, such as digital skills and financial fragility, have also been shown to shape individuals' risk aversion. Evidence from studies such as the National Endowment for Financial Education (2017) indicates that financial fragility, characterised by insufficient assets, high levels of debt, and limited financial literacy, impairs individuals' capacity to cope with unforeseen financial shocks. Moreover, the study underscores the critical role of education in shaping financial decisions and draws attention to significant disparities in financial knowledge across various demographic segments. Furthermore, Lusardi (2019) finds that digital financial literacy, the ability to use online tools to manage finances, does not substitute for actual financial literacy. The author highlights findings on Millennials from the US, showing that individuals who rely on mobile payments are more likely to engage in financially costly behaviours, such as spending more than they earn, utilising non-traditional financial services, and sometimes overdrafting their bank accounts. Moreover, the same group tends to demonstrate lower levels of actual financial literacy (Lusardi, de Bassa Scheresberg, & Avery, 2018).

In summary, the aforementioned literature demonstrates a robust connection between financial knowledge, risk tolerance, and investment preferences. Yet a significant gap persists: no study has simultaneously examined, at the comparative EU-27 country level, the joint associations between self-assessed and tested financial literacy, short- and long-term risk aversion, digital skills, trust in financial advice, and actual investment product participation, using a single harmonised pan-European dataset. Flash Eurobarometer 525 (2023) - the first survey to provide fully comparable financial literacy data across all EU Member States - uniquely enables this analysis. The present study addresses this gap directly.

Three research objectives structure the inquiry. First: to characterise cross-national heterogeneity in financial knowledge (self-assessed and tested), risk profiles (short- and long-term), digital skills, and investment product participation across EU Member States. Second: to assess whether tested financial literacy is more strongly associated with risk-taking and investment engagement than self-assessed literacy. Third: to examine how short- and long-term risk aversion relate differentially to distinct categories of financial product ownership. Correspondingly, three directional hypotheses are advanced: H1 - tested financial literacy exhibits a stronger positive association with long-term investment product adoption than self-assessed literacy; H2 - short-term risk aversion is more strongly associated with everyday financial decisions, while long-term risk aversion is more closely linked to long-horizon products such as pensions and mortgages; H3 - digital literacy positively moderates engagement with investment and online financial products across EU countries.

3. Research methodology

3.1. Data source and description

This research is based on data from the Eurobarometer survey, specifically the "Monitoring the Level of Financial Literacy FL525" dataset, published by the Directorate-General for Communication of the European Commission. Updated in July 2023, this dataset offers a detailed evaluation of financial literacy across EU Member States, as well as the questionnaire used to collect the data, covering aspects such as financial behaviour, investment preferences, formal education, digital competencies, and trust in advice, and many more. With a

sample of 26,139 respondents, the survey provides a comprehensive overview of financial literacy trends within the European population.

3.2. Variables

To examine the relationship between financial knowledge (self-perceived and tested), risk profiles (short-term and long-term), trust in advice, digital skills, and investment preferences across EU countries, a standardised data-processing procedure was employed. Survey responses were coded on scales ranging from 1 to 5 or 1 to 4, depending on the variable, and country-level weighted averages were subsequently calculated.

Question 8 from the Flash Eurobarometer survey, used as a proxy for short-term risk aversion, captures financial fragility by asking: *“If you lost your main source of income today, how long could you continue to cover your living expenses without borrowing money or moving house?”*

The response options were as follows:

- I don't have emergency savings
- At least 1 week, but less than 1 month
- At least 1 month, but not 3 months
- At least 3 months, but not 6 months
- 6 months or more
- Don't know / Prefer not to answer

Respondents were categorised according to their self-reported ability to absorb income shocks, interpreted as an indicator of financial risk tolerance. Each response was assigned a numerical value, with 5 representing the highest level of risk tolerance (“I don't have emergency savings”) and 1 indicating the most risk-averse position (“6 months or more”). We utilised financial fragility as a proxy for risk profiles because it is often used in scholarly research as an indirect measure of risk aversion, reflecting the susceptibility of individuals or households to unexpected financial disruptions and how this influences their approach to risk. According to behavioural finance theories, such as those proposed by Kahneman & Tversky (1979), individuals facing financial instability, marked by insufficient savings, significant debt, or a lack of financial safety nets, may be more inclined to take financial risks, contrary to what traditional models of risk aversion would predict. This behaviour is frequently explained by the “gambling for resurrection” hypothesis, first introduced by Downs and Rocke (1995), which suggests that people experiencing financial hardship may

pursue high-risk decisions in an attempt to improve their economic situation. Moreover, limited financial knowledge and restricted economic resources can impair sound judgment regarding risk, increasing the likelihood of engaging in speculative or high-risk financial activities. In a more recent study, Lusardi et al. (2011) assessed the ability of households to handle financial emergencies and found that many American households would struggle to raise \$2,000 within a month. This inability signals widespread financial fragility, which the authors link to both reduced risk tolerance and lower levels of financial literacy. These values were used to compute national-level average risk scores, enabling cross-country comparisons of financial vulnerability and risk aversion. Responses marked as “Don’t know / Prefer not to answer” were excluded from the analysis to ensure the robustness and validity of the resulting indices. Following data processing, an average risk coefficient was calculated for each EU Member State, based on which statistical analyses were performed.

The same methodological approach was applied to all other variables, except for question 9, as follows:

- For long-term risk aversion (Q10), the question used is “Overall, how confident are you that you will have enough money to live comfortably throughout your retirement years?” Answers ranged from “*Very confident*”, scored with 1, to “*Not at all confident*”, scored with 4.
- To gauge self-perceived financial literacy (Q1), the question asked is “*How would you rate your overall knowledge about financial matters compared to other adults in [COUNTRY]?*” with answers spanning from “*Very high*”, scored with 5, to “*Very low*”, scored with 1.
- Furthermore, to assess actual financial literacy scores (F1), the survey used a 3-question weighted index. The scores were calculated from 0 (ranked as 1) to 5 (ranked as 6) in our analysis.
- Question 11 (Q11) asked “*How comfortable are you with using digital financial services, such as online banking or mobile payments?*” measuring respondents’ digital skills. Answers spanned from “*Very comfortable*”, which was scored with 4, to “*Not at all comfortable*”, scored with 1.
- Lastly, question 12 (Q12) measured respondents’ trust in financial advice from different private institutions. The question states “*How confident are you that investment advice you receive from your bank/insurer/financial advisor is primarily in your best interest?*” with answers from “*Very confident*”, scored with 4, to “*Not at all confident*”, assessed with 1.

- Question 9 (Q9) used to measure respondents' interactions with different financial products stated "*Which of the following financial products do you currently have or have you had in the last two years?*" – with multiple answers allowed, as follows: "*A private pension or retirement product*"; "*Life insurance*"; "*Non-life insurance*" (e.g. *household insurance, motor insurance*); "*A mortgage or home loan*"; "*Other consumer loan*"; "*An investment product*" (*funds, stocks or bonds*); "*Crypto-securities, including crypto-currency*". The data collected with Q9 is used as is and will not be processed. Answers "*None of these*" and "*Don't know*" were excluded from this analysis.

3.3. Analytical framework and methodological justification

The analytical strategy of this study is deliberately calibrated to the structural constraints of the underlying data. Flash Eurobarometer 525 constitutes a single cross-sectional survey wave, providing country-level weighted averages for 27 EU Member States with no temporal replication. This data architecture has direct implications for the class of inferential methods that are both valid and epistemically appropriate. Panel data estimators - fixed-effects, random-effects, or difference-in-differences specifications - require multiple observations per unit over time and are therefore inapplicable, as the survey covers a single reference period (spring 2023) and extends across no successive waves.

The absence of multivariate demographic controls is therefore not an analytical oversight but a methodological necessity imposed by the aggregate data structure. Demographic heterogeneity is, in part, absorbed into the country-level average indices, which reflect the composite socioeconomic profile of each Member State's surveyed population. The research objective of this study is explicitly comparative and descriptive - to characterise the landscape of financial knowledge, risk profiles, and investment preferences across the EU-27 - rather than to identify individual-level causal mechanisms. These are distinct objectives that require epistemically distinct methods.

This approach is consistent with peer-reviewed research using the same dataset and pursuing an analogous objective. Demertzis, Léry Moffat, Lusardi, and Mejino-López (2024), in their study published in the *Journal of Financial Literacy and Wellbeing* (Cambridge University Press) analyse Flash Eurobarometer 525 data at the country level using descriptive statistics and bivariate associations across the EU-27, without constructing multivariate regression models

incorporating individual-level demographic controls. Their explicit objective - mapping the state of financial knowledge across European Member States - is methodologically analogous to the comparative objective pursued in this paper. The present study situates itself within this established stream of country-level, landscape-mapping analysis, which draws its inferential value precisely from cross-national heterogeneity rather than individual variation.

Given $N = 27$ country-level observations, the analytical toolkit is appropriately constrained to methods with sufficient statistical power for small samples. The procedure unfolds in three stages. First, cross-country descriptive statistics and distributional visualisations characterise each variable across Member States, establishing a comparative portrait of cross-national heterogeneity. Second, two-sample t-tests (paired samples) assuming unequal variances evaluate whether statistically significant differences exist between paired constructs - specifically between self-assessed and tested financial literacy, and between short-term and long-term risk aversion. Third, unifactorial OLS regressions estimate the marginal predictive relationship between each explanatory variable and the relevant outcome, with R^2 serving as a standardised measure of explained variance. These regressions are not intended as causal identification strategies but as descriptive measures of association, fully consistent with the cross-sectional, aggregate nature of the data.

The adoption of unifactorial rather than multifactorial specifications reflects both the sample size constraint and the study's explicitly comparative, landscape-mapping objective. Including multiple regressors simultaneously in a model with 27 observations would yield severely underpowered estimates susceptible to multicollinearity and overfitting, rendering coefficient interpretation unreliable. The unifactorial approach sacrifices the capacity to partial out confounders in exchange for analytical transparency and epistemic honesty about what the data can support. This position is acknowledged explicitly as a limitation in the concluding section, alongside future research directions incorporating longitudinal panel data and individual-level micro-econometric specifications as the EU's financial literacy monitoring framework matures across successive survey waves.

The formal specification of each unifactorial OLS regression is as follows. For each outcome variable Y and explanatory variable X ,

both measured as country-level weighted averages across the EU-27 ($i = 1, \dots, 27$), the estimating equation is:

$$Y_i = \alpha + \beta X_i + \varepsilon_i \quad (1)$$

where Y_i is the outcome of interest for country i (the share of respondents holding a given financial product, or the country-level average risk aversion score); X_i is the explanatory variable (e.g., tested financial literacy, short-term risk aversion, or digital literacy score); α is the intercept; β is the slope coefficient quantifying the marginal association between X and Y across countries; ε_i is the error term, assumed independently distributed.

R^2 is reported as a standardised measure of the proportion of cross-country variance in Y explained by X . Given the study's descriptive objective, no causal interpretation is attributed to β . The absence of endogeneity correction is consistent with this framing: reverse causality is a concern in causal inference but not in analyses whose explicit purpose is to characterise the empirical landscape of associations across Member States.

4. Results and discussion

4.1. Cross-country averages

An analysis of the cross-country averages for Q1 (self-assessed financial literacy) and F1 (tested financial literacy), shown in Table 1, reveals a consistent pattern of underestimation of financial knowledge across the EU. In nearly all countries, respondents rated their own financial literacy lower than their actual tested scores, with particularly notable gaps in high-performing countries such as Finland (Q1: 3.34; F1: 4.05) and Germany (Q1: 2.91; F1: 3.67). This self-perception gap aligns with earlier findings suggesting that individuals often lack confidence in their financial abilities, even when their knowledge is objectively adequate (Angrisani & Casanova, 2019). Contrary to the overconfidence bias documented in the Dunning-Kruger effect (Kruger & Dunning, 1999), this pattern reflects financial self-underestimation, which may have tangible economic consequences. When individuals undervalue their financial competencies, they may avoid complex financial products, underinvest in markets, or rely excessively on external financial advice (Hadar et al., 2013). Furthermore, the data show that countries with higher digital literacy (Q11) and higher actual financial literacy (F1) do not

necessarily report higher trust in financial advisors (Q12), suggesting a potential mismatch between education and perceived reliability of financial institutions.

Table 1
Financial literacy & behavioural indicators across the EU

Country	Q1	F1	Q8	Q10	Q11	Q12
BE	3.123	3.562	2.341	2.668	3.091	2.283
BG	3.280	3.333	2.922	2.987	3.122	2.407
CZ	3.237	3.585	2.644	2.809	3.431	2.697
DK	3.239	3.992	2.344	2.264	3.405	2.538
DE	3.134	3.684	2.491	2.512	3.211	2.489
EE	3.207	3.992	2.546	2.941	3.374	2.242
IE	3.222	3.665	2.652	2.580	3.132	2.310
EL	3.097	3.299	2.965	3.089	2.723	1.961
ES	3.142	3.359	2.341	2.522	2.833	2.394
FR	3.370	3.428	2.482	2.799	2.838	2.310
HR	3.277	3.475	2.836	2.890	3.360	2.459
IT	2.794	3.460	2.332	2.782	2.879	2.376
CY	3.131	3.281	2.831	2.873	3.049	2.015
LV	3.060	3.394	3.118	3.014	3.229	2.131
LT	3.239	3.553	2.488	2.938	3.472	2.326
LU	3.317	3.714	1.921	2.305	3.118	2.357
HU	3.059	3.581	2.882	3.096	3.140	2.212
MT	3.078	3.621	2.330	2.620	3.149	2.348
NL	3.302	3.981	2.011	2.263	3.429	2.352
AT	2.946	3.608	2.558	2.464	3.403	2.488
PL	3.337	3.358	2.792	3.175	3.261	2.074
PT	2.976	3.249	2.667	2.797	2.789	2.535
RO	3.546	3.122	3.005	2.789	3.228	2.474
SI	3.165	3.883	2.657	2.867	3.120	2.184
SK	3.213	3.625	2.637	2.956	3.360	2.479
FI	3.344	4.054	2.935	2.620	3.634	2.667
SE	3.166	3.812	2.130	2.439	3.490	2.265

Notes: Q1 = Self-assessed Financial Literacy; F1 = Actual Financial Literacy; Q8 = Short-Term Risk Aversion; Q10 = Long-Term Risk Aversion; Q11 = Digital Literacy; Q12 = Trust in Advice (from Banks, Consultants)

Source: Author's

Furthermore, as shown in Table 2, countries with higher actual financial literacy scores, such as Denmark (3.992) and the Netherlands (3.981), demonstrate greater uptake of sophisticated financial instruments, including private pensions (5.19 and 3.07, respectively), investment products (3.49 and 2.00), and mortgages (3.46 and 4.16). This aligns with existing literature suggesting that financial literacy

reduces information barriers and facilitates participation in complex financial markets (Van Rooij, Lusardi, & Alessie, 2011). Conversely, nations with lower actual financial literacy, such as Greece (3.299) and Romania (3.122), exhibit markedly lower adoption rates across most products, reinforcing the link between financial competence and market inclusion. Interestingly, self-assessed financial literacy shows weaker predictive power, with Romania reporting the highest self-assessment (3.546) despite low actual literacy and product uptake, a finding consistent with the Dunning-Kruger effect, where individuals overestimate their financial capabilities.

Table 2
Choice of investment products across the EU

Country	Pension ¹⁾	Life insurance	Non-life insurance	Mortgage ²⁾	Other consumer loan	An investment product	Crypto ³⁾
BE	3.680	2.820	5.170	2.730	1.370	2.650	0.920
BG	1.870	1.730	3.710	0.920	3.140	0.930	1.090
CZ	3.990	4.180	3.860	1.470	1.540	2.390	1.390
DK	5.190	3.370	6.700	3.460	1.740	3.490	0.730
DE	2.140	2.480	5.890	1.650	0.990	3.280	0.610
EE	3.090	2.320	4.540	2.010	1.730	2.360	1.240
IE	3.950	3.640	4.020	2.540	1.740	1.810	0.810
EL	0.790	1.560	3.020	1.940	1.280	1.220	0.890
ES	2.270	2.880	4.960	2.930	1.830	2.250	0.440
FR	2.010	4.390	4.100	1.920	1.200	1.870	0.410
HR	0.780	2.590	3.010	1.070	2.370	1.470	1.580
IT	1.990	2.040	3.110	1.540	0.900	2.810	0.380
CY	1.410	3.270	3.680	2.410	1.530	0.960	1.040
LV	2.320	2.260	3.750	0.950	1.820	0.920	0.960
LT	2.410	3.410	4.110	1.290	1.350	1.400	1.130
LU	4.120	3.860	5.440	4.210	1.990	3.700	1.250
HU	1.820	3.180	4.400	1.520	1.510	1.970	0.640
MT	2.290	2.510	4.180	2.100	0.460	3.160	0.820
NL	3.070	2.430	6.420	4.160	0.600	2.000	1.140
AT	2.120	3.680	5.850	1.640	0.700	2.410	1.040
PL	1.020	5.820	4.440	1.500	2.100	1.510	0.580
PT	1.870	2.740	4.570	2.460	1.850	2.050	0.920
RO	3.250	2.270	4.080	1.160	2.290	1.630	0.750
SI	1.660	4.170	4.020	1.420	1.760	1.680	1.670
SK	1.470	3.920	3.710	2.080	1.870	2.580	0.740
FI	1.090	2.460	4.790	2.480	2.820	3.630	0.890
SE	3.310	2.360	5.720	3.040	1.250	4.630	0.510

¹⁾“A private pension or retirement product”; ²⁾A mortgage or home loan; ³⁾“Crypto-securities, including crypto-currency”

Source: Author's

Risk aversion emerges as another critical determinant of financial behaviour, with countries exhibiting higher short-term risk aversion, such as Latvia (3.118) and Bulgaria (2.922), showing lower participation in volatile assets like investment products and cryptocurrencies. This supports behavioural finance theories, such as those of Kahneman & Tversky (1979), that risk-averse individuals prefer stable, familiar instruments over uncertain returns. Notably, Luxembourg (1.921) and Sweden (2.130), which report the lowest short-term risk aversion, display higher engagement with mortgages and investment products, suggesting that cultural attitudes toward risk shape financial decision-making. Long-term risk aversion, however, does not uniformly correlate with product ownership, indicating that consumers may weigh short-term uncertainties more heavily than long-term risks when making financial choices.

Digital literacy further mediates financial product adoption, with Scandinavian countries, Finland (3.634), Sweden (3.490), and Denmark (3.405), leading in both digital competence and ownership of technology-driven assets like investment products and cryptocurrencies. This suggests that digital skills might facilitate access to and confidence in modern financial tools. By contrast, Southern European nations such as Greece (2.723) and Portugal (2.789) lag in digital literacy and exhibit lower uptake of digital-based financial products, reinforcing the notion that technological readiness influences financial inclusion.

The final column in Table 1, which measures trust in financial advice, demonstrates a nuanced relationship with financial product adoption patterns. Countries with low institutional trust, such as Greece (1.961) and Cyprus (2.015), show diminished engagement with formal financial products, likely reflecting post-crisis scepticism. However, Portugal (2.535) presents an exception, with relatively high trust coexisting with low product uptake, suggesting that trust alone does not guarantee market participation without complementary financial literacy. The data also reveals that high-trust, high-literacy countries like Denmark (2.538) and Germany (2.489) exhibit selective rather than blanket product adoption, indicating that financially literate consumers critically evaluate advice rather than relying on it indiscriminately.

4.2. Descriptive statistics

Furthermore, descriptive statistics listed in Tables 3 and 4 reveal several important dynamics in individuals' financial literacy, risk

preferences, and product choice patterns. First, the comparison between self-assessed financial literacy (Q1) and actual financial literacy (F1) reveals a nuanced self-perception gap. On average, individuals rated their own financial knowledge lower (*Median* = 3.19) than what they demonstrated in objective tests (*Median* = 3.58). This difference suggests a general underconfidence in financial knowledge, echoing recent findings by Angrisani and Casanova (2019), who show that underconfidence, even in objectively knowledgeable individuals, can hinder financial decision-making and long-term preparedness. Interestingly, the higher standard deviation of actual literacy (0.25 vs. 0.15 for Q1) confirms that tested knowledge varies more widely across the population, while the lower variance in self-assessment may reflect social desirability bias or general difficulty in self-evaluation.

Table 3

Descriptive statistics of key variables

	Q1	F1	Q8	Q10	Q11	Q12
Mean	3.185	3.580	2.587	2.742	3.195	2.347
Standard Error	0.029	0.048	0.058	0.049	0.045	0.034
Median (M)	3.206	3.581	2.636	2.796	3.210	2.352
Standard Deviation (SD)	0.150	0.251	0.305	0.258	0.236	0.179
Sample Variance	0.022	0.063	0.093	0.066	0.055	0.032
Kurtosis	1.267	-0.629	-0.361	-0.751	-0.520	0.007
Skewness	-0.275	0.321	-0.353	-0.365	-0.354	-0.234
Range	0.751	0.932	1.197	0.911	0.911	0.736
Minimum	2.794	3.122	1.920	2.263	2.723	1.960
Maximum	3.545	4.054	3.118	3.174	3.634	2.697
Sum	86.000	96.670	69.856	74.056	86.272	63.373
Count	27	27	27	27	27	27
Confidence Level (95.0%)	0.059	0.099	0.121	0.102	0.0935	0.071

Notes: Q1 = Self-assessed Financial Literacy; F1 = Actual Financial Literacy; Q8 = Short-Term Risk Aversion; Q10 = Long-Term Risk Aversion; Q11 = Digital Literacy; Q12 = Trust in Advice (from Banks, Consultants)

Source: Author's

The analysis of risk aversion reinforces known temporal asymmetries in financial behaviour. Respondents are more risk-averse in the short term (Q8, M = 2.59) compared to the long term (Q10, M = 2.74), a pattern consistent with time-inconsistent preferences and hyperbolic discounting (Laibson, 1997). The slightly greater standard deviation in short-term risk aversion (0.31 vs. 0.26) suggests that immediate financial decisions provoke more heterogeneous emotional responses, perhaps due to perceived urgency or lack of liquidity. The negative skewness observed in both measures may further imply that

a substantial portion of individuals are highly risk-averse, highlighting an underlying behavioural influence of financial fragility, the tendency to avoid risks in contexts where loss-absorbing capacity is limited.

Digital literacy (Q11, $M = 3.20$, $SD = 0.24$) appears relatively well-developed, with most individuals reporting moderate to high competence in navigating digital platforms. This is encouraging, as digital literacy has become an increasingly critical skill for accessing financial services, especially with the rise of online banking, robo-advisors, and mobile investment platforms (OECD, 2020). Trust in financial advice (Q12, $M = 3.20$, $SD = 0.24$) exhibits a similar pattern, moderately high and stable, suggesting a relatively even distribution of attitudes toward institutional actors such as banks, consultants, or advisors. A potential correlation between digital literacy and trust could reflect that more digitally capable individuals feel empowered to assess the credibility of financial advice, though this relationship warrants formal statistical testing (e.g., Pearson's r or regression).

Table 4
Descriptive statistics of investment choices

	Pension ¹⁾	Life insurance	Non-life insurance	Mortgage ²⁾	Other consumer loan	An investment product	Crypto ³⁾
Mean	2.406	3.049	4.490	2.096	1.619	2.250	0.910
Standard Error	0.214	0.182	0.191	0.171	0.120	0.181	0.064
Median (M)	2.140	2.820	4.180	1.940	1.730	2.050	0.890
Mode	1.870	N/A	3.710	N/A	1.740	N/A	0.920
Standard Deviation (SD)	1.116	0.949	0.994	0.893	0.624	0.942	0.336
Sample Variance	1.246	0.900	0.988	0.797	0.389	0.887	0.113
Kurtosis	-0.020	1.245	-0.244	0.411	0.492	0.063	-0.107
Skewness	0.652	0.924	0.623	0.919	0.335	0.654	0.456
Range	4.410	4.260	3.690	3.290	2.680	3.710	1.290
Minimum	0.780	1.560	3.010	0.920	0.460	0.920	0.380
Maximum	5.190	5.820	6.70	4.210	3.140	4.630	1.670
Sum	64.980	82.34	121.250	56.600	43.730	60.760	24.570
Count	27	27	27	27	27	27	27
Confidence Level⁴⁾	0.441	0.375	0.393	0.353	0.246	0.372	0.133

Notes: ¹⁾“A private pension or retirement product”; ²⁾A mortgage or home loan; ³⁾“Crypto-securities, including crypto-currency”; ⁴⁾Confidence Level = 95.0%.

Source: Author's

The data on financial product adoption reveal clear preferences. Traditional products like non-life insurance ($M = 4.49$) and mortgages ($M = 4.18$) are the most widely held, reflecting basic risk management and wealth accumulation strategies. By contrast, investment in crypto-securities remains marginal ($M = 0.91$, Median = 0.89), despite recent widespread media attention. The low adoption rate may reflect volatility, regulatory uncertainty, or lack of trust - especially in regions with lower financial literacy. Similarly, standard investments such as funds or bonds remain modest ($M = 1.62$), suggesting either risk aversion or limited access. Loans exhibit substantial variability, particularly for mortgages ($SD > 0.8$), pointing to diverse credit conditions, housing market dynamics, or national policy effects across the sample.

4.3. Mean analysis for self-assessed & actual financial literacy, short-term & long-term risk aversion

Moreover, the results from the two-sample t-test assuming unequal variances, shown in Table 5, reveal a statistically significant discrepancy between self-assessed financial literacy (Q1) and tested financial literacy (F1). The mean score for self-assessed literacy was 3.19, notably lower than the mean of 3.58 recorded for actual financial literacy. This difference is strongly supported by the test statistic ($t = -7.01$), which far exceeds the critical values for both one-tailed and two-tailed tests. The corresponding two-tailed p-value ($p = 1.24 \times 10^{-8}$) further underscores the robustness of this result, indicating that the observed difference is highly significant and unlikely to have occurred by chance.

The t-statistics suggest a consistent trend: participants tend to underestimate their financial knowledge. This self-perception gap reflects a broader issue documented in the literature: individuals often fail to accurately evaluate their own competencies in financial matters (Lusardi & Mitchell, 2014). Such underestimation may have practical implications, particularly in contexts requiring confidence in decision-making, such as investment choices or personal financial planning. When individuals lack confidence in their abilities, even when their actual knowledge is sufficient, they may refrain from engaging with more sophisticated or long-term financial products, such as retirement products or stocks, and are more likely to defer to financial advisors, even when their objective knowledge would support independent decision-making.

Table 5
Comparison of self-assessed & actual financial literacy

Statistics	Q1 - Self-assessed Financial Literacy	F1 - Actual Financial Literacy
Mean	3.1852	3.5804
Variance	0.0226	0.0632
Observations	27	27
Hypothesised Mean Difference	0	,
Degrees of Freedom (df)	43	,
t Statistic	-7.0102	,
P(T<=t) two-tail	0.0000	,
t Critical two-tail	2.0167	,

Source: Author's

In parallel, the comparison shown in Table 6 between short-term (Q8) and long-term (Q10) risk aversion reveals a significant, though more nuanced, temporal dimension to financial risk attitudes. The mean for short-term risk aversion was 2.59, while long-term risk aversion averaged slightly higher at 2.74. Although the absolute difference appears modest, the t-statistic (-2.02) and the associated two-tailed p-value ($p = 0.0489$) suggest statistical significance at the conventional 5% level. This indicates that the time frame over which financial decisions are made can meaningfully influence individuals' risk preferences.

The direction of the effect supports the notion that individuals are more risk-averse in the short term, but gradually become more tolerant of risk when outcomes are projected into the future. This behaviour is consistent with established theories in behavioural finance, such as Laibson (1997), particularly those concerning time-inconsistent preferences and hyperbolic discounting. Immediate risks are often perceived as more threatening or emotionally salient, whereas distant risks may be abstracted and thus tolerated more readily.

Table 6

Comparison of short-term & long-term risk aversion

Statistics	Q8 - Short-Term Risk Aversion	F1 - Long-Term Risk Aversion
Mean	2.5873	2.7428
Variance	0.0936	0.0669
Observations	27	27
Hypothesised Mean Difference	0	,
Degrees of Freedom (df)	51	,
t Statistic	-2.0180	,
P(T<=t) two-tail	0.0489	,
t Critical two-tail	2.0076	,

Source: Author's

4.4. Unifactorial regressions

4.4.1. Self-assessed & tested financial literacy regressions

Self-assessed financial literacy exhibits weak and predominantly positive associations with most financial behaviours examined (see Figure 1, Appendix). For the majority of product categories - including trust in financial advice, insurance ownership, investment products, home loans, and crypto-assets - the explanatory power is negligible, consistent with Allgood and Walstad's (2016) finding that perceived competence is a weaker predictor of financial engagement than objective knowledge. Modest positive associations emerge for life insurance and private pension ownership, suggesting that subjective confidence may marginally encourage long-term financial planning behaviour, albeit without the strength to be economically decisive. The most substantive relationship is observed with consumer credit use, where self-assessed literacy displays a moderate positive association. This pattern is consistent with overconfidence effects documented by Kruger and Dunning (1999): individuals who overestimate their financial competence may underestimate credit risk, leading to higher debt-product uptake. From a policy perspective, this finding underscores the risk of programmes that raise financial self-confidence without commensurate improvements in tested knowledge - a concern particularly relevant to CEE countries exhibiting high self-assessment relative to objective scores.

Tested financial literacy (Figure 2, Appendix) displays its strongest associations with investment products, non-life insurance, and home loans, with all three exhibiting moderate to substantial positive linkages (see Table). These patterns carry direct economic significance: countries where the population demonstrates higher objective financial knowledge show markedly greater participation in complex, long-horizon financial instruments. This finding is consistent with Van Rooij, Lusardi, and Alessie (2011), who demonstrate that actual financial knowledge reduces informational barriers to stock market participation. The underlying mechanism likely involves a more accurate comprehension of risk-return trade-offs, which increases the perceived tractability of complex products. Private pensions exhibit a moderate positive association, corroborating the established link between financial knowledge and retirement preparedness documented by Lusardi and Mitchell (2014). By contrast, life insurance, trust in financial advice, and crypto-securities show negligible associations, suggesting these decisions are governed primarily by social norms, cultural attitudes, or institutional trust rather than financial competence per se. Notably, a slight negative association emerges with consumer loans, consistent with the view that objectively literate individuals are more likely to recognise and avoid high-cost borrowing - a finding with practical relevance for consumer credit policy across Member States.

4.4.2. Short & long term risk profiles regressions

Figure 3 (see Appendix) reveals that short-term risk aversion is predominantly negatively associated with financial product ownership - a pattern that, on its surface, appears counterintuitive but is consistent with well-established behavioural finance theory. Countries where populations exhibit higher financial fragility (lower emergency savings, hence higher risk exposure in the short run) are precisely those where uptake of home loans, investment products, and non-life insurance is greatest. This aligns with the “gambling for resurrection” dynamic formalised by Downs and Rocke (1995): agents in financially precarious positions may rationally pursue exposure to financial products that offer the prospect of long-run security, even at the cost of short-term vulnerability. The association with private pension products is economically meaningful in a similar vein: countries with weaker short-term safety nets show greater private pension uptake, suggesting a substitution effect between state-provided and

individually funded retirement provisions. Consumer loans, by contrast, display the opposite directionality, indicating that households with greater immediate financial resilience are more likely to take on debt - consistent with standard liquidity constraint theory (Lusardi et al., 2011). Associations with life insurance, trust in advice, and crypto-securities are weak, reflecting that these product choices are shaped by factors largely orthogonal to short-term financial fragility.

Long-term risk aversion (Figure 4, Appendix) produces associations that are, in aggregate, stronger and more consistent than those observed for the short-term dimension, with non-life insurance, home loans, investment products, and private pensions all displaying substantial negative linkages. Economically, this pattern indicates that countries where populations perceive their long-term financial position as uncertain are precisely those where households engage most actively in protective financial instruments. This is not paradoxical but rather structurally rational: households that recognise their long-run vulnerability respond by building insurance-based and pension-based buffers against future adversity, a mechanism consistent with precautionary saving theory (Lusardi, 2015) and with the lifecycle hypothesis of financial planning. The stronger explanatory power of long-term relative to short-term risk aversion for most product categories suggests that retirement and insurance planning decisions are more fundamentally anchored in perceptions of distant risk than in immediate financial fragility. Conversely, life insurance, trust in advice, crypto-securities, and consumer loans exhibit negligible associations, reinforcing the view that these product categories are governed by distinct motivational structures - cultural attitudes toward the concept of death, institutional confidence, speculative interest, and immediate liquidity needs, respectively - that long-term risk aversion does not meaningfully predict at the country level.

Conclusively, Figures 3 and 4 (see Appendix) demonstrate that greater risk aversion, whether measured over the short or long term, is consistently associated with higher engagement in protective and long-horizon financial products - most prominently insurance, home loans, investment products, and private pensions - while consumer credit displays the opposite directional pattern.

4.4.3. Digital literacy regressions

The scatterplots in Figure 5 (see Appendix) illustrate the associations between digital literacy and financial product adoption

across EU countries. The pattern is consistently positive but selectively strong. The most economically meaningful associations involve trust in financial advice, non-life insurance, and investment products (see Table, Appendix), a clustering that is theoretically interpretable: digital competence facilitates navigation of online financial platforms, reduces the informational cost of accessing and evaluating financial advice, and lowers barriers to entry for investment products that increasingly require digital interfaces. This aligns with OECD (2020) evidence linking digital financial literacy to greater engagement with online financial services and robo-advisory tools. The association with trust in financial advice is particularly noteworthy: more digitally capable populations may be better positioned to evaluate the credibility and alignment of advisory services with their interests. By contrast, home loans and consumer loans show negligible associations, consistent with the view that collateral-based borrowing decisions are driven by macroeconomic conditions, housing market dynamics, and credit supply constraints rather than by the digital competence of borrowers. The digital literacy channel is thus most operative where financial engagement is mediated by technology and information processing - and largely inactive where it is mediated by institutional relationships and physical asset markets.

In summary, the findings across Figures 1 to 5 collectively underscore that different dimensions of individual competence, self-assessed knowledge, tested financial literacy, risk preferences, and digital skills, shape financial behavior in distinct and economically meaningful ways. Self-assessed literacy shows weak but generally positive links, with the strongest effect observed for consumer credit use, possibly reflecting confidence or overconfidence in debt management. In contrast, tested financial literacy is more clearly associated with engagement in complex and long-term financial products, such as investment instruments and pensions, echoing past research that ties actual financial knowledge to improved financial decision-making (such as van Rooij, Lusardi, & Alessie, 2011). Risk preferences emerge as particularly influential: both short- and long-term risk tolerance are strongly linked to investment and borrowing behaviours, confirming the central role of risk attitudes in financial engagement (Dohmen et al., 2011). The relationships were mostly negative, showing that the higher the risk-aversion, the lower the preference for all types of analysed investment options, with the exception being consumer credit. Lastly, digital literacy appears most

relevant in facilitating participation in investment products and online-mediated financial services, suggesting that digital competence may be an increasingly important prerequisite for financial inclusion in modern markets. Together, these findings highlight the multifaceted nature of financial decision-making, where knowledge, perception, risk tolerance, and digital readiness each contribute to shaping individual financial behaviour.

5. Conclusions

This study explored the links between financial knowledge, risk aversion, and investment preferences among individuals in EU Member States, utilising data from the Flash Eurobarometer 525. The research sheds light on the nuanced relationship between tested financial literacy, self-assessed financial confidence, and actual financial behaviour, revealing meaningful divergences and regional patterns across Europe.

Returning to the three hypotheses formulated at the outset, the empirical evidence shows the following: H1, which posited that tested financial literacy would exhibit a stronger positive association with long-term investment product adoption than self-assessed literacy, is supported. Tested financial literacy displays substantively stronger associations with investment products, non-life insurance, home loans, and private pensions than self-assessed literacy, whose only economically meaningful linkage emerges with consumer credit - a result more consistent with overconfidence-driven debt uptake than with informed financial planning. H2, anticipating that short-term risk aversion would map onto everyday financial decisions while long-term risk aversion would track long-horizon products, receives partial support. Long-term risk aversion exhibits stronger and more systematically negative associations with insurance and pension products than short-term risk aversion does, consistent with the precautionary saving and lifecycle frameworks. The short-term dimension, however, behaves in a manner more nuanced than initially hypothesised: rather than aligning narrowly with everyday decisions, it tracks engagement with long-term borrowing and investment products through a “gambling for resurrection” type of mechanism (Downs & Rocke, 1995). H3, asserting a positive moderating role for digital literacy, is supported within a circumscribed domain - investment products, trust in advice, and non-life insurance - but is largely inactive

for collateral-based borrowing decisions, suggesting digital competence operates as an enabler primarily where financial engagement is mediated by online platforms.

The principal contribution of this study lies in extending the comparative country-level analysis of EU financial literacy - pioneered by Demertzis et al. (2024) using the same Flash Eurobarometer 525 dataset - beyond the descriptive mapping of knowledge stocks to a multidimensional examination that jointly integrates tested literacy, self-assessment, short- and long-term risk profiles, digital competence, trust in advice, and product participation. Whereas the established literature (Lusardi & Mitchell, 2014; Van Rooij et al., 2011) has documented the financial literacy–behaviour nexus predominantly at the individual level within single-country samples, this study delivers a harmonised EU-27 portrait that surfaces three findings of independent value. First, the documented direction of the self-perception gap inverts the canonical Dunning-Kruger pattern: across the majority of EU member states, individuals systematically underestimate rather than overestimate their financial knowledge. This contradicts the overconfidence framing that dominates much of the behavioural finance literature (Allgood & Walstad, 2016) and warrants explicit recognition in policy design. Second, the differentiation between economically meaningful (tested literacy) and economically negligible (self-assessment) predictors of long-term product engagement provides empirical justification for prioritising objective competence-building over confidence-calibration interventions. Third, the regional patterning - Northern European countries combining high tested knowledge with high self-confidence, against CEE Member States such as Romania exhibiting the opposite alignment - identifies a heterogeneity that any pan-European financial education strategy must accommodate.

Notably, the study also found that risk preferences play a central role in shaping financial behaviour, as both short- and long-term risk tolerance show strong associations with investment and borrowing decisions. Higher risk aversion tends to boost engagement with most financial products, particularly long-term investments, while consumer credit stands out as an exception, often preferred even by less risk-averse individuals. Additionally, digital literacy emerges as a key enabler, especially for accessing investment opportunities and using online financial tools. These results emphasise that financial decision-making is not driven by knowledge alone but is also shaped by

personal risk attitudes and digital competence, which together influence individuals' ability and willingness to engage with increasingly complex financial markets.

These findings underscore the dual need to both improve financial literacy and calibrate financial confidence. A one-size-fits-all approach to financial education is unlikely to be effective given the observed heterogeneity in behaviour and knowledge: In overconfident but low-literacy countries, programs should focus on correcting inflated self-perceptions and building actual financial knowledge through targeted, accessible education initiatives. In underconfident but high-literacy countries, efforts might focus on boosting financial self-efficacy, encouraging practical application of existing knowledge, and building trust in institutions and advisors.

For the European Capital Markets Union and the EU's broader retail investor engagement agenda, these results carry concrete operational implications. The asymmetry between tested and self-assessed literacy - with the former predicting long-horizon engagement and the latter predicting consumer credit uptake - suggests that financial education frameworks should be calibrated diagnostically rather than uniformly: countries displaying CEE-type underconfidence relative to objective competence require self-efficacy and trust-building interventions, whereas overconfident-low-literacy populations require remedial competence-building and credit-risk awareness programmes. The largely orthogonal behaviour of short-term financial decisions vis-à-vis literacy further indicates that day-to-day financial conduct is driven by liquidity, institutional, and cultural factors that lie outside the scope of conventional financial education and warrant complementary policy levers.

Several limitations, intrinsic to the analytical framework outlined in Section 3.3, must be acknowledged. First, the analysis rests on a single cross-sectional wave of Flash Eurobarometer 525, which precludes the construction of a longitudinal panel and, consequently, the application of fixed-effects or difference-in-differences estimators. Causal inference is therefore not claimed; the associations reported are descriptive in nature, consistent with the comparative landscape-mapping objective stated at the outset. Second, the unit of analysis is the country ($N = 27$), and the data structure provides pre-aggregated weighted averages rather than individual-record microdata. This precludes the simultaneous inclusion of demographic controls (age, gender, income quartile, educational attainment) that would be

standard in micro-econometric specifications. Demographic heterogeneity is partially absorbed into the country-level indices but cannot be directly partialled out. Third, the small-N constraint imposed by the EU-27 dictates the use of unifactorial rather than multifactorial regressions; including multiple regressors simultaneously would yield underpowered and multicollinear estimates. Fourth, reliance on self-reported measures introduces the possibility of social desirability bias, particularly for self-assessed knowledge and risk attitudes. Future research will benefit from successive waves of Flash Eurobarometer enabling panel construction and the application of fixed-effects estimators; access to individual-level microdata supporting multivariate models with demographic conditioning; experimental and quasi-experimental designs to identify the causal effect of financial education interventions; and the integration of institutional, regulatory, and cultural variables capable of explaining cross-country heterogeneity beyond the variables observed in the present dataset.

In sum, this study advances the literature along three distinct axes. Theoretically, it complicates the dominant overconfidence narrative by documenting a robust pattern of financial underconfidence across most EU Member States, calling for refined behavioural-finance models that accommodate bidirectional self-perception biases. Empirically, it provides the first multidimensional EU-27 portrait jointly mapping tested and self-assessed literacy, dual-horizon risk profiles, digital competence, trust in advice, and product participation using the harmonised Flash Eurobarometer 525 instrument. Practically, it gives policymakers a typology of national positioning - underconfident-high-literacy versus overconfident-low-literacy - that operationalises the otherwise abstract call for tailored financial education. The interaction between cognitive self-assessment, risk attitudes, and digital readiness emerges not as three parallel determinants of financial behaviour, but as an integrated competence block whose calibration is the proper object of pan-European financial inclusion policy.

Disclaimer: *The author declares that no generative AI tools were used in the preparation of the research content or analysis. Automated tools (ChatGPT-5 & Grammarly v1.2.208) were employed solely for grammar correction and linguistic polishing, equivalent to a digital proofreading process. All concepts, analyses, and conclusions are entirely the author's original work.*

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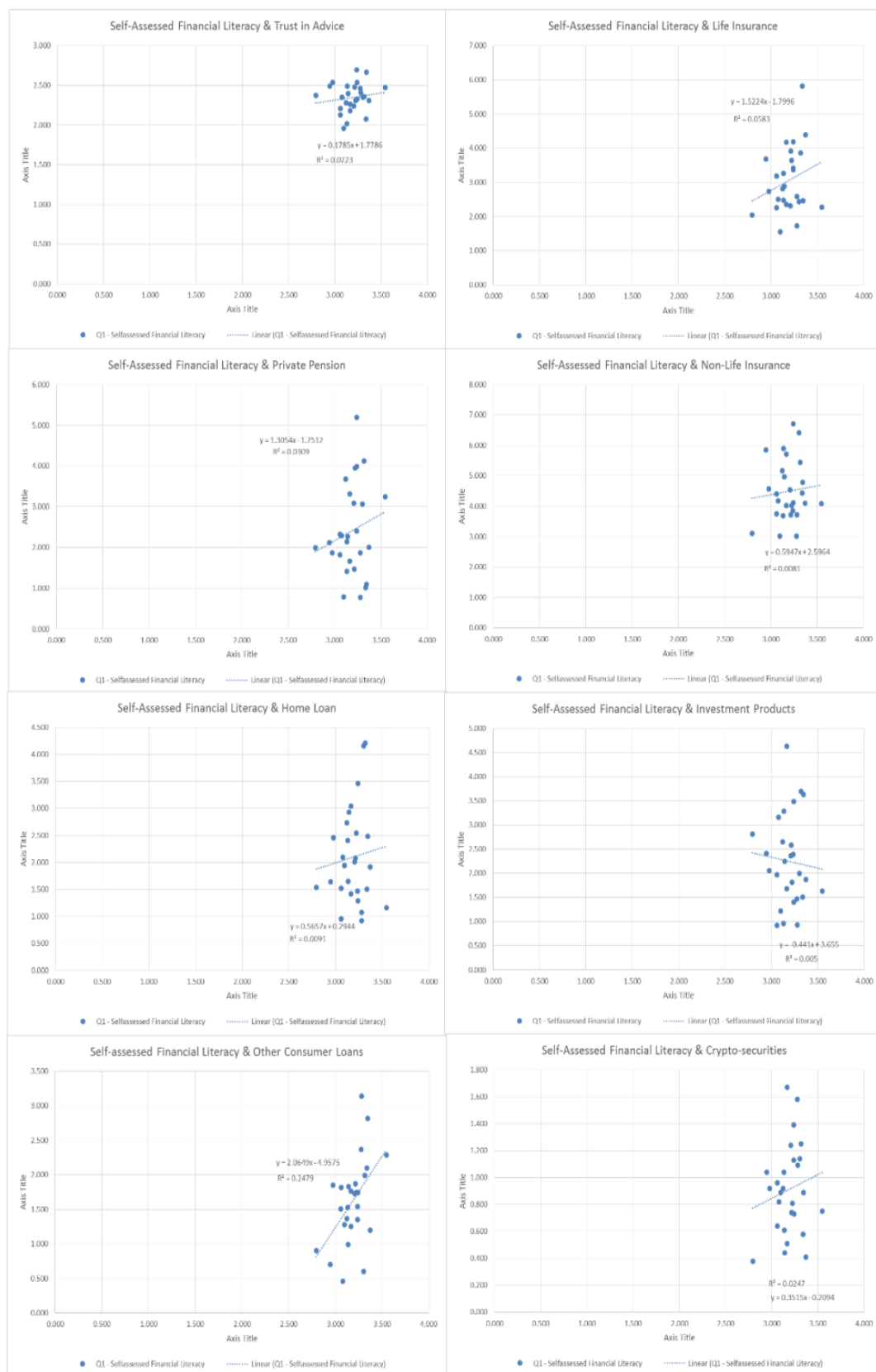
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Figure 1

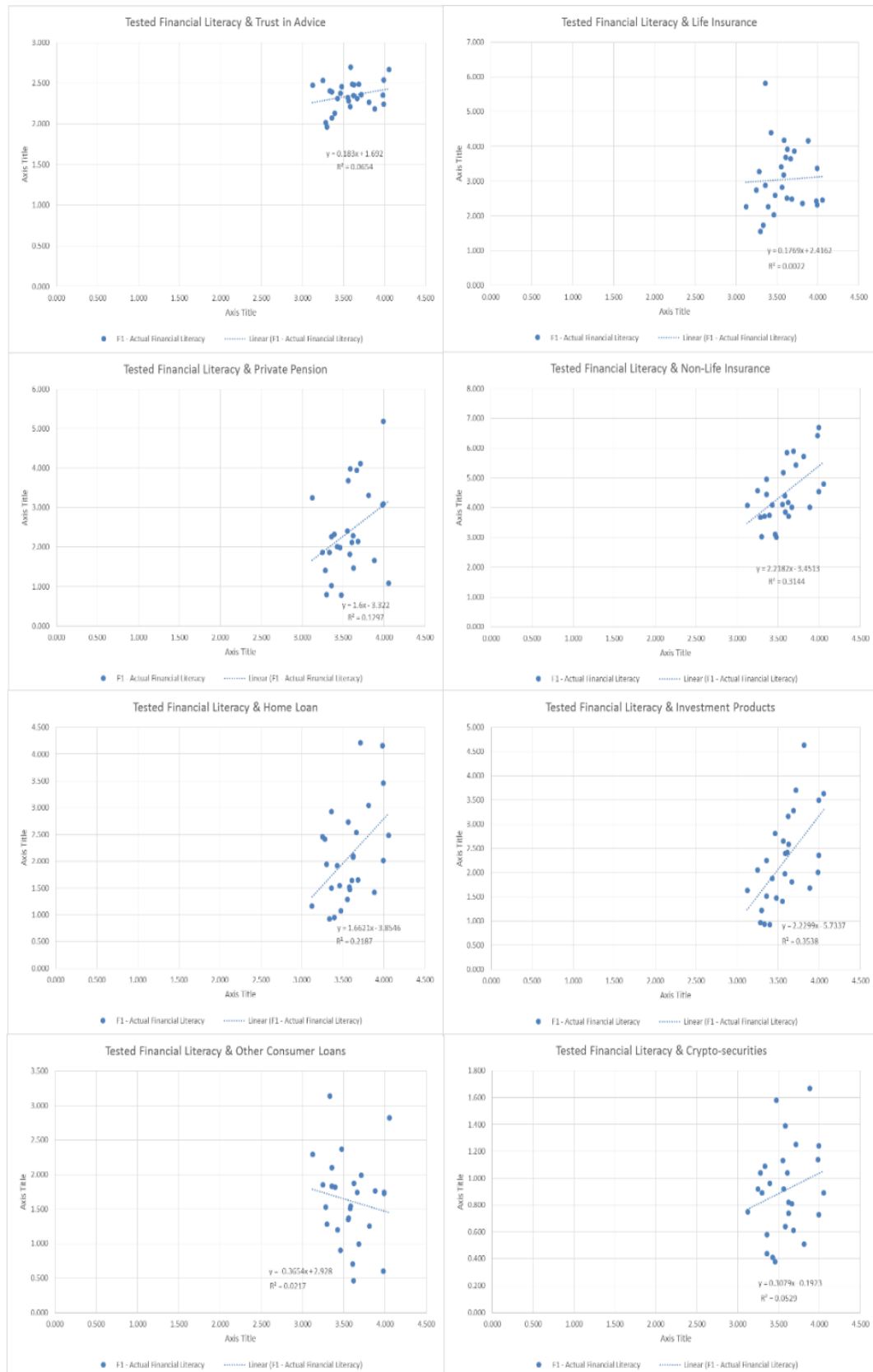
Self-Assessed Financial Literacy Regressions



Source: Author's

Figure 2

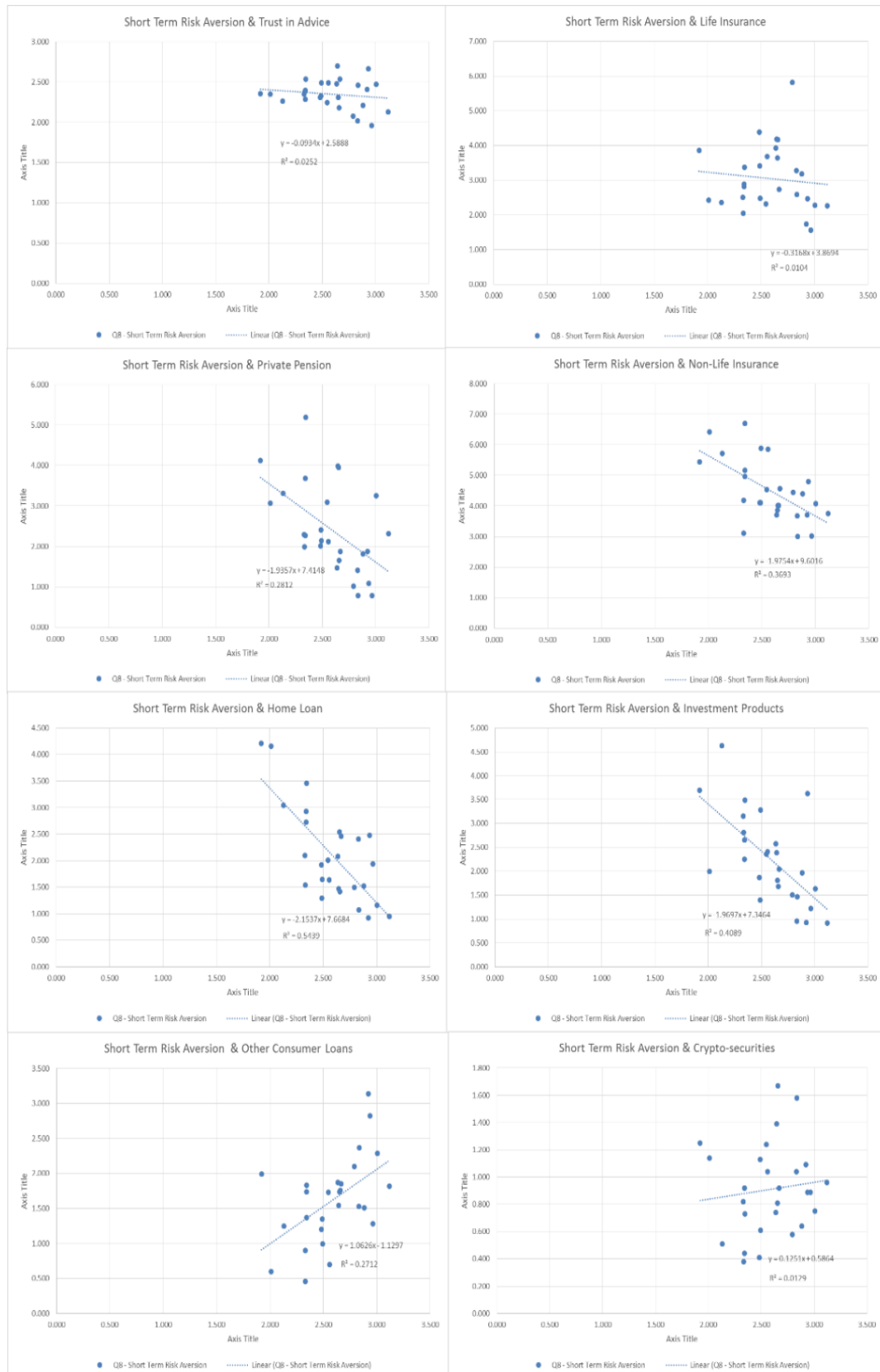
Tested Financial Literacy Regressions



Source: Author's

Figure 3

Short-Term Risk Aversion Regressions



Source: Author's

Figure 4

Long-Term Risk Aversion Regressions



Source: Author's

Figure 5

Digital Literacy Regressions



Source: Author's