# How do households invest on behalf of their children? Evidence from a robo-advisor *

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**Abstract**

Despite the practice being commonplace, little is known about how parents invest in financial markets on behalf of their children. Using a large dataset from the leading French robo-advisor, we find that fathers are more likely to open investment accounts for their sons than their daughters for those aged 12 and above. Since fathers predominantly manage children's contracts within the family, this results in a higher number of savings contracts opened for boys. Additionally, although fathers tend to choose riskier investment profiles for their children compared to mothers, no discernible difference in investment strategy is observed between sons and daughters for either parent.

J.E.L. codes:

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# 1 Introduction

Governments around the world encourage residents to invest on behalf of their children through awareness campaigns or tax-advantage savings and investment accounts like the 529 Plan in the USA, the Junior SIPP in the UK, and the Livret Jeune in France. In those countries and others, laws distinguish assets owned by parents and assets owned by children and custodied by parents until age of majority. However, despite the practice being commonplace, how parents manage child investment accounts has not received attention in the household finance literature.

This paper studies the way child saving accounts are opened and managed by parents and focuses on age and gender differences. Do fathers or mothers subscribe child accounts? Do they choose riskier investment portfolios for their sons or daughters? To answer those questions, we use extensive data from the leading robo-advisor operating in France over the period 2017-2022. We link 3000 child investment accounts with their parent's own accounts and exploit a rich set of information about parent's income and wealth, risk preferences, liquidity need and financial literacy in addition to sex and age.

We find that fathers are more likely to open investment accounts for their sons than their daughters for teenagers aged 12 and above. As fathers subscribe 4 child contracts out of 5, this son preference results in a higher number of savings contracts opened for boys. Additionally, although fathers tend to choose riskier investment profiles than mothers for their children, no discernible difference in investment strategy is observed between sons and daughters for either parent.

The questions raised and the results found by the paper are important for several reasons. First, it is of prime importance to assert to what extent the

traditional and common practice of gender bias in wealth transmission found in Western societies has regressed, thanks to evolving laws, cultural norms, and societal changes. Most legal systems have evolved to ensure equal treatment of sons and daughters in inheritance matters. In France, the Civil Code stipulates that the hereditary reserve (*réserve héréditaire*) should be split among children, regardless of gender. Cultural norms have also shifted toward more equal treatment for boys and girls on a variety of dimensions including financial capacity. Our results are consistent with the persistence of within-family differential treatment between boys and girls with respect to wealth management and transmission.

Second, the choice by parents of the child account's risk profile is akin to a principal-agent relationships in which the problem of moral hazard and incentives misalignment are presumably minimized thanks to parents' altruism and investment of their own money. However the portfolio delegation problem may still lead parents to choose inadequate risk level for their children. Experimental evidence suggest that people are weakly more risk-averse when dealing with others' money (Eriksen et al., 2020; Eriksen and Kvaløy, 2010). Using a dataset of saving accounts, Direr and Visser (2016) show that male financial advisors lead their customers to invest more in risky assets compared to female advisors. The present study finds a similar result transposed to parental relationship in which fathers choose riskier portfolio for their children than mothers do. A child may therefore obtain different financial risk exposition whether the father or the mother is in charge of the account.

Third, there is evidence that investing on behalf of children aids the intergenerational transmission of financial values and education. A sizeable literature documents a correlation between parents' and children's risk preferences, saving behaviors, and asset ownership (Dohmen et al., 2011, Charles and Hurst, 2003, Kimball et al., 2009, Arrondel, 2013, Fagereng, 2021). Opening an investment contract on behalf of one's child may establish lifelong financial habits, strengthen his propensity to save, signals trust in financial markets and provide first-hand financial experience and education. Jorgensen and Savla (2010) show

that the financial socialization from parents significantly influence the financial literacy of young adults. Webley and Nyhus (2006) find that parental influences play a significant role in shaping children's attitudes towards saving. Our results indicate that fathers favor their sons in matters of financial transmission and education.

Fourth, a key financial choice for which early gender differences may appear is the risk profile chosen by parents on behalf of their children. Traditional gender norms may influence the way parents treat their children in the context of risk-taking behavior. It's often perceived that boys are encouraged to be more adventurous, while girls are often guided towards being more cautious. For instance, studies show that parents are more likely to allow risky behaviors like driving (Caswell et al., 2015), riding all-terrain vehicle or fighting (Rosvall et al., 2018) for their sons than daughters. Research also suggests that confidence in financial decision-making can be lower among women (Barber and Odean, 2000), which could potentially be linked to childhood experiences and parental influences. In contrast, the present study does not find any differential treatment between boys and girls with regard to portfolio risk.

Fifth, another interesting research question is who within the family is in charge of managing children's saving. Within households, women spend more time in childcare on average whereas men make the majority of the household investment decisions. Because investing on behalf of children is a behavior that is at once both childcare and household investment, it is not immediately clear how this responsibility will be borne by households. Our results show that men are disproportionately in charge of managing child investment accounts.

More generally, a broad literature points to gender differences in financial markets. Significant gender gaps have been observed in the participation to financial markets (Zitzewitz, 2007, Ke, 2018) and financial knowledge (Fonseca et al. 2012, Mitchell et al., 2016). Behavioral differences have also been documented regarding to risk taking (Levine and Barber, 2008, Agarwal et al., 2011, Charness and Gneezy, 2012), portfolio choice (Sunden and Surette, 1998) and

trading behavior (Barber and Odean, 2000, Harrison and Ho, 2017). Our study contributes to this literature by showing that men are predominantly in charge of the household investments both within the couple and on behalf of children.

The remaining of the article is organized the following way. Section 2 explains the process of opening an account for oneself and one's child. Section 3 presents summary statistics about parental and child accounts and documents gender differences in subscriptions and risk profiles. Section 4 uses econometric models to assert significant gender differences in subscriptions and risk profiles. Section 6 concludes.

# 2 Opening an investment account

To open an account with the robo-advisor, customers have to visit the company's website and fill out a questionnaire. The questionnaire, administered in French, collects a rich information set about customers used by the robot-advisor's in-house algorithm to recommend a risk profile.[1]

## 2.1 Questionnaire

The questionnaire collects detailed information about the client's financial situation, previous investment experience, attitudes towards risk, demographic status, contact information and investment goals. Possible goals include 'Increase savings', 'Prepare a major purchase', 'Bequeath an inheritance', 'Plan their retirement', 'Save in the event of hard times', 'Prepare a real estate investment', 'Finance their children's studies' or 'Open an account for one's child'. Questions about the client's demographic status include date of birth, number of children, city and country of birth, nationality, legal capacity, gender, employment status, employment sector, and profession.

[1] See Boulu-Reshef et al (2022) for an analysis of the advising algorithm based on the same data source, and the way savers abide to the financial recommendation.

Questions about the investment include the initial capital invested, the additional capital invested monthly, the investment horizon, the odds of the investment being liquidated in two years, and the odds of the investment being liquidated before the stated investment horizon. Questions about the client's financial status include tax residency status, pre-tax annual income, homeownership, monthly rent or mortgage repayment, total real estate property, total financial property, and monthly savings rate.

Prospective clients begin by defining their investment project. If the option "Open an account for my child" is selected, the following text box appears: "This project allows you to open an account in your child's name. The savings will belong to your child, and they will have full access to the account when they come of age. In the following section, the questions about the savings plan concern your child. The questions concerning knowledge of the financial markets, risk appetite and the need for liquidity concern the legal representatives." The questionnaire also collects the demographic status of the client's child (date of birth, city and country of birth, nationality, legal capacity, and gender) and the contact information of the child's second legal representative, if one is listed.

All of the information in the questionnaire is self-reported, but some fields require proof. Before signing a contract, a client must provide an identity card, a proof of address, a mobile phone bill, and bank account identification details (*relevé d'identité bancaire*). When signing a contract on behalf of a child, in addition to the aforementioned documents, a client must also provide an up-to-date summary of the vital records (*livret de famille*) of their child as well as a proof of identity for their child to establish a relationship as the child's authentic parental authority. Because of fail-safes during the questionnaire and the identity verification process, it is not possible to open a children's account on behalf of an adult or of any child except one's own. Therefore, all of a client's demographic details are accurate and externally verified, and their parental relationship to the child on behalf of which they are opening a contract is certain.

In contrast, no documents are requested to justify a client's financial situ-

ation, such as a pay stub or a tax form. The self-reports on financial details are thus approximate and not externally verified. That said, while proof is not required, prospective clients are nevertheless incentivized to provide correct information about their financial situation in order to receive relevant advice from the robo-advisor. Without providing at least approximate information, the advice received from the robo-advisor is practically useless.

## 2.2 Risk Profiles

A recommendation is calculated based on the responses to the questionnaire. The client must create an account to proceed. After creating an account, the client accepts or modifies the suggestion. Thereafter, additional questions are asked about the demographic characteristics about the child and the legal representative who filled out the questionnaire.

The company offers ten discrete investment portfolios which are arranged from 1 to 10 based on the proportion of the capital invested in various risky assets. The composition of the portfolio advertised as the lowest risk, "Risk Profile 1," is 100% money market assets, 0% bond exchange traded funds (bond ETFs), and 0% stock exchange traded funds (stock ETFs). As the risk profile increases to the middle of the risk spectrum, money market assets are phased out in favor of bond ETFs, then again as the risk profile increases to the riskiest end of the risk spectrum, bond ETFs are phased out in favor of stock ETFs.

Table 1 summarizes the composition of the ten risk profiles.[2]

[2]As of September 10th, 2020, it is no longer possible to select risk profile 1. Contracts which selected this risk profile before this date were not changed. As of April 30th, 2021, the composition of Risk Profile 2 was rebalanced from the former 80-10-10 to the current 70-15-15. Contracts which selected this risk profile were updated.

Table 1: Portfolio composition by risk profile, in percentages

| Risk Profiles | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|---|
| Money Market Assets | 100 | 70 | 60 | 40 | 20 | 0 | 0 | 0 | 0 | 0 |
| Bond ETFs | 0 | 15 | 20 | 30 | 40 | 50 | 40 | 30 | 20 | 0 |
| Stock ETFs | 0 | 15 | 20 | 30 | 40 | 50 | 60 | 70 | 80 | 100 |

# 3 Summary statistics on child and parental accounts

As the analysis will focus on parental and child accounts, it is worth first assessing to what extent adults opening accounts on behalf of their children are observationally different from other adults, either the ones declaring children but without opening child accounts or the ones declaring no children.

There are reasons to suppose that investment behavior will differ between parents and non-parents. The presence of children may provide higher incentives to set long term goals and invest in risky assets. On the other hand, parents may take fewer financial risks when it comes to preserving their offspring's standard of living (Love, 2010). In addition, opening an investment account for one's child may signal confidence and optimism about the long-term prospects of financial markets and propensity to take risks (Hong et al., 2004). This would imply riskier portfolios for parents who invest for their children than those who do not.

Descriptive statistics on the variables of interest and of control are provided in Table 2 for five groups: adult non-parent investors, parent-only investors (declaring having children without child accounts), parent-child investors with at least one child account, parent-child investors' children and child-only investors which are child account without linked parents' accounts. The dataset includes all contracts subscribed from August 28th, 2015 to April 11th, 2022.

<Insert Table 2>

Some trends are noticeable in the descriptive statistics. We will call attention to a few, starting from the top of the table. Consistent with previous literature, men are more likely to subscribe a contract than women. The proportion is even higher among parent-child investors. Logically, fathers open more frequently than mothers a contract on behalf of their children. Meanwhile, the gender distribution for children (parent-child child and child-only) is much more even, with only a slightly larger number of boys.

Across a set of financial variables such as income, home-ownership, property assets, and financial wealth, parent-only, parent-child parent, and parent-child child are better off than child-only, who are better off than non-parent. However, regardless of whether their parents opened a contract on behalf of themselves, children with contracts share several similarities, such as initial deposits which are much lower than those for adults, horizons which are several years longer, and parents with lower liquidity needs.

Risk profiles chosen by non-parent investors are on average slightly less than risk profiles selected by parent-only investors, which are less than risk profiles chosen by parent-child investors. Risk profiles chosen by parents on behalf of their children is even greater, which could be explained by higher investment horizons. Finally, while differences in risk attitudes seem negligible, clients who open accounts for both themselves and their children demonstrate greater financial literacy.

To summarize, parents opening a contract for their children are different from other adults. They are more likely to be male, more financially wealthy and educated, indicate higher risk preferences and hold riskier portfolios. Those differences should be kept in mind when analyzing the behavior of parents with child accounts.

# 4 Gender differences in subscriptions and risk profiles

While marked gender differences have been documented in the financial literature, little is known about their evolution over the life cycle starting from cradle. As we are interested in within-family preferences, we focus on families with opened accounts both for at least one adult and one child. This corresponds to two groups presented in previous descriptive statistics: parent-child investors with at least one child account (N=2792) and parent-child investors' children (N=3033). Parent-only investors and child accounts without linked parents' accounts are discarded.

## 4.1 Gender differences in subscriptions

In this section, we ask whether fathers or mothers open more child contracts and more contracts are subscribed for their sons or daughters.

<Insert Figure 1>

Fig. 1 plots the share of contracts opened by parents on behalf of their sons. It also plots as a reference the share of contracts opened by the male head of family for subscribers older than 18. In stark contrast to parents among which the share of male subscribers is at least 2/3, the share of contracts opened for sons is closed to 50% for ages below 13 (51.7% for 0-5 y.o. and 49.4% for 6-11 y.o.). The gender gap becomes significant for teenagers (55.1% for 12-17 y.o.). The Figure also documents a gender gap which consistently declines with parents' age, from 89.7% for ages between 18-29 down to 66.7% for ages greater than 60.

In other words, parents open as frequently a contract for their young sons and daughters, but express a discernible son preference for teenagers. Gender bias remains smaller to those observed among fathers and mothers.

<Insert Figure 2>

Fig. 2 shows that the male head of family is predominantly in charge of managing savings both within the couple and on behalf of their children. 87.5% of contracts for their children aged 0-5 are opened by fathers. The share then declines for older children (80.7% for ages 6-11 and 79.6 for ages 12-17). The proportion of fathers who subscribe for their children is in line with the share of men opening an investment contract among adults.

<Insert Figure 3>

Since fathers make up the large majority of parents opening a child contract, it is worth investigating a possible preference for sons. Fig. 3 shows the share of boys' and girls' accounts opened by their father. While no or limited differences are observed for ages 0-5 (87.1% for sons vs. 87.9% for daughters) and 6-11 (81.9% vs. 79.5%), a clear preference is observed for teenagers (83.0% vs 75.3%). This could be equivalently interpreted as mothers expressing a daughter preference for their teenagers. Yet as fathers subscribe a larger share of child contracts, son preference emerges at the family level.

## 4.2 Gender differences in risk profiles

Another key financial choice for which early gender differences may appear is the risk profile chosen by parents on behalf of their children.

<Insert Figure 4>

Figure 4 shows no systematic difference in risk profiles between sons and daughters. Mean risk profiles are pretty equal for children aged 0-5 (7.77 for boys vs. 7.81 for girls) and 6-11 (7.95 for boys vs. 7.89 for girls). Boys are given higher risk profiles at age 12-17 (7.63 for boys vs. 7.46 for girls). While the difference is small, it is consistent with the pattern found for parents where men select higher risk profiles for themselves than women. Risk profiles are relatively even across age groups and high compared to what parents choose for themselves.

<Insert Figure 5>

Figure 5 shows that fathers choose higher risk profiles for their sons than their girls and that the gap between the two sexes broadens with child's age (7.81 vs. 7.63 for ages 0-5, 7.99 vs. 7.62 for ages 6-11 and 7.67 vs. 7.12 for ages 12-17). Differences in risk profiles are in line with differences between fathers and mothers when they decide for their own savings, with a gender gap increasing with age.

<Insert Figure 6>

Last, Figure 6 shows that although fathers choose higher risk profiles than mothers for their children, they both tend to not differentiate between their sons and daughters. Only marginal differences are observed for father at ages 12-17 (7.75 for boys vs. 7.55 for girls) and mothers at ages 0-5 (7.54 for boys vs. 7.31 for girls), 6-11 (7.72 for boys vs. 7.52 for girls) and 12-17 (7.02 for boys vs. 7.20 for girls)

In summary, parents choose similar risk profiles for their sons and daughters although fathers select higher risk profiles than mothers do. This explains why risk profiles in child accounts are not significantly different across sexes.

# 5 Econometrics

The previous section found some evidence of a son preference for their older children aged 12-17, which is mostly explained by the disproportionate share of child contracts subscribed by fathers. The aim of the econometrics is to test whether previous descriptive results are statistically significant and robust to the addition of other factors. The dataset is restricted to child accounts with at least one linked parent account (N=3033) as key information from parent accounts such as their age and sex are leveraged. This corresponds to the group of parent-child investors' children in Table 2.

## 5.1 Gender differences in subscriptions

To study gender differences in subscriptions, we test the logit model:

$$\text{SON}_i = f\Big(\alpha + \beta_0 \text{DAD}_i + \beta_1 \text{AGE1}_i + \beta_2 \text{AGE2}_i + \beta_3 \text{DAD}_i \times \text{AGE1}_i + \beta_4 \text{DAD}_i \times \text{AGE2}_i + \gamma X_i\Big)$$

in which:

- $\text{SON}_i = 1$ if the contract was subscribed on behalf of a boy (0 of a girl)
- $\text{DAD}_i = 1$ if the contract was opened by the father (0 by the mother)
- $\text{AGE1}_i = 1$ if the child was 6 to 11 year old at subscription
- $\text{AGE2}_i = 1$ if the child was 12 to 17 year old at subscription
- $\text{X}_i$ is a set of covariates from questionnaire's and contracts' information

With previous descriptive results in mind, the model allows to examine various forms of son preferences, whether associated with parent's sex, specific age group or a combination of the two. Three versions of the model are tested in Table 3. Model 1.1 includes information about parent's sex, child's age and interaction terms. Model 1.2 adds demographic variables (family size and parent's age) and subscription years. Model 1.3 includes a full set of covariates including income and wealth indicators obtained from the questionnaire filled by parents at subscription.

<Insert Table 3>

In baseline model 1.1, the only variable which significantly affects at 5% level the probability of a contract to be subscribed for a son is the interaction term $\text{DAD}_i \times \text{AGE2}_i$. In accordance with descriptive statistics, contracts subscribed for teenagers aged 12-17 are more frequent for sons than daughters and the effect is explained by fathers subscribing more contracts for their sons for this specific

age group. There are no significant difference between sons and daughters for other age groups and/or whether the contract is subscribed by the father or mother. The result is robust to the inclusion of additional covariates in models 1.2 and 1.3. Family size, parent's age, income and wealth do not affect the probability of opening a contract for one's son.

## 5.2 Gender differences in risk profiles

To examine gender differences in risk profiles, an ordinary least-squares model is used:

$$\begin{aligned} \text{RP}_i = \alpha + \beta_0 \text{SON}_i + \beta_1 \text{DAD}_i + \beta_2 \text{AGE1}_i + \beta_3 \text{AGE2}_i \\ + \beta_4 \text{DAD}_i \times \text{AGE1}_i + \beta_5 \text{DAD}_i \times \text{AGE2}_i + \gamma X_i \end{aligned} \tag{1}$$

where SON, DAD, AGE1, AGE2 and X have been defined in previous subsection. The dependent variable RP is the risk profile, scaled from 1 to 10, which determines the risk level of the client's portfolio, as explained in Section 2. The model allows to investigate whether the risk profile selected by a parent on behalf of his child depends on child's sex or age group, parent's sex or a combination of those characteristics. Four versions of the model are tested in Table 4:

- Model 2.1 includes information listed in Eq. (1) without any additional variables (X= 0).
- Model 2.2 adds demographic variables (family size and parent's age) and subscription years.
- Model 2.3 adds to model 2.2 parent's income and wealth information obtained from the questionnaire filled at subscription.
- Model 2.4 adds to model 2.3 parent's own risk profile and answers about investment horizons (for their child and own accounts), liquidity needs, risk attitude and financial knowledge (see Appendix for a description).

<Insert Table 4>

Results show that risk profiles do not vary with child's sex or age. As documented in the descriptive section, fathers choose higher risk profiles than mothers for their children in models 2.1 and 2.2, although the effect disappears once income/wealth indicators are included (model 2.3) and other information used by the algorithm to make a recommendation (model 2.4). The same way, children aged 12 to 17 are given higher risk profiles at 5% (model 2.1) or 10% level (model 2.2), but the age group is not significant in larger models 2.3 and 2.4 anymore. Overall, demographic effects found in the Section 4 tend to disappear once additional non-demographic characteristics are taken into account.

The lack of significance could be explained by two complementary reasons. First, the full model exploits a rich set of control variables which measure a wide range of factors associated with the propensity to take financial risk such as indicators of wealth and income, risk aversion, financial knowledge and experience, liquidity needs, age and investment type and horizon. Those characteristics are possibly correlated with gender and reduce its explanatory power. For instance, a major reason why men invest in riskier portfolio than women is lower risk aversion (Charness and Gneezy, 2012, Croson and Gneezy, 2009), which is controlled for in the econometrics by several preference measures. Second, all this information is used by the robo-advisor to make a recommendation of risk profiles that many clients follow. In the sample, 69.6% of all child accounts abide to the recommendation at subscription. Since the algorithm is gender neutral, most clients' portfolio decisions will be as well. This illustrates a benefit of algorithmic choice in terms of reducing human bias in financial decisions.

In addition, the econometric results indicate higher risk profiles given to children in family with more than one child, by parents with higher incomes, higher property wealth, higher financial wealth to some extent, higher risk profiles for their own saving contracts, less liquidity needs, lower risk aversion, who wait or buy when markets dip and have previously experienced financial losses.

# 6 Conclusion

This article find evidence of a son preference for their older children aged 12-17. For this age group, fathers are more likely to open investment accounts for their sons. As they predominantly manage children's contracts within the family this effectively leads to a higher number of savings contracts opened for boys. Additionally, while fathers tend to choose riskier investment profiles for their children compared to mothers, no discernible difference in investment strategy is observed between sons and daughters for either parent. Father's higher propensity to take financial risk on behalf of their children weakens or disappears altogether when control variables are included. This is mainly explained by the fact that 70% of child contracts follow the gender-neutral algorithmic recommendation.

This study could be extended in several ways. It would be interesting to analyze how children's portfolio change with age in a longitudinal study and not only at subscription. It remains unclear whether contracts subscribed for younger children could also be characterized by a son preference in the form of higher contributions when they age. A son preference could also exist and is still to be investigated in other parent-child relationship in which money is involved, like pocket money, the opening of a bank and saving accounts, financing higher education and inter-vivo transfers.

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## Appendix: Description of control variables

Savers's characteristics are obtained from the the questionnaire filled by clients during the subscription process. In case of the opening of a child account, the user interface indicates that the questions and possible answers are for the legal representative.

**Investment horizon:** "In how much time would you like to benefit from this investment? (Answer entered in years)"

**Liquidity needs Q1:** "Could you need all the savings held with [Name of the company] within the next two years?"

- ☐ Certainly not [coded 1 in Table 2]
- ☐ Likely not [coded 2 in Table 2]
- ☐ Likely [coded 3 in Table 2]
- ☐ Very likely [coded 4 in Table 2]

[Note: Table 2 reports a mean score of liquidity based on the numerical coding]

**Liquidity needs Q2:** "Could you need half of your investment before the end of the selected investment period?"

- ☐ Certainly not [coded 1 in Table 2]
- ☐ Likely not [coded 2 in Table 2]
- ☐ Likely [coded 3 in Table 2]
- ☐ Very likely [coded 4 in Table 2]

[Note: Table 2 reports a mean score of liquidity based on the numerical coding]

**Risk aversion Q1:** "What profit/loss ratio are you willing to accept by investing €10,000 over 5 years? There is no right or wrong answer."

- ☐ Potential gain of €5,000 / Potential loss of €2,000 [coded as *very high* in Table 4 and 1 in Table 2]
- ☐ Potential gain of €2,000 / Potential loss of €1,000 [coded as *high* in Table 4 and 2 in Table 2]
- ☐ Potential gain of €1,000 / Potential loss of €400 [coded as *medium* in Table 4 and 3 in Table 2]

☐ Potential gain of €500 / Potential loss of €0 [coded as *low* in Table 4 and 4 in Table 2]

[Note: Table 2 reports a mean score of risk aversion based on the numerical coding]

**Risk aversion Q2:** What profit/loss ratio are you willing to accept by investing over 10 years?

☐ With an expected final gain of 20%, but with a risk of loss of 5% [coded as *very high* in Table 4 and 4 in Table 2]
☐ With an expected final gain of 30%, but with a risk of loss of 10% [coded as *high* in Table 4 and 3 in Table 2]
☐ With an expected final gain of 50%, but with a risk of loss of 15% [coded as *medium* in Table 4 and 2 in Table 2]
☐ With an expected final gain of 70%, but with a risk of loss above 15% [coded as *low* in Table 4 and 1 in Table 2]

[Note: Table 2 reports a mean score of risk aversion based on the numerical coding]

**When market dips**: If your investment loses 10% of its value in 3 months, what do you do?

☐ I reinvest to benefit from this opportunity [coded as *Buy* in Table 4]
☐ I wait without panicking [coded as *Wait* in Table 4]
☐ I sell a portion to limit my potential losses [coded as *Sell part or all* in Table 4]
☐ I sell everything [coded as *Sell part or all* in Table 4]
☐ I do not know [coded as *Doesn't know* in Table 4]

**Experience loss**: "Have you already endured losses on your financial investments?"

☐ Non, I have not endured a loss on my financial investments [coded as *Never* in Table 4]
☐ Yes, of 10% maximum [coded as *Max 10%* in Table 4]
☐ Yes, of 20% maximum [coded as *Max 20%* in Table 4]
☐ Yes, of more than 20% [coded as $>$ *20%* in Table 4]

**Knowledge Q1**: "A high gain prospect implies a high risk of capital loss. Does the statement seem true to you?"

☐ True [coded as *Correct* in Tables 4 and 2]
☐ False [coded as *Wrong* in Tables 4]
☐ I do not know [coded as *Doesn't know* in Tables 4]

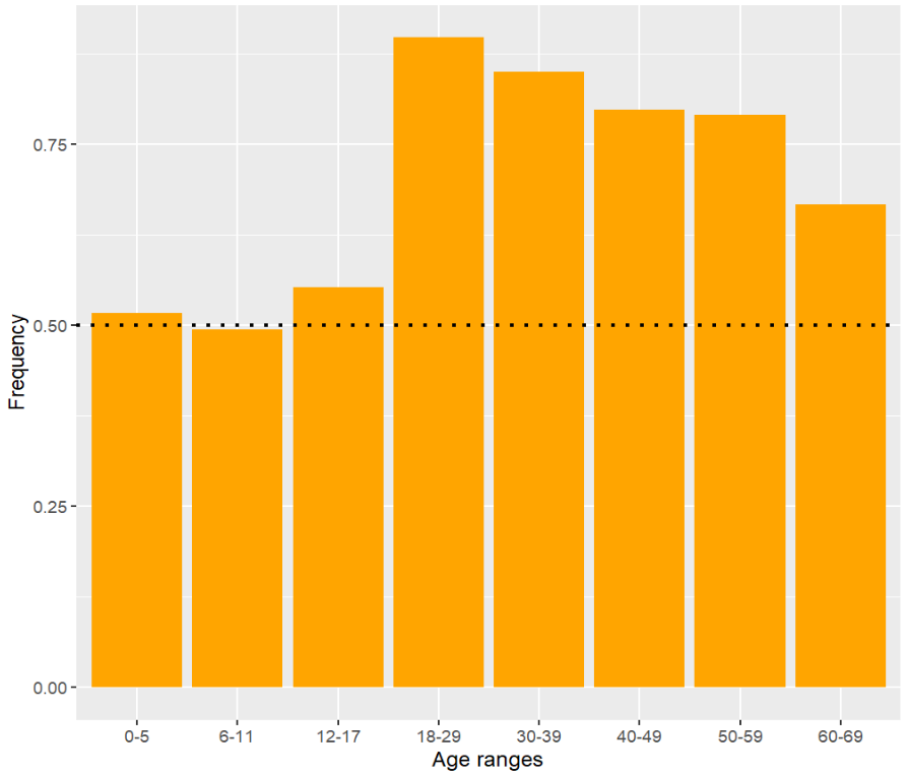
**Knowledge Q2**: "An ETF is a fund for which the capital is guaranteed. Does the statement seem true to you?"

☐ True [coded as *Wrong* in Tables 4]
☐ False [coded as *Correct* in Tables 4 and 2]
☐ I do not know [coded as *Doesn't know* in Tables 4]

**Knowledge Q3**: "By delegating the management of my portfolio to a management company, I renounce making any investment decisions myself on it. Does the statement seem true to you?"

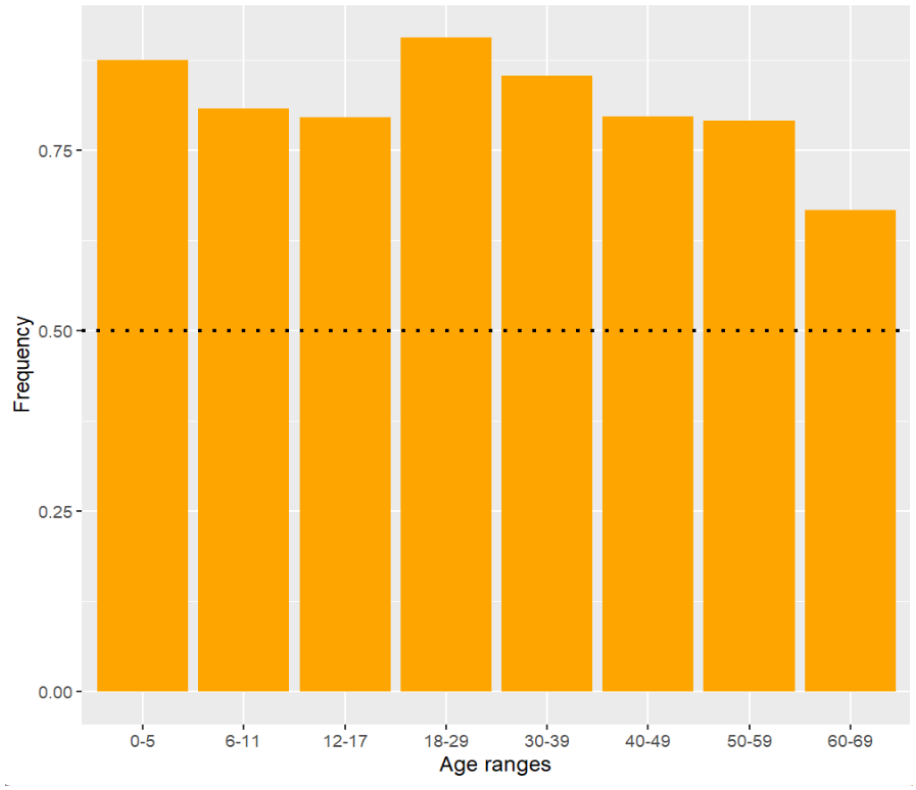
☐ True [coded as *Correct* in Tables 4 and 2]
☐ False [coded as *Wrong* in Tables 4]
☐ I do not know [coded as *Doesn't know* in Tables 4]

Figure 1: Proportion of contracts opened for sons (before 18) or by men (after 18)



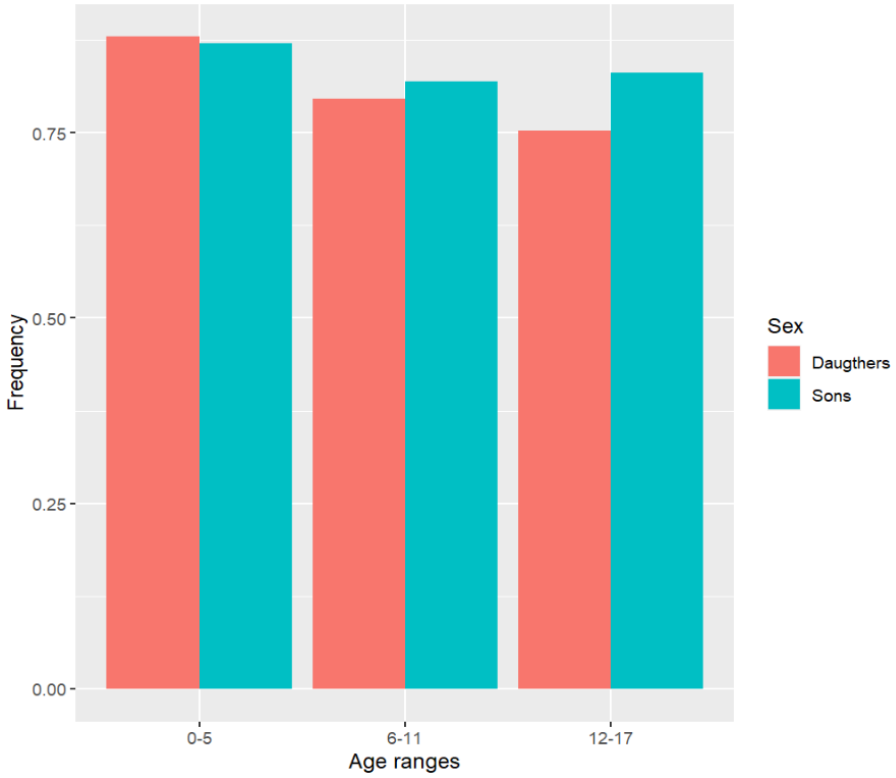

Dataset: contracts subscribed by at least one adult and for one child belonging to the same family. Reading: Among all contracts opened for children aged 0 to 5, 51.7% are subscribed for boys. Among all contracts opened by adults aged 30 to 39, 85.0% are subscribed by men.

Figure 2: Proportion of fathers (ages 0-17) or men (ages 18+) opening a contract



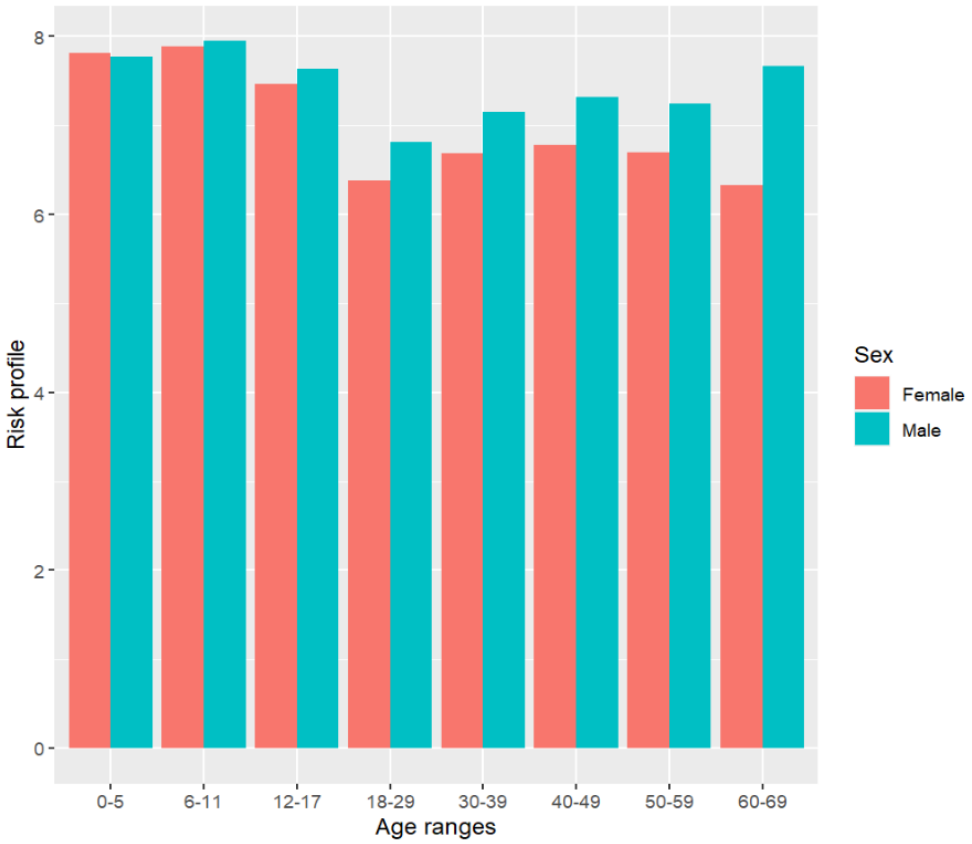

Dataset: contracts subscribed by at least one adult and for one child belonging to the same family. Reading: Among all contracts opened for children aged 0 to 5, 87.5% are subscribed by fathers. Among all contracts opened by adults aged 30 to 39, 85.0% are subscribed by men.

Figure 3: *Share of fathers opening a contract for their sons and daughters*



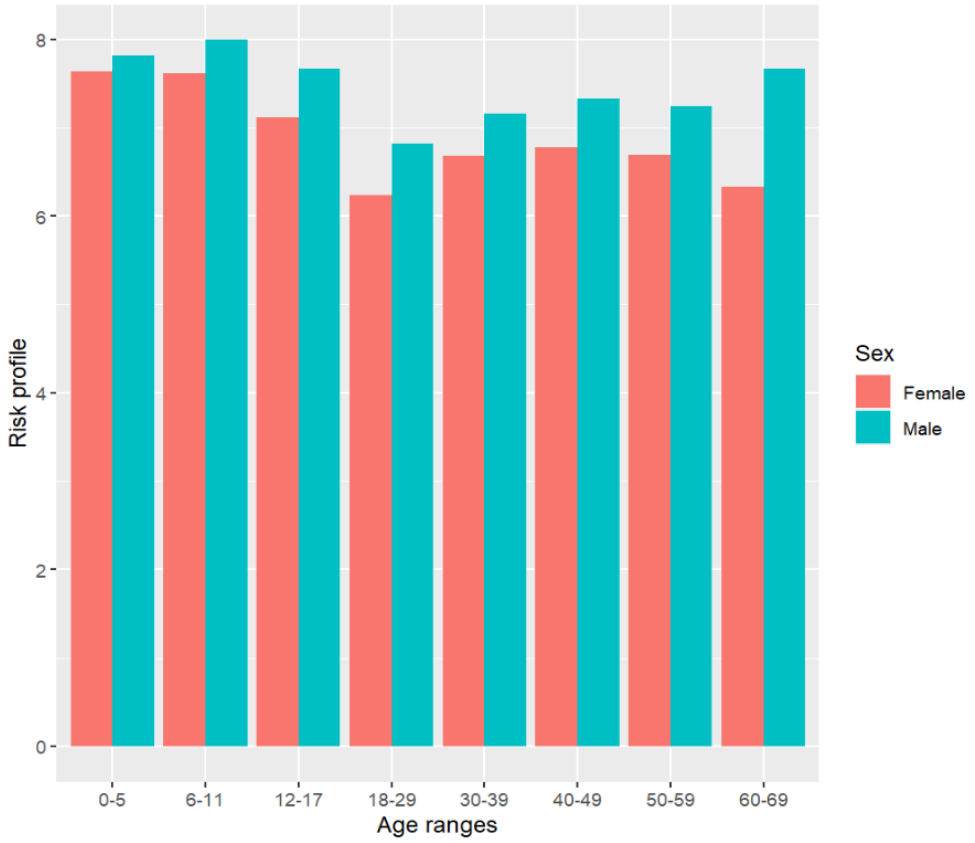

Dataset: contracts subscribed by at least one adult and for one child belonging to the same family. Reading: Among all contracts opened for sons aged 0 to 5, 87.1% are subscribed by fathers. Among all contracts opened for daughters aged 0 to 5, 87.9% are subscribed by fathers.

Figure 4: *Mean risk profiles by sex and age*



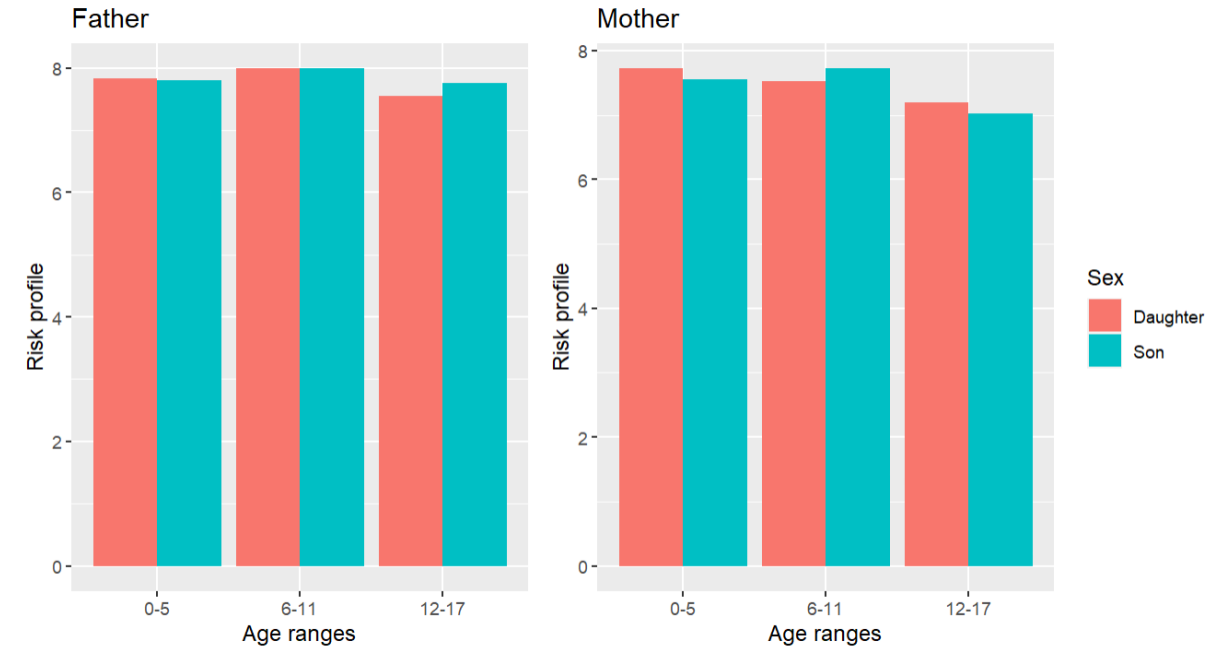

Dataset: contracts subscribed by at least one adult and for one child belonging to the same family. Reading: Mean risk profile of contracts opened on behalf of children aged 0 to 5 is 7.7 for boys and 7.8 for girls. Mean risk profile for contracts subscribed by adults aged 30 to 39 is 7.1 for men and 6.7 for women.

Figure 5: *Mean risk profiles by chooser's sex and age*




Dataset: contracts subscribed by at least one adult and for one child belonging to same family. Reading: Mean risk profiles of contracts opened on behalf of children aged 0 to 7 is 7.8 when subscribed by fathers and 7.6 when subscribed by mothers. Mean risk profiles for contracts subscribed by adults aged 30 to 39 is 7.1 for men and 6.7 for women.

Figure 6: *Mean risk profiles chosen by fathers and mothers decomposed by child's sex and age*




Dataset: contracts subscribed by at least one adult and for one child belonging to the same family. Reading: Mean risk profiles of contracts opened on behalf of a child aged 0 to 5 subscribed by his fathers is 7.8 for a boy and 7.8 for a girl. Mean risk profiles of contracts opened on behalf of a child aged 0 to 5 subscribed by her mother is 7.5 for a boy and 7.7 for a girl.

Table 2: Descriptive statistics for non-parent investors, parent-only investors, parent-child investors, parent-child investors' children and child-only investors.

| Means | Non-parent | Parent-only | Parent-child parent | Parent-child child | Child-only |
|---|---|---|---|---|---|
| N | 20415 | 9895 | 2792 | 3033 | 1748 |
| Sex | 0.72 | 0.7 | 0.84 | 0.52 | 0.51 |
| Age at subscription | 35.53 | 40.43 | 36.68 | 5.07 | 5.26 |
| Annual income less than 25k | 0.15 | 0.03 | 0.02 | 0.01 | 0.04 |
| Annual income 25k to 50k | 0.42 | 0.21 | 0.18 | 0.16 | 0.2 |
| Annual income 50k to 100k | 0.33 | 0.45 | 0.47 | 0.48 | 0.5 |
| Annual income 100k to 150k | 0.08 | 0.2 | 0.22 | 0.22 | 0.19 |
| Annual income more than 150k | 0.02 | 0.11 | 0.11 | 0.12 | 0.07 |
| Home-owner | 0.41 | 0.78 | 0.78 | 0.8 | 0.78 |
| Property assets | 155379 | 325697 | 301686 | 329020 | 290925 |
| Financial wealth | 129907 | 195890 | 178759 | 197882 | 137498 |
| Initial deposit | 8776 | 11060 | 8229 | 2400 | 2983 |
| Risk profile | 6.88 | 7.07 | 7.42 | 7.6 | 7.34 |
| Horizon | 10.75 | 11.37 | 12.19 | 15.05 | 14.81 |
| Liquidity needs Q1 | 1.59 | 1.57 | 1.55 | 1.26 | 1.25 |
| Liquidity needs Q2 | 0.94 | 0.88 | 0.75 | 0.56 | 0.57 |
| Risk aversion Q1 | 0.68 | 0.66 | 0.60 | 0.58 | 0.63 |
| Risk aversion Q2 | 1.10 | 1.07 | 0.91 | 0.99 | 1.08 |
| Knowledge Q1 Correct | 0.96 | 0.97 | 0.98 | 0.99 | 0.97 |
| Knowledge Q2 Correct | 0.77 | 0.78 | 0.84 | 0.89 | 0.79 |
| Knowledge Q3 Correct | 0.7 | 0.71 | 0.79 | 0.87 | 0.72 |

See Appendix for the description of variables horizon, liquidity needs, risk aversion and knowledge.

Table 3: Logit model of gender differences at subscription

| | Model 1.1 | | Model 1.2 | | Model 1.3 | |
|---|---|---|---|---|---|---|
| | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) |
| Father | -2.03 | 0.562 | -2.93 | 0.403 | -2.54 | 0.472 |
| Age at subscription 0-5 | | | *reference* | | | |
| Age at subscription 6-11 | -7.13 | 0.137 | -6.60 | 0.219 | -5.83 | 0.279 |
| Age at subscription 12-17 | -0.65 | 0.231 | -5.66 | 0.400 | -6.06 | 0.366 |
| Father × age 0-5 | | | *reference* | | | |
| Father × age 6-11 | 5.87 | 0.306 | 6.11 | 0.286 | 4.75 | 0.409 |
| Father × age 12-17 | 13.85 | 0.050 * | 14.56 | 0.040 * | 14.40 | 0.042 * |
| One child family | | | *reference* | | | |
| Two child family | | | 0.35 | 0.871 | 0.03 | 0.988 |
| Three + child family | | | -1.62 | 0.569 | -2.34 | 0.419 |
| Parent aged 18-29 | | | *reference* | | | |
| Parent aged 30-39 | | | -2.25 | 0.463 | -2.28 | 0.462 |
| Parent aged 40-49 | | | -3.07 | 0.401 | -3.39 | 0.364 |
| Parent aged 50-59 | | | -7.17 | 0.208 | -8.06 | 0.164 |
| Subscribed in 2017 | | | 5.51 | 0.080 . | 4.65 | 0.142 |
| Subscribed in 2018 | | | 6.10 | 0.081 . | 6.14 | 0.078 . |
| Subscribed in 2019 | | | 3.73 | 0.248 | 3.29 | 0.310 |
| Subscribed in 2020 | | | 1.53 | 0.503 | 1.61 | 0.509 |
| Subscribed in 2021 | | | *reference* | | | |
| Subscribed in 2022 | | | -6.19 | 0.040 * | -6.21 | 0.040 * |
| Annual income < 25k | | | | | -10.30 | 0.170 |
| Annual income 25k to 50k | | | | | 2.09 | 0.434 |
| Annual income 50k to 100k | | | *reference* | | | |
| Annual income 100k to 150k | | | | | -1.20 | 0.617 |
| Annual income > 150k | | | | | 0.43 | 0.893 |
| Financial wealth < 10k | | | *reference* | | | |
| Financial wealth 10k to 50k | | | | | -5.55 | 0.228 |
| Financial wealth 50k to 100k | | | | | -5.76 | 0.225 |
| Financial wealth 100k to 250k | | | | | -3.08 | 0.528 |
| Financial wealth 250k to 1m | | | | | -4.13 | 0.420 |
| Financial wealth > 1m | | | | | -1.39 | 0.860 |
| Property assets 0 | | | *reference* | | | |
| Property assets 0+ to 10k | | | | | -1.45 | 0.878 |
| Property assets 10k to 50k | | | | | -1.07 | 0.794 |
| Property assets 50k to 100k | | | | | 5.52 | 0.166 |
| Property assets 100k to 250k | | | | | 0.91 | 0.770 |
| Property assets 250k to 1m | | | | | 2.73 | 0.352 |
| Property assets > 1m | | | | | 7.83 | 0.213 |

Dependent variable is 1 if the contract is subscribed on behalf of a boy and 0 of a girl. See Appendix for description of the explanatory variables. Significance codes: ***: 0, **: 0.001, **: 0.01, *: 0.05, .: 0.1.

Table 4: OLS model of gender differences in risk profiles

| | Model 2.1 | | Model 2.2 | | Model 2.3 | | Model 2.4 | |
|---|---|---|---|---|---|---|---|---|
| | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) |
| (Intercept) | 7.33 | 0.000 *** | 7.61 | 0.000 *** | 6.45 | 0.000 *** | 8.08 | 0.000 *** |
| Son | -0.01 | 0.884 | 0.03 | 0.077 | -0.02 | 0.818 | -0.01 | 0.912 |
| Father | 0.27 | 0.015 * | 0.28 | 0.019 * | 0.19 | 0.108 | -0.01 | 0.897 |
| Age at subscription 0-5 | | | | *reference* | | | | |
| Age at subscription 6-11 | 0.05 | 0.730 | 0.05 | 0.074 | 0.01 | 0.920 | -0.05 | 0.522 |
| Age at subscription 12-17 | -0.35 | 0.049 * | -0.50 | 0.094 . | -0.51 | 0.081 . | -0.01 | 0.962 |
| Father × age 0-5 | | | | *reference* | | | | |
| Father × age 6-11 | 0.12 | 0.522 | 0.10 | 0.572 | 0.15 | 0.398 | 0.12 | 0.217 |
| Father × age 12-17 | 0.09 | 0.700 | 0.02 | 0.907 | 0.12 | 0.603 | -0.07 | 0.557 |
| One child family | | | | *reference* | | | | |
| Two child family | | | 0.03 | 0.783 | -0.10 | 0.286 | -0.13 | 0.009 ** |
| Three + child family | | | 0.24 | 0.056 . | -0.01 | 0.913 | -0.12 | 0.066 . |
| Parent aged 18-29 | | | | *reference* | | | | |
| Parent aged 30-39 | | | -0.16 | 0.227 | -0.24 | 0.066 . | -0.03 | 0.685 |
| Parent aged 40-49 | | | 0.16 | 0.314 . | -0.33 | 0.035 * | -0.08 | 0.356 |
| Parent aged 50-59 | | | -0.26 | 0.284 | -0.64 | 0.009 *** | -0.04 | 0.756 |
| Subscribed in 2017 | | | -0.08 | 0.521 | -0.26 | 0.049 * | -0.13 | 0.416 |
| Subscribed in 2018 | | | -0.86 | 0.000 | -0.86 | 0.000 *** | -0.43 | 0.000 *** |
| Subscribed in 2019 | | | -0.69 | 0.000 | -0.77 | 0.000 *** | -0.30 | 0.000 *** |
| Subscribed in 2020 | | | -0.37 | 0.000 | -0.38 | 0.286 | -0.15 | 0.007 ** |
| Subscribed in 2021 | | | | *reference* | | | | |
| Subscribed in 2022 | | | 0.26 | 0.045 * | 0.27 | 0.036 * | 0.03 | 0.643 |
| Annual income < 25k | | | | | -0.69 | 0.026 * | -0.40 | 0.016 * |
| Annual income 25k to 50k | | | | | 0.25 | 0.027 * | -0.05 | 0.363 |
| Annual income 50k to 100k | | | | *reference* | | | | |
| Annual income 100k to 150k | | | | | 0.44 | 0.000 *** | 0.10 | 0.059 . |
| Annual income > 150k | | | | | 0.59 | 0.000 *** | 0.13 | 0.081 . |
| Financial wealth < 10k | | | | *reference* | | | | |
| Financial wealth 10k to 50k | | | | | 0.70 | 0.000 *** | 0.20 | 0.049 * |
| Financial wealth 50k to 100k | | | | | 0.94 | 0.000 *** | 0.21 | 0.049 |
| Financial wealth 100k to 250k | | | | | 0.86 | 0.000 *** | 0.18 | 0.110 |
| Financial wealth 250k to 1m | | | | | 1.13 | 0.000 *** | 0.25 | 0.028 * |
| Financial wealth > 1m | | | | | 1.41 | 0.000 *** | 0.20 | 0.260 |
| Property assets 0 | | | | *reference* | | | | |
| Property assets 0+ to 10k | | | | | 0.68 | 0.009 . | 0.08 | 0.708 |
| Property assets 10k to 50k | | | | | 0.37 | 0.032 * | 0.05 | 0.603 |
| Property assets 50k to 100k | | | | | 0.66 | 0.000 *** | 0.22 | 0.013 * |
| Property assets 100k to 250k | | | | | 0.35 | 0.000 ** | 0.14 | 0.039 * |
| Property assets 250k to 1m | | | | | 0.12 | 0.008 *** | 0.30 | 0.000 *** |
| Property assets > 1m | | | | | 0.26 | 0.000 *** | 0.74 | 0.000 *** |

Table 4: Continued

| | Model 2.1 | | Model 2.2 | | Model 2.3 | | Model 2.4 | |
|---|---|---|---|---|---|---|---|---|
| | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) | Estimate | Pr(>\|t\|) |
| Parent's risk profile | | | | | | | 0.08 | 0.000 *** |
| Child's investment horizon | | | | | | | 0.00 | 0.430 |
| Parent's investment horizon | | | | | | | -000 | 0.232 |
| Liquidity needs Q1 Certainly not | | | | *reference* | | | | |
| Liquidity needs Q1 Likely not | | | | | | | -0.10 | 0.031 * |
| Liquidity needs Q1 Likely | | | | | | | -0.49 | 0.000 *** |
| Liquidity needs Q1 Very likely | | | | | | | -0.29 | 0.543 |
| Liquidity needs Q2 Certainly not | | | | *reference* | | | | |
| Liquidity needs Q2 Likely not | | | | | | | -0.23 | 0.000 *** |
| Liquidity needs Q2 Likely | | | | | | | -0.67 | 0.110 * |
| Liquidity needs Q2 Very likely | | | | | | | 0.42 | 0.525 |
| Risk aversion Q1 Low | | | | *reference* | | | | |
| Risk aversion Q1 Medium | | | | | | | -0.44 | 0.000 *** |
| Risk aversion Q1 High | | | | | | | -0.82 | 0.000 *** |
| Risk aversion Q1 Very high | | | | | | | -0.85 | 0.000 *** |
| Risk aversion Q2 Low | | | | *reference* | | | | |
| Risk aversion Q2 Medium | | | | | | | -0.54 | 0.000 *** |
| Risk aversion Q2 High | | | | | | | -2.61 | 0.000 *** |
| Risk aversion Q2 Very high | | | | | | | -4.58 | 0.000 *** |
| When market dips Wait | | | | *reference* | | | | |
| When market dips Buy | | | | | | | 0.32 | 0.000 *** |
| When market dips Sell part or all | | | | | | | -0.43 | 0.041 * |
| When market dips Doesn't know | | | | | | | -0.11 | 0.417 |
| Experience loss Never | | | | *reference* | | | | |
| Experience loss Max 10% | | | | | | | 0.05 | 0.318 |
| Experience loss Max 20% | | | | | | | 0.17 | 0.011 * |
| Experience loss > 20% | | | | | | | 0.16 | 0.009 ** |
| Knowledge Q1 Correct | | | | *reference* | | | | |
| Knowledge Q1 Doesn't know | | | | | | | -0.23 | 0.345 |
| Knowledge Q1 Wrong | | | | | | | 0.02 | 0.937 |
| Knowledge Q2 Correct | | | | *reference* | | | | |
| Knowledge Q2 Doesn't know | | | | | | | -0.01 | 0.921 |
| Knowledge Q2 Wrong | | | | | | | 0.00 | 0.989 |
| Knowledge Q3 Correct | | | | *reference* | | | | |
| Knowledge Q3 Doesn't know | | | | | | | 0.14 | 0.472 |
| Knowledge Q3 Wrong | | | | | | | 0.02 | 0.751 |

Dependent variable is risk profile 1 to 10 chosen by the parent on behalf of his child. See Appendix for description of the explanatory variables. Significance codes: ***: 0, **: 0.001, **: 0.01, *: 0.05, .: 0.1.