Financial Literacy in South Africa

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We examine financial literacy in South Africa using a nationally representative survey conducted in 2017 that includes standardized questions on financial literacy used in over 140 countries. South Africa follows patterns found in other countries: less educated and low-income respondents display low levels of financial literacy. Most countries have large gender gaps in financial literacy while the gender gap is absent in South Africa. The absence of an aggregate gender gap masks two offsetting patterns. Men are more financially literate than their female partners, but single women are more financially literate than single men.

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1. Introduction

Financial literacy—understanding basic financial concepts like interest rates, inflation, and risk diversification—shapes how people make economic decisions (Lusardi and Mitchell 2014). Financial literacy is associated with several dimensions of financial wellbeing: people who understand financial concepts are more likely to invest in the stock market (van Rooij, Lusardi, and Alessie 2011), achieve better portfolio performance (Bianchi 2018), and accumulate more wealth (Lusardi, Michaud, and Mitchell 2017). Identifying gaps in financial literacy can help inform policies aimed at improving financial wellbeing.

South Africa offers a compelling setting to study financial literacy. The country combines a sophisticated financial sector with deep inequalities in income, wealth, and access to finance. Since navigating complex financial products often demands financial knowledge, differences in financial literacy might worsen economic divides.

Researchers often use standardized questions, introduced by Lusardi and Mitchell (2011a), to measure financial literacy within household surveys (Lusardi and Mitchell 2011c; Klapper and Lusardi 2020). Such data from large, nationally representative surveys have been scarce in many developing countries. Our study uses data from Wave 5 of the National Income Dynamics Study (NIDS), South Africa's premier nationally representative household survey, which included five financial literacy questions that were first used in the S&P Global FinLit Survey (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020) and closely resemble the "Big Three," a widely used set of questions covering interest compounding, inflation, and risk diversification (Lusardi and Mitchell 2011a). The NIDS survey allows us to move beyond national averages and examine differences in financial literacy across socioeconomic groups within South Africa, alongside its relationship with economic behavior and outcomes. To our knowledge, South Africa is the only African country to include internationally comparable financial literacy questions in a representative household survey (Anong, Aboagye, and Yoo 2021).

We estimate that 40.57 percent of South Africans are financially literate, close to the 42 percent reported by the S&P Global FinLit Survey (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020). Respondents perform better than the global benchmark on risk diversification and compounding, but less well on inflation. Similar to patterns found in other countries, financial literacy also varies sharply with education, household income, and wealth.

South Africa also provides a useful counterpoint to the substantial gender gaps documented in many countries (Bucher-Koenen et al. 2017). We find a small gender gap, which is close to zero after adjusting for demographic and economic characteristics. Although men and women have similar financial literacy overall, men score higher than their female partners and single women score higher than single men. Looking separately at couples and single adults reveals differences that are not apparent in the overall comparison.

Finally, we examine financial product holdings among adults aged 18 or older. Holders of pensions, life insurance, and credit cards have substantially higher financial literacy than non-holders. After controlling for education, household income, employment status, and other characteristics, however, the estimated differences in product take-up associated with financial literacy are small in absolute terms and generally much smaller than those associated with education, income, and employment. The conditional associations are most consistent for pensions, while those for life insurance and credit cards depend on the literacy definition.

Related literature. Our analysis builds on efforts to measure financial knowledge consistently across populations. Lusardi and Mitchell first introduced a measure of financial literacy in the 2004 wave of the Health and Retirement Study in the United States (Lusardi and Mitchell 2011a). These questions, known as the Big Three, assess understanding of interest, inflation, and risk diversification and have since been adopted in surveys around the world (Lusardi and Mitchell 2011c, 2023).

The S&P Global FinLit Survey extended this approach through a survey conducted simultaneously in over 140 countries in 2014, using five questions to assess numeracy and understanding of compound interest, inflation, and risk diversification (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020). Its estimate that 42 percent of South Africans are financially literate is close to our estimate of 40.57 percent. The published studies compare overall and concept-level knowledge internationally (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020), while companion reports also examine gender differences (Hasler and Lusardi 2017) and focus in on millennials (Lusardi and Oggero 2017). By including the same questions in a large household survey, NIDS allows us to examine how financial literacy varies with education, household income, and wealth; compare men and women within households and couples; and estimate associations with pension, life insurance, and credit product holdings.

Existing South African studies provide complementary evidence using different measures. Nanziri and Leibbrandt (2018) construct a financial literacy index from the 2005–2009 FinScope surveys. The FinScope surveys recorded whether respondents say they have heard of and understand financial terms, as well as their perceived need for financial education. The survey captures reported familiarity rather than performance on standardized knowledge questions. The OECD INFE modules in the South African Social Attitudes Survey (SASAS) include knowledge questions alongside measures of financial attitudes and behavior (Roberts, Struwig, and Gordon 2016; Roberts et al. 2021). These studies document limited financial knowledge, strong differences by education and socio-economic position, and difficulties with saving and financial planning. In the 2016 OECD/INFE international survey, 31 percent of South African adults achieved the minimum target score on financial

knowledge (at least five out of seven), the lowest proportion among the 30 participating countries (Atkinson 2016).

NIDS adds a substantially larger adult sample and the ability to compare financial knowledge within households. The 2020 SASAS round interviewed 2,693 respondents aged 16 or older, selecting one adult at random from each sampled household (Roberts et al. 2021). In contrast, NIDS surveys every resident adult aged 15 or older within the household (Brophy et al. 2018), and our analysis sample includes 23,872 respondents. Linking the financial literacy responses to individual characteristics and household income and wealth allows us to examine demographic patterns in greater detail and compare men and women within the same household.

The within-household comparisons are particularly useful for understanding South Africa's small aggregate gender gap. Women have lower financial literacy than men in most countries, and differences in demographic and economic characteristics do not fully account for these gaps (Fonseca et al. 2012; Bucher-Koenen et al. 2017). One explanation is that household members specialize in financial tasks, giving men and women different incentives to acquire financial knowledge (Hsu 2016). The S&P studies already report little difference between men and women in South Africa (Klapper and Lusardi 2020; Hasler and Lusardi 2017), but do not examine in detail why South Africa diverges from the more common international pattern of large gender gaps. We use NIDS to examine whether the small overall gap masks differences within households and by partnership status. We find that men have higher financial literacy than their female partners, while the gap among single adults favors women.

Finally, we examine how financial knowledge relates to ownership of pension, life insurance, and credit products among adults aged 18 or older. Roberts et al. (2021) examine how education, living standards, and other characteristics relate to financial knowledge and to a score combining product awareness, ownership, and decision-making. We ask whether people with greater financial knowledge are more likely to hold particular products, after accounting for socio-economic characteristics. Examining each product separately allows us to compare the associations across retirement provision, insurance, and borrowing.

2. Background and Data

2.1. Setting

South Africa has a sophisticated financial sector, comparable to developed countries. The array of financial products includes savings accounts, credit cards, overdraft facilities, student loans, mutual funds, mortgages, vehicle financing, pension funds, and offshore accounts. The Johannesburg Stock Exchange (JSE) is the 19th largest in the world by market

capitalization—larger than stock exchanges in Brazil, Indonesia, or Spain.[1]

In South Africa's case, a sophisticated financial sector does not imply economic prosperity. Gross national income per capita is ten times smaller than the United States and South Africa has one of the highest levels of income and wealth inequality in the world. Much of South Africa's economic challenges stem from decades of racial discrimination by the Apartheid government.

Before 1994, the use of financial services was restricted to less than 15% of the population categorized as "white" by the Apartheid government. Informal alternatives, such as rotating saving and credit associations (ROSCAs) or "Stokvels" as they are known in South Africa, filled some of the gaps in access to financial services. Stokvels are helpful for short-term loans and saving but cannot replace other formal financial services such as housing loans and mutual funds. The Apartheid system left a substantial gap in financial access.

As part of the reconstruction and development of post-Apartheid South Africa, a Financial Sector Charter was developed to ensure access to financial services.[2] The Charter mandated the development of a low-cost account, the Mzansi account, and the extension of credit to those who were previously excluded from the formal financial system. The South African government also delivers several conditional cash transfers (called "social grants") directly into recipients' bank accounts. These developments led the number of South Africans using bank accounts to increase from 49 percent in 2003 to 77 percent by 2017.[3]

South Africa's retirement system combines employer pensions, individual retirement savings, and a means-tested public old-age benefit. Public-sector employees are covered by a defined-benefit arrangement, while defined-contribution pensions are common in the private sector. Individuals can also contribute to tax-advantaged retirement savings funds independently of their employer, with restrictions on access to the accumulated savings. The Older Persons Grant provides public support to eligible residents aged 60 or older who meet income and asset limits (South African Government 2026).

Credit is widely available but only high-income earners can access long-term loans at low interest rates (Karley 2003; Okurut 2006). The majority of South Africans access credit through store cards, hire-purchase agreements, and microloans. Individuals without formal employment or collateral often resort to *mashonisas*, a South African term for loan sharks (Mashigo 2012). Policymakers have highlighted that South African households may hold too much debt and have looked to financial education as a remedy (Sibanda and

[1] Using 2023 data from the World Federation of Exchanges Annual Statistics Guide, available at `https://www.world-exchanges.org/our-work/articles/2023-annual-statistics-guide`

[2] See Reconstruction and Development Plan (1994) for more information.

[3] For more information on these statistics see `http://www.finmark.org.za/finscope` and `http://www.banking.org.za`

Sibanda 2017).

South Africa has a sophisticated financial sector, but income, wealth, and access to financial services remain highly unequal. We examine how financial literacy varies across the population and whether people with greater financial knowledge are more likely to hold pensions, life insurance, and credit products.

2.2. NIDS

The National Income Dynamics Study (NIDS) is the first national household panel study in South Africa. The study began in 2008 with a nationally representative sample of over 28,000 individuals in 7,300 households across the country. The core panel was fielded in five waves (2008, 2010/11, 2012, 2014/15, and 2017), and our analysis uses Wave 5, collected in 2017.[4]

NIDS is a face-to-face household panel survey conducted through in-person interviews (Brophy et al. 2018). Wave 5 consists of linked household- and individual-level instruments (a household questionnaire and roster, and a separate adult questionnaire for each resident adult aged 15+). Importantly for interpreting our gender results, the financial literacy module is administered directly to adult respondents in their own interview rather than being answered by a single household informant such as the "most knowledgeable" financial decision-maker or the household head.

Attrition of respondents between waves has been concentrated among high-income respondents (Brophy et al. 2018). Since previous research has shown a strong correlation between income and financial literacy, the attrition of high-income respondents is particularly relevant to measures of financial literacy. Fortunately, the inclusion of a financial literacy measure in the most recent core panel wave (Wave 5, 2017) coincided with a top-up sample that targeted high-income households. The fortunate timing of the top-up sample gives us more confidence in our cross-sectional results.

3. Measurement and international comparisons

3.1. Survey questions

NIDS measures financial literacy using five questions, which were used in the S&P Global FinLit Survey and were based on similar questions used by the Financial Literacy Around the World (FLAT World) studies (Klapper, Lusardi, and van Oudheusden 2016; Lusardi and Oggero 2017). The five questions relate to four categories: numeracy, inflation, compound interest, and risk diversification. Two questions are included in the compound interest

[4] During COVID-19, a separate follow-up survey, NIDS-CRAM, was fielded by phone in five rounds between May 2020 and May 2021 using a subsample of Wave 5 adults; see `https://saldru.uct.ac.za/nids/nids-cram`. As of October 2026, no additional post-2017 core NIDS wave has been publicly released.

category. We show the questions below, highlight correct answers in bold, and provide the frequency of each response in brackets, weighted to represent the South African adult population.

a. Numeracy: Suppose you need to borrow R100. Which is the lower amount to pay back: R105 or R100 plus three percent?
   - R105 (43.14%)
   - **R100 plus 3% (47.78%)**
   - Don't know (8.28%)
   - Refused (0.80%)

b. Inflation: Suppose over the next 10 years the prices of the things you buy double. If your income also doubles, will you be able to buy less than you can buy today, the same as you can buy today, or more than you can buy today?
   - Less (14.99%)
   - **The same (42.70%)**
   - More (32.77%)
   - Don't know (9.10%)
   - Refused (0.45%)

c. Compounding 1: Suppose you put money in the bank for two years and the bank agrees to add 15 percent per year to your account. Will the bank add more money to your account the second year than it did the first year, or will it add the same amount of money both years?
   - **More (56.73%)**
   - The same (31.71%)
   - Don't know (10.85%)
   - Refused (0.70%)

d. Compounding 2: Suppose you had R100 in a savings account and the bank adds 10 percent per year to the account. After five years, if you did not remove any money from the account, would you have...
   - **More than R150 (59.13%)**
   - Exactly R150 (23.81%)
   - Less than R150 (6.38%)
   - Don't know (10.32%)
   - Refused (0.36%)

e. Risk diversification: Suppose you have some money. Is it safer to put your money into one business or investment, or to put your money into multiple businesses or investments?
   - One business or investment (34.44%)
   - **Multiple businesses or investments (54.05%)**

- Don't know (10.81%)
- Refused (0.70%)

We define an individual as financially literate if they provide correct answers in at least three of the four financial literacy categories, which was the approach used in the S&P Global FinLit Survey (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020). Because the interest compounding category contains two questions, individuals are classified as knowing about interest compounding if they answer at least one correctly. According to this measure, we estimate that 40.57 percent of South Africans are financially literate.

3.2. International benchmarks

The S&P Global FinLit Survey provides a direct benchmark because NIDS uses the same five questions (Klapper, Lusardi, and van Oudheusden 2016; Klapper and Lusardi 2020). South Africa's numeracy score of 47.78 percent is close to the global rate of roughly half of adults, while its inflation score of 42.70 percent falls below a similar global benchmark. For compounding, both surveys count respondents as understanding the concept if they answer at least one of the two questions correctly. On this basis, South Africa scores 72.26 percent, compared with about 45 percent worldwide. For risk diversification, 54.05 percent answer correctly, compared with 35 percent worldwide. Thus, South Africa performs comparatively well on compounding and diversification, whereas inflation is its weakest concept.

Comparisons with national surveys using the Big Three require more caution. Although the questions assess similar concepts, NIDS uses different interest and inflation tasks, less technical terminology for diversification, and different response formats. Differences in correct-response rates may therefore reflect question design as well as financial knowledge. Appendix B presents these survey results alongside a question-by-question comparison of the instruments.

South Africa's low inflation score relative to the S&P benchmark is particularly striking given the country's sustained experience of rising prices. The South African Reserve Bank introduced inflation targeting in February 2000, with a 3–6 percent target range that remained in place during the 2017 survey; in November 2025 the target was revised to 3 percent with a ±1 percentage point band (South African Reserve Bank 2025; Government of South Africa 2025). Consumer prices rose by roughly 65 percent between 2010 and 2020, an average annual inflation rate of about 5.2 percent (South African Reserve Bank 2025). Figure 1 shows the persistence of inflation and episodes above the historical target range. Exposure to rising prices does not necessarily imply understanding of how proportional changes in income and prices affect purchasing power. The 2020 SASAS baseline survey similarly identifies inflation and compound interest among its lowest-scoring knowledge

items, although it uses different questions (Roberts et al. 2021).

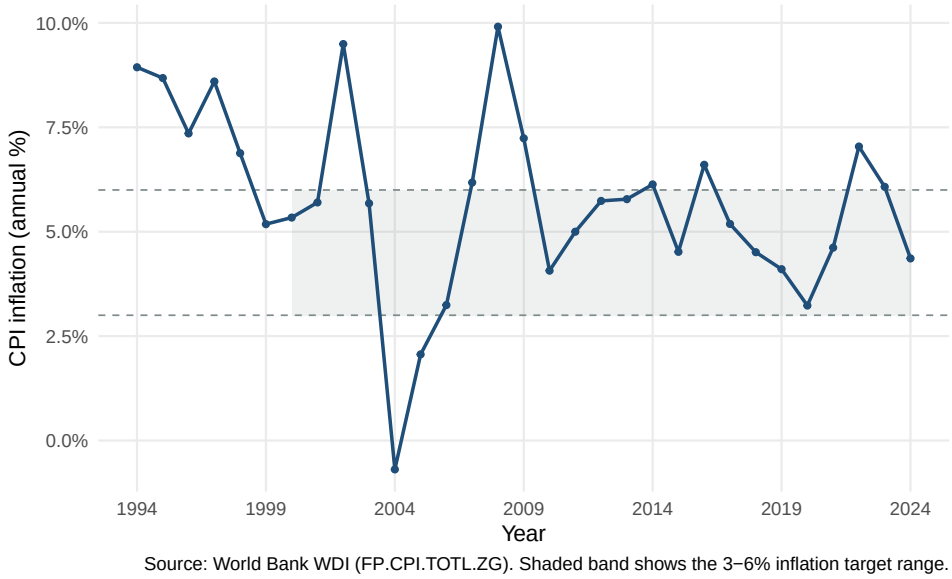


FIGURE 1. Consumer price inflation in South Africa (annual %). Source: World Bank World Development Indicators, indicator FP.CPI.TOTL.ZG. Shaded band denotes the historical 3–6 percent inflation target range introduced in 2000.

4. Differences by demographics

This section examines how financial literacy varies across demographic and socioeconomic groups in South Africa. Table 1 reports differences by gender, age, education, Apartheid-era racial classification, household income and wealth, and employment category. It shows correct responses and "don't know" or refusal rates for each question, alongside the share classified as financially literate.

Gender. Men and women have similar overall financial literacy, with a male advantage of 1.2 percentage points. This small gap contrasts with the substantial gender differences documented internationally. Using the S&P Global FinLit Survey, Hasler and Lusardi (2017) find that women have lower financial literacy than men in most countries, with gaps present across both advanced and emerging economies. Worldwide, 35 percent of men are financially literate compared with 30 percent of women, while the gap across the G7 economies is eight percentage points. The report identifies South Africa as one of the countries with similar literacy rates for men and women, consistent with our findings. Men have slightly higher correct-response rates on each question in NIDS, while women are more likely to answer "don't know" or refuse. In the next subsection, we examine within-household and within-couple gender differences in greater detail.

TABLE 1. The Distribution of Financial Literacy by Demographics

	Numeracy		Inflation		Compounding 1		Compounding 2		Risk		Overall
Category	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	≥ 3
Gender											
Male	48.3	8.0	43.0	8.9	58.8	9.9	59.6	9.9	56.0	9.8	41.2
Female	47.2	10.0	42.4	10.1	55.0	13.0	58.8	11.4	52.3	12.9	40.0
Age categories											
15–34	48.9	6.2	43.7	6.5	57.7	8.1	60.5	7.0	57.2	8.8	42.3
35–54	47.8	9.1	42.6	9.8	57.3	11.6	60.1	10.9	54.6	10.5	40.3
55–64	44.1	16.2	39.9	16.9	52.5	20.4	52.8	20.7	44.7	20.2	36.5
65+	44.0	20.4	39.2	21.2	52.3	24.6	53.1	23.2	41.2	24.7	34.7
Education											
No schooling	36.6	28.9	30.1	31.1	36.5	33.3	39.7	33.1	27.8	33.9	23.4
Primary	38.0	18.7	35.5	21.7	48.1	24.6	47.0	23.8	36.9	22.8	26.5
High school	44.8	8.4	41.2	9.1	56.8	11.3	59.8	10.2	51.2	11.9	37.9
Technical	52.8	6.0	45.1	5.1	59.1	6.4	59.8	6.3	61.9	6.1	45.0
Matric	53.6	4.6	48.5	4.3	60.6	5.7	65.2	5.1	61.6	5.7	48.3
Degree or diploma	59.2	3.3	49.1	2.5	66.0	4.5	68.2	2.7	73.7	3.8	56.1
Apartheid-era racial categories											
African	46.1	9.6	41.1	10.4	55.4	12.1	57.1	11.4	52.1	12.2	38.0
Coloured	45.0	8.4	43.0	8.7	57.2	12.4	60.0	10.6	54.1	12.8	40.5
Asian/Indian	58.5	2.6	51.1	1.5	67.7	5.0	70.6	3.1	52.7	6.6	45.8
White	66.3	6.0	57.9	3.3	67.9	6.5	77.7	4.5	76.3	4.1	67.7

Note: Sample includes Wave 5 respondents aged 15+ with valid survey weights and sampling strata/cluster identifiers (N = 25,078). Item-level percentages are computed using non-missing responses for each question (denominator N = 23,872); the overall literacy measure uses N = 23,872. DK/ref. combines don't know and refusal responses. All estimates are weighted and account for the complex survey design.

Table 1 continued: The Distribution of Financial Literacy by Demographics

	Numeracy		Inflation		Compounding 1		Compounding 2		Risk		Overall
Category	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	≥ 3
Income											
R0-	44.0	10.8	39.4	11.4	54.4	13.5	55.9	12.5	47.5	14.3	34.1
R5,000-	48.3	9.2	43.0	10.1	55.5	11.9	58.5	11.3	53.3	11.6	40.2
R15,000-	51.3	7.7	45.8	6.6	60.2	9.2	60.3	8.5	61.1	7.8	46.9
R30,000-	58.1	2.9	52.0	2.8	68.1	4.3	75.3	2.7	77.9	3.5	63.3
Wealth											
Bottom 90%	46.7	9.6	41.5	10.3	55.2	12.3	57.4	11.5	51.2	12.5	37.9
Top 10%	56.1	5.4	52.0	4.0	68.1	5.9	72.5	4.2	75.4	4.2	61.0
Employment											
Not employed	45.5	11.2	40.2	12.1	54.7	14.2	57.3	13.3	49.7	14.6	37.3
Other sectors	50.3	6.5	46.2	6.6	58.4	8.8	61.2	7.4	58.1	7.7	43.6
Finance/business services	53.1	3.5	49.7	3.5	62.5	4.6	64.4	3.5	69.8	5.9	52.8

Note: Sample includes Wave 5 respondents aged 15+ with valid survey weights and sampling strata/cluster identifiers (N = 25,078). Item-level percentages are computed using non-missing responses for each question (denominator N = 23,872); the overall literacy measure uses N = 23,872. DK/ref. combines don't know and refusal responses. All estimates are weighted and account for the complex survey design.

Age. Financial literacy is lower in successively older age groups in Table 1, consistent with patterns in many emerging economies (Klapper and Lusardi 2020; Lusardi and Oggero 2017). Many developed countries instead display a hump-shaped profile, with lower knowledge among younger and older respondents than among middle-aged adults.

Education. Financial literacy increases sharply with education, income, and wealth, consistent with international evidence (Lusardi and Mitchell 2014; Lusardi, Michaud, and Mitchell 2017; Klapper and Lusardi 2020). In the education categories, we find sharp increases in financial literacy if the respondent completed matric and then again if the respondent obtained a degree or diploma. Matric is a standardized set of exams that students take after completing seven years of primary school and five years of high school. Entrance to university is usually conditional on passing the matric exams. The differences in financial literacy by education level are expected. Financial literacy may be taught during school subjects such as accounting or economics, and skills in mathematics are necessary for many financial calculations. This strong relationship between education and financial literacy is also a central finding of the 2020 SASAS financial literacy baseline survey (Roberts et al. 2021).

Apartheid-era racial classifications. Since respondents who were categorized as "white" by the Apartheid government were privileged with greater access to education, employment, and investment opportunities, we observe large differences in financial literacy by Apartheid-era racial classifications. The United States, which has a similar history of racial discrimination, also shows large differences in financial literacy by racial categories (Lusardi and Mitchell 2011b).

Income and wealth. We find large differences in financial literacy by household income and wealth. For income, 63.3 percent of respondents living in households with income of at least R30 000 per month are financially literate in comparison to 34.1 percent in households with less than R5 000 income per month. For wealth, 61.0 percent of respondents in the upper wealth group are financially literate in comparison to 37.9 percent below the cutoff.[5] Since financial literacy enables individuals to find investments with higher returns (Clark, Lusardi, and Mitchell 2017; Bianchi 2018), individuals with high income and wealth may see greater benefits to acquiring financial literacy (Jappelli and Padula 2013; Lusardi, Michaud, and Mitchell 2017). The greater benefit stems from a greater need to smooth consumption. A household with a high income during working years needs to save more to maintain the same income during retirement. The more a household needs to save, the more benefit the household receives from higher investment returns.

[5]The wealth cutoff is the unweighted 90th percentile of household net wealth attached to adult records before sample exclusions, not a population decile of distinct households; see Appendix A.3.

Employment. Respondents working in financial intermediation, insurance, real estate, and business services have higher financial literacy than those in other sectors. This broad industry category may include jobs that require financial knowledge. The association could reflect learning at work or selection into these occupations; it does not establish that employment in the category increases financial literacy.

4.1. Gender gaps within households and couples

Research on gender and financial literacy usually seeks to explain why women score below men, a pattern observed in many countries even after accounting for demographic and economic characteristics (Fonseca et al. 2012; Bucher-Koenen et al. 2017). South Africa offers a useful counterpoint: the S&P Global FinLit Survey reports little difference between men and women (Klapper and Lusardi 2020; Hasler and Lusardi 2017). We ask whether this small aggregate gap also describes men and women living in the same household or within couples. NIDS is particularly useful for this question because it interviews each adult separately and identifies partners within households.

We begin with an aggregate comparison. The outcome equals one for respondents who answer correctly in at least three of the four financial literacy categories and zero otherwise. To keep the samples consistent for unadjusted and adjusted comparisons, we use the 21,533 respondents with observed literacy, gender, and all covariates used below. Men are 1.24 percentage points more likely to be financially literate, a difference that is not statistically distinguishable from zero ($p = 0.271$).

This small difference could reflect the composition of the male and female populations. We therefore estimate linear probability models of the form

$$L_i = \alpha + \beta \text{Male}_i + X_i'\gamma + \varepsilon_i,$$

where Male_i indicates a male respondent and X_i contains age in years, an indicator for being married, and categorical controls for education, employment sector, household income, household wealth, and Apartheid-era racial classification. We scale β by 100, so positive estimates indicate higher literacy among men in percentage points. After controlling for demographic charateristics, the gap falls to 0.06 points, with a 95% confidence interval of [-2.06, 2.18]. Panel A of Table 2 reports these estimates. All models use survey weights, with standard errors accounting for sampling strata and primary sampling units; the table also reports two-sided p-values and confidence intervals.

We next compare men and women within households, using household fixed effects with and without individual-level controls. Panel B includes the 4,418 households with at least one man and one woman in the complete-covariate sample, comprising 13,763 respondents. Without individual controls, the male advantage is 2.97 percentage points

TABLE 2. Gender gaps in financial literacy

Specification	Estimate	Std. error	*p*-value	95% CI	Observations
A. All respondents					
1. Unadjusted	1.24	1.13	0.271	[-0.97, 3.46]	21,533
2. With controls	0.06	1.08	0.956	[-2.06, 2.18]	21,533
B. Within households					
3. Household fixed effects	2.97	1.15	0.010	[0.71, 5.24]	13,763
4. With individual controls	2.05	1.17	0.081	[-0.25, 4.35]	13,763
C. Within couples					
5. Couple fixed effects	6.11	1.88	0.001	[2.41, 9.80]	4,352
6. With individual controls	5.81	2.43	0.017	[1.04, 10.58]	4,352
D. Single respondents					
7. Unadjusted	-1.04	1.45	0.474	[-3.87, 1.80]	12,661
8. With controls	-3.00	1.43	0.036	[-5.80, -0.19]	12,661

Note: Each row reports a separate linear probability model. The outcome indicates correct answers in at least three of four financial literacy categories; estimates, standard errors, and confidence intervals are in percentage points. Positive estimates indicate higher literacy among men. All rows start from respondents with non-missing literacy, gender, and all controls. Controls in Panels A and D are age, an indicator for being married, education, employment sector, household income and wealth categories, and Apartheid-era racial category; the married indicator is constant among singles. Panel B includes only households with at least one man and one woman in this sample and uses household fixed effects in both rows. Panel C uses couple fixed effects in both rows for reciprocally linked male–female partners in the same household, married or unmarried, with both partners in the sample. Individual controls in Panels B and C are age, marital status, education, employment sector, and racial category; controls without within-group variation are absorbed by the fixed effects, including household income and wealth. Singles are widowed, divorced/separated, or never married and report no current partner. All models use survey weights, with standard errors accounting for sampling strata and primary sampling units; two-sided *p*-values and 95% confidence intervals use the survey-design degrees of freedom.

(p = 0.010; 95% CI [0.71, 5.24]). Adding age, marital status, education, employment sector, and Apartheid-era racial category reduces the estimate to 2.05 points (p = 0.081; 95% CI [-0.25, 4.35]). Household income and wealth and controls without within-household variation are absorbed by the fixed effects. The adjusted gap remains positive but is not statistically distinguishable from zero at the 5% level.[6]

Households may contain several generations or adults who are not partners. To focus more closely on the setting in which financial tasks might be shared, Panel C compares partners directly using couple fixed effects. We identify 2,176 male–female pairs who name each other as their spouse or partner and live in the same household. Both married and unmarried partners are included. Without individual controls, men are 6.11 percentage points more likely to be financially literate than their female partners (p = 0.001; 95% CI [2.41, 9.80]). Adding the same individual controls as in Panel B gives a gap of 5.81 points (p = 0.017; 95% CI [1.04, 10.58]), using the same partners. Controls without variation between partners are absorbed by the couple fixed effects. The male advantage therefore persists after accounting for these observed differences between partners. This is consistent with a role for financial specialization within partnerships, as discussed by Hsu (2016), but could also reflect partner selection or unobserved individual characteristics.

Appendix D examines the household and couple gaps separately by the gender of the main decision-maker for large, unusual purchases.

The within-couple result raises a further question: do men also have higher literacy among adults without a partner? Panel D considers respondents who report no current spouse or partner. Among these 12,661 respondents, the unadjusted male–female gap is -1.04 points. With the same controls as in Panel A, except for the constant married indicator, the gap is -3.00 points (p = 0.036; 95% CI [-5.80, -0.19]). Single women therefore have higher financial literacy than single men with similar observed characteristics.

The small aggregate gender gap in South Africa coexists with a male advantage within couples and, after adjustment for observed characteristics, a female advantage among single respondents. These results show that the aggregate comparison gives an incomplete picture of gender differences in financial literacy. They do not establish that partnership produces these differences. People who form couples may differ from those who remain single, and controlling for observed differences between partners does not account for unobserved characteristics or prior financial knowledge. The observed patterns could therefore reflect differences that existed before partnership as well as experiences within relationships; these comparisons cannot distinguish between those explanations.

[6] Appendix Table A6 repeats the aggregate and within-household comparisons without individual controls in the fixed-effects models for respondents aged 25 to under 60 and for non-retirees, defined using reported retirement income. The aggregate estimates remain small, while the within-household estimates favor men.

TABLE 3. Financial literacy by financial product holdings

	Numeracy		Inflation		Compounding 1		Compounding 2		Risk		Overall
Category	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	Correct	DK/ref.	≥ 3
Pension											
Yes	61.62	2.17	50.28	2.75	64.80	4.19	70.02	2.73	74.69	5.73	60.11
No	47.04	9.44	42.13	9.84	56.45	11.71	58.55	11.08	52.57	11.65	39.03
Life insurance											
Yes	56.33	4.78	47.97	4.21	64.52	5.44	66.34	4.16	71.48	4.91	54.57
No	46.94	9.50	41.97	10.06	55.96	12.00	58.39	11.39	51.65	12.17	38.54
Bank loan											
Yes	55.19	3.66	40.94	4.26	63.84	5.58	61.05	4.92	63.52	5.38	46.93
No	47.46	9.42	42.99	9.81	56.39	11.70	59.31	11.00	53.36	11.81	40.06
Credit card											
Yes	59.90	2.73	51.50	2.39	69.97	2.81	68.20	2.56	74.20	3.28	56.42
No	47.50	9.23	42.25	9.69	56.33	11.61	58.94	10.88	53.14	11.66	39.77
Store card											
Yes	50.70	5.85	44.45	5.18	58.41	6.60	61.85	6.33	61.61	6.27	45.18
No	47.66	9.54	42.41	10.20	56.83	12.13	58.94	11.33	52.70	12.30	39.72

Note: All main financial-product tables use the same sample (N = 21,272): adults aged 18 or older with explicit yes/no responses for pensions, life insurance, personal bank loans, credit cards, and store cards, and non-missing literacy measures and controls. All other outcome codes are treated as missing. DK/ref. combines don't know and refusal responses. Item-level percentages use non-missing responses and survey weights.

5. Take-up of financial products

Financial products allow households to save, manage risk, and obtain credit, and financial knowledge may be associated with their use (Lusardi and Mitchell 2014). We examine private pensions, life insurance, personal bank loans, credit cards, and store cards. The central pattern is that large differences in financial literacy between holders and non-holders of some products coexist with small conditional differences in take-up. Once we account for education, household income, employment status, and other characteristics, the estimated marginal differences associated with financial literacy are modest in absolute terms.

All descriptive and regression tables in this section use a common sample of 21,272 respondents aged 18 or older. We require explicit yes/no responses for all five outcomes, non-missing values for both literacy measures and every regression control, and valid survey weights and sampling identifiers. Unknown, refused, not-applicable, and missing outcome responses are excluded. Using a common sample supports comparisons across products, although exclusions for missing responses or covariates may limit representativeness. Appendix Tables A8 and A9 repeat the regressions for adults aged 25–65 inclusive, using the same controls.

The outcomes record reported holdings, with an explicit "yes" coded as one and an explicit "no" as zero. Pension holdings include pensions or retirement annuities, which provide income in retirement; life insurance protects dependants against the financial consequences of a policyholder's death. The credit outcomes indicate whether respondents have each product. Having a credit or store card need not imply an outstanding balance, so these outcomes do not measure debt balances, repayment behavior, or the quality of debt management. Within the common sample, 8.11 percent report a pension, 13.70 percent life insurance, 9.87 percent a personal bank loan, 5.82 percent a credit card, and 18.66 percent a store card.

Table 3 compares financial literacy between holders and non-holders of all five products. Using correct answers in at least three of the four categories, 60.11 percent of pension holders are financially literate, compared with 39.03 percent of non-holders. The corresponding shares are 54.57 and 38.54 percent for life insurance, and 56.42 and 39.77 percent for credit cards. These are substantial descriptive differences. Holders of these three products also answer every literacy question correctly more often than non-holders, with the largest gaps in risk diversification. The overall literacy gaps for bank loans and store cards are smaller, and bank-loan holders perform less well on inflation than non-holders. Holders of all five products are less likely to answer "don't know" or refuse.

Table 4 asks whether financial literacy is associated with product holdings conditional on socio-demographic characteristics. Each product has two survey-weighted logit specifications, using correct answers in at least three categories and in all four categories,

respectively. All ten specifications control for age and age squared, gender, marital status, a degree or diploma, Apartheid-era racial classification, household income, household wealth, employment status, and an indicator for an own child under 18 living in the household. Employment status distinguishes employed, unemployed, and economically inactive respondents; the child indicator uses the roster's mother and father links. We report average marginal effects in percentage points, calculated as survey-weighted average changes in predicted probabilities when the literacy indicator changes from zero to one. Standard errors use the delta method with the survey-adjusted coefficient covariance, conditional on observed covariates.

Under the three-category definition, financial literacy is associated with 2.07 percentage points higher pension take-up and 2.33 percentage points higher life-insurance take-up. Both estimates are statistically distinguishable from zero at the 5% level. The corresponding estimates for bank loans, credit cards, and store cards are 0.69, 0.44, and 1.43 percentage points, respectively; none is statistically distinguishable from zero at that level. Under the stricter four-category definition, the pension association remains positive and statistically distinguishable from zero, while the life-insurance estimate is smaller and imprecise. The credit-card estimate rises to 2.25 percentage points and is statistically distinguishable from zero, while the bank-loan and store-card estimates remain imprecise.

Across the ten specifications, the estimated literacy differences in take-up are less than 2.5 percentage points. These are generally much smaller than the differences associated with education, household income, and employment. For example, a degree or diploma is associated with 6.00 percentage points higher pension take-up in the three-category specification, compared with 2.07 points for financial literacy. Employment is associated with approximately 9 percentage points higher pension take-up and 12 points higher life-insurance take-up relative to economic inactivity. Respondents with monthly household income of R15 000–R30 000 have approximately 17 and 18 percentage points higher take-up of these products, respectively, than those with income below R5 000. The literacy associations are therefore small in absolute terms, although differences of around two percentage points can still be meaningful relative to low product prevalence.

This pattern is consistent with financial knowledge and product holdings sharing economic and social determinants. Education, income, and employment may influence both opportunities to acquire financial knowledge and access to products. Employment is particularly relevant for pensions and life insurance, which can be provided through employee benefit arrangements, especially at large companies. Such arrangements may also expose employees to financial information and advice, so holdings need not reflect an independent purchase decision. The models control for current employment status but do not capture employer size, benefit provision, or employment history. Access to

TABLE 4. Financial literacy and product holdings: average marginal effects from logit models

Dependent variable	Pension		Life insurance		Bank loan		Credit card		Store card	
Mean of dependent variable	8.11% (0.53%)		13.70% (0.73%)		9.87% (0.48%)		5.82% (0.42%)		18.66% (0.66%)	
Specification	1	2	3	4	5	6	7	8	9	10
Financial literacy measure										
Correct in at least three categories	2.07		2.33		0.69		0.44		1.43	
	(0.67)		(0.78)		(0.78)		(0.60)		(1.00)	
Correct in all four categories		1.66		0.58		1.00		2.25		2.08
		(0.81)		(1.10)		(1.17)		(0.86)		(1.37)
Socio-demographic controls										
Age (quadratic specification)	0.17	0.17	0.29	0.28	0.21	0.21	0.10	0.11	0.15	0.14
	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.03)	(0.02)	(0.02)	(0.03)	(0.03)
Female	-1.73	-1.77	-0.92	-0.96	-3.46	-3.46	-1.05	-1.05	9.04	9.04
	(0.55)	(0.55)	(0.67)	(0.67)	(0.64)	(0.64)	(0.53)	(0.53)	(0.78)	(0.79)
Married	0.81	0.80	1.92	1.92	1.71	1.72	0.45	0.42	0.96	0.97
	(0.64)	(0.66)	(1.00)	(0.99)	(0.89)	(0.90)	(0.70)	(0.69)	(1.12)	(1.12)
Degree or diploma	6.00	5.96	10.61	10.70	4.40	4.36	6.18	5.97	5.99	5.93
	(1.08)	(1.10)	(1.53)	(1.54)	(1.19)	(1.20)	(1.02)	(1.00)	(1.95)	(1.97)
Categorized as "white" under Apartheid	0.88	0.89	1.02	1.34	-4.00	-4.06	1.70	1.25	-10.07	-10.18
	(1.04)	(1.02)	(1.49)	(1.52)	(1.32)	(1.30)	(0.90)	(0.85)	(1.86)	(1.82)
Unemployed	0.02	0.05	2.01	2.03	2.11	2.11	0.84	0.88	4.96	4.97
	(0.72)	(0.73)	(1.81)	(1.80)	(0.92)	(0.92)	(1.24)	(1.24)	(1.24)	(1.23)
Employed	9.38	9.44	11.97	12.05	11.87	11.88	4.48	4.51	15.85	15.88
	(0.71)	(0.71)	(0.82)	(0.82)	(0.77)	(0.76)	(0.54)	(0.54)	(0.99)	(0.99)
Own child under 18 in household	-0.54	-0.55	-0.22	-0.22	-0.57	-0.58	-0.04	-0.06	0.03	0.03
	(0.61)	(0.62)	(0.88)	(0.88)	(0.90)	(0.90)	(0.71)	(0.71)	(1.02)	(1.01)
Household income (monthly)										
R5 000 - R15 000	7.48	7.61	8.23	8.36	6.02	6.05	4.26	4.24	6.09	6.13
	(1.37)	(1.38)	(1.01)	(1.01)	(1.07)	(1.07)	(1.39)	(1.38)	(1.19)	(1.19)
R15 000 - R30 000	16.54	16.80	18.13	18.42	12.85	12.87	11.14	11.00	13.39	13.39
	(2.69)	(2.71)	(2.01)	(2.01)	(1.92)	(1.94)	(2.33)	(2.32)	(2.11)	(2.13)
R30 000 +	19.98	20.39	26.31	26.74	9.32	9.39	16.77	16.79	9.42	9.49
	(3.26)	(3.31)	(3.47)	(3.58)	(2.83)	(2.83)	(3.88)	(3.85)	(3.43)	(3.41)
Household wealth										
Top 10%	4.59	4.88	3.56	3.87	-1.54	-1.48	1.59	1.56	0.62	0.73
	(1.14)	(1.16)	(1.27)	(1.28)	(1.14)	(1.15)	(0.86)	(0.86)	(1.83)	(1.83)
Age squared included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	21,272	21,272	21,272	21,272	21,272	21,272	21,272	21,272	21,272	21,272

Note: Common sample for all main financial-product tables: adults aged 18 or older; explicit yes/no responses for all five products and non-missing literacy measures and controls are required. Reference categories: not economically active, household income below R5 000 per month, and bottom 90% of household wealth. Unemployed combines discouraged and strict unemployment. The child indicator identifies an own resident child under 18 through roster parent links. The age row reports the derivative of the full quadratic specification. Entries are survey-weighted logit average marginal effects in percentage points. Parentheses show delta-method standard errors using survey-adjusted coefficient covariance, conditional on observed covariates. Estimates describe conditional associations.

credit may likewise depend on creditworthiness and lender requirements beyond the observed controls.

The large descriptive literacy gaps thus coexist with modest conditional associations with take-up. These cross-sectional estimates do not establish that improving financial literacy would cause households to acquire products: experience with contributions, benefits, borrowing, or advice may itself build financial knowledge, and unobserved characteristics may influence both knowledge and holdings. Nor do holdings establish whether products suit households' needs or improve their well-being. The results suggest that the descriptive gaps should be interpreted alongside the much larger conditional differences associated with economic circumstances, rather than as evidence that financial knowledge alone drives take-up.

6. Conclusion

Using internationally comparable questions included in the NIDS household survey conducted in 2017, we estimate that 40.57 percent of South Africans are financially literate. As in other countries, financial knowledge differs sharply by education, household income, and wealth. South Africa performs comparatively well on compounding and risk diversification relative to the global benchmark, while understanding of inflation is weaker.

South Africa's small aggregate gender gap gives an incomplete picture of differences between men and women. Men have higher financial literacy than their female partners, whereas single women are more likely to be financially literate than single men after adjustment for observed characteristics. These comparisons are possible because NIDS interviews each adult household member separately, unlike many financial literacy surveys that select only one respondent per household (Klapper, Lusardi, and van Oudheusden 2016).

Holders of several financial products have substantially higher financial literacy than non-holders, but the conditional differences in take-up associated with literacy are small in absolute terms after accounting for education, household income, employment status, and other characteristics. The literacy associations are generally much smaller than those associated with these economic circumstances. They do not establish that financial knowledge causes product take-up. Access to financial products and experience using them may also create opportunities to acquire knowledge, including through employment and advice.

These findings are consistent with financial literacy being a form of human capital that people acquire in response to different incentives and opportunities (Lusardi, Michaud, and Mitchell 2017). Differences in knowledge may reflect different returns to learning rather than a market failure, so they do not on their own establish a case for subsidizing financial education. The case for intervention depends on identifying unmet demand for useful financial knowledge or advice and barriers to acquiring it. Longitudinal data and credible sources of exogenous variation, such as randomized financial education interventions or policy changes, would help distinguish the causes of the observed patterns

and assess whether improving financial literacy leads to better financial outcomes in South Africa.

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Online Appendix

The following appendix is intended for online publication only.

Appendix A. Data, variable definitions, and analysis samples

A.1. Source files, links, and population

We use the anonymized NIDS Wave 5 (2017) files, version 1.0.0: `Adult`, `indderived`, `hhderived`, `Link_File`, and `HouseholdRoster`. Each filename ends in `_W5_Anon_V1.0.0.dta`. The adult file supplies financial knowledge responses, product holdings, decision-maker nominations, partner links, and retirement-income indicators. The individual derived file supplies demographic characteristics, employment status, wages, and the summary literacy measures. The household derived file supplies income, net wealth, weights, and strata. The link file supplies primary sampling units (PSUs), and the roster identifies household heads. We join individual records on `pid` and `w5_hhid`, and household characteristics on `w5_hhid`. The analysis checks that these joins preserve one record per person. Identifiers define links and fixed effects and are not numerical covariates.

NIDS began with a stratified, clustered sample of private households and followed original members and their household connections across waves (Brophy et al. 2018). The Wave 5 sample combines this panel with a top-up drawn from urban areas with relatively high proportions of white or Indian residents, intended to improve coverage of wealthier households across racial groups (Branson 2019). Sample origin is recorded in `w5_a_sample`: 1 denotes the original sample and 2 the top-up. The top-up is not a separate nationally representative sample. The weighted cross-section targets the population in private households covered by the NIDS sampling and tracking rules, rather than residents of institutions.

The adult questionnaire is intended for residents aged 15 or older and is answered separately by each adult. We require a positive `w5_wgt`, observed PSU and stratum identifiers, and an observed best age of at least 15. Of 30,110 adult-file records, 5,015 lack valid design information. We exclude a further 17 records with unknown-age codes, leaving 25,078 eligible adults. The summary literacy measure is missing for 1,206, leaving 23,872 observations for the overall rate. No children are included. Table A1 distinguishes individual, household, and couple counts and reports the successive restrictions for the product sample. Other rows identify overlapping analysis domains, not successive exclusions.

TABLE A1. Sample construction and analysis domains

Sample	Individuals	Households	Pairs
Adult-file records before exclusions	30,110	13,464	–
Valid positive weight, stratum and PSU	25,095	10,834	–
Observed age 15+ (descriptive base)	25,078	10,833	–
Observed summary literacy	23,872	10,628	–
Original sample: descriptive base	23,153	9,825	–
Top-up sample: descriptive base	1,925	1,008	–
Complete-covariate gender sample	21,533	10,012	–
Mixed-gender households	13,763	4,418	–
Households: male purchase decision-maker	4,109	1,383	–
Households: female purchase decision-maker	8,471	2,580	–
Reciprocally linked couples	4,352	2,138	2,176
Couples: female partner decides	1,498	749	749
Couples: male partner decides	2,014	1,007	1,007
Single respondents	12,661	6,931	–
Product sample: ages 18+	22,730	10,821	–
Then five explicit yes/no product responses	21,326	10,555	–
Then literacy and controls (common product sample)	21,272	10,545	–
Product robustness: ages 25–65 inclusive	14,613	9,081	–
Household heads: literacy and gender	10,023	10,023	–
Household heads: complete covariates	8,769	8,769	–
Daily expenditure decision-makers: literacy and gender	9,565	9,565	–
Daily expenditure decision-makers: complete covariates	8,411	8,411	–
Gender robustness: ages 25–59	11,776	7,825	–
Gender robustness: ages 25–59, mixed households	5,223	2,211	–
Gender robustness: non-retirees	18,548	9,315	–
Gender robustness: non-retirees, mixed households	10,923	3,641	–
Inflation models: age and education/employment	21,550	10,019	–
Inflation model: additionally observed income	21,550	10,019	–

Note: Counts are unweighted. Households and pairs are distinct identifiers, not additional observations. The first three rows and the three main product-sample rows are sequential restrictions. The product robustness sample further restricts the common product sample to ages 25–65 inclusive. Other rows are overlapping analysis domains. Counts for literacy and covariates exclude their missing values; item-specific denominators appear in Table A2. Both partners must be eligible for a couple to enter.

A.2. Weights, non-response, and survey inference

All estimates use `w5_wgt`, the calibrated cross-sectional weight including the top-up, supplied in `hhderived`. This household-level weight is also intended for individual analysis and is constant among members of a household. It combines inverse selection probabilities, household non-response adjustments, an adjustment for overlap between the original

and top-up sampling frames, and calibration to 2017 Statistics South Africa population totals by province and age–sex–race cells (Brophy et al. 2018; Branson and Wittenberg 2019). Top-up household non-response adjustments use residential-area types because response within some sampled areas was very low.

The cross-sectional weight is distinct from the individual panel weight `w5_pweight`, which explicitly uses estimated probabilities of reinterview to adjust for attrition. Cross-sectional calibration can reduce demographic imbalance associated with attrition but does not directly reweight respondents by their individual income-related attrition probability. The top-up achieved interviews in only about 12 percent of valid sampled households; within participating households, about 73 percent of listed individuals completed interviews, with no separate adjustment for individual non-response (Branson and Wittenberg 2019, Section 3.3). Consequently, neither the top-up nor calibration eliminates possible selection within calibration cells, particularly by income or wealth. Complete-case exclusions create further potential selection.

The R survey design uses `cluster` from the link file as the PSU, `w5_dc2001` as the district-council stratum, and `w5_wgt` as the sampling weight, with PSU identifiers nested in strata. Taylor-linearized standard errors allow dependence within sampling clusters, including co-resident adults. We analyze subsamples as domains of this design. Strata containing a single observed PSU use the `survey` package's `adjust` option. Household and couple fixed effects are absorbed using survey-weighted within-group means; inference retains the PSU/stratum design, with two-sided tests and confidence intervals based on design degrees of freedom. Fixed effects account for shared intercepts, while the survey design governs variance estimation. Logit marginal-effect standard errors use the delta method applied to the survey-adjusted coefficient covariance, conditional on observed covariates.

A.3. Variable definitions and coding

Variable names below retain their original file prefixes. The code removes `a_` from adult variable names after import. Except where stated otherwise, negative categorical codes and absent observations are missing. We do not impute missing values in the analysis; supplied derived variables may already incorporate NIDS imputations or reconciliation across instruments. Rand values are nominal survey-period amounts.

Financial knowledge.. The five adult items are `w5_a_flint`, `flval`, `flcomp1`, `flcomp2`, and `flrisk`. They provide numeracy, inflation, two compounding questions, and diversification, respectively; the latter four share the `w5_a_` prefix. Correct codes are 2, 2, 1, 1, and 2. Each item-correct indicator equals one for a correct response and zero for another observed answer, including "don't know" (−9) and refusal (−8); code −3 and ab-

sent responses remain missing. The tables' DK/refusal indicator combines codes −9 and −8. The response distributions in the main text report these two responses separately. Compounding knowledge equals one if either compounding answer is correct, zero if both are observed and incorrect, and is otherwise missing.

Overall literacy (`overall` and `finlit3`) uses the supplied summary `w5_flyn`: code 1 is literate and code 2 is not. NIDS defines literacy as correct answers in at least three of four concepts, counting either compounding answer as sufficient. The stricter indicator `finlit4` equals one when the supplied `w5_flscore` is 4 and zero for scores 0–3. We preserve missing summary codes rather than reconstructing these thresholds from partially observed items. Item-specific statistics therefore use item-specific denominators, whereas threshold statistics use the supplied summaries. In this sample all five item denominators equal 23,872.

Age, gender, and partnership.. Age is `w5_best_age_yrs`, in years; the quadratic inflation model and all product regressions also include its square. The product tables report the total age marginal effect from the quadratic specification. Age categories are 15–34, 35–54, 55–64, and 65 or older, with the first as the regression reference. Gender uses `w5_best_gen`: 1 is male and 2 female. The male indicator is one for men; the female indicator used in the product models is its complement. Other codes are missing.

Marital status uses `w5_best_marstt`: 1 married, 2 living with a partner, 3 widowed, 4 divorced/separated, and 5 never married. The married indicator equals one only for code 1, and zero for codes 2–5. Single respondents must have code 3, 4, or 5 and `w5_a_parhpid` equal to 0 (no partner) or 44 (partner deceased); unknown links, cohabitation, and partners living elsewhere are excluded from this subgroup. Couples require reciprocal positive partner PIDs within the same household, opposite recorded genders, and both members in the complete-covariate sample. A pair identifier combines the household ID with the smaller and larger partner PIDs. Married and unmarried pairs are included; a household may contain more than one pair.

Education and racial classification.. Education comes from `w5_best_edu`. The categories are no schooling (25), primary (1–7), incomplete high school (8–11), technical/other qualifications (14–18, 24, 27–32), matric (12), and degree/diploma (19–23). Other codes, including grade R/0 and qualifications outside these groups, are not assigned to a category. No schooling is the regression reference. The product models' degree/diploma indicator (`university`) equals one for codes 19–23 and zero for the other five constructed categories; it is not a separate measure of the institution attended. Racial classification uses `w5_best_race`: African (1, regression reference), Coloured (2), Asian/Indian (3), and white (4). The product models' white indicator compares code 4 with codes 1–3. These are

survey categories reflecting South Africa's history, not biological classifications.

Employment.. We combine `w5_empl_stat` with the primary-occupation industry code `w5_a_em1prod_c`. Employment-status codes 0–2 (not economically active and the two unemployment definitions) are not employed, the industry-control reference. Industry code 8 combines financial intermediation, insurance, real estate, and business services; it is broader than the financial sector alone. Codes 0–7 and 9 form other sectors. Remaining industry/status combinations are missing. The product regressions instead control for employment status: not economically active (code 0, reference), unemployed (codes 1–2, combining discouraged and strict unemployment), and employed (code 3). Other codes are missing. No employment-status group is excluded from product-sample eligibility.

Household resources.. Monthly total household income is `w5_hhincome`, without adjustment for household size. Categories are $[0, 5000)$ (reference), $[5000, 15000)$, $[15000, 30000)$, and R30,000 or more. Negative or absent income is missing. Household net wealth is the supplied `w5_net_worth`, allowing negative net worth. The upper wealth group comprises values at or above R969,200, the unweighted 90th percentile of non-missing net wealth attached to all adult-file records before design and age exclusions, computed with R's quantile type 2. Values below the cutoff form the reference group. Thus the table labels "Top 10%" and "Bottom 90%" refer to a cutoff in the adult-record distribution, not a survey-weighted decile of distinct households. Household income and wealth are repeated for co-resident respondents, so their reported means describe adults' household circumstances rather than equally weighted households.

Children.. The product regressions include an indicator for an own child under 18 living in the household. We link resident roster members (`w5_r_pres`=1) to their recorded father or mother using `w5_r_fthpid` and `w5_r_mthpid`, matching the respondent's PID within the same household. A linked child's best age must be between zero and 17 inclusive. The indicator is one if any such child is identified and zero otherwise; if a linked resident child has unknown age and no known minor child is identified, it is missing. It is available for men and women and does not measure lifetime parenthood or children living elsewhere.

Wages and product holdings.. `w5_fwag` records monthly wages from the primary occupation and is reported descriptively; it does not determine product-sample eligibility. The main product sample includes adults aged 18 or older, with no employment or wage restriction. The product robustness sample restricts age to 25–65 inclusive, also without an employment or wage restriction. Holdings use `w5_a_aspen` (pension or retirement

annuity), aslifeins (life insurance), dtbnk (personal bank loan), dtcre (credit card), and dtstr (store card), all with the same adult prefix. Only explicit yes (1) and no (2) become one and zero; all other codes are missing. Card holdings do not imply a balance, and pension holdings are distinct from receipt of a public old-age benefit. Both product samples require explicit yes/no responses for all five outcomes, both literacy thresholds, and all product-regression controls: age and age squared, female, married, degree/diploma, white, household income and wealth categories, employment status, and the own-child indicator.

Household roles and retirement income.. The roster identifies the head using w5_r_head. We require a unique positive PID; inconsistent nominations are unresolved. For daily expenditure, we use the unique modal positive nomination from w5_a_decdpid, excluding special codes 44, 66, and 77. Ties and absent nominations are unresolved. The household-head and expenditure robustness samples retain the identified respondent if otherwise eligible. Large-purchase responsibility uses the unique modal nomination from w5_a_declrgpid that matches a member of the same household. Its gender is taken from the individual derived file. Ties, unmatched nominees, or unknown gender are excluded from gender splits. The couple splits additionally require the nominee to be the corresponding partner; other nominees contribute only to the overall couple estimate.

Retirement-income receipt combines w5_a_incgovpen, incwar, incpfnd, incret, and incretp, all with the adult prefix: public old-age benefit, war veterans benefit, pension/provident fund, private retirement annuity, and retirement gratuity/package. Any explicit yes makes the combined indicator one. If none is yes but at least one is an explicit no, it is zero; if none supplies yes/no information, it is missing. Thus the non-retiree restriction means no reported retirement income under this partial-response rule, rather than verified non-retirement. The gender age robustness restriction is 25–59, without a wage floor; it is distinct from the product robustness restriction to ages 25–65. Inflation models require an observed item, age, gender, education, and employment category; their last specification also requires household income.

A.4. Summary statistics

Table A2 reports survey-weighted means and unweighted non-missing counts for the full descriptive base, the complete-covariate gender sample, and the common product sample aged 18+. It includes category shares, both literacy thresholds and the underlying knowledge measures, continuous resources and wages, and the indicators defining subgroup and robustness samples. Male and female shares are complementary; the married share, degree/diploma share, and white share also identify the binary controls used in the product models. Sample membership and person/household/pair counts are reported

separately in Table A1.

TABLE A2. Survey-weighted summary statistics by analysis sample

Variable	Descriptive Mean	Descriptive *N*	Gender Mean	Gender *N*	Products Mean	Products *N*
Financial knowledge (percent unless stated)						
Numeracy: correct	47.8	23,872	47.6	21,533	48.2	21,272
Numeracy: don't know/refused	9.1	23,872	9.1	21,533	8.9	21,272
Inflation: correct	42.7	23,872	42.8	21,533	42.8	21,272
Inflation: don't know/refused	9.6	23,872	9.7	21,533	9.3	21,272
Compounding 1: correct	56.7	23,872	56.5	21,533	57.1	21,272
Compounding 1: don't know/refused	11.6	23,872	11.8	21,533	11.1	21,272
Compounding 2: correct	59.1	23,872	59.1	21,533	59.5	21,272
Compounding 2: don't know/refused	10.7	23,872	10.7	21,533	10.4	21,272
Diversification: correct	54.1	23,872	53.7	21,533	54.4	21,272
Diversification: don't know/refused	11.5	23,872	11.7	21,533	11.2	21,272
Compounding: either item correct	72.3	23,872	72.2	21,533	72.4	21,272
At least three concepts (overall/finlit3)	40.6	23,872	40.4	21,533	40.7	21,272
All four concepts (finlit4)	10.6	23,872	10.7	21,533	10.8	21,272
Summary score (0–4)	2.17	23,872	2.16	21,533	2.18	21,272
Individual characteristics						
Age (years)	37.4	25,078	36.9	21,533	38.9	21,272
15–34 (%)	51.2	25,078	53.2	21,533	47.9	21,272
35–54 (%)	32.2	25,078	30.4	21,533	34.5	21,272
55–64 (%)	9.1	25,078	8.7	21,533	9.7	21,272
65+ (%)	7.5	25,078	7.7	21,533	7.9	21,272
Male (%)	47.3	25,061	45.1	21,533	46.6	21,272
Female (%)	52.7	25,061	54.9	21,533	53.4	21,272
No schooling (%)	4.3	25,018	4.6	21,533	4.9	21,272
Primary (%)	12.3	25,018	12.4	21,533	12.4	21,272
High school (%)	39.1	25,018	40.4	21,533	36.9	21,272
Technical (%)	13.9	25,018	13.7	21,533	15.0	21,272
Matric (%)	19.1	25,018	18.6	21,533	20.0	21,272
Degree or diploma (%)	11.3	25,018	10.3	21,533	10.9	21,272
African (%)	79.3	25,069	82.1	21,533	81.4	21,272
Coloured (%)	9.0	25,069	8.8	21,533	8.8	21,272
Asian/Indian (%)	2.7	25,069	2.1	21,533	2.1	21,272
White (%)	9.0	25,069	7.0	21,533	7.7	21,272
Not employed (%)	59.5	21,580	59.5	21,533	56.2	19,058
Other sectors (%)	35.4	21,580	35.4	21,533	38.4	19,058
Finance/business services (%)	5.1	21,580	5.1	21,533	5.5	19,058
Not economically active (%)	41.1	23,860	46.1	21,533	36.8	21,272
Unemployed (%)	12.0	23,860	13.4	21,533	12.9	21,272
Employed (%)	46.9	23,860	40.5	21,533	50.3	21,272
Married (marital status, %)	28.5	24,945	27.0	21,533	29.6	21,272
Living with partner (marital status, %)	6.0	24,945	5.7	21,533	6.3	21,272

Continued on next page

TABLE A2 continued

Variable	Descriptive Mean	Descriptive *N*	Gender Mean	Gender *N*	Products Mean	Products *N*
Widowed (marital status, %)	6.8	24,945	7.1	21,533	7.5	21,272
Divorced/separated (marital status, %)	3.3	24,945	3.3	21,533	3.7	21,272
Never married (marital status, %)	55.3	24,945	56.9	21,533	52.9	21,272
Degree/diploma indicator (%)	11.3	25,018	10.3	21,533	10.9	21,272
Own child under 18 in household (%)	31.2	25,077	31.4	21,532	33.8	21,272
Household resources						
R0 - R5 000 (%)	39.3	25,078	40.2	21,533	41.0	21,272
R5 000 - R15 000 (%)	36.9	25,078	38.0	21,533	37.4	21,272
R15 000 - R30 000 (%)	13.2	25,078	13.2	21,533	12.9	21,272
R30 000 + (%)	10.6	25,078	8.6	21,533	8.8	21,272
Bottom 90% (%)	86.9	25,077	88.8	21,533	88.1	21,272
Top 10% (%)	13.1	25,077	11.2	21,533	11.9	21,272
Household income (rand/month)	13,309	25,078	12,013	21,533	12,079	21,272
Household net wealth (rand)	804,708	25,077	738,855	21,533	779,203	21,272
Wages and product holdings						
Primary occupation wages (rand/month)	7,820	6,968	7,850	6,860	7,841	6,835
Pension/retirement annuity (%)	7.5	23,704	8.0	21,380	8.1	21,272
Life insurance (%)	12.8	23,792	12.7	21,463	13.7	21,272
Personal bank loan (%)	9.1	23,831	9.4	21,496	9.9	21,272
Credit card (%)	5.5	23,844	5.6	21,509	5.8	21,272
Store card (%)	17.3	23,851	17.1	21,515	18.7	21,272
Subgroup indicators (%)						
Respondent is household head	48.7	25,074	48.3	21,532	53.7	21,269
Respondent decides daily expenditure	49.8	23,109	49.6	20,203	55.1	19,907
Large-purchase decision-maker is male	41.0	22,705	39.5	19,833	42.5	19,564
Eligible single respondent	52.0	25,078	56.4	21,533	52.4	21,272
Any reported retirement income	10.3	23,874	10.7	21,533	11.1	21,272
Reciprocally linked opposite-sex partner	21.2	25,078	22.2	21,533	24.5	21,272
State old-age benefit	8.8	23,858	9.1	21,518	9.5	21,257
War veterans benefit	0.0	23,859	0.0	21,519	0.0	21,259
Pension/provident income	1.3	23,853	1.4	21,516	1.5	21,251
Retirement annuity income	0.4	23,854	0.4	21,516	0.4	21,255
Retirement gratuity/package	0.1	23,861	0.1	21,520	0.1	21,262
Sample origin (%)						
Original 2008 sample	88.4	25,078	92.1	21,533	91.6	21,272
2017 top-up sample	11.6	25,078	7.9	21,533	8.4	21,272

Note: Means use `w5_wgt`; *N* is the unweighted non-missing count for each row. Descriptive includes all eligible adults with valid survey design information; Gender is the complete-covariate sample in Table 2; Products is the common sample aged 18+ in Section 5, with no employment or wage restriction. Categorical rows report percentages. Household resources are attached to each adult and are therefore adult-weighted means. The male purchase-decision-maker share conditions on an identified nominee of known gender; household-head

and daily-decision-maker shares condition on a resolved nominee. Single and reciprocal-partner rows are eligibility indicators, including zero for unresolved cases. Retirement-income components require explicit yes/no answers; the combined indicator follows the partial-response rule in Appendix A.3. Identifiers and survey-design variables are documented there rather than averaged.

Appendix B. Comparison to national surveys using the Big Three

This appendix is intended for readers who wish to relate the South African findings to the national surveys using the Big Three financial literacy questions. The Big Three differ in wording from the NIDS and S&P questions, even where they assess the same concept. The comparisons therefore complement the direct S&P benchmarks in Section 3.2, but cannot be read as a like-for-like comparison of financial knowledge. We explain the wording differences before discussing the results.

Table A3 contains 32 surveys from 26 countries with data collected between 2005 and 2023. We began with the country studies in the 2011 FLAT World special issue of the *Journal of Pension Economics and Finance*, then examined subsequent country studies and their cited literature, including the 2023 *Journal of Financial Literacy and Wellbeing* studies. We included the general-population country surveys located through this literature search that report correct-response rates for the Big Three or related items. We excluded overview articles, duplicate reports of the same survey, and studies restricted to selected groups. We retain separate survey rounds and each country in a multi-country study. This is a structured literature compilation rather than an exhaustive systematic review with a registered search protocol. It is illustrative of the available national evidence, and wording, tasks, response options, sample coverage, and survey years differ.

For interest, the original Big Three question asks how much would remain after five years if $100 earned 2 percent annually, with answers of more than, exactly, or less than $102 (Lusardi and Mitchell 2011c). NIDS Compounding 2 instead asks about R100 earning 10 percent annually for five years, with a threshold of R150. The original item can be answered correctly without distinguishing simple from compound interest, since either gives more than $102. The NIDS item requires that distinction: simple interest gives exactly R150, whereas compounding gives more. NIDS also includes the borrowing-cost numeracy question and Compounding 1, which compares interest payments in the first and second years; neither has a separate counterpart in the Big Three or a column in the table.

For inflation, the original question asks whether savings earning 1 percent interest when inflation is 2 percent would buy more, the same, or less after one year (Lusardi and Mitchell 2011c). NIDS instead asks whether purchasing power changes when both income and prices double over ten years. Both assess purchasing power, but the original requires comparing interest with inflation, with "less" as the correct answer; NIDS requires recognizing that equal proportional increases in income and prices leave purchasing power unchanged, with "the same" as the correct answer.

For risk diversification, the original question asks respondents to judge whether "Buying a single company's stock usually provides a safer return than a stock mutual fund" is true or false (Lusardi and Mitchell 2011c). NIDS instead asks whether it is safer to put money into one business or investment or into multiple businesses or investments. This

tests the benefit of diversification without requiring familiarity with stocks or mutual funds, and uses a choice between alternatives rather than a true-or-false statement. The simpler terminology could make the NIDS item easier to answer, so differences in correct-response rates may reflect familiarity with financial products as well as understanding of diversification.

The surveys in Table A3 also vary in their wording and response formats. Some adapt currencies or phrasing, while others change the task itself. Sweden's interest item asks for an exact balance after two years, and France's uses a threshold equal to five years of simple interest, requiring recognition of compounding (Almenberg and Säve-Söderbergh 2011; Arrondel, Debbich, and Savignac 2013). The 2006 Italian survey replaces diversification with a question about the effect of falling stock prices on equity funds, while New Zealand asks about expected long-run returns (Fornero and Monticone 2011; Crossan, Feslier, and Hurnard 2011). The table therefore offers a comparison of related measures, and differences between countries cannot be attributed entirely to financial knowledge. The gender gaps also use different literacy definitions: at least three of four concepts in NIDS and all three questions in the Big Three studies.

With these qualifications, the table shows substantial gender gaps in most countries, reaching 22.7 percentage points in Switzerland and 18.4 percentage points in Canada. A few countries show minimal differences between men and women, such as Peru, Russia, and several Eastern European countries. Performance on individual items also varies: 77% of respondents answered the inflation item correctly in the Netherlands, compared with 61% in neighboring France. High-income countries generally show higher correct-response rates across the three columns, although considerable variation remains among countries with similar economic development. The Age pattern column indicates which group has lower financial literacy in each study; for example, "Both tails" indicates lower literacy among respondents under 35 and over 65.

TABLE A3. National surveys using the Big Three financial literacy questions or related items

			Demographics		Correct responses (%)			
Country	Year of data	Sample Size	Gender gap	Age pattern	Interest	Inflation	Risk	Citation
Netherlands	2005, 2010	1,665	20.1	Older	85	77	52	Alessie, Van Rooij, and Lusardi (2011)
Italy	2006	3,992	12.5	Both tails	40	59	52	Fornero and Monticone (2011)
Italy	2022	5,000	10.2	Younger	71	67	64	Bottazzi and Oggero (2023)
United States	2009	1,488	15.8	Both tails	65	64	52	Lusardi and Mitchell (2011b)
United States	2021	27,118	18.2	Younger	69	53	42	Lusardi and Streeter (2023)
Germany	2009	1,059	11.9	Both tails	82	78	61	Bucher-Koenen and Lusardi (2011)
Germany	2021	4,116	13.1	Both tails	81	88	77	Bucher-Koenen et al. (2023)
Russia	2009	1,400	1.3	Older	36	51	13	Klapper and Panos (2011)
Chile	2009	14,500	-	Older	47	18	41	Garabato Moure (2016)
New Zealand	2009, 2010	1,250	16.0	Both tails	86	81	76	Crossan, Feslier, and Hurnard (2011)
Sweden	2010	1,032	15.7	Both tails	49	60	69	Almenberg and Säve-Söderbergh (2011)
Japan	2010	5,386	13.7	Younger	71	59	56	Sekita (2011)
Japan	2022	1,701	16.5	Younger	65	62	51	Sticha and Sekita (2023)
Switzerland	2011	1,500	22.7	Both tails	79	78	74	Brown and Graf (2013)
France	2011	3,616	10.3	Both tails	48	61	67	Arrondel, Debbich, and Savignac (2013)
Romania	2011	1,030	3.0	Older	41	32	14	Beckmann (2013)
Romania	2022	1,029	2.7	Older	45	70	29	Beckmann and Kiesl-Reiter (2023)
Australia	2012	1,024	18.0	Younger	83	69	55	Agnew, Bateman, and Thorp (2013)
Canada	2012	6,805	18.4	Both tails	78	66	59	Boisclair, Lusardi, and Michaud (2017)
Finland	2014	1,477	16.9	Both tails	58	77	66	Kalmi and Ruuskanen (2018)
Finland	2023	1,806	21.2	Younger	49	65	74	Vaahtoniemi et al. (2023)

The gender gap is the percentage of men minus the percentage of women answering all three questions correctly. Age-pattern labels summarize the source studies rather than harmonized age effects: Both tails means lower literacy among both younger and older adults, and Similar indicates no clear difference. The conventional bounds in the early FLAT World comparisons are Younger < 35, Middle 35–65 inclusive, and Older > 65, with no overlap. Some studies use different bins: the 2022 Eastern European surveys use ≤ 35, 36–50, 51–65, and > 65; Hungary's lower literacy also extends above 50. There are 32 surveys in 26 countries. Wording and formats vary among the surveys. Appendix B documents selection and comparability.

Table A3 continued: National surveys using the Big Three financial literacy questions or related items

			Demographics		Correct responses (%)			
Country	Year of data	Sample Size	Gender gap	Age pattern	Interest	Inflation	Risk	Citation
Singapore	2022	1,699	12.3	Middle	78	75	50	Sconti and Fernandez (2023)
Bosnia and Herzegovina	2022	1,000	4.9	Both tails	46	52	38	Beckmann and Kiesl-Reiter (2023)
Bulgaria	2022	1,009	0.6	Older	54	80	34	"
Croatia	2022	1,021	-1.9	Similar	64	69	42	"
Czech Republic	2022	1,000	5.2	Older	65	75	67	"
Hungary	2022	1,000	8.8	Older	54	71	48	"
North Macedonia	2022	1,014	-1.0	Older	53	52	44	"
Poland	2022	1,010	10.4	Older	60	74	53	"
Serbia	2022	1,020	2.8	Older	71	73	42	"
Peru	2022	1,201	2.5	Older	40	47	56	Estrada-Mejia, Mejía, and Córdoba (2023)
Uruguay	2022	1,200	6.9	Younger	58	58	61	"

The gender gap is the percentage of men minus the percentage of women answering all three questions correctly. Age-pattern labels summarize the source studies rather than harmonized age effects: Both tails means lower literacy among both younger and older adults, and Similar indicates no clear difference. The conventional bounds in the early FLAT World comparisons are Younger < 35, Middle 35–65 inclusive, and Older > 65, with no overlap. Some studies use different bins: the 2022 Eastern European surveys use ≤ 35, 36–50, 51–65, and > 65; Hungary's lower literacy also extends above 50. There are 32 surveys in 26 countries. Wording and formats vary among the surveys. Appendix B documents selection and comparability.

Inflation. South Africa's score of 42.70% is near the lower end of the distribution in Table A3. Most FLAT World studies find higher inflation knowledge (Lusardi and Mitchell 2011c, 2014), although Chile is an exception: only 18 percent answer its inflation item correctly, compared with 47 and 41 percent on interest and risk. These differences require caution because the NIDS question concerns equal proportional increases in income and prices, while the original Big Three asks respondents to compare a savings interest rate with inflation.

Compounding. NIDS Compounding 2 assesses understanding of compound interest. The South African mathematics curriculum covers compound interest in both the final year of primary school and the first two years of high school (Department of Basic Education 2011). South Africa records 59.13% correct responses, higher than several middle-income-country estimates (for example, Peru and Romania) but lower than most high-income countries in Table A3.

Risk diversification. For the risk diversification question, 54.05% of South Africans answer the question correctly. In many countries in Table A3, risk is the weakest of the three Big Three items. In South Africa, the diversification score is below the Compounding 2 score, while inflation is the weakest of these three NIDS items. Exceptions include Sweden, France, and Finland, where risk-diversification responses are relatively strong compared with interest responses. One possible explanation is greater exposure to investment products where diversification is a salient concept.

Appendix C. Household-level robustness checks

The main estimates already account for clustered sampling. As a complementary check on sample composition, we re-estimate key statistics using two samples that are closer to one-respondent-per-household designs. These restrictions change the population being described; they do not replace the survey-design adjustment for dependence.

First, we restrict the sample to household heads identified in the household roster. Second, we restrict to the person responsible for day-to-day household expenditure, using the adult decision-making module. Because adults in the same household can occasionally report different decision-makers, we assign the household decision-maker as the uniquely most frequently named individual within household and drop tied cases.

Table A4 shows that the weighted share financially literate is nearly unchanged across the full sample, household heads, and expenditure decision-makers. The unadjusted male coefficient is larger in the household-head sample, but once we adjust for socio-demographic controls the male coefficient remains close to zero in all three samples.

TABLE A4. Robustness to within-household sampling

	Full sample	Household head	Main expenditure decision-maker
Financially literate (%)	40.57	40.26	40.53
	(1.08)	(1.25)	(1.35)
Male coefficient (unadjusted, p.p.)	1.22	4.29	2.20
	(1.06)	(1.63)	(2.08)
Male coefficient (adjusted, p.p.)	0.06	0.07	-0.59
	(1.08)	(1.68)	(1.94)
Observations (unadjusted)	23,855	10,023	9,565
Households (unadjusted)	10,628	10,023	9,565
Observations (adjusted)	21,533	8,769	8,411
Households (adjusted)	10,012	8,769	8,411

Note: Household heads are identified using roster question B9. Main expenditure decision-makers are identified from adult question L1.1 as the uniquely most frequently named household member. Households with ties or no valid identified decision-maker are excluded from the decision-maker column. Adjusted specifications include age, marital status, education, employment sector, income category, wealth category, and Apartheid-era racial category controls. All estimates use survey weights and account for the complex survey design.

Appendix D. Gender gaps by main decision-maker

To explore whether reported financial responsibility helps describe the gender gaps in Section 4.1, we split the household and couple samples by the gender of the main decision-maker for large, unusual purchases. The NIDS questionnaire includes a question to identify

this person and we use the uniquely most frequently nominated household member. Ties, unidentified nominees, and nominees of unknown gender are excluded. In the couple comparisons, the nominee must be one of the two partners. We retain the household and couple fixed-effects specifications without individual controls and survey-design inference used in Table 2.

Table A5 reports the results. The household gaps are 4.10 points where the nominee is male and 2.17 points where the nominee is female; both confidence intervals include zero. Within couples, the corresponding gaps are 6.88 and 3.93 points.

TABLE A5. Gender gaps by main decision-maker for large purchases

Specification	Estimate	Std. error	*p*-value	95% CI	Observations
A. Within households					
1. Male decision-maker	4.10	2.25	0.069	[-0.32, 8.53]	4,109
2. Female decision-maker	2.17	1.37	0.113	[-0.52, 4.85]	8,471
B. Within couples					
3. Female partner decides	3.93	3.17	0.216	[-2.31, 10.17]	1,498
4. Male partner decides	6.88	2.17	0.002	[2.62, 11.13]	2,014

Note: Each row reports a separate linear probability model. The outcome indicates correct answers in at least three of four financial literacy categories; estimates, standard errors, and confidence intervals are in percentage points. Positive estimates indicate higher literacy among men. The samples start from the complete-covariate household and couple samples in Table 2. Panel A uses household fixed effects and includes only households with at least one man and one woman. Panel B uses couple fixed effects for reciprocally linked male–female partners in the same household, married or unmarried, with both partners in the sample. No individual controls are added to these fixed-effects models. Decision-maker splits concern large, unusual purchases and use the uniquely most frequently nominated household member; ties, unidentified nominees, and nominees of unknown gender are excluded. In Panel B, the nominee must be the corresponding partner. All models use survey weights, with standard errors accounting for sampling strata and primary sampling units; two-sided *p*-values and 95% confidence intervals use the survey-design degrees of freedom.

Appendix E. Gender robustness checks

Appendix Table A6 repeats the aggregate and within-household gender regressions for two subsamples: ages 25 to under 60 and non-retirees. The non-retiree sample excludes respondents reporting receipt of any retirement-related income (state pension, war veterans pension, pension/provident fund, private retirement annuity, or retirement gratuity/package). All models use the survey design for inference. The household fixed-effects models include only households containing at least one eligible man and one eligible woman. The aggregate estimates remain small in both subsamples, while the within-household estimates

favor men and are less precise than in the full sample.

TABLE A6. Financial literacy and gender: robustness checks

Specification	1	2	3
Panel A: Ages 25 to under 60			
Male	0.98	-0.61	3.85
	(1.49)	(1.42)	(1.88)
Demographic controls	No	Yes	No
Household Fixed Effects	No	No	Yes
Observations	11,776	11,776	5,223
Panel B: Non-retirees			
Male	0.14	-0.53	2.42
	(1.20)	(1.16)	(1.30)
Demographic controls	No	Yes	No
Household Fixed Effects	No	No	Yes
Observations	18,548	18,548	10,923

Note: Linear probability models with survey weights and standard errors accounting for sampling strata and primary sampling units. Panel A restricts the sample to ages 25 to under 60. Panel B restricts to non-retirees, defined as respondents who do not report receiving a state pension, war veterans pension, pension/provident fund income, private retirement annuity income, or retirement gratuity/package income. Specification 2 adds age, marital status, education, employment sector, household income category, household wealth category, and Apartheid-era racial category controls. All specifications require non-missing values for the outcome, gender, and these controls. Specification 3 uses household fixed effects and includes only households with at least one man and one woman in the relevant estimation sample. Standard errors are shown in parentheses; estimates and standard errors are in percentage points.

Appendix F. Inflation knowledge robustness checks

Appendix Table A7 reports linear probability models for the inflation question. We estimate a quadratic age specification as well as indicators for ages 35–54, 55–64, and 65 or older, with ages 15–34 as the reference group, and include education and employment controls in all specifications. The final specification adds household income categories. Across specifications, age effects are modest and the gender coefficient remains small.

TABLE A7. Inflation knowledge and age: robustness checks

	(1)	(2)	(3)
Male	-0.64	-0.52	-0.57
	(1.05)	(1.04)	(1.04)
Age (years)	-0.35		
	(0.18)		
Age^2	0.00		
	(0.00)		
Age 35–54		-1.03	-1.20
		(1.40)	(1.41)
Age 55–64		0.81	0.13
		(2.03)	(2.09)
Age 65+		3.70	2.84
		(2.41)	(2.43)
Education controls	Yes	Yes	Yes
Employment controls	Yes	Yes	Yes
Income controls	No	No	Yes
Observations	21,550	21,550	21,550

Note: Linear probability models with survey weights and the complex survey design. The dependent variable equals one if the respondent answered the inflation question correctly. Column 1 uses a linear and quadratic age specification; Columns 2–3 replace these with age-group indicators (reference: ages 15–34; other groups: 35–54, 55–64, and 65+). Column 3 additionally includes household income categories. Standard errors are shown in parentheses.

Appendix G. Financial-product age robustness checks

Appendix Tables A8 and A9 repeat the financial-product logit models for the 14,613 respondents aged 25–65 inclusive in the common product sample. There is no employment or wage restriction. We retain the main models' literacy definitions, age and age squared, gender, marital status, degree/diploma indicator, Apartheid-era racial indicator, household income categories, household wealth category, employment status, and indicator for an own child under 18 living in the household, as well as the survey weights and inference method. All ten specifications use the same respondents.

The three-category literacy associations with pensions and life insurance remain positive and statistically distinguishable from zero at the 5% level. Their average marginal effects are 2.60 and 3.42 percentage points, respectively, compared with 2.07 and 2.33 in the sample aged 18+. Under the four-category definition, the pension association remains positive and statistically distinguishable from zero, while the life-insurance association remains imprecise.

For credit products, the four-category credit-card association remains positive and statistically distinguishable from zero, at 2.53 percentage points compared with 2.25 in the main sample. The remaining credit estimates are not statistically distinguishable from zero at the 5% level in either sample. The qualitative conclusions therefore persist when the age range is restricted to 25–65.

TABLE A8. Pensions and life insurance: robustness for ages 25–65

Dependent variable	Pension		Life insurance	
Mean of dependent variable	10.07% (0.68%)		16.76% (0.93%)	
Specification	1	2	3	4
Financial literacy measure				
Correct in at least three categories	2.60		3.42	
	(0.82)		(0.97)	
Correct in all four categories		2.91		1.36
		(1.06)		(1.42)
Socio-demographic controls				
Age (quadratic specification)	0.15	0.15	0.24	0.24
	(0.05)	(0.05)	(0.05)	(0.05)
Female	-2.08	-2.10	-0.57	-0.60
	(0.71)	(0.71)	(0.91)	(0.92)
Married	1.43	1.42	2.29	2.30
	(0.86)	(0.88)	(1.21)	(1.21)
Degree or diploma	6.57	6.44	10.93	10.98
	(1.31)	(1.33)	(1.82)	(1.84)
Categorized as "white" under Apartheid	1.54	1.36	0.77	1.06
	(1.34)	(1.29)	(1.89)	(1.95)
Unemployed	0.62	0.67	2.50	2.56
	(0.92)	(0.93)	(2.27)	(2.26)
Employed	11.11	11.17	13.43	13.56
	(0.80)	(0.79)	(0.99)	(0.99)
Own child under 18 in household	-1.03	-1.05	-1.24	-1.26
	(0.73)	(0.74)	(1.10)	(1.11)
Household income (monthly)				
R5 000 - R15 000	8.70	8.86	9.69	9.88
	(1.65)	(1.66)	(1.18)	(1.17)
R15 000 - R30 000	20.03	20.28	21.61	22.01
	(3.15)	(3.16)	(2.43)	(2.42)
R30 000 +	23.94	24.45	33.21	33.83
	(3.70)	(3.77)	(3.88)	(4.04)
Household wealth				
Top 10%	5.62	5.97	4.40	4.83
	(1.46)	(1.50)	(1.65)	(1.67)
Age squared included	Yes	Yes	Yes	Yes
Observations	14,613	14,613	14,613	14,613

Note: Common sample for the financial-product age robustness tables: adults aged 25–65 inclusive; explicit yes/no responses for all five products and non-missing literacy measures and controls are required. Reference categories: not economically active, household income below R5 000 per month, and bottom 90% of household wealth. Unemployed combines discouraged and strict unemployment. The child indicator identifies an own resident child under 18 through roster parent links. The age row reports the derivative of the full quadratic specification. Entries are survey-weighted logit average marginal effects in percentage points. Parentheses show delta-method standard errors using survey-adjusted coefficient covariance, conditional on observed covariates. Estimates describe conditional associations.

TABLE A9. Credit product holdings: robustness for ages 25–65

Dependent variable	Bank loan		Credit card		Store card	
Mean of dependent variable	12.69% (0.61%)		7.02% (0.52%)		22.65% (0.81%)	
Specification	1	2	3	4	5	6
Financial literacy measure						
Correct in at least three categories	1.15		0.64		1.35	
	(1.01)		(0.77)		(1.23)	
Correct in all four categories		1.72		2.53		2.44
		(1.52)		(1.04)		(1.70)
Socio-demographic controls						
Age (quadratic specification)	0.13	0.13	0.08	0.08	-0.22	-0.22
	(0.06)	(0.06)	(0.03)	(0.03)	(0.07)	(0.07)
Female	-4.66	-4.66	-1.00	-0.99	10.70	10.72
	(0.84)	(0.84)	(0.68)	(0.68)	(1.02)	(1.03)
Married	2.39	2.39	0.86	0.83	1.78	1.79
	(1.17)	(1.17)	(0.87)	(0.87)	(1.38)	(1.37)
Degree or diploma	4.94	4.88	6.81	6.61	6.17	6.09
	(1.54)	(1.55)	(1.19)	(1.19)	(2.35)	(2.37)
Categorized as "white" under Apartheid	-4.81	-4.93	1.30	0.85	-13.52	-13.68
	(1.70)	(1.67)	(1.15)	(1.10)	(2.19)	(2.13)
Unemployed	3.30	3.31	1.77	1.82	5.19	5.20
	(1.29)	(1.29)	(1.51)	(1.51)	(1.64)	(1.64)
Employed	14.77	14.78	5.87	5.89	17.21	17.23
	(0.87)	(0.87)	(0.65)	(0.64)	(1.22)	(1.22)
Own child under 18 in household	-0.67	-0.69	-0.66	-0.69	-0.96	-0.97
	(1.20)	(1.20)	(0.88)	(0.88)	(1.28)	(1.28)
Household income (monthly)						
R5 000 - R15 000	7.97	8.03	5.07	5.08	7.19	7.23
	(1.37)	(1.37)	(1.74)	(1.74)	(1.49)	(1.49)
R15 000 - R30 000	17.29	17.33	13.45	13.30	16.24	16.22
	(2.41)	(2.43)	(2.82)	(2.81)	(2.47)	(2.48)
R30 000 +	12.01	12.14	20.19	20.29	12.63	12.70
	(3.49)	(3.48)	(4.61)	(4.58)	(4.27)	(4.26)
Household wealth						
Top 10%	-2.13	-2.04	1.92	1.92	1.08	1.19
	(1.45)	(1.46)	(1.10)	(1.09)	(2.18)	(2.18)
Age squared included	Yes	Yes	Yes	Yes	Yes	Yes
Observations	14,613	14,613	14,613	14,613	14,613	14,613

Note: Common sample for the financial-product age robustness tables: adults aged 25–65 inclusive; explicit yes/no responses for all five products and non-missing literacy measures and controls are required. Reference categories: not economically active, household income below R5 000 per month, and bottom 90% of household wealth. Unemployed combines discouraged and strict unemployment. The child indicator identifies an own resident child under 18 through roster parent links. The age row reports the derivative of the full quadratic specification. Entries are survey-weighted logit average marginal effects in percentage points. Parentheses show delta-method standard errors using survey-adjusted coefficient covariance, conditional on observed covariates. Estimates describe conditional associations.

Appendix H. Software and replication

All data analysis was conducted in R (R Core Team 2025). Survey-weighted descriptive statistics and regression models use the `survey` package (Lumley 2025). Data are read from Stata format using `haven` (Wickham, Miller, and Smith 2025), and data manipulation uses `dplyr` and related packages from the tidyverse (Wickham et al. 2019). The paper and online appendix are typeset in LaTeX.

Replication code and constructed variables will be made available at the authors' websites upon publication. The underlying NIDS Wave 5 microdata are available to registered users through the Southern Africa Labour and Development Research Unit (SALDRU) at the University of Cape Town (`https://saldru.uct.ac.za/nids/`).

The authors used AI coding assistants—Claude Code (Anthropic) and ChatGPT Codex (OpenAI)—to assist with coding tasks and to propose edits during the writing process. The authors are responsible for all writing, analysis, and conclusions.

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