Online Appendix for "On The Origins of Risk-Taking in Financial Markets"

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This Internet Appendix provides robustness checks and further information about our data. It is arranged in the following order:

1. Creating the Measure of Portfolio Volatility

The portfolio variance is estimated using a two-step procedure. First, the portfolio covariance matrix is estimated using data on monthly returns. Our data collection covers the period from January 1999 to December 2006, but a full history is not available for all securities for various reasons. To handle differences in the length of the series of monthly returns, the covariance matrix is populated element by element. The covariance between any pair of securities is estimated using all available information (Stambaugh, 1997; Page, 2013). For two assets I and J, where I and J have series of historical returns of length L and S, respectively, and $L > S$, the covariance over the longer period is estimated as:

$$\hat{\sigma}_{IJ,L} = \hat{\sigma}_{IJ,S} + \frac{\hat{\sigma}_{IJ,S}}{\hat{\sigma}_{I,S}^2}(\hat{\sigma}_{I,L}^2 - \hat{\sigma}_{I,S}^2)$$

where $\hat{\sigma}_{IJ,S}$ is the sample covariance during the period of overlapping historical returns and $\hat{\sigma}_I^2$ denotes the sample variance of I. The variance ($I = J$) of securities with less than full histories is estimated over the full period by adjusting for differences in the market volatility between the full and the short period.

$$\hat{\sigma}_{J,L}^2 = \hat{\sigma}_{J,S}^2 + \left(\frac{\hat{\sigma}_{MJ,S}}{\hat{\sigma}_{M,S}^2}\right)^2 (\hat{\sigma}_{M,L}^2 - \hat{\sigma}_{M,S}^2),$$

where terms indexed M denote the (co)variance of market returns.[1]

In the second step, the portfolio variance is calculated as the inner product of the estimated covariance matrix ($\widehat{\Sigma}$) and the portfolio value weights (ω):

$$\hat{\sigma}_P^2 = \omega' \, \widehat{\Sigma} \omega$$

For our analysis, we transform the resulting portfolio variance into the annualized portfolio standard deviation.[2]

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[1] We use OMXSPI as a proxy for the market index, a value-weighted index covering all stocks listed on the Stockholm exchange.

[2] $\hat{\sigma}_{P,annual} = \sqrt{\hat{\sigma}_P^2} * \sqrt{12}$

2. Testing the Robustness of Our Baseline Estimates to Specification

2.1 In Table II of the paper, we report marginal effects from probit models. Here we show estimates using a linear probability model to estimate the intergenerational transmission of equity market participation.

Table OA1: Intergenerational Transmission of Equity Market Participation (linear probability model)

	(1)	(2)	(3)	(4)	(5)	(6)
Own Birth Children						
Biological Father	0.209*** (0.001)		0.147*** (0.001)			
Biological Mother		0.239*** (0.001)	0.189*** (0.001)			
Biological Parents				0.225*** (0.001)		
Adopted Children						
Biological Father	0.082*** (0.014)		0.073*** (0.014)		0.076*** (0.014)	
Biological Mother		0.090*** (0.015)	0.079*** (0.015)		0.081*** (0.015)	0.080*** (0.011)
Adoptive Father	**0.153*** (0.013)**		0.109*** (0.013)			
Adoptive Mother		**0.164*** (0.014)**	**0.123*** (0.014)**			
Sum of estimates for biological and adoptive fathers	0.235*** (0.019)		0.182*** (0.019)			
Sum of estimates for biological and adoptive mothers		0.255*** (0.020)	0.202*** (0.021)			
Biological Parents (one if either participates)				0.099*** (0.013)		
Adoptive Parents (one if either participates)				**0.163*** (0.013)**	0.163*** (0.013)	0.158*** (0.009)
Sum of estimates for biological and adoptive parents				0.297*** (0.021)		
Are the coefficients for Own-birth and sum of adopted children statistically different?	NO	NO	NO	YES	N/A	N/A

Notes: Estimation uses data from years 1999-2006 and assets of parents and children are measured in the same year. Separate regressions are run for own-birth children and adopted children. There are 15,493,001 observations (2,074,779 own-birth children) in the first panel and 20,782 observations (3,187 adoptees) in the second panel. In Column (6), the sample size includes 44,150 observations (6,752 adoptees). All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, year of survey dummies, and dummies for child and parent county of residence. In columns (1) - (4), coefficients for adoptive parents are in bold if they are significantly different to the analogous coefficients for biological parents at the 5% level. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

2.2 In Tables II, III, and IV of the paper, we report regressions pooled over the 1999-2006 period. Here we show estimates that include only one observation per person.

Table OA2: Intergenerational Transmission of Equity Market Participation-
Maxima during 1999-2006 (marginal effects from probit)

	(1)	(2)	(3)	(4)	(5)	(6)
Own Birth Children						
Biological Father	0.230***		0.161***			
	(0.001)		(0.001)			
Biological Mother		0.249***	0.199***			
		(0.001)	(0.001)			
Biological Parents				0.273***		
				(0.001)		
Adopted Children						
Biological Father	0.125***		0.122***		0.124***	
	(0.019)		(0.020)		(0.020)	
Biological Mother		0.114***	0.100***		0.103***	0.102***
		(0.020)	(0.021)		(0.021)	(0.013)
Adoptive Father	0.178***		0.131***			
	(0.022)		(0.024)			
Adoptive Mother		**0.176*****	**0.142*****			
		(0.021)	**(0.023)**			
Sum of estimates for biological and adoptive fathers	0.303***		0.253***			
	(0.028)		(0.031)			
Sum of estimates for biological and adoptive mothers		0.290***	0.242***			
		(0.028)	(0.031)			
Biological Parents (one if either participates)				0.156***		
				(0.020)		
Adoptive Parents (one if either participates)				0.210***	0.209***	0.210***
				(0.028)	(0.028)	(0.018)
Sum of estimates for biological and adoptive parents				0.365***		
				(0.034)		
Are the coefficients for Own-birth and sum of adopted children statistically different?	YES	NO	F(YES) M(NO)	YES	N/A	N/A

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. Participation is defined as one if the person holds equities at any point during 1999-2006. There are 2,074,779 own-birth children in the first panel and 3,187 adoptees in the second panel. In Column (6), the sample size includes 6,752 adoptees. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. In columns (1)-(4), coefficients for adoptive parents are in bold if they are significantly different to the analogous coefficients for biological parents at the 5% level. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

Table OA3: Intergenerational Transmission of Risky Share -
Average over 1999-2006, conditional on ever being in the market

	(1)	(2)	(3)	(4)	(5)	(6)
Own Birth Children						
Biological Father	0.152***		0.099***			
	(0.001)		(0.001)			
Biological Mother		0.164***	0.101***			
		(0.001)	(0.001)			
Biological Parents				0.206***		
				(0.001)		
Adopted Children						
Biological Father	0.016		-0.005		-0.009	
	(0.026)		(0.027)		(0.027)	
Biological Mother		0.045*	0.037		0.037	0.012
		(0.025)	(0.026)		(0.026)	(0.016)
Adoptive Father	**0.122***		**0.094***			
	(0.024)		**(0.028)**			
Adoptive Mother		0.089***	0.059**			
		(0.023)	(0.027)			
Sum of estimates for biological and adoptive fathers	0.138***		0.090**			
	(0.033)		(0.038)			
Sum of estimates for biological and adoptive mothers		0.134***	0.096***			
		(0.033)	(0.037)			
Biological Parents				0.040		
				(0.030)		
Adoptive Parents				**0.145***	0.147***	0.173***
				(0.028)	(0.028)	(0.018)
Sum of estimates for biological and adoptive parent				0.184***		
				(0.038)		
Are the coefficients for Own-birth and sum of adopted children statistically different?	NO	NO	NO	NO	N/A	N/A

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. Average share of risky assets is calculated over years in which investments in Stocks or Mutual Funds is positive. There are 1,302,037 own-birth children in the first panel and 1,766 adoptees in the second panel. In Column (6), the sample size includes 3,841 adoptees. All specifications include Controls for Parental Risky Holding and include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents and dummies for child and parent county of residence. In columns (1) - (4), coefficients for adoptive parents are in bold if they are significantly different to the analogous coefficients for biological parents at the 5% level. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

Table OA4: Intergenerational Transmission of Portfolio Volatility -
Average over 1999-2006, conditional on ever being in the market

	(1)	(2)	(3)	(4)	(5)	(6)
Own Birth Children						
Biological Father	0.056***		0.052***			
	(0.001)		(0.001)			
Biological Mother		0.095***	0.092***			
		(0.001)	(0.001)			
Biological Parents				0.132***		
				(0.001)		
Adopted Children						
Biological Father	-0.021		-0.017		-0.015	
	(0.029)		(0.031)		(0.030)	
Biological Mother		0.074**	0.066*		0.067*	0.046*
		(0.033)	(0.034)		(0.034)	(0.024)
Adoptive Father	**0.071***		**0.068***			
	(0.039)		**(0.040)**			
Adoptive Mother		0.077**	0.078*			
		(0.039)	(0.042)			
Sum of estimates for biological and adoptive fathers	0.050		0.051			
	(0.045)		(0.048)			
Sum of estimates for biological and adoptive mothers		0.151***	0.144***			
		(0.051)	(0.054)			
Biological Parents				0.056*		
				(0.033)		
Adoptive Parents				**0.124***	0.122***	0.127***
				(0.043)	(0.043)	(0.028)
Sum of estimates for biological and adoptive parent				0.180***		
				(0.054)		
Are the coefficients for Own-birth and sum of adopted children statistically different?	NO	NO	NO	NO	N/A	N/A

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. Average portfolio volatility is calculated over years in which investments in Stocks or Mutual Funds is positive. There are 1,302,037 own-birth children in the first panel and 1,766 adoptees in the second panel. In Column (6), the sample size includes 3,841 adoptees. All specifications include Controls for Parental Risky Holding and include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents and dummies for child and parent county of residence. In columns (1) - (4), coefficients for adoptive parents are in bold if they are significantly different to the analogous coefficients for biological parents at the 5% level. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

3. Estimates for Risky Share and Portfolio Volatility in a Sample where all Parents Participate

In the paper, we include non-participating parents in Tables III and IV by setting the risky share and portfolio volatility equal to zero for non-participators and including an indicator variable for whether the parent participates. This forces the identification of the effects of parental risky share and portfolio volatility to come from participating parents while allowing us to maintain reasonable sample sizes for adoptees. Here, in Table OA5, we verify this approach by showing estimates when we omit cases with non-participating parents.

For own-birth children, we see that the estimates are almost identical to those in Tables III and IV. For adoptees, the estimates are quite uninformative due to high standard errors except when we do household-level analysis in columns (4) and (8). Here, we have sufficient observations to see that the estimates are the same as the equivalent ones in Tables III and IV.

Table OA5: Intergenerational Transmission of Risky Share and Portfolio Volatility -
Including Only Cases in Which All Parents Participate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Risky Share				Portfolio Volatility			
Own Birth Children								
Biological Father	0.184***		0.130***		0.069***		0.065***	
	(0.001)		(0.001)		(0.001)		(0.001)	
Biological Mother		0.196***	0.146***			0.104***	0.093***	
		(0.001)	(0.001)			(0.001)	(0.001)	
Biological Parents				0.231***				0.133***
				(0.001)				(0.001)
Adopted Children								
Biological Father	-0.055		-0.072		0.007		0.031	
	(0.066)		(0.109)		(0.042)		(0.051)	
Biological Mother		-0.004	0.008			0.103	0.141	
		(0.068)	(0.106)			(0.080)	(0.114)	
Adoptive Father	0.097		0.044		0.117*		0.079	
	(0.066)		(0.095)		(0.070)		(0.087)	
Adoptive Mother		0.051	0.019			0.138*	0.089	
		(0.071)	(0.090)			(0.074)	(0.101)	
Biological Parents				0.005				0.031
				(0.029)				(0.025)
Adoptive Parents				0.186***				0.166***
				(0.025)				(0.029)

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. The regressions are limited to those cases where all parents hold risky assets. In Columns (1)-(3) and (5)-(7) there are 2,824,431 observations in the first panel and 593 observations in the second panel. In Columns (4) and (8) there are 4,575,000 observations in the first panel and 5,684 observations in the second panel. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

4. Alternative Method of Imputing Bank Accounts

In the paper, we impute missing bank account information by predicting cash balances based on observable characteristics. We follow Calvet et al. (2007) and Calvet and Sodini (2014) and impute bank account balances for persons without a bank account using the subsample of individuals for which we observe the bank account balance even though the earned interest is less than 100 kronor. We regress the balance onto the following observable characteristics: age and age squared, household size, real estate wealth, level and squared level of disposable income, and financial wealth other than bank accounts. We use the coefficients from this regression to impute the account balances of individuals who report no bank account.

Here, we report estimates where we use an alternative imputation procedure in which we allocate our estimate of missing cash balances equally amongst all individuals. The imputation procedure has no effect on our definition of holding risky assets (participation in the stock market) and also has no effect on portfolio volatility conditional on participation. Therefore, the only estimates in the paper that may be influenced by this imputation method are those for the risky share. Table OA6 below provides estimates that are analogous to our baseline estimates in Table III but which use this alternative method of imputation. The estimates are very similar to those in Table III.

Table OA6: Intergenerational Transmission of Risky Share (Alternative Method of Imputing Bank Accounts)

	(1)	(2)	(3)	(4)	(5)	(6)
Own Birth Children						
Biological Father	0.175***		0.128***			
	(0.001)		(0.001)			
Biological Mother		0.189***	0.144***			
		(0.001)	(0.001)			
Biological Parents				0.225***		
				(0.001)		
Adopted Children						
Biological Father	-0.011		-0.034		-0.033	
	(0.027)		(0.027)		(0.027)	
Biological Mother		0.045	0.031		0.025	-0.008
		(0.032)	(0.032)		(0.032)	(0.021)
Adoptive Father	**0.157***		**0.102***			
	(0.022)		**(0.024)**			
Adoptive Mother		**0.144***	0.094***			
		(0.024)	(0.027)			
Sum of estimates for biological and adoptive fathers	0.146***		0.068*			
	(0.034)		(0.036)			
Sum of estimates for biological and adoptive mothers		0.188***	0.125***			
		(0.040)	(0.041)			
Biological Parents				0.005		
				(0.026)		
Adoptive Parents				**0.178***	0.178***	0.192***
				(0.023)	(0.023)	(0.016)
Sum of estimates for biological and adoptive parent				0.183***		
				(0.033)		
Are the coefficients for Own-birth and sum of adopted children statistically different?	NO	NO	F(YES) M(NO)	NO	N/A	N/A

Notes: See Table 3.

5. Measuring Child Outcomes at the Household Level

In the paper, we measure child investment behavior at the individual-level. In Table OA7 below, we measure it at the household level. So, if the child is married, participation is defined as one if either spouse participates in the stock market, and the risky share and portfolio volatility are calculated over the household portfolio. The table below shows the estimates for adoptees.

Table OA7: Intergenerational Transmission of Equity Market Participation, Risky Share, and Portfolio Volatility - Outcomes measured at the Child Household Level

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Equity Market Participation			Risky Share			Portfolio Volatility		
Biological Father	0.077***		0.068***	0.001		-0.023	0.015		0.015
	(0.016)		(0.016)	(0.026)		(0.026)	(0.023)		(0.022)
Biological Mother		0.096***	0.087***		0.044	0.038		0.041	0.033
		(0.017)	(0.017)		(0.030)	(0.030)		(0.034)	(0.035)
Adoptive Father	0.153***		0.113***	0.141***		0.085***	0.056***		0.054**
	(0.015)		(0.016)	(0.021)		(0.022)	(0.023)		(0.022)
Adoptive Mother		0.158***	0.117***		0.140***	0.099***		0.064***	0.049*
		(0.015)	(0.016)		(0.023)	(0.025)		(0.028)	(0.028)

Notes: Estimation uses data from years 1999-2006. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by raising family.

6. Using a Narrower Definition of Stock-Holding -- Directly Held Stocks

In the paper, we focus on a broad measure of equity holding that includes both holdings of individual stocks and mutual funds with a stock component. Here, we show that the findings are robust to instead using a narrower definition of directly held individual stocks. The share of directly held stocks is the proportion of financial wealth that is invested in directly held stocks, conditional on holding stocks directly.

Table OA8: Intergenerational Transmission of Direct Stock Holding

	(1)	(2)	(3)	(4)	(5)	(6)
	Direct Stock Holding			Share of Directly Held Stocks		
Own Birth Children						
Biological Father	0.192***		0.140***	0.243***		0.185***
	(0.001)		(0.001)	(0.002)		(0.002)
Biological Mother		0.213***	0.166***		0.285***	0.222***
		(0.001)	(0.001)		(0.002)	(0.002)
Adopted Children						
Biological Father	0.057***		0.052***	-0.060		-0.049
	(0.015)		(0.015)	(0.047)		(0.046)
Biological Mother		0.075***	0.066***		-0.008	-0.027
		(0.018)	(0.018)		(0.070)	(0.066)
Adoptive Father	0.155***		0.110***	0.242***		0.170***
	(0.014)		(0.014)	(0.039)		(0.039)
Adoptive Mother		0.166***	0.122***		0.295***	0.217***
		(0.014)	(0.015)		(0.046)	(0.048)

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by raising family.

Table OA9: Intergenerational Transmission of Direct Stock Holding

Male Children

	(1)	(2)	(3)	(4)	(5)	(6)
	Direct Stock Holding			Share of Directly Held Stocks		
Own Birth Children						
Biological Father	0.219***		0.166***	0.236***		0.185***
	(0.001)		(0.001)	(0.002)		(0.002)
Biological Mother		0.230***	0.176***		0.262***	0.199***
		(0.001)	(0.001)		(0.002)	(0.002)
Adopted Children						
Biological Father	0.053**		0.039	-0.048		-0.044
	(0.024)		(0.024)	(0.065)		(0.059)
Biological Mother		0.088***	0.090***		-0.095	-0.041
		(0.027)	(0.029)		(0.080)	(0.072)
Adoptive Father	0.180***		0.139***	0.252***		0.173***
	(0.020)		(0.026)	(0.049)		(0.048)
Adoptive Mother		0.166***	0.108***		0.244***	0.184***
		(0.021)	(0.025)		(0.061)	(0.065)

Female children

	(1)	(2)	(3)	(4)	(5)	(6)
	Direct Stock Holding			Share of Directly Held Stocks		
Own Birth Children						
Biological Father	0.160***		0.110***	0.255***		0.184***
	(0.001)		(0.001)	(0.002)		(0.002)
Biological Mother		0.189***	0.150***		0.318***	0.253***
		(0.001)	(0.001)		(0.003)	(0.003)
Adopted Children						
Biological Father	0.063***		0.057***	-0.089		-0.065
	(0.018)		(0.015)	(0.062)		(0.049)
Biological Mother		0.058**	0.041**		0.105	0.157*
		(0.024)	(0.019)		(0.080)	(0.087)
Adoptive Father	0.122***		0.059***	0.224***		0.060
	(0.017)		(0.014)	(0.052)		(0.049)
Adoptive Mother		0.171***	0.112***		0.388***	0.269***
		(0.018)	(0.011)		(0.056)	(0.057)

Notes: Estimation uses data from years 1999-2006. Separate regressions are run for own-birth children and adopted children. All specifications include controls for child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by raising family.

7. Measuring Equity Holding in Different Years

This table shows the impact of measuring equity holding in various years for the child and for the parents. Column (1) shows our baseline estimates from Tables II, III, and IV. In column (2), we measure parental investments in 1999 and child investments in 2006. In column (3), we make the age at measurement of biological and adoptive parents more comparable by measuring investments of biological parents in 2006 and investments of adoptive parents in 1999.

Table OA10: Measuring Equity Holding in Different Years

	(1)	(2)	(3)
	Panel A: Equity Market Participation		
Biological Father	0.078***	0.079***	0.077***
	(0.015)	(0.016)	(0.021)
Biological Mother	0.081***	0.070***	0.066***
	(0.016)	(0.018)	(0.024)
Adoptive Father	0.124***	0.105***	0.104***
	(0.015)	(0.017)	(0.025)
Adoptive Mother	0.133***	0.109***	0.113***
	(0.015)	(0.016)	(0.027)
	Panel B: Risky Share		
Biological Father	-0.027	-0.037	-0.062
	(0.028)	(0.033)	(0.038)
Biological Mother	0.036	0.042	0.021
	(0.032)	(0.032)	(0.036)
Adoptive Father	0.100***	0.092***	0.096**
	(0.025)	(0.026)	(0.044)
Adoptive Mother	0.095***	0.084***	0.072*
	(0.027)	(0.027)	(0.042)
	Panel C: Portfolio Volatility		
Biological Father	0.012	0.014	0.014
	(0.019)	(0.022)	(0.024)
Biological Mother	0.062	0.050	0.050
	(0.034)*	(0.035)	(0.041)
Adoptive Father	0.071***	0.074***	0.074***
	(0.021)	(0.024)	(0.026)
Adoptive Mother	0.064**	0.069**	0.066**
	(0.025)	(0.027)	(0.033)
Year biological parents	All Years	1999	2006
Year Adoptive parents	All Years	1999	1999
Year Child	All Years	2006	2006

Notes: All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, and dummies for child and parent county of residence. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by adoptive family.

8. Missing Fathers

Here we compare estimates for mothers both for cases where the biological father is known and cases where he is unknown. Including observations with missing father information approximately doubles the sample size but has very little effect on the coefficients for equity market participation or portfolio volatility. For the risky share, the evidence for environmental rather than genetic effects is stronger in the less selected sample. This suggests that restricting the sample in the paper to cases with information on biological fathers does not bias estimates in favor of finding environmental effects.

Table OA11. Intergenerational Transmission of Equity Market Participation, Risky Share, and Portfolio Volatility - Full Sample of Adoptees

	(1)	(2)	(3)	(4)	(5)	(6)
	Equity Market Participation		Risky Share		Portfolio Volatility	
Biological mother	0.091***	0.083***	0.051	0.000	0.064*	0.054
	(0.016)	(0.011)	(0.031)	(0.021)	(0.034)	(0.022)**
Adoptive mother	0.176***	0.182***	0.141***	0.171***	0.076***	0.079***
	(0.014)	(0.010)	(0.024)	(0.017)	(0.025)	(0.017)
Cases with unknown biological father included	No	Yes	No	Yes	No	Yes

Notes: Estimation uses data from years 1999-2006 and assets of parents and children are measured in the same year. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological mothers, year of survey dummies, and dummies for child and mother county of residence. In Column (1), the sample size includes 20,782 observations (3,187 adoptees). In Column (2), the sample size includes 44,150 observations (6,752 adoptees). In Columns (3) and (5), there are 6,996 observations (1,766 adoptees). In Columns (4) and (6), the sample size includes 15,530 observations (3,841 adoptees). *** p<0.01, ** p<0.05, * p<0.1. Standard errors clustered by adoptive family.

9. Differential Effects by Whether Adoptive Parents Remain Married

A proportion of adoptive parents subsequently split up and, thus, the adoptive father may have limited influence on the child. Of our sample of adopted children with parents alive in 2000, 87% have adoptive parents who are still together in 2000. When we allow the effects of parents to differ depending on whether the adoptive parents are still together, we find some evidence that the effects are larger for adoptive mothers and smaller for adoptive fathers if the adoptive couple has split. This is consistent with mothers being more likely to have custody of children. For adoptive parents who have not split, the estimates are similar to those in Tables II, III, and IV in the paper.

Table OA12: Intergenerational Transmission of Equity Market Participation, Risky Share, and Portfolio Volatility - The Effect of Adoptive Parents Not Being Married Together When The Outcomes Are Measured

	(1)	(2)	(3)
	Equity Market Participation	Risky Share	Portfolio Volatility
Biological Father	0.073***	-0.027	0.012
	(0.014)	(0.028)	(0.019)
Biological Mother	0.080***	0.036	0.062*
	(0.015)	(0.032)	(0.034)
Adoptive Father	0.116***	0.119***	0.067***
	(0.015)	(0.026)	(0.021)
Adoptive Mother	0.121***	0.079***	0.048*
	(0.015)	(0.028)	(0.026)
Adoptive parents not married	0.008	0.058*	-0.009
	(0.026)	(0.030)	(0.012)
Interaction adoptive father*not married	-0.049	-0.134**	0.049
	(0.035)	(0.057)	(0.056)
Interaction adoptive mother*not married	-0.004	0.070	0.107*
	(0.035)	(0.064)	(0.057)

Notes: Equity Market Participation regression is a linear probability model. Estimation uses data from years 1999-2006 and assets of parents and children are measured in the same year. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, year of survey dummies, and dummies for child and parent county of residence. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by adoptive family.

10. Intergenerational Transmission of Asset holding of Own-birth Siblings of Adoptees

One objection to adoption studies is that adoptive parents may be people with a very high desire for children and who are particularly nurturing parents. If so, one would expect non-adopted siblings of adoptees to have higher transmission from their parents than own-birth children in general. Table OA13 examines this issue and finds no evidence for this.

Table OA13: Intergenerational Transmission of Equity Market Participation, Risky Share, and Portfolio Volatility - Own-birth Siblings of Adoptees

	(1)	(2)	(3)
	Equity Market Participation	Risky Share	Portfolio Volatility
Biological father	0.100***	0.069*	0.030
	(0.022)	(0.039)	(0.020)
Biological mother	0.179***	0.157***	0.097**
	(0.028)	(0.043)	(0.044)

Notes: Estimation uses data from years 1999-2006 and assets of parents and children are measured in the same year. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive parents, year of survey dummies, and dummies for child and adoptive parents county of residence. In Column (1), the sample size includes 5,950 observations. In Columns (2) and (3), the sample size includes 2,495 observations. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by raising family.

11. Heterogeneous Effects by Adoptive Parents' Characteristics

Here we split the sample by adoptive parental SES and by the age difference between adoptive parents and their children to examine whether these factors affect the degree of intergenerational transmission. As we can see in Table OA14, there are no strong systematic patterns.

Table OA14: Heterogeneous Effects by Adoptive Parents' Characteristics

	(1)	(2)	(3)	(4)	(5)	(6)
	Poorer adoptive families	Richer adoptive families	Less Educated adoptive families	More Educated adoptive families	Smaller age difference	Bigger age difference
			Panel A: Equity Market Participation			
Biological Father	0.075***	0.076***	0.095***	0.051**	0.057***	0.121***
	(0.019)	(0.022)	(0.019)	(0.023)	(0.020)	(0.019)
Biological Mother	0.079***	0.085***	0.093***	0.070***	0.085***	0.082***
	(0.019)	(0.023)	(0.020)	(0.024)	(0.022)	(0.021)
Adoptive Father	0.094***	0.146***	0.122***	0.109***	0.096***	0.160***
	(0.017)	(0.025)	(0.019)	(0.025)	(0.020)	(0.018)
Adoptive Mother	0.115***	0.122***	0.118***	0.158***	0.112***	0.130***
	(0.018)	(0.023)	(0.019)	(0.024)	(0.020)	(0.019)
			Panel B: Risky Share			
Biological Father	0.033	-0.058	-0.033	-0.017	-0.024	-0.035
	(0.039)	(0.038)	(0.038)	(0.041)	(0.039)	(0.039)
Biological Mother	0.004	0.010	0.059	0.028	0.067	-0.020
	(0.041)	(0.045)	(0.043)	(0.046)	(0.047)	(0.044)
Adoptive Father	0.084**	0.124***	0.129***	0.087**	0.104***	0.061
	(0.034)	(0.035)	(0.032)	(0.036)	(0.032)	(0.037)
Adoptive Mother	0.062*	0.107***	0.052	0.128***	0.034	0.114***
	(0.036)	(0.038)	(0.034)	(0.040)	(0.038)	(0.038)
			Panel C: Portfolio Volatility			
Biological Father	-0.004	-0.025	0.035	-0.020	0.018	0.008
	(0.044)	(0.042)	(0.028)	(0.029)	(0.028)	(0.027)
Biological Mother	0.066**	0.095**	-0.000	0.094*	0.033	0.075
	(0.029)	(0.031)	(0.036)	(0.054)	(0.038)	(0.053)
Adoptive Father	0.077**	0.084***	0.058**	0.088***	0.081***	0.053*
	(0.031)	(0.028)	(0.029)	(0.030)	(0.031)	(0.029)
Adoptive Mother	0.041	0.073**	0.047	0.071**	0.059	0.064**
	(0.047)	(0.034)	(0.037)	(0.035)	(0.041)	(0.032)

Notes: Estimation uses data from years 1999-2006. All specifications include controls for child gender, child birth cohort FE, dummies for child county of residence, and birth cohort FE and dummies for parent county of residence for included adoptive and biological parents. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by adoptive family. The median average net wealth of adoptive mothers and fathers is 1,041,814 SEK (deflated to 2000 values). The median average education of adoptive mothers and fathers is 11 years. The median difference between the average age of adoptive parents and their adopted children is 32.5 years. Each sample split is done at the median.

12. Fairlie-Blinder-Oaxaca Decomposition of the Secondary Effects of Parental Participation on Children's Equity Market Participation

We have implemented the decomposition developed by Fairlie (2005) and recently used in the finance literature by Grinblatt et al. (2011). This decomposition informs about whether the effect of parental market participation is mediated through other variables. For example, adoptive parents who participate may have children with higher financial wealth, which may then lead the children to be more likely to participate. We do this firstly using just child variables in order to understand the quantitative effects played by mediating variables. However, we also implement it using the full set of child and adoptive parent explanatory variables to get a more complete picture of transmission mechanisms. To do so, we run a regression but omit the parental risk-taking variables, using the resultant estimates to calculate the predicted probability of child participation by participation level of adoptive parents.[3] Because the decomposition technique is designed for a single categorical variable, we implement it using pooled behavior of adoptive mothers and fathers and we only provide results for risky asset market participation.

The results are in Table OA15 below. There is a 19 percentage point difference in child participation between children of adoptive parents who participate and children of adoptive parents who don't. In column (1) we see that group mean differences in the child controls explain just over half of this difference with 5 percentage points due to financial wealth differences and about 2 percentage points each due to income and schooling differences. The other child controls explain little. These estimates are consistent with our finding in the paper that child financial wealth is the primary mediating variable for effects of adoptive parental participation on that of their children. In column (3) we add equivalent control variables for the adoptive parents. Also consistent with our findings in the paper, these have little explanatory power.

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[3] We implement this using the STATA ado file *fairlie*.

Table OA15: Fairlie-Blinder-Oaxaca Decomposition of the Secondary Effects of Parental Participation on Children's Equity Market Participation

	(1)	(2)	(3)	(4)
Panel A	Decomposition Estimates, %	z-value	Decomposition Estimates, %	z-value
Child characteristics				
Log (financial wealth)	5.01	24.97	5.42	26.01
Log (real estate wealth)	0.39	3.08	0.37	3.36
Log (income)	2.09	3.87	1.95	2.74
Schooling	1.53	6.61	1.71	7.11
Gender	0.21	7.91	0.35	7.94
Entrepreneurship	0.20	1.69	0.19	1.83
Cohort	0.24	2.39	0.26	2.90
Panel B				
Adoptive parents' characteristics				
Log (financial wealth)			1.03	2.80
Log (real estate wealth)			0.21	0.30
Log (income)			0.54	6.70
Schooling			0.21	1.29
Entrepreneurship			0.10	1.55
Cohort			0.14	0.98
Parental equity market participation=0 participation rate	31.69		31.69	
Parental equity market participation=1 participation rate	50.69		50.69	
Explained difference in participation rate	9.67		12.48	
Unexplained difference in participation rate	9.33		6.52	

Notes: This analysis measures how much of the difference in stock market participation rates between children of adoptive parents who participate and children of adoptive parents who don't can be explained by differences in control variables such as education, income, and financial wealth. We first estimate a probit regression of a child stock market participation dummy against all control variables, omitting the control for whether their adoptive parents participate. We save the *z*-scores from this regression and translate them into predicted participation rates for the two groups (parents who participate and parents who don't). Marginal effects are the sequence of changes in predicted child participation rates obtained by sequentially changing each control variable's value from its group mean for non-participating adoptive parents to its mean for participating adoptive parents. The sequence of changes in the control variables is randomized, repeated, and averaged to obtain marginal changes in participation rates and test statistics. Panel A reports on an analysis of participation rate differences using only child controls. Panel B reports on analysis using characteristics of both children and adoptive parents.

13. Variable Definition and Variance Decomposition for Appendix Table AVIII

We closely follow Calvet and Sodini (2014) in defining the variables in Appendix Table AVIII. Details can be found in the Online Appendix that accompanies their paper: http://houseoffinance.se/sodini-paolo/wp-content/uploads/sites/7/2015/09/appendix20130726.pdf

Unlike Calvet and Sodini (2014), our dependent variables are defined at the individual rather than at the household level. Therefore, we also we run the labor income regressions at the individual level and our vector of characteristics include household size, marital status, age, and unemployment and entrepreneurship dummies.

To estimate labor income shocks and Human Capital we use n = 5, as in Calvet and Sodini (2014), which means that for estimation in 1999 we go back until 1995. This imposes a requirement on the age of adoptees, as we would like them to have non-financial disposable income starting in 1995. Since the younger cohorts of adoptees in our sample are very unlikely to generate any non-financial disposable income starting in 1995, we restrict this analysis to adoptees born 1970 and earlier so that the youngest group of adoptees is 25 in 1995.

In Table OA16, we provide a decomposition of the adjusted R^2 for the regressions reported in Appendix Table AVIII in the paper. Consistent with our findings in the paper, this table shows that parental investment behavior has significant explanatory power, even after controlling for a comprehensive set of child variables in the regressions. Also, the explanatory power of the adoptive parental variables exceeds that of those for biological parents.

Table OA16: Variance Decomposition of the Adjusted R^2

	Column (2)	Column (4)	Column (6)
Adjusted R squared	29.5%	22.3%	16.9%
Contribution of the variance of:			
Child characteristics except cohort and county of residence	18.2%	5.5%	4.7%
Child's cohort and county of residence	1.1%	2.9%	2.3%
Biological parent's equity market participation	1.7%	0.5%	0.8%
Adoptive parent's equity market participation	4.2%	1.9%	2.0%
Biological parent's risky share	N/A	0.8%	N/A
Adoptive parent's risky share	N/A	5.0%	N/A
Biological parents' portfolio volatility	N/A	N/A	0.2%
Adoptive parents' portfolio volatility	N/A	N/A	1.8%
Parent's cohort and county of residence	0.6%	0.8%	0.6%
Year effects	3.7%	4.9%	4.5%

Notes: See Appendix Table AVIII for details.

14. Summary Statistics, Conditional on Equity Market Participation

Table OA17: Summary Statistics, Conditional on Equity Market Participation

	Own-birth children			Adopted children		
	Mean	Median	SD	Mean	Median	SD
	Children					
Financial wealth*	171,034	47,903	1,535,795	198,873	40,805	863,985
Net wealth*	327,695	86,172	2,091,260	418,339	109,265	1,184,980
Risky share	0.52	0.54	0.30	0.49	0.51	0.31
Portfolio volatility	0.21	0.17	0.15	0.21	0.17	0.12
Age	32.80	32	8.14	34.97	35	6.55
Earnings**	183,678	183,922	179,892	192,525	188,900	180,851
Years of schooling	12.82	12	2.17	12.44	12	2.19
Birth order (in raising family)	1.64	1	0.81	1.29	1	0.57
Married	0.32	0	0.47	0.36	0	0.48
Household size (own family)	2.37	2	1.58	2.42	2	1.43
Household size (raising family)	4.32	4	1.04	3.74	4	0.80
Female	0.47	0	0.50	0.47	0	0.50
Observations		1,181,845			1,593	
	Biological parents					
Financial wealth, mother*	332,043	137,666	5,282,677	208,497	73,664	426,038
Net wealth, mother*	666,667	356,598	5,606,063	425,569	207,513	684,301
Financial wealth, father*	479,878	165,093	2,999,003	389,433	111,960	1,083,986
Net wealth, father*	1,097,405	617,414	6,012,158	785,748	363,187	1,816,630
Risky share, mother	0.54	0.56	0.29	0.48	0.50	0.30
Risky share, father	0.52	0.54	0.31	0.48	0.47	0.31
Portfolio volatility, mother	0.16	0.15	0.09	0.17	0.15	0.10
Portfolio volatility, father	0.18	0.16	0.11	0.20	0.17	0.14
Parents married together****	0.72	1	0.45	0.08	0	0.27
Age, mother	59.15	58	8.67	57.68	57	6.89
Age, father	61.83	61	9.22	60.66	60	8.00
Earnings, mother***	49,611	48,795	23,892	51,174	50,396	21,015
Earnings, father***	78,745	68,177	53,117	69,424	63,155	41,005
Years of schooling, mother	11.20	11	3.02	10.53	11	2.77
Years of schooling, father	10.95	11	3.24	10.33	11	2.98
	Adoptive parents					
Financial wealth, mother*				458,070	206,622	1,094,821
Net wealth, mother*				798,963	465,048	1,433,748
Financial wealth, father*				636,066	211,469	3,178,404
Net wealth, father*				1,310,989	746,856	4,299,809
Risky share, mother				0.55	0.58	0.29
Risky share, father				0.52	0.54	0.30
Portfolio volatility, mother				0.15	0.15	0.08
Portfolio volatility, father				0.17	0.15	0.10
Parents married together****				0.87	1	0.34
Age, mother				65.97	66	7.72
Age, father				68.71	69	8.04
Earnings, mother***				43,799	41,496	23,614
Earnings, father***				76,680	66,872	51,387

Years of schooling, mother	10.98	11	3.19
Years of schooling, father	11.21	11	3.36

The table reports summary statistics of the main financial and demographic characteristics of our sample of analysis at the end of 2000, conditional on participating in the equity market. Summary Statistics for children (parents) is conditional on children (parents) participating in the equity market. * All monetary values are reported in Swedish Krona on December 31, 2000. At the time, the exchange rate was 1 USD = 9.42 SEK. ** We measure earnings for children when they are aged 34-36. *** The variable is the average earnings between 1980 and 1999. **** Conditional on either parent participating in the market.

15. The Logit regression used for reweighting the sample in Table AVII

Table OA18: Logit Coefficient Estimates Used for Reweighting The Sample

	Logit Coefficient
Oldest child in the raising family	0.328***
	(0.032)
Only child in the raising family	0.948***
	(0.034)
Biological parents in the 2nd quartile of parental financial wealth dist.	-4.048***
	(0.074)
Biological parents in the 3rd quartile of parental financial wealth dist.	-6.214***
	(0.093)
Biological parents in the 4th quartile of parental financial wealth dist.	-6.847***
	(0.224)
Raising parents in the 2nd quartile of parental financial wealth dist.	3.796***
	(0.078)
Raising parents in the 3rd quartile of parental financial wealth dist.	5.577***
	(0.095)
Raising parents in the 4th quartile of parental financial wealth dist.	6.204***
	(0.213)
Biological parents in the 2nd quartile of parental schooling dist.	-0.717***
	(0.056)
Biological parents in the 3rd quartile of parental schooling dist.	-2.827***
	(0.080)
Biological parents in the 4th quartile of parental schooling dist.	-6.329***
	(0.151)
Raising parents in the 2nd quartile of parental schooling dist.	0.634***
	(0.056)
Raising parents in the 3rd quartile of parental schooling dist.	2.575***
	(0.078)
Raising parents in the 4th quartile of parental schooling dist.	5.441***
	(0.144)
Biological parents in the 2nd quintile of parental age dist.	-6.102***
	(0.193)
Biological parents in the 3rd quintile of parental age dist.	-10.921***
	(0.212)
Biological parents in the 4th quintile of parental age dist.	-16.105***
	(0.232)
Biological parents in the 5th quintile of parental age dist.	-23.253***
	(0.371)
Raising parents in the 2nd quintile of parental age dist.	7.249***
	(0.209)
Raising parents in the 3rd quintile of parental age dist.	13.029***
	(0.228)
Raising parents in the 4th quintile of parental age dist.	18.207***
	(0.246)
Raising parents in the 5th quintile of parental age dist.	23.976***
	(0.352)

Notes: The dependent variable here is a dummy equal to 1 if a child is an adoptee. There are 98,730 observations in the sample that includes all adoptees and a 0.5 percent random sample of own-birth children. Pseudo R-squared is equal to 0.63. All right hand side variables are dummies. Parental schooling distribution is based on the average schooling of father and mother. Parental age distribution is based on the average age of father and mother. *** p<0.01, ** p<0.05, * p<0.1.

16. Differential Effects by Whether Adoptive Children raised as only children

Table OA19: Intergenerational Transmission of Equity Market Participation, Risky Share, and Portfolio Volatility - Split Based on the Adoptee's Number of Siblings in the Raising Family

	(1)	(2)	(3)	(4)	(5)	(6)
	Equity Market Participation		Risky Share		Portfolio Volatility	
	Num. of siblings=0	Num. of siblings>0	Num. of siblings=0	Num. of siblings>0	Num. of siblings=0	Num. of siblings>0
Biological Father	0.090***	0.088***	0.046	-0.054	0.028	0.006
	(0.026)	(0.018)	(0.044)	(0.036)	(0.032)	(0.025)
Biological Mother	0.079***	0.070***	-0.007	0.064	0.096	0.037
	(0.015)	(0.020)	(0.049)	(0.041)	(0.059)	(0.043)
Adoptive Father	0.109***	0.120***	0.128	0.099	0.022	0.088
	(0.013)	(0.019)	(0.045)***	(0.030)***	(0.029)	(0.029)***
Adoptive Mother	0.123***	0.125***	0.072	0.070	0.117	0.042
	(0.014)	(0.019)	(0.044)	(0.034)**	(0.048)**	(0.032)
Observations	8,132	12,650	2,949	4,047	2,949	4,047

Notes: All estimates are from specifications relating the portfolio choices of children to the analogous variable for their parents. Estimation uses data from years 1999-2006 and assets of parents and children are measured in the same year. Number of siblings is the adoptee's number of siblings in the raising family. All specifications include controls for child's gender, child birth cohort FE, birth cohort FE for adoptive and biological parents, year of survey dummies, and dummies for child and parent county of residence. In columns (3) - (6), the sample is restricted to children who have investments in Stocks or Mutual Funds and specifications include controls for parental equity market participation. *** $p<0.01$, ** $p<0.05$, * $p<0.1$. Standard errors clustered by adoptive family.

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