

## **Online Appendix:**

# From Learning to Earning: Financial Literacy and Wealth Accumulation in the UK (Abridged Version)

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The data for this research have been provided by the Geographic Data Service, a Smart Data Research UK Investment, under project ID GeoDS 2495, ES/Z504464/1.

## A Empirical Appendix

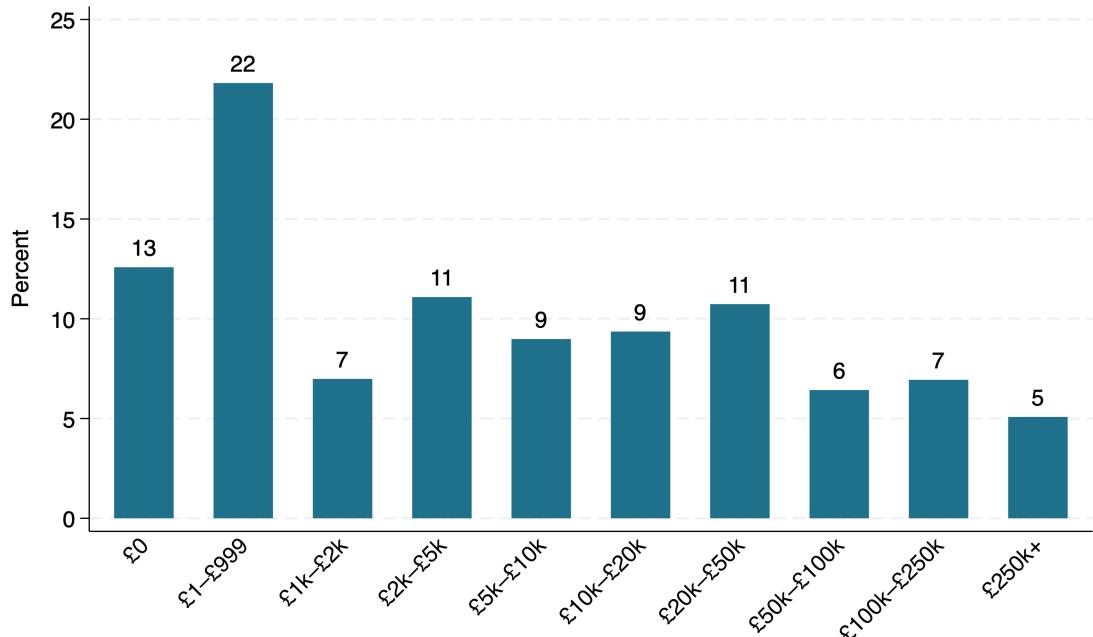
### A.1 Financial Literacy Elicitation Questions

The FLS includes the following items adapted from the “Big Three” financial literacy questions introduced by Lusardi and Mitchell (2008):

- Q1.** Suppose you put £100 into a savings account with a guaranteed interest rate of 2% per year (with no fees or tax to pay). How much would be in the account at the end of the first year, once the interest payment is made? (*Numeric response*)
- Q2.** And how much would be in the account at the end of five years (remembering that there are no fees or tax deductions)?
- More than £110
  - Exactly £110
  - Less than £110
  - It is impossible to tell from the information given
  - Don’t know
- Q3.** If the inflation rate is 5% and the interest rate you get on your savings is 3%, will your savings have more, less, or the same amount of buying power in a year’s time?
- More
  - The same
  - Less
  - Don’t know
- Q4.** Is the following statement true or false? “Buying shares in a single company usually provides a safer return than buying shares in a range of companies.”
- True
  - False
  - Don’t know

## A.2 Distribution of Investable Assets

Figure A1: Distribution of Investable Assets



*Notes:* The figure reports the distribution of households by self-reported level of investable assets corresponding to the categories on the x-axis.

## A.3 Descriptive Statistics - Wealth and Asset Survey

Table A1: Descriptive Statistics of Household Income and Wealth in 2020 (in £000s)

	Mean	Std. Dev.	P10	P50	P90	N
<i>Income</i>						
Gross income	44.1	41.3	13.0	33.7	85.3	11,341
<i>Net Wealth</i>						
Property wealth	264.2	327.4	0.0	190.0	600.0	11,341
Financial wealth	100.5	244.9	-2.0	25.6	284.0	11,340
<i>Financial Assets</i>						
Stocks	4.5	20.5	0.0	0.0	5.0	11,341
Bonds	8.5	53.9	0.0	0.0	10.5	11,341
Cash and deposits	44.5	86.4	0.3	14.0	118.8	11,341

*Notes:* Table reports descriptive statistics for household income and wealth variables for the Wealth and Assets Survey Wave 7. All amounts are expressed in £ thousands. Property and financial wealth are measured net of associated liabilities (e.g., mortgages on property).

## A.4 Mean Financial Literacy Scores by Demographics

Table A2: Mean Financial Literacy Scores by Demographic Group and Interactions

	Mean	Std. Dev.	N
<i>A. Gender</i>			
Male	3.29	0.95	14,717
Female	2.80	1.09	13,340
<i>B. Gender × Education Level</i>			
<b>Lower Secondary</b>			
Male	2.93	1.07	2,016
Female	2.54	1.11	2,290
<i>Overall</i>	2.72	1.11	4,337
<b>Upper Secondary</b>			
Male	3.22	0.95	4,280
Female	2.71	1.09	3,427
<i>Overall</i>	2.99	1.05	7,763
<b>Tertiary</b>			
Male	3.58	0.75	7,667
Female	3.07	1.01	6,949
<i>Overall</i>	3.34	0.91	14,759
<i>C. Stock Ownership</i>			
No Stocks	2.91	1.08	20,467
Has Stocks	3.52	0.76	7,824

*Notes:* Table reports mean financial literacy scores and distributional statistics (standard deviation and 25th, 50th, and 75th percentiles) by demographic characteristics, education level, inheritance, and stock ownership. Gender–education interaction values are computed from group-level data.

## A.5 Construction of Non-Cash Investment Measure

Because the Financial Lives Survey (FLS) does not directly record the monetary value of households' non-cash investments, we approximate this using the available categorical data. Specifically, we combine (i) the midpoint of each household's reported *investable asset* bracket with (ii) the midpoint of their reported *propensity to invest* category (i.e., the share of savings held in cash versus non-cash assets). The highest investable asset category is truncated at £250,000 to avoid over-weighting of open-ended responses. For example, a respondent reporting investable assets between £10,000 and £20,000 and indicating that their savings are held “mostly in cash” (that is, at least 75% in cash) is assigned an asset midpoint of £15,000 and a non-cash investment share of 12.5%, implying an estimated non-cash investment value of £1,875. This procedure yields a continuous proxy for non-cash investment amounts that preserves ordinal variation across both wealth and portfolio composition, maintaining internal consistency with the categorical structure of the data.

Table A3: Investable Asset Categories and Assigned Midpoints

<b>Code</b>	<b>Category Description</b>	<b>Assigned Midpoint (£)</b>
1	£0	0
2	£1–£999	500
3	£1,000–£1,999	1,500
4	£2,000–£4,999	3,500
5	£5,000–£9,999	7,500
6	£10,000–£19,999	15,000
7	£20,000–£49,999	35,000
8	£50,000–£99,999	75,000
9	£100,000–£249,999	175,000
10	£250,000 or more (truncated)	250,000

*Notes:* This table reports the investable asset categories provided in the Financial Lives Survey (FLS) and the corresponding midpoints used to construct continuous approximations of investable wealth. The upper open-ended category is truncated at £250,000 to prevent over-weighting of extreme values.

Table A4: Propensity to Invest Categories and Assigned Midpoints

<b>Code</b>	<b>Category Description</b>	<b>Assigned Cash Share (%)</b>
1	All in cash	100.0
2	Mostly in cash (75%+ held in cash)	87.5
3	Mixed portfolio (26–74% held in cash)	50.0
4	Mostly or fully invested (0–25% held in cash)	12.5

*Notes:* This table shows the categorical breakdown of the *propensity to invest* variable for households with at least £10,000 in investable assets. The assigned midpoint reflects the approximate share of assets held in cash, with the complement used to estimate the non-cash (investment) share when constructing continuous investment values.

## B Computational Appendix

### B.1 Solving the Model

Given the model in Section ??, the Lagrangian is

$$\begin{aligned} V(s_t, m_t, \lambda_t, z_t, R_t^s) = \max_{c_t, s_{t+1}, m_{t+1}} & u(c_t) - \kappa(s_{t+1}, s_t, \lambda_t) + \beta \mathbb{E}[V_{t+1}(s_{t+1}, m_{t+1}, \lambda_{t+1}, z_{t+1}, R_{t+1}^s)] \\ & - \mu_t^A(c_t + s_{t+1} + m_{t+1} - z_t w_t - R_t^s s_t - R^m m_t) + \mu_t^B s_{t+1} \\ & + \mu_t^C(m_{t+1} - \underline{m}). \end{aligned} \quad (1)$$

Note that  $\mu_t^A$ ,  $\mu_t^B$ , and  $\mu_t^C$  are the Lagrange multipliers on the budget constraint, short-selling constraint, and borrowing constraint, respectively. From this, the first-order conditions with respect to  $c_t$ ,  $s_{t+1}$ , and  $m_{t+1}$  are:

$$[c] : \quad u'(c_t) - \mu_t^A = 0, \quad (2)$$

$$[s_{t+1}] : \quad -\frac{\partial \kappa(s_{t+1}, s_t, \lambda_t)}{\partial s_{t+1}} + \beta \mathbb{E}\left[\partial_{s_{t+1}} V_{t+1}\right] - \mu_t^A + \mu_t^B = 0, \quad (3)$$

$$[m_{t+1}] : \quad \beta \mathbb{E}\left[\partial_{m_{t+1}} V_{t+1}\right] - \mu_t^A + \mu_t^C = 0. \quad (4)$$

The envelope conditions are

$$\partial_m V = \mu_t^A R_m = R_m u'(c_t), \quad (5)$$

$$\partial_s V = -\frac{\partial \kappa(s_{t+1}, s_t, \lambda_t)}{\partial s} + \mu_t^A R_s. \quad (6)$$

Thus, iterating Equation 5 forward by one period and substituting into Equation 2, we obtain the standard Euler equation.

$$\begin{aligned} u'(c) &= \mu_t^A = \beta \mathbb{E}\left[\partial_{m_{t+1}} V'\right] + \mu_t^C \\ &= \beta \mathbb{E}\left[R_m \mu_{t+1}^A\right] + \mu_t^C \\ &= \beta R_m \mathbb{E}\left[u'(c_{t+1})\right] + \mu_t^C. \\ u'(c_t) &\geq \beta R_m \mathbb{E}\left[u'(c_{t+1})\right] \end{aligned} \quad (7)$$

This inequality becomes strict if the borrowing constraints binds.

To solve this, we first assume that the FOC holds with equality, and invert the marginal utility to get optimal consumption given the  $m_{t+1}$  and  $s_{t+1}$  grid values that create  $\partial_{m_{t+1}} V'$ , and consequently, the policy of  $c_{t+1}$  given  $m_{t+1}$  and  $s_{t+1}$ . Thus,

$$c_{endo} = (u')^{-1}(\beta R_m \mathbb{E}[u'(c_{t+1})]), \quad (8)$$

where  $c_T$  comes from consuming all resources in the last period and any  $c_{t+1}$  for  $t < T - 1$  comes from the solved consumption policy in the following period. Given that we impose CRRA utility, we have

$$c_{endo} = (\beta R_m \mathbb{E}[(c_{t+1})^{-\sigma}])^{-\frac{1}{\sigma}}. \quad (9)$$

We will solve the utility for all fixed options of  $s_{t+1}$  and assume that the stock level today,  $s$ , lies on the grid. Let us denote a variable,  $X$ , on our exogenous grid by  $X^{grid}$ . We solve the cash holding in the current period,  $m_{endo}$  that justifies saving  $s_{t+1}^{grid}$  and  $m_{t+1}^{grid}$  and consuming  $c_{endo}$  given that agents have

$s^{grid}$  today. Thus, using the budget constraint,

$$m_{endo} = \frac{c_{endo} + s_{t+1}^{grid} + m_{t+1}^{grid} - zw - R_t^s s^{grid}}{R_m}. \quad (10)$$

We will now interpolate the consumption policies back to the exogenous grid, rather than our  $m_{endo}$  endogenous grid. We will do this taking the  $s_{t+1}$  choice as fixed, solving for each value of  $s_{t+1}^{grid}$ . Rather than choosing the value of stocks that directly maximizes the utility, we will take the “soft-max” or logit probabilities over the intermediate value functions,  $\tilde{V}_t$ , to compute the probability with which each action is chosen, maintaining that actions associated with higher value are chosen with a higher probability. These intermediate value functions are defined as

$$\begin{aligned} \tilde{V}_t(s_t, m_t, \lambda_t, z_t, R_t^s; \hat{s}_{t+1}) := \\ \max_{c_t, m_{t+1}} u(c_t) - \kappa(s_t, \lambda_t, \hat{s}_{t+1}) + \beta \mathbb{E} \left[ V_{t+1}(\hat{s}_{t+1}, m_{t+1}, \hat{\lambda}_{t+1}, z_{t+1}, R_{t+1}^s) \right], \end{aligned} \quad (11)$$

where  $\hat{\lambda}_{t+1}$  denotes the evolution of financial literacy conditional on the choice of  $\hat{s}_{t+1}$ . The probability of each choice of  $s_{t+1}$  is determined by a standard logit form derived from the Gumbel-distributed taste shocks,

$$\Pr(\hat{s}_{t+1} | \tilde{V}_t) = \frac{\exp\left(\frac{1}{\xi}\tilde{V}_t(s_t, m_t, \lambda_t, z_t, R_t^s; \hat{s}_{t+1})\right)}{\sum_{s_{t+1}} \exp\left(\frac{1}{\xi}\tilde{V}_t(s_t, m_t, \lambda_t, z_t, R_t^s; s_{t+1})\right)}, \quad (12)$$

where  $\xi$  governs the degree of taste dispersion (or choice “temperature”) in the soft-max operator. The final value function is then given by the log-sum formula:

$$V_t(s_t, m_t, \lambda_t, z_t, R_t^s) = \xi \log \left( \sum_{s_{t+1}} \exp \left[ \frac{1}{\xi} \tilde{V}_t(s_t, m_t, \lambda_t, z_t, R_t^s; s_{t+1}) \right] \right). \quad (13)$$

**Solving for Policies** We start by discretizing the AR(1) processes for productivity using the Tauchen (1986) method, and approximate the stock process by i.i.d. normal distributions. Each of these will take ten discrete values. Stocks and cash take discretized values on a double-exponentiated grid with 40 grid points ranging from 0 to 100; literacy is similarly distributed on a grid from the lowest literacy level,  $\lambda^0$ , to 25, taking 50 discrete values.

Using that  $V_{T+1} = 0$  and as there are no bequests in the model, households will optimally consume all resources in the last period, setting  $s_{T+1} = 0$  and  $m_{T+1} = 0$ . Therefore, agents will consume

$$c_T = \tau_T + R^m m_T + R_T^s s_T \implies V_T = u(\tau_T + R^m m_T + R_T^s s_T). \quad (14)$$

From the envelope condition, the marginal value function in the terminal period is

$$\frac{\partial V_T}{\partial m_T} = R^m u'(c_T). \quad (15)$$

We will solve the remainder of the periods using the steps and optimality conditions described above. We start from the marginal value function of Equation 15 and propagate backwards from period  $T$  to 1.

**Cross-Sectional Distribution** We compute the ergodic cross-sectional distribution of household states as the fixed point of the law of motion for the distribution, integrating over the stationary distribution of aggregate stock returns. Conceptually, this corresponds to the cross-sectional distribution obtained after

averaging over all possible histories of aggregate returns, so that aggregate shocks enter only through their long-run distribution.

Given an initial cross-sectional distribution of stocks, cash, and financial literacy in period 1, we draw idiosyncratic productivity and aggregate stock returns for the entering cohort from their respective stationary distributions. This implies that households enter the model in an environment in which aggregate risk is already at its long-run distribution. Starting from this initial cross-section, we then use the optimal policy functions and the Markov transition matrices to update the joint distribution period by period from  $t = 1$  to  $t = T$ .

## B.2 Calibration

In this subsection, we describe how the model is parametrized and how the exogenously calibrated parameters are determined.

The life cycle consists of  $T = 29$  periods, with each period representing two years. Agents are born at age 18, work until age 65 (corresponding to the 64–65 period), and are retired from age 66 onward. The final model period corresponds to ages 74–75, after which agents die, aligning the terminal age with the 75+ category in the FLS data. Because each period spans two years, all model moments that relate to time, for example asset returns and income dynamics, are calibrated at a two-year frequency so that they are consistent with the model’s timing structure.

**Asset Returns** We calibrate stock returns using global equity data from the FTSE All-World Total Return Index over the period from January 2003 to August 2025, which includes reinvested dividends and provides broad exposure to world equity markets. Using a global index is consistent with our partial-equilibrium framework, since UK households are small relative to the global equity market and can reasonably be treated as taking returns as given. We summarize the empirical two-year gross return distribution by fitting a normal distribution that matches the sample mean and standard deviation, which are 20.9 percent and 24.1 percent, respectively, in net terms. For the numerical solution of the model, we discretize this normal approximation into ten return grid points.<sup>1</sup> We set the two-year return on cash equal to 1.83 percent, or 0.91 percent per annum, in order to match the average annual rate paid on instant-access deposit accounts between January 2011 and August 2025 (Bank of England, 2025).

**Household Income** We estimate household income dynamics using the measure of “gross regular income” in the WAS. From this data, we obtain two key inputs for the model. First, we estimate the cross-sectional, age-dependent mean household wage in the latest wave of the survey (2020), fitting the following quadratic relationship between age and mean household income:<sup>2</sup>

$$Wage(Age) = -43025.49 + 4488.44 \cdot Age - 50.08 \cdot Age^2. \quad (16)$$

This specification implies an average predicted household wage of approximately £18,420 at age 18, with mean income peaking around age 45 at around £57,500. We normalize the wage rate such that the first-period mean wage is  $w_1 = 1$ .

Next, we estimate the idiosyncratic productivity process,  $z_{it}$ , for households. We again use the WAS and compute the age-dependent mean income across *all* survey waves, including wave fixed effects that capture nominal wage growth over time. Using the fitted measure of age-dependent wages,  $\hat{w}_t$ , we define

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<sup>1</sup>The values and associated probabilities are reported in Table B1.

<sup>2</sup>We condition on working-age households and trim the top and bottom 1 percent of the income distribution to remove outliers.

household-specific productivity as

$$\ln(\hat{z}_{it}) = \ln(y_{it}) - \ln(\hat{w}_t), \quad (17)$$

where  $y_{it}$  denotes household income.

Because the household-level component of the WAS follows respondents biennially, the two-year gap between interviews coincides with the model's period length. Therefore, one can estimate directly the two-year idiosyncratic productivity process in logs as an AR(1). We obtain an estimated persistence of  $\hat{\rho}_1^z = 0.75$  (s.e. = 0.01), a constant of  $\hat{\rho}_0^z = -0.06$  (s.e. = 0.001), and a residual standard deviation of  $\hat{\sigma}_{\varepsilon^z} = 0.46$ . The implied annual persistence is  $(\hat{\rho}_1^z)^{1/2} \approx 0.87$ , which indicates a high degree of persistence in household-specific productivity, consistent with the range reported by Floden and Lindé (2001), who find annual persistence estimates of 0.91 for the United States and 0.81 for Sweden. We discretize the AR(1) process using the Tauchen (1986) method with ten grid points spanning plus and minus two unconditional standard deviations of the stationary distribution of  $\ln(z_{it})$ .

To calibrate the transfer to retirees, we target the replacement rate of UK state pension levels. Cribb et al. (2025) estimate that the state pension replaces 30.2% of average earnings. Using the fitted wage profile in Equation (16) and our normalization of wages to the first-period mean, we obtain an average earnings level of 2.2 in model units. We, therefore, set the per-period transfer to retirees to  $\tau = 0.66$  in line with this estimate.

**Financial Literacy** We calibrate the initial distribution of latent financial literacy, denoted by  $\lambda_{t=0}$ , to match the empirical distribution of observed literacy scores among households aged 18–24 in the data. In the FLS, the proportions of households with financial literacy scores 0, 1, 2, 3, and 4 are 1.4%, 14.4%, 24.7%, 26.4%, and 33.1%, respectively. We assume that latent financial literacy at model entry takes the form

$$\lambda_{t=0}^i = \lambda^0 \Lambda^i, \quad i = 0, 1, 2, 3, 4, \quad (18)$$

and we choose the parameters  $\lambda^0$  and  $\Lambda > 1$  such that the model-implied shares of agents with each discrete literacy score match the empirical proportions for ages 18–24. Given the calibrated latent levels  $\{\lambda_{t=0}^i\}_{i=0}^4$ , we define cut-points at the midpoints between adjacent values and use these to partition the continuous  $\lambda$  grid into the five literacy-score categories. Specifically, let

$$\bar{\lambda}_j = \frac{\lambda_0^{j-1} + \lambda_0^j}{2}, \quad j = 1, 2, 3, 4, \quad (19)$$

and define the edges  $\{-\infty, \bar{\lambda}_1, \bar{\lambda}_2, \bar{\lambda}_3, \bar{\lambda}_4, \infty\}$ . Each agent is then assigned a discrete literacy score  $FL_i \in \{0, 1, 2, 3, 4\}$  according to their latent literacy,  $\lambda_t$ ; that is,  $FL_{i,t} = j$  if  $\bar{\lambda}_{j-1} < \lambda_{i,t} \leq \bar{\lambda}_j$ , with  $\bar{\lambda}_0 = -\infty$  and  $\bar{\lambda}_4 = \infty$ . These literacy-score categories are held fixed over the life cycle and are used to group agents in the subsequent analysis.

To allow for age-dependent depreciation of financial knowledge, we let  $\delta_t$  denote the fraction of latent financial literacy that survives from period  $t$  to period  $t+1$ . We parameterize the sequence  $\{\delta_t\}_{t=1}^T$  as linearly declining in  $t$ , starting from 1 in the first period and reaching a terminal value  $\underline{\delta} \in (0, 1)$  in the last period. This specification implies that older households experience faster depreciation of financial knowledge than younger households.

**Initial Distributions** We choose three mass points for initial cash holdings,  $\{0.1, 0.6, 5\}$ , with probabilities  $\{0.45, 0.50, 0.05\}$  in order to approximate the FLS distribution of investable assets for 18–24 year olds. In the FLS, around 2% of young households report more than £50,000 in investable assets, about 4% report £20,000–£50,000, and the vast majority report less than £20,000. This motivates concentrating almost all of the mass on low and moderate initial cash levels and assigning only a small share to the high-wealth

point. We initialize income productivity according to the stationary Markov distribution. We will assume that households start without stocks.

### B.2.1 Calibration – Additional Results

Table B1 reports the calibrated stock returns and associated probabilities.

Table B1: Discretized Two-Year Gross Returns on Global Equity

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>
<i>Net Return (%)</i>	-27.3	-16.6	-5.9	4.8	15.5	26.2	36.9	47.6	58.3	69.0
<i>Probability</i>	2.5	5.4	9.8	14.6	17.7	17.7	14.6	9.8	5.4	2.5

*Notes:* Table reports a ten-point discrete approximation of two-year gross returns for the FTSE All-World Total Return Index. The empirical return distribution is modelled as normal with a mean net return of 20.9% and a standard deviation of 24.1%. Probabilities reflect normalized density weights evaluated at each grid point. Returns are shown in percent and include reinvested dividends.

Table B2 shows the cut-points of the financial literacy scores that correspond to the continuous financial literacy levels in the model. These are computed given the calibration of  $\lambda^0$  and  $\Lambda$  in Table ??.

Table B2: Initial Financial Literacy Categories and Latent Ability Cut-points

Score $FL_i$	Lower cutpoint	Upper cutpoint	Share among ages 18–24 (%)
0	$-\infty$	3.32	1.4
1	3.32	5.48	14.4
2	5.48	9.06	24.7
3	9.06	14.98	26.4
4	14.98	$+\infty$	33.1

*Notes:* Cutpoints are expressed in units of the latent financial literacy index  $\lambda$ . Shares correspond to the empirical distribution of financial literacy scores among households aged 18–24 in the Wealth and Assets Survey (WAS).

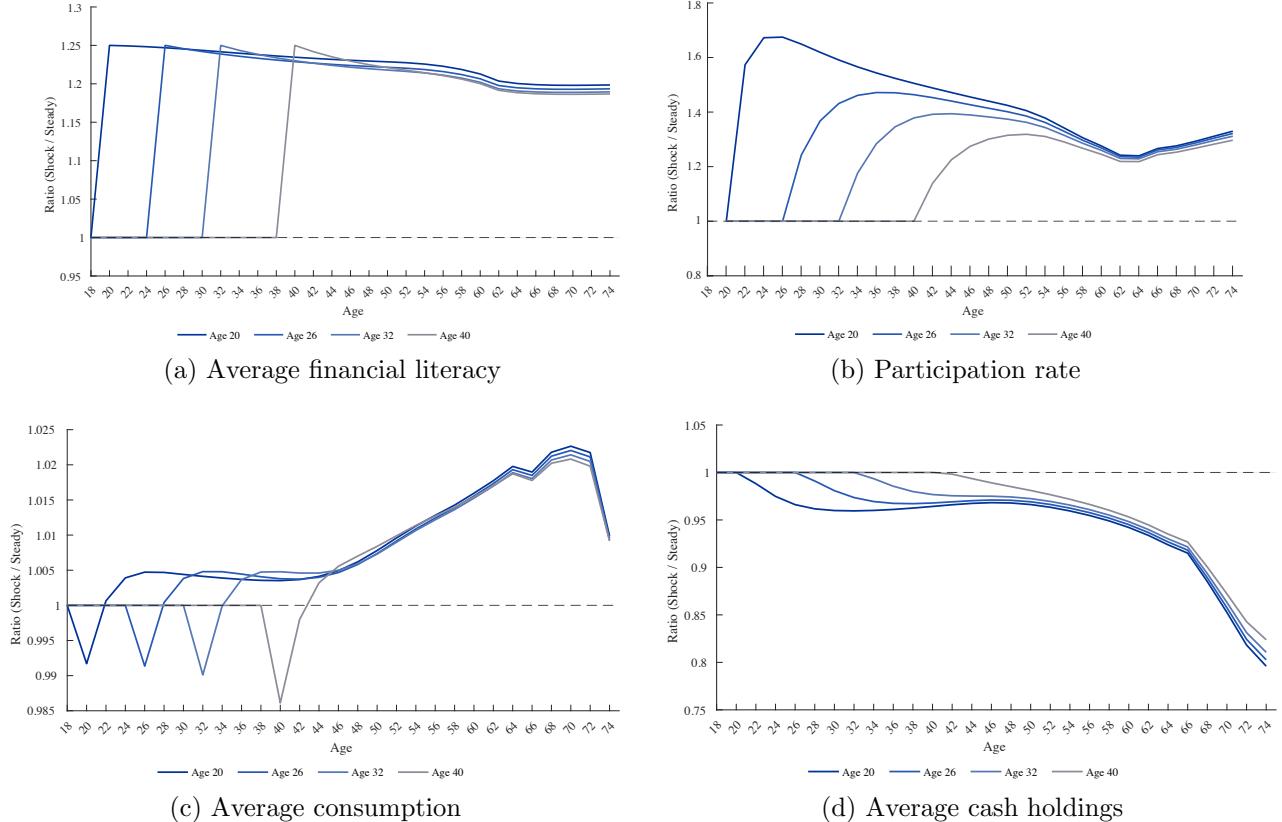
### B.3 Policy Analysis – Additional Results

Table B3: Final Working-Age Moments: Literacy Programs

	Participation	Stocks	Total Wealth	Avg. Fin. Lit.	Consumption
<i>Baseline</i>	51.3%	0.36	1.60	13.21	1.35
<i>Age 20</i>	63.3% (24.0%)	0.48 (34.6%)	1.63 (1.9%)	15.86 (20.0%)	1.37 (2.0%)
<i>Age 26</i>	63.1% (23.5%)	0.48 (33.5%)	1.63 (1.8%)	15.79 (19.5%)	1.37 (1.9%)
<i>Age 32</i>	62.8% (22.9%)	0.47 (32.3%)	1.63 (1.8%)	15.73 (19.1%)	1.37 (1.9%)
<i>Age 40</i>	62.2% (21.8%)	0.47 (31.0%)	1.63 (1.9%)	15.71 (18.8%)	1.37 (1.9%)

*Notes:* Participation is shown in percent, rounded to one decimal place. Moments are evaluated at period  $T-R$  (age 64). Percentage deviations are relative to the baseline.

Figure B1: Financial Literacy Shocks by Age: Ratio of Post-Shock to Steady State



*Notes:* This figure shows the ratio of shock-to-steady-state moments across for the financial literacy boosts at ages 20, 26, 32, 40.

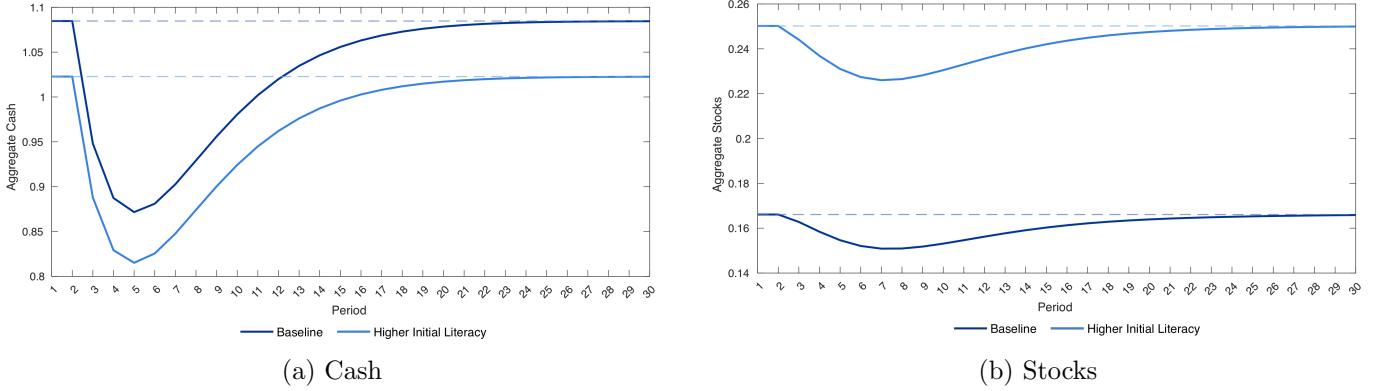
Table B4: Final Working-Age Moments: Cash vs. Stock Transfers

	Participation	Stocks	Total Wealth	Avg. Fin. Lit.	Consumption
<i>Baseline</i>	51.3%	0.36	1.60	13.21	1.35
<i>Age 20</i>					
Cash transfer	51.3% (0.1%)	0.36 (0.3%)	1.60 (0.0%)	13.24 (0.2%)	1.35 (0.0%)
Stock transfer	82.3% (61.8%)	0.63 (76.6%)	1.67 (4.7%)	18.73 (41.7%)	1.41 (4.7%)
<i>Age 26</i>					
Cash transfer	51.3% (0.1%)	0.36 (0.3%)	1.60 (0.0%)	13.24 (0.2%)	1.35 (0.0%)
Stock transfer	81.4% (60.0%)	0.62 (72.9%)	1.67 (4.6%)	18.42 (39.4%)	1.41 (4.5%)
<i>Age 32</i>					
Cash transfer	51.3% (0.1%)	0.36 (0.3%)	1.60 (0.1%)	13.24 (0.2%)	1.35 (0.0%)
Stock transfer	82.0% (61.1%)	0.62 (72.5%)	1.67 (4.6%)	18.35 (38.9%)	1.41 (4.5%)
<i>Age 40</i>					
Cash transfer	51.3% (0.1%)	0.36 (0.5%)	1.60 (0.3%)	13.24 (0.2%)	1.35 (0.1%)
Stock transfer	83.8% (64.8%)	0.61 (70.9%)	1.66 (4.0%)	18.32 (38.6%)	1.40 (4.2%)

*Notes:* Participation is shown in percent, rounded to one decimal place. Moments are evaluated at period  $T-R$  (age 64). Percentage deviations are relative to the baseline.

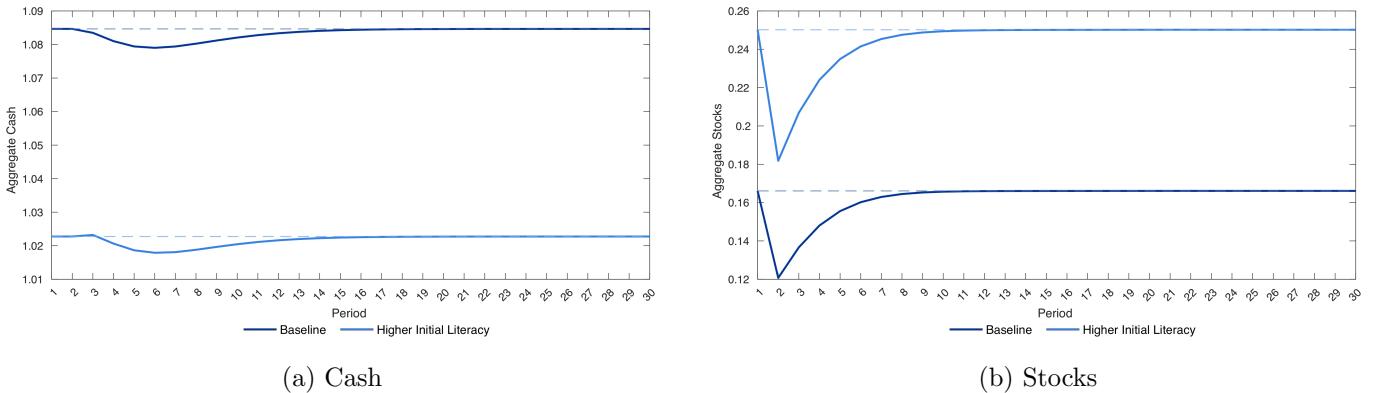
## B.4 Aggregate Shocks – Additional Results

Figure B2: Income Shock - Baseline vs Higher Initial Literacy: Aggregate Moments



*Notes:* The figure plots the levels of (a) cash and (b) stocks following a one-off fall in productivity in which all agents have their labor productivity,  $z_t$ , reduced by one grid point. The economy is then simulated for 30 subsequent periods. The dark blue line shows the baseline economy, calibrated in Section ??; the light blue line shows an economy in which agents born in period 1 have 25% higher initial financial literacy.

Figure B3: Return Shock - Baseline vs Higher Initial Literacy: Aggregate Moments



*Notes:* The figure plots the levels of (a) cash and (b) stocks following a one-off negative shock to returns (-27.3%). The economy is then simulated for 30 subsequent periods. The dark blue line shows the baseline economy, calibrated in Section ??; the light blue line shows an economy in which agents born in period 1 have 25% higher initial financial literacy.

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