** ONLINE APPENDIX **

A   Supplemental Tables

Table A.1: Effect of Wealth (100K USD) on Risky Share. Panel A of this table presents coefficients, standard errors, sample size, and mean predicted outcome when lottery wealth is zero ($\hat{y}|L_i = 0$) from estimating Equation (9) using our baseline definition of the risky share. Panel B shows the analogous estimates when we classify structured products as risky assets with a risk exposure of 49% (Calvet et al., 2023). Panel C drops capital insurance products from the calculation of the risky share (Calvet et al., 2007). Panel D classifies real estate as risky assets.

	A. Baseline				B. Structured Products			
(s)	β_s	SE	N	$\hat{y}_{|L_i=0}$	β_s	SE	N	$\hat{y}_{|L_i=0}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
0	-0.048	0.006	49,995	0.418	-0.041	0.006	49,955	0.424
1	-0.037	0.006	46,003	0.393	-0.027	0.006	46,003	0.400
2	-0.032	0.007	42,238	0.387	-0.021	0.007	42,238	0.394
3	-0.032	0.008	39,317	0.392	-0.022	0.008	39,317	0.401
4	-0.043	0.007	36,503	0.385	-0.035	0.007	36,503	0.395

	C. Capital Insurance Excluded				D. Real Estate			
(s)	β_s	SE	N	$\hat{y}_{|L_i=0}$	β_s	SE	N	$\hat{y}_{|L_i=0}$
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
0	-0.047	0.007	49,955	0.444	-0.072	0.006	49,955	0.719
1	-0.033	0.006	46,003	0.418	-0.061	0.008	46,003	0.707
2	-0.025	0.007	42,238	0.410	-0.053	0.009	42,238	0.704
3	-0.022	0.008	39,317	0.416	-0.048	0.010	39,317	0.707
4	-0.026	0.009	36,503	0.407	-0.057	0.009	36,503	0.703

Table A.2: Testing for Random Assignment. This table shows the results from estimating Equation (10) in the pooled sample and the three lottery subsamples. Standard errors are clustered at the individual level and reported in parentheses. F-statistics and corresponding p-values are obtained from testing the joint significance of the indicated controls.

	(1)	(2)	(3)	(4)	(5)
	Pooled		Kombi	Triss	PLS
Fixed Effects	Group ID	None	Group ID	Group ID	Group ID
Demographic Controls					
Female	222.5	131.7	-	6,211.2	22.4
	(233.8)	(195.1)	-	(7,231.0)	(15.6)
Nordic born	-716.2	-900.0	-875.1	-17,384.3	-175.7
	(759.2)	(816.6)	(1,784.5)	(21,988.2)	(183.1)
College	42.9	-327.8	68.3	-317.0	0.3
	(238.4)	(248.6)	(328.0)	(9,562.2)	(19.6)
Household size	105.0	251.7	271.7	301.7	-2.1
	(135.1)	(143.8)	(249.6)	(2,735.8)	(12.5)
Household income ($\times 100$)	0.034	0.481	-0.886	10.523	-0.013
	(0.480)	(0.505)	(0.513)	(19.600)	(0.018)
Married	-288.7	-398.7	-704.2	-277.4	1.6
	(301.2)	(316.0)	(463.5)	(11,296.0)	(5.1)
p for joint test of cubic in age	0.380	<0.000	-	0.105	0.311
F-stat (demographic controls)	**1.061**	**7.686**	**1.647**	**1.213**	**1.280**
p	**0.388**	**0.000**	**0.144**	**0.283**	**0.242**
Financial Controls					
Net wealth ($\times 1000$)	-0.180	-1.350	-0.725	4.375	-0.022
	(0.269)	(0.288)	(0.744)	(14.637)	(0.023)
Gross debt ($\times 1000$)	0.113	0.584	-1.231	50.425	0.017
	(0.211)	(0.385)	(0.991)	(64.133)	(0.006)
Homeowner	282.1	455.4	522.1	3,297.6	23.4
	(235.5)	(254.2)	(426.9)	(9,234.9)	(17.6)
Risky share	438.3	-154.8	355.4	12,271.0	16.5
	(305.5)	(315.2)	(514.7)	(11,009.9)	(28.0)
F-stat (financial controls)	**0.730**	**6.200**	**0.968**	**0.490**	**2.585**
p	**0.571**	**0.000**	**0.424**	**0.743**	**0.035**
Demographic + Financial Controls					
F-stat (all controls)	**1.074**	**6.629**	**1.421**	**0.993**	**1.590**
p	**0.376**	**0.000**	**0.172**	**0.456**	**0.080**

Table A.3: Effect of Wealth on Risky Share by Prize Size. Coefficients are obtained by estimating Equation (9) with the lottery-wealth variable replaced by indicators for five mutually exclusive prize categories: 0 to 1K USD, 1.K to 10K, 10K to 100K, 100K to 250K, and 250K+. The smallest prize category is omitted in the regression.

	Prize Size Category			
	$1K < L_i \leq 10K$	$10K < L_i \leq 100K$	$100K < L_i \leq 250K$	$250K < L_i$
	(1)	(2)	(3)	(4)
Estimate	0.002	-0.012	-0.182	-0.171
SE	0.008	0.017	0.016	0.032
N	478	801	202	51

Table A.4: Effect of Wealth (100K USD) on Risky Share, Heterogeneity by HC/W Ratio and Mode of Payment. This table presents coefficients, standard errors, sample size, and mean predicted outcome when lottery wealth is zero ($\hat{y}|L_i = 0$) from estimating Equation (9). Panels A and B present results for households with (pre-lottery) human-capital-to-wealth ratios that are above and below the median. Panels C and D present results for Triss winners stratified by type of payment plan, lump sum or monthly installments. Hetero p is obtained from an F-test of the null hypothesis that the two lottery-wealth coefficients are identical.

(s)	A. HC/W High				B. HC/W Low				A - B
	β_s	SE	N	$\hat{y}_{|L_i=0}$	β_s	SE	N	$\hat{y}_{|L_i=0}$	Hetero p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	-0.055	0.008	24,978	0.416	-0.035	0.009	24,977	0.420	0.081
1	-0.042	0.007	23,284	0.392	-0.030	0.009	22,719	0.394	0.293
2	-0.040	0.009	21,432	0.383	-0.023	0.009	20,806	0.390	0.199
3	-0.044	0.013	19,978	0.386	-0.023	0.009	19,339	0.399	0.201
4	-0.056	0.013	18,532	0.375	-0.034	0.008	17,971	0.396	0.155

(s)	C. Triss Lump Sum				D. Triss Monthly				C - D
	β_s	SE	N	$\hat{y}_{|L_i=0}$	β_s	SE	N	$\hat{y}_{|L_i=0}$	Hetero p
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
0	-0.023	0.006	1,065	0.353	0.003	0.006	227	0.350	0.002
1	-0.013	0.006	904	0.358	0.017	0.007	205	0.253	<0.001
2	-0.007	0.007	731	0.347	0.011	0.009	167	0.244	0.122
3	-0.009	0.008	598	0.352	0.013	0.011	138	0.222	0.088
4	-0.019	0.007	472	0.360	-0.016	0.013	108	0.368	0.668

Table A.5: Heterogeneous Effect of Wealth (100K USD) on Risky Share. Coefficients are obtained by estimating Equation (9) at time $s = 3$ in our pooled sample stratified by various demographic and financial characteristics. Hetero p is obtained from an F-test of the null hypothesis that the two lottery-wealth coefficients are identical. Income risk is proxied by the standard deviation of annual income changes prior to the lottery. Equity returns are based on the MSCI Sweden Index the calendar year prior to the lottery.

	Demographic Characteristics							
	Sex		Age		College		Self-employed	
	Male	Female	≤ 45	> 45	No	Yes	No	Yes
Effect	-0.051	-0.025	-0.037	-0.035	-0.048	-0.005	-0.043	0.002
SE	0.013	0.012	0.028	0.009	0.010	0.017	0.010	0.015
p	<0.001	0.038	0.177	<0.001	<0.001	0.742	<0.001	0.877
Hetero p	0.146		0.929		0.029		0.011	
N	19,113	20,204	5,641	33,676	27,385	11,932	37,067	2,250

	Financial Characteristics							
	Debt		Homeowner		Income Risk		Equity Returns	
	≤ 0	> 0	No	Yes	Low	High	≤ 0	> 0
Effect	-0.070	-0.029	-0.053	-0.035	-0.064	-0.017	-0.063	-0.006
SE	0.023	0.010	0.016	0.011	0.013	0.011	0.013	0.012
p	0.003	0.005	0.001	0.001	<0.001	0.112	<0.001	0.619
Hetero p	0.106		0.342		0.006		<0.001	
N	16,237	23,080	7,586	31,731	19,915	19,402	27,758	11,559

Table A.6: Non-Experimental Estimates of Financial Wealth Elasticity of Risky Share.
Coefficients are obtained by estimating Equation (12) in our pooled sample with an end date
the year prior to the lottery win. Regressions are estimated at 2-year and 5-year horizons
using both OLS and 2SLS. This estimation closely replicates Table 4 of Brunnermeier and
Nagel (2008). Observations are weighted by their respective contribution to the identifying
variation in the lottery regressions. p-value is obtained from an F-test of the null hypothesis
that the two coefficients are identical.

	2 Year		5 Year	
	(1)	(2)	(3)	(4)
Estimator	OLS	2SLS	OLS	2SLS
Lottery Sample (LS)				
$\Delta \log(W_t)$	-0.039	-0.113	-0.019	0.105
SE	0.021	0.072	0.025	0.123
N	10,770	10,770	2,458	2,458
Brunnermeir and Nagel (BN)				
$\Delta \log(W_t)$	0.023	-0.136	-0.013	-0.012
SE	0.011	0.076	0.009	0.058
N	1,455	1,455	1,234	1,234
Test of Equal Coefficients				
LS-BN	-0.062	0.023	0.006	0.117
SE	0.024	0.105	0.027	0.136
p-value	0.009	0.83	0.82	0.39

Table A.7: Effect of Lottery Wealth on Net Wealth, Bonds, Stocks, Bank Account Balances, Real Assets, and Debt. This table presents results from estimating Equation (9) in our pooled sample where various asset classes are used as outcome variables. Lottery wealth and financial variables are measured in USD. The coefficients are scaled so that an estimate of 0.10 implies the total value of that asset class increases by 10 cents for each dollar won.

	Net Wealth $\sim (2)+(3)-(9)$	Real Assets	Financial Assets Total	Bonds	Interest Funds	Bank	Other	Equity	Debt
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
$s=0$	0.600	0.009	0.537	0.117	0.069	0.243	0.031	0.077	-0.041
$N=49,955$	(0.041)	(0.024)	(0.041)	(0.024)	(0.030)	(0.040)	(0.010)	(0.026)	(0.011)
$s=1$	0.569	0.052	0.454	0.126	0.048	0.120	0.051	0.110	-0.057
$N=46,003$	(0.067)	(0.060)	(0.040)	(0.026)	(0.028)	(0.029)	(0.011)	(0.027)	(0.011)
$s=2$	0.502	0.026	0.453	0.128	0.042	0.081	0.061	0.142	-0.013
$N=42,238$	(0.059)	(0.049)	(0.064)	(0.029)	(0.032)	(0.024)	(0.021)	(0.058)	(0.032)
$s=3$	0.463	0.062	0.391	0.105	0.006	0.091	0.073	0.116	-0.005
$N=39,317$	(0.049)	(0.042)	(0.050)	(0.016)	(0.006)	(0.028)	(0.026)	(0.050)	(0.036)
$s=4$	0.350	0.026	0.303	0.096	-0.008	0.121	0.059	0.034	-0.027
$N=36,503$	(0.067)	(0.046)	(0.037)	(0.020)	(0.003)	(0.046)	(0.020)	(0.026)	(0.019)

Table A.8: Sensitivity of Results to Alternative Calibrations and Assumptions, Baseline Model. This table shows the sensitivity of the model-implied estimates from the baseline model in Section 5.3 to alternative calibrations and assumptions. Column (1) repeats the model-implied estimates under our baseline calibration summarized in Table 4. Column (2) shows the model-implied estimates when we increase the coefficient of relative risk aversion from $\gamma = 5$ to $\gamma = 8$. Column (3) increases the elasticity of intertemporal substitution from $\psi = 0.2$ to $\psi = 0.5$. Column (4) removes the bequest motive by changing the bequest multiplier from $b = 2.5$ to $b = 0$. Column (5) assumes a positive correlation between equity returns and innovations to the permanent component of labor income $\rho_{n,s} = 0.15$. Column (6) lowers the mean excess returns on equity from $\mu_s = 0.06$ to $\mu_s = 0.04$.

		Baseline (1)	$\gamma = 8$ (2)	$\psi = 0.5$ (3)	$b = 0$ (4)	$\rho_{n,s} = 0.15$ (5)	$\mu_s = 0.04$ (6)
Participants		-0.109	-0.102	-0.107	-0.115	-0.104	-0.118
Prize Size	1K to 10K	-0.010	0.000	-0.005	-0.006	-0.012	-0.038
	10K to 100K	-0.063	-0.014	-0.038	-0.053	-0.065	-0.144
	100K to 250K	-0.314	-0.306	-0.298	-0.333	-0.306	-0.403
	250K+	-0.504	-0.437	-0.496	-0.524	-0.478	-0.520
HC/W Ratio	Low	-0.087	-0.078	-0.085	-0.101	-0.084	-0.066
	High	-0.121	-0.115	-0.118	-0.123	-0.115	-0.145

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Table A.9: Sensitivity of Results to Alternative Calibrations and Assumptions, Extended Model. This table shows the sensitivity of the model-implied estimates from the extended model in Section 5.3 to alternative calibrations and assumptions. Column (1) repeats the model-implied estimates under our baseline calibration summarized in Table 4. Column (2) shows the model-implied estimates when we increase the coefficient of relative risk aversion from $\gamma = 5$ to $\gamma = 8$. Column (3) increases the elasticity of intertemporal substitution from $\psi = 0.2$ to $\psi = 0.5$. Column (4) removes the bequest motive by changing the bequest multiplier from $b = 2.5$ to $b = 0$. Column (5) assumes a positive correlation between equity returns and innovations to the permanent component of labor income $\rho_{n,s} = 0.15$. Column (6) lowers the mean excess returns on equity from $\mu_s = 0.06$ to $\mu_s = 0.04$.

		Baseline (1)	$\gamma = 8$ (2)	$\psi = 0.5$ (3)	$b = 0$ (4)	$\rho_{n,s} = 0.15$ (5)	$\mu_s = 0.04$ (6)
Participants		-0.052	-0.039	-0.085	-0.052	-0.047	-0.035
Prize Size	1K to 10K	0.016	0.008	0.016	0.017	0.015	0.006
	10K to 100K	-0.012	-0.064	0.012	-0.014	-0.009	-0.032
	100K to 250K	-0.103	-0.098	-0.198	-0.104	-0.087	-0.086
	250K+	-0.274	-0.216	-0.401	-0.278	-0.257	-0.182
HC/W Ratio	Low	-0.060	-0.042	-0.087	-0.061	-0.058	-0.035
	High	-0.048	-0.039	-0.086	-0.048	-0.042	-0.036

B Model Solution and Details

B.1 Model Solution

Following Carroll (1997) and Gomes and Michaelides (2005), we exploit the model's homotheticity and normalize the value function, state variables, and controls by the permanent component of income P_t, thereby dropping P_t as a state variable to reduce the computational burden. We use lower case letters to denote the normalized variables (e.g., $v_t = V_t/P_t$, $w_t = W_t/P_t$). After these transformations, the model is solved by backward induction using a modified endogenous grid method (see Carroll (2006) and Barillas and Fernández-Villaverde (2007) for more details). Assuming the last period's utility specified as $v_T = b(w_T)^{1-\rho}$, we solve for the optimal saving policy $w_{T-1} - c_{T-1}$ and portfolio allocation rule α_{T-1} using an interpolated grid search (100 grid points). To calculate the expected value of next period's value function, we follow the procedure described in Gomes and Michaelides (2005) to create a state transition matrix that makes integration less computationally costly. After having obtained the optimal saving and portfolio allocation policies, we calculate the value function v_{T-1}. We then repeat this process and iterate backward until reaching age t_0. We repeat this procedure for all combinations of education group and marital status and store the resulting policy functions.

B.2 Survival Probabilities

The survival probability is calculated using the observed survival probabilities from years 1999-2000. We randomly select 100,000 individuals in year 1999 from the Swedish population and define a binary indicator equal to 1 if the individual is observed alive in 2000. We then regress a quartic in age on this indicator. For simplicity, we do not permit time or cohort effects in our estimation and do not allow survival probabilities to vary with wealth, income, or sex. Importantly, there is no attrition or selection concerns in this sample, because it is drawn randomly from the entire population. The resulting estimates are presented in Figure B.1.

B.3 Labor Income Process Estimation

We estimate the labor income process following the procedure described in Cocco et al. (2005). Our definition of income is total income after taxes and trasfers. As noted in
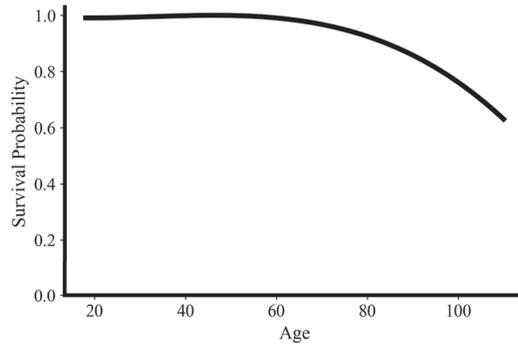
Figure B.1: Survival Probabilities. This figure presents the estimated one-year survival probability for each age. Survival probabilities are calculated as the average observed 1999-2000 survival probabilities for a random 100,000 individual sample from the Swedish population.

Campbell et al. (2001) and Storesletten, Telmer and Yaron (2007), this definition captures (potentially endogenous) insurance mechanisms – including government transfers, family transfers, and spousal labor supply decisions – without an explicit modeling of such means through which households protect themselves against labor income risk. Our estimation sample is the sample of lottery winners in (up to) 22 years prior to the lottery event. We estimate the income process separately for each of the education groups that we consider.

The estimation procedure proceeds in several steps. We first regress the log of household after-tax income on a quartic polynomial in age for households between age 18-65. We then regress the fitted value of this regression on an indicator variable for marital status to obtain an average income profile $f(t,m,e)$. The resulting average income profile estimates $exp(f(t,m,e))$ are shown in Figure B.2. Our estimated income profile is similar to the one estimated in Calvet et al. (2021) for the whole Swedish population.

To estimate the variances of permanent and transitory shocks to labor income for each education group, we follow Carroll and Samwick (1997) and define

$$log(H_{i,t}^*) \equiv log(H_{i,t}) - \hat{f}(\text{age}_{i,t}, m_{i,t}) \tag{19}$$

which then implies

$$Var[log(H_{i,t+d}^*) - log(H_{i,t}^*)] = d\sigma_u^2 + 2\sigma_n^2. \tag{20}$$

We estimate σ_u^2 and σ_n^2 by running an OLS regression of $Var[log(H_{i,t+d}^*) - log(H_{i,t}^*)]$ on d
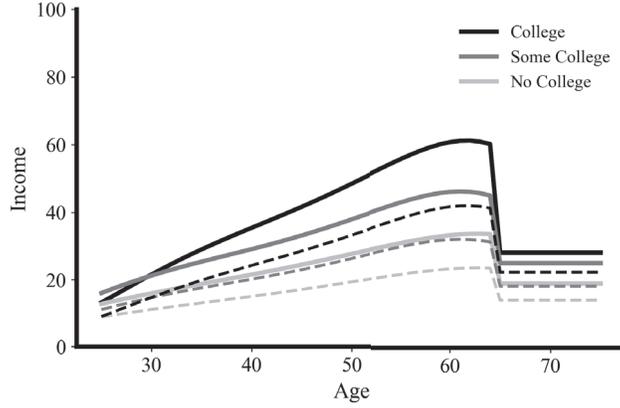
Figure B.2: Average Income Profiles. This figure presents the deterministic component of the estimated income process for single (dashed) and married (solid) households. The income profiles are estimated from our sample of lottery winners up to 22 years prior to the lottery event, using the methodology described in Cocco et al. (2005).

and a constant term.

We follow a similar procedure to estimate the correlation between equity returns and labor income shocks. Note that the change in $log(H_{i,t}^*)$ can be written as

$$\Delta log(H_{i,t}^*) = log(N_{i,t}) + log(U_{i,t}) - log(U_{i,t-1}). \tag{21}$$

Decomposing $N_{i,t}$ into (implicit) aggregate and idiosyncratic components and averaging across households yields

$$\overline{\Delta log(H_{i,t}^*)} = log(N_t^{agg}). \tag{22}$$

The correlation between equity returns and $log(N_{i,t})$ is then recovered by the coefficient from an OLS regression of $\overline{\Delta log(H_{i,t}^*)}$ on excess returns, where excess returns are defined as the difference between Stockholm Stock Exchange and short-term Swedish Treasury returns (Waldenström, 2014).

B.4   Retirement Income Replacement Rates

We approximate retirement income replacement rates using the formulas described in Laun and Wallenius (2015), which conducts a detailed analysis of the Swedish pension system. We adopt a slightly simplified version of the formulas under the assumption that

labor supply is exogenous.

The retirement income has two parts. First, all households receive 96% of a basic amount (*BA*) of 43,600 SEK (6,500 USD). Second, a supplemental earning is given by $0.6 \times AP \times BA$, where *AP* denotes pension points calculated from the 15 years with highest observed income computed recursively by the following formula:

$$AP_{t+1} = AP_t + \frac{1}{15} \max(0, \frac{\min(Y_t, 7.5 \times BA) - BA}{BA} - AP_t). \tag{23}$$

Hence, we approximate retirement income as the ratio of the following to age 65 income:

$$0.96 \times BA + 0.6 \times AP \times BA. \tag{24}$$

To reduce computational burden, we do not carry pension points as a state variable as in Laun and Wallenius (2015), but instead simulate 20,000 income processes for each education and marital status and calculate the average replacement rate for each group.

B.5   Expected Human Capital Calculation

We describe how we calculate the expected human capital (introduced in Section 4.2). Since our goal is to explore the heterogeneity of wealth effects by the pre-lottery human-capital-to-financial-wealth ratio, we focus on calculating the expected human capital in the year before the lottery event.

Following Calvet and Sodini (2014), we set the variance of the permanent component of the labor income process to its steady state value,

$$\sigma_p^2 = \frac{1}{2}(\sqrt{\sigma_n^4 + 4\sigma_u^2\sigma_n^2} - \sigma_n^2), \tag{25}$$

and compute the conditional mean (in the year prior to the lottery) as

$$\mu_{p,i,t-1} = h_{i,t-1}^* \frac{\sigma_p^2}{\sigma_u^2}, \tag{26}$$

where $h_{i,s}^* = \log(H_{i,s}^*) \equiv \log(H_{i,s}) - \hat{f}(\text{age}_{i,s}, m_{i,s}, e_{i,s})$ denotes the difference between the (observed) log income and its fitted value.[26]

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[26]We assume that permanent income coincides with actual income in date $t - 2$ (i.e., $\mu_{p,i,t-2} = 0$).

Given the age is fully predictable over time (whereas education and marital status are assumed to remain constant), it follows that

$$\mathbb{E}_{t-1}(H_{i,t-1+n}) = \exp(f(\text{age}_{i,t-1+n}, m_i, e_i))\mathbb{E}_{t-1}(e^{p_{i,t-1+n}+u_{i,t-1+n}})$$

$$= \exp(f(\text{age}_{i,t-1+n}, m_i, e_i) + \frac{1}{2}\sigma_u^2 + \frac{1}{2}Var_{t-1}(p_{i,t-1+n})). \qquad (27)$$

Since the relation $p_{i,s+n} = p_{i,s} + n_{i,s+1} + \ldots + n_{i,s+n}$ implies $Var_s(p_{i,s+n}) = Var_s(p_{i,s}) + n\sigma_n^2$, it follows that

$$\mathbb{E}_{t-1}(H_{i,t-1+n}) = \exp(f(\text{age}_{i,t-1+n}, m_i, e_i) + \frac{1}{2}(\sigma_u^2 + \sigma_p^2 + n\sigma_n^2)). \qquad (28)$$

Finally, the expected human capital is given by

$$HC_{i,t-1} = \sum_{n=1}^{T_{i,t-1}} \pi_{i,t-1,t-1+n} \frac{\mathbb{E}_{t-1}(H_{i,t-1+n})}{(1+r)^n}$$

$$= \sum_{n=1}^{T_{i,t-1}} \pi_{i,t-1,t-1+n} \frac{\exp(f(\text{age}_{i,t-1+n}, m_i, e_i) + \frac{1}{2}(\sigma_u^2 + \sigma_p^2 + n\sigma_n^2))}{(1+r)^n}, \qquad (29)$$

where $T_{i,s}$ is the difference between 100 and the age at date s, and $\pi_{i,s,s+n}$ denotes the probability of survival at date $s+n$ conditional on being alive at date s.

C   Bank Account Balance Imputation

C.1   Background

Between 1999 and 2007, banks were legally required to report account balances and interest payments to the Swedish Tax Authority (the relevant law is SFS 2001:1227). All accounts that earned at least 100 SEK in interest had to be reported. Moreover, during 2006 and 2007, accounts with a year-end balance of at least 10,000 SEK also had to be reported. For accounts with less than 100 SEK interest, the law did not require that the amount of interest paid be reported, regardless of the account balance.[27] During the whole

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[27]One additioinal complication is that individual bank accounts are not observed during 2001 and 2002. For these years, we only observe the total account balance and the total amount of interest paid for all reported accounts at the individual level.

period, however, banks were allowed to also report accounts that did not meet these criteria. We follow Nekoei and Seim (2023) and use these voluntarily reported accounts to impute account balances for accounts with missing balances.

Column (2) of Table C.1 shows the number of individuals with at least one account in the Wealth Registry. The registry includes children and sometimes also deceased individuals (most likely because the division of the estate had not been settled yet). Over the whole period, 7,050,382 individuals are linked to a reported account at least once during the sample period, which can be compared to the total population at the time of about 9 million. Due to a lower interest rate, the number of registered accounts was particularly low during 2004-2005. The number of reported accounts increased substantially in 2006 when all accounts with an account balance of more than 10,000 SEK had to be reported.

Column (3) shows total bank holdings for the reported accounts in the Wealth Registry in billion SEK. These estimates can be compared to the household's total bank savings according to the national financial accounts (sum of FA2200 and FA2900 in Statistics Sweden's data) in column (4). The incomplete reporting implies about 13% of all wealth held in bank accounts during 1999-2007 is not attributed to any individual. As shown in column (5), our imputation procedure (to be described below) brings the total wealth attributed to each individual much closer to the total bank account balance in the national accounts.

Notably, the Wealth Registry does not include cash. Column (6) of Table C.1 shows the total amount of cash held by households during the period according to the national financial accounts. Because we have no information about the distribution of household cash holdings, we do not attempt to impute cash holdings. Instead, Section C.4 below shows robustness analyses where cash holdings are taken into account.

C.2 Voluntarily Reported Accounts

Column (2) of Table C.2 shows the number of accounts that were reported despite not meeting the interest payment ($R \geq 100$ SEK) or bank balance ($B \geq 10,000$ SEK) criteria. Some of these accounts had interest payments and account balances of exactly zero. For the years 2001 and 2002, however, we cannot distinguish accounts that are non-reported from voluntarily reported accounts with zero balance and therefore treat accounts with zero balance and zero interest payment as missing (although most likely some of them actually had a zero account balance). Column (4) shows the fraction of voluntarily reported accounts that belonged to an individual who had at least one voluntarily reported account in the

Table C.1: Overview of Reported Account Balances. This table shows the number of individuals with at least one observable account in the Wealth Registry, and the total bank account balances at the end of each year in the Wealth Registry, in the national financial accounts, and in our imputed measure of account balances. The last column shows the total amount of cash held by households in the national financial accounts.

	(1) Riksbank Rate (%)	(2) Individuals w/ Accounts	(3) Wealth Registry	(4) National Accounts	(5) Imputed Wealth	(6) Cash
1999	3.0	3,551,504	382	436	438	70
2000	3.7	3,675,831	375	424	427	71
2001	4.0	4,015,354	410	475	491	77
2002	4.1	3,847,879	410	519	518	77
2003	3.1	3,871,882	473	552	550	79
2004	2.2	2,754,495	424	564	555	78
2005	1.7	2,674,848	443	615	573	80
2006	2.2	5,175,615	701	708	711	81
2007	3.5	5,715,269	863	867	869	80

previous year. There is a high degree of persistence in the voluntary reporting of accounts, which implies that banks use similar rules from year to year to determine which accounts to report voluntarily. Our data do not allow us to match accounts to banks. However, Nekoei and Seim (2023) show in their Online Appendix that a couple of large banks reported the same number of accounts before and after the law change in 2006, suggesting that these banks simply decided to report all accounts regardless of their balance and interest.

The voluntarily reported accounts in our data are not entirely representative of non-reported accounts. To illustrate this, Figure C.1 shows the bank account balances for accounts with interest payments around the cutoff at 100 SEK. Note that the scale on the vertical axis changes from year to year, where the jump at the threshold is particularly large in 2004 and 2005 when the interest rates were low. As is clear from these plots, voluntarily reported accounts tend to have lower account balances. In our imputation procedure (to be described below), we use the jump at the threshold to adjust imputed bank account balances.

Table C.2: Overview of Voluntarily Reported Accounts. This table shows the number of voluntarily reported accounts, the number of accounts with zero balance and zero interest payment, and the fraction of voluntarily reported accounts that belong to an individual who had at least one voluntarily reported account in the previous year.

	(1) Legal Requirement	(2) # of Voluntarily Reported Accounts	(3) Accounts with $R = 0$ & $B = 0$	(4) Persistence (%)
1999	$R \geq 100$	525,463	3,969	
2000	$R \geq 100$	739,802	7,164	55
2001	$R \geq 100$	298,153*	0*	64
2002	$R \geq 100$	260,640*	0*	57
2003	$R \geq 100$	773,915	67,172	25
2004	$R \geq 100$	783,742	66,525	63
2005	$R \geq 100$	895,160	44,917	63
2006	$R \geq 100$ or $B \geq 10,000$	605,472	60,496	66
2007	$R \geq 100$ or $B \geq 10,000$	568,978	78,467	56

Note: * refers to the number of individuals, not the number of accounts.

C.3 Imputation Procedure

We now turn to describing our procedure for imputing account balances for non-reported accounts. Compared to previous approaches to impute non-reported bank account balances (notably Bach et al. (2020) and Nekoei and Seim (2023)), our procedure is distinguished by our using individual accounts (as opposed to aggregated information at the individual level) and using the discontinuity in Figure C.1 to adjust account balances.

We proceed in eight steps:

1. We first merge all account-level data for 1999-2000 and 2003-2007. For 2001 and 2002, we only have individual-level data and thus treat an individual's total bank account holdings as one account and add it to the panel.

2. We carry forward the number of accounts so that the number of accounts per person is non-decreasing.

3. Since the data do not contain account identifiers, we link accounts from year to year by sorting accounts by interest paid and account balance and then break ties randomly. By construction, in 2001 and 2002, there will only be one account with a
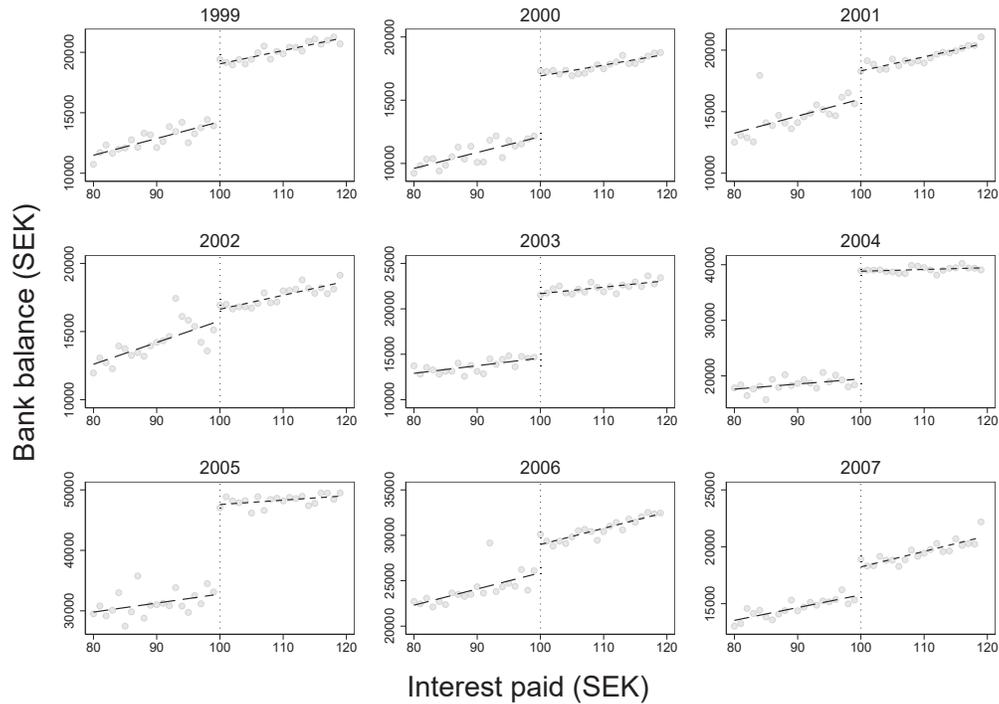
Figure C.1: Regression Discontinuity around the Reporting Threshold. This figure shows the average bank account balance around the account reporting threshold based on the amount of interest paid (i.e., annual interest payment of 100 SEK).

positive account balance per person, whereas all the other accounts will have a missing balance.

4. All individuals who are not observed in the Wealth Registry but are found in LISA are assigned one account for each year they are observed in LISA. LISA contains all individuals aged 16 or above that live in Sweden. Our assumption is that all individuals aged 16 and above have at least one bank account. Moreover, the Wealth Registry also contains accounts of younger children that had accounts meeting the reporting requirement. Bank account balances observed after a person's death are also included. We account for these accounts in order to calibrate the total amount of wealth distributed to the non-reported accounts.

5. For the years 1999-2000 and 2003-2005, we run the following regression for ac-

Table C.3: Predictors Used for Imputation. This table summarizes the definition of regression variables used in step 5 of our bank balance imputation procedure.

Variable Name	Variable Description
B_{it}	Reported bank balance
$income_{it}$	Total earnings
$real\_assets_{it}$	Real assets
$financial\_assets_{it}$	Financial assets net of reported bank balance
$debt_{it}$	Total gross debt
$BR_{i,t-s}$	Reported bank account balance lagged s years
	(set to missing if it does not meet the reporting requirement)
$D1_{it}$, $D2_{it}$, $D3_{it}$	Dummy for whether the account is the first, second, or third largest

counts with $R < 100$ separately for each year:

$$
\begin{aligned}
B_{it} =\ & \beta_0 + \beta_1 income_{it} + \beta_2 real\_assets_{it} + \beta_3 financial\_assets_{it} + \beta_4 debt_{it} \\
& + \beta_5 BR_{i,t-1} + \beta_6 BR_{i,t-2} + \beta_7 BR_{i,t-3} + \beta_8 age_{it} + \beta_9 age_{it}^2 + \beta_{10} age_{it}^3 + \beta_{11} female_i \\
& + \beta_{12} dead_{it} + \beta_{13} born\_nordic_i + \beta_{14} D1_{it} + \beta_{15} D2_{it} + \beta_{16} D3_{it} + \mathbf{MISS}_{it}\alpha + \varepsilon_{it},
\end{aligned}
\tag{30}
$$

where $\mathbf{MISS}_{it}$ is a vector of dummy variables indicating whether variable j is missing. All variables are set to 0 if they are missing, and monetary variables on the right-hand side are winsorized at the 1st and 99th percentiles. Apart from the self-explanatory demographic variables, all variables included in the regression are described in Table C.3.

Note that we only include lagged bank account balances that meet the reporting requirement, because voluntarily reported account balances in preceeding years contain different information for voluntarily reported accounts and non-reported accounts. Some banks reported all accounts, so a voluntarily reported account that has a voluntarily reported account balance in preceeding years is likely to be correctly linked, whereas a non-reported account with a voluntarily reported balance in preceeding years is likely to be incorrectly matched. The dependence on previous voluntarily reported bank account balances is therefore likely to differ between voluntarily reported and non-reported accounts. For 2006 and 2007, we run the same regression, but restrict the sample to accounts with $R < 100$ and $B < 10,000$. For 2001 and 2002, we run the same regression as above, but restrict the sample to individ-

uals with $R < 100$ who are predicted to only have one bank account (based on the number of accounts in 1999 and 2000). The R^2 from these regressions is between 0.03 (in 2007) and 0.12 (in 2001).

6. We use the regression estimates from the previous step to predict the bank balance of all non-reported accounts. We winsorize negative values. For 2001 and 2002, we impute all accounts that an individual is believed to have in those years based on the number of accounts in 1999 and 2000.

7. We repeat steps 5 and 6 with R_{it} as the dependent variable instead. We winsorize negative values and values above 100.

8. Because Figure C.1 showed evidence of bank balances being lower in voluntarily reported accounts, we estimate the jumps in Figure C.1 assuming separate linear trends on different sides of the cutoff and using a bandwidth from $R = 80$ to $R = 120$. Denoting the resulting estimate of the jump δ_t, we adjust the imputed bank balances by adding the product of δ_t and $R_{it}/100$, where R_{it} is the imputed interest rate from step 7.

Table C.1 shows total bank holdings in the registry before and after our imputation, where the latter is much closer to the aggregate balance in the national accounts (without this balance being explicitly targeted in the imputation). Table C.4 shows summary statistics for the resulting imputed bank balances and interest payments. The much smaller imputed balances in 2006 and 2007 are due to the new reporting requirement in 2006, which mandated accounts with balances above 10,000 SEK to be reported regardless of the amount of interest payment.

C.4 Robustness to Imputation Method

We now turn to evaluating the robustness of our main empirical results to different assumptions regarding non-reported account balances and cash holdings.

We first consider the results when we abstain from imputing non-reported bank account balances and simply use the bank account balances reported in the Wealth Registry when computing the risky share. Panel (a) of Figure C.2 shows that the estimated effect of lottery wealth on the risky share of financial assets becomes more negative when we abstain from bank balance imputation. For example, at $t = 0$, each \$100K won reduces the risky share

Table C.4: Summary Statistics of Imputed Bank Account Balances. This table shows the summary statistics of imputed bank balances and interest payments under our baseline imputation procedure described in Section C.3. The imputed bank balances and interest payments are denoted in SEK.

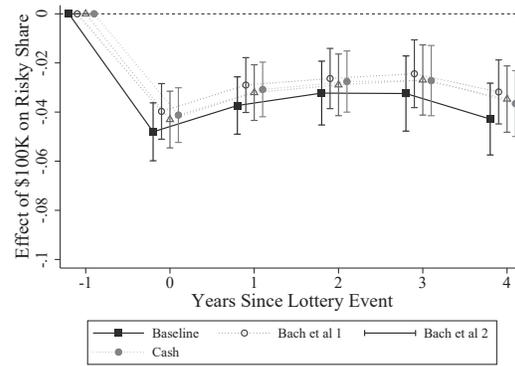| | Imputed bank balance (SEK) | | | Imputed interest payment (SEK) | |
| | Mean | Median | Max | Mean | Median |
	(1)	(2)	(3)	(4)	(5)
1999	14,661	11,948	92,501	30.6	31.6
2000	12,860	8,978	324,956	28.8	30.1
2001	14,637	8,534	467,375	32.3	31.6
2002	18,751	11,433	412,937	27.9	29.2
2003	16,220	11,292	573,427	19.5	19.5
2004	20,147	15,024	544,352	12.3	10.3
2005	19,301	14,689	607,422	12.2	10.0
2006	2,303	2,132	6,247	14.0	11.9
2007	1,702	1,652	4,137	17.2	15.9

by 7.6 percentage points, compared to 4.8 percentage points in our baseline case (under which bank account balances are imputed as described above). When using non-imputed account balances, the effect is most likely overstated because the risky share is overstated for individuals whose balances are not reported (since non-imputed balances are set to 0). Moreover, as some lottery wealth ends up in bank accounts (see Figure 7), winning the lottery reduces the likelihood that bank account balances are not reported (and consequently that the risky share is overstated). To illustrate, Panel (a) of Figure C.2 shows that winsorizing non-imputed bank account balances from below at $100, $1,000 or $2,000 reduces the discrepancy between the results based on imputed and non-imputed bank balances.

We next consider the alternative procedure for imputing bank balances from Bach et al. (2020). Their procedure differs from ours in several respects: they impute balances at the individual level rather than the account level, they only use information on assets in the current period, and they use a logaritmic specification rather than a linear specification. Moreover, they impute balances based on data from all reported accounts, not just using the voluntarily reported accounts. In addition, after the regression-based imputation, they adjust the imputed amounts so that the difference in bank holdings between the National Financial Accounts and the Wealth Registry is distributed to those with missing accounts.

In order to assess the robustness of our results to using Bach et al. (2020)'s alternative
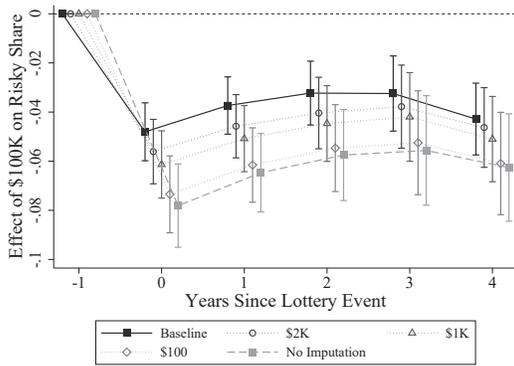
(a) Non-Imputed Measures	**(b) Alternative Approaches**

Figure C.2: Robustness to Alternative Imputations of Bank Account Balances. This figure shows the robustness of our main results to alternative procedures used for imputing bank account balances. Panel (a) shows the effect of wealth on the risky share when using non-imputed bank balances and when using non-imputed bank balances that are winsorized from below at $100, $1,000, and $2,000. Panel (b) shows the effect of wealth on the risky share when using imputation procedures similar to those in Bach et al. (2020) and when accounting for average cash holdings not reported in the Wealth Registry.

approach, we replicate their procedure as closely as possible. Due to data limitations, however, we deviate from their method in two ways. First, we use data on assets from the Wealth Registry as predictors rather than data from the underlying asset-level KURU registry. The classification of assets is somewhat different in the Wealth Registry compared to Bach et al. (2020)'s classification of assets in the KURU registry. For example, we use interest funds rather than money market funds as a predictor variable. Second, because we do not have demographic variables for the full population, we base the imputation on those aged 16 and above who appear in the LISA registry. We construct two measures of imputed bank balances in the spirit of Bach et al. (2020). The first measure ("Bach et al. 1") distributes the "missing bank holdings" (i.e., the difference between the national financial accounts and bank holdings in the Wealth Registry) only to people above age 16. In this case, the average imputed amount varies between SEK 14,596 (in 2006) and SEK 38,972 (in 2005). The second measure ("Bach et al. 2") assumes that the missing balance is distributed to everybody in the population, implying the average imputed amount is between SEK 8,951 (in 2006) and SEK 28,924 (in 2005). Panel (b) of Figure C.2 shows our results are robust to using these alternative imputation methods.

A final issue is that our imputation method does not take cash holdings into account.

Table C.1 shows that total cash holdings amount to 70-80 billion SEK for the period we consider. With approximately 7 million Swedish adults, average cash holdings are thus about 10,000 SEK ($1500) per individual. As a rough way to take cash holdings into account, we add $1500 to our baseline measure of imputed bank holdings. As shown in Panel (b) of Figure C.2, the results are robust to changing our baseline imputation to either of these alternative measures.

D   Comparison to Prior Work

Here, we briefly discuss two studies whose conclusions conflict with our baseline finding that wealth effects on the risky share are negative.

Calvet and Sodini (2014)   Calvet and Sodini (2014) analyzed Swedish longitudinal twin data and found a positive within-family association between financial wealth and the risky share. While there is a long history of relying on twin comparisons to improve causal inference, the key identifying assumption of so-called co-twin studies is quite strong. To many researchers, the intuitive appeal of the method is that twins, especially monozygotic twins, tend to be very similar, both genetically and in terms of their environmental backgrounds. Therefore, twin studies are effective at controlling for a number of factors, both genetic and environmental ones, that are hard to measure reliably and could lead to omitted-variable biases in conventional cross-sectional analyses. But as noted by Griliches (1979), the fact that twins' outcomes are usually highly correlated need not imply that any remaining differences are plausibly exogenous. *Something* must have caused the differences observed between the twins, and the critical identifying assumption is that the differences are as-good-as randomly assigned.

In practice, there is a body of literature that makes a compelling argument - both theoretically and empirically - that twin studies only recover causal estimates under strong assumptions and may well be vulnerable to exactly the same set of concerns about omitted-variable biases that are often voiced about cross-sectional analyses (Griliches, 1979; Neumark, 1999; Bound and Solon, 1999). Therefore, Calvet and Sodini (2014)'s identification strategy implicitly comes down to assuming that within-pair differences in financial wealth are unrelated to within-pair differences in other determinants of the risky share (conditional on some controls for within-pair differences that can be reliably measured). In contrast, the source of identifying variation in our study is transparent and comes from the randomized

assignment of lottery wealth. Our identfication strategy is valid provided the lottery prizes were assigned according to the rules of the lottery.

Calvet, Campbell, and Sodini (2009)   Calvet et al. (2009), also using the Swedish administrative data, investigate how portfolio-return-induced variation in financial wealth affects portfolio decisions among individual investors. Specifically, they estimate a portfolio adjustment model in which the change in financial wealth and a wide array of characteristics are used as predictors of the risky share. To account for the endogeneity of financial wealth, they use the zero-rebalancing portfolio return as an instrument for the contemporaneous change in financial wealth and find that an increase in financial wealth leads to a higher risky share. While the idiosyncratic component of portfolio returns can induce an exogenous variation in financial wealth, the results of this prior study likely reflect household inertia in portfolio rebalancing or what is known as the "flypaper effect" (Hines and Thaler, 1995; Choi, Laibson and Madrian, 2009). When households fail to rebalance promptly in response to yearly variations in financial wealth induced by portfolio returns, higher financial wealth can lead to a mechanical increase in the risky share. Although our results are not entirely immune to such inertial behavior, our analyses in Section 4.3 suggest the lottery winners' portfolio responses likely reflect an active decision, as only 24% (12%) of the winnings are retained in bank accounts in the initial year (after one year).

Appendix References

Bach, Laurent, Laurent E Calvet, and Paolo Sodini, "Rich Pickings? Risk, Return, and Skill in Household Wealth," *American Economic Review*, 2020, *110* (9), 2703–2747.

Barillas, Francisco and Jesús Fernández-Villaverde, "A Generalization of the Endogenous Grid Method," *Journal of Economic Dynamics and Control*, 2007, *31* (8), 2698–2712.

Bound, John and Gary Solon, "Double Trouble: On the Value of Twins-Based Estimation of the Return to Schooling," *Economics of Education Review*, 1999, *18*, 169–182.

Brunnermeier, Markus K and Stefan Nagel, "Do Wealth Fluctuations Generate Time-Varying Risk Aversion? Micro-Evidence on Individuals' Asset Allocation," *American Economic Review*, 2008, *98* (3), 713–736.

Calvet, Laurent, Claire Célérier, Paolo Sodini, and Boris Vallée, "Can Security Design Foster Household Risk-Taking?," *Journal of Finance*, August 2023, *78* (4), 1917–1966.

Calvet, Laurent E and Paolo Sodini, "Twin Picks: Disentangling the Determinants of Risk-Taking in Household Portfolios," *Journal of Finance*, 2014, *69* (2), 867–906.

_ , **John Y Campbell, and Paolo Sodini**, "Down or Out: Assessing the Welfare Costs of Household Investment Mistakes," *Journal of Political Economy*, 2007, *115* (5), 707–747.

Calvet, Laurent, John Campbell, Francisco Gomes, and Paolo Sodini, "The Cross-Section of Household Preferences," *NBER Working Paper 28788*, 2021.

_ , **John Y Campbell, and Paolo Sodini**, "Fight or Flight: Portfolio Rebalancing by Individual Investors," *Quarterly Journal of Economics*, 2009, *124* (1), 301–348.

Campbell, John Y, Joao F Cocco, Francisco J Gomes, and Pascal J Maenhout, "Investing Retirement Wealth: A Life-Cycle Model," in "Risk Aspects of Investment-Based Social Security Reform," University of Chicago Press, 2001, pp. 439–482.

Carroll, Christopher D, "Buffer-Stock Saving and the Life Cycle/Permanent Income Hypothesis," *Quarterly Journal of Economics*, 1997, *112* (1), 1–55.

_ , "The Method of Endogenous Gridpoints for Solving Dynamic Stochastic Optimization Problems," *Economics Letters*, 2006, *91* (3), 312–320.

_ **and Andrew A Samwick**, "The Nature of Precautionary Wealth," *Journal of Monetary Economics*, 1997, *40* (1), 41–71.

Choi, James, David Laibson, and Brigitte Madrian, "Mental Accounting in Portfolio Choice: Evidence from a Flypaper Effect," *American Economic Review*, 2009, *99*, 2085–95.

Cocco, Joao F, Francisco J Gomes, and Pascal J Maenhout, "Consumption and Portfolio Choice Over the Life Cycle," *Review of Financial Studies*, 2005, *18* (2), 491–533.

Gomes, Francisco and Alexander Michaelides, "Optimal Life Cycle Asset Allocation: Understanding the Empirical Evidence," *Journal of Finance*, 2005, *60* (2), 869–904.

Griliches, Zvi, "Sibling Models and Data in Economics: Beginnings of a Survey," *Journal of Political Economy*, 1979, *87*, 37–64.

Hines, James and Richard Thaler, "The Flypaper Effect," *Journal of Economic Perspectives*, 1995, *9*, 217–226.

Laun, Tobias and Johanna Wallenius, "A Life Cycle Model of Health and Retirement:The Case of Swedish Pension Reform," *Journal of Public Economics*, 2015, *127*, 127–136.

Nekoei, Arash and David Seim, "How Do Inheritances Shape Wealth Inequality? Theory and Evidence from Sweden," *The Review of Economic Studies*, January 2023, *90* (1), 463–498.

Neumark, David, "Biases in Twin Estimates of the Return to Schooling," *Economics of Education Review*, April 1999, *18* (2), 143–148.

Storesletten, Kjetil, Chris Telmer, and Amir Yaron, "Asset Pricing with Idiosyncratic Risk and Overlapping Generations," *Review of Economic Dynamics*, 2007, *10*, 519–548.

Waldenström, Daniel, "Swedish Stock and Bond Returns, 1856-2012," in Rodney Edvinsson, Tor Jacobson, and Daniel Waldenström, eds., *Historical Monetary and Financial Statistics for Sweden, Volume II:: House Prices, Stock Returns, National Accounts, and the Riksbank Balance Sheet, 1620-2012*, Ekerlids Förlag, 2014.