B Internet Appendix

This appendix contains extended descriptions of the data and methods used in "Skewness Expectations and Portfolio Choice". The experimental instructions can be found in their original form on the website of the LISS panel (https://www.dataarchive.lissdata.nl/study_units/view/576/).

B.1 Response and completion rates

Table B.1 shows the number of invitees and respondents for all parts of the experiment. Our main sample includes 1,857 respondents who completed the wave in March 2014.

Table B.1: Response and completion rates

Wave	Sample	Invited	Responded	Completed
Aug 2013	Wealth $\geq 1,000$ or unknown	2,978	2,377 (79.8%)	2,311 (77.6%)
Sep 2013	Participants of wave 1	2,307	2,130 (92.3%)	2,125 (92.1%)
Mar 2014	Participants of wave 2	2,095	1,865 (89.0%)	1,857 (88.6%)
Oct / Nov 2014	Participants of wave 1	2,255	1,966 (87.2%)	1,965 (87.1%)

B.2 Description of financial numeracy and financial advice

B.2.1 Financial numeracy

In October 2014, respondents were asked three questions due to van Rooij et al. (2011) to determine their familiarity with concepts related to basic financial numeracy:

> **Question 1 - Simplest numeracy:** Suppose you have 100 euros on a savings account with an annual interest rate of 2 per cent. How much will you have on the savings account after five years, assuming you leave the money in this account?

- More than 102 Euros
- Less than 102 Euros
- Exactly 102 Euros
- Do not know

Question 2 - Interest compounding: Suppose you have 100 euros on a savings account with an annual interest rate of 20 per cent and you never withdraw any money or interest. How much will you have after five years in total?

- More than 200 Euros
- Less than 200 Euros
- Exactly 200 Euros
- Do not know

Question 3 - Inflation: Suppose the interest rate on your savings account is 1 per cent per year and inflation is 2 per cent per year. After one year, how much will you be able to buy with the money in the account?

- Less than today
- More than today
- Exactly the same as today
- Do not know

Altogether, 1674 of the subjects of our main sample participated in that questionnaire. We count the number of correct answers and standard normalize the measure.

B.2.2 Financial advice

In October 2014, respondents were also asked for their main source of financial advice. Altogether, 1674 of the subjects of our main sample participated in that questionnaire.

Participants were given nine options which we aggregate to the following five categories:

- internet (22% of the sample): 'Financial Information on the Internet'
- newspaper/books (13% of the sample): 'Newspaper articles', 'Financial magazines, guides, books'
- parents/friends (26% of the sample): 'Parents, friends or acquaintances'
- professional (24% of the sample): 'Professional advisors in financial matters', 'Folders from my bank or mortgage advisor'
- other (17% of the sample): 'Advertising on TV, in newspapers or other media', 'Financial computer programs', 'other'

In the regressions, we use professional advice as the left-out category.

B.3 Expectations

B.3.1 Hermite splines

The method we employ to estimate the moments of an indiviual's belief distribution is similar to the method proposed in Bellemare et al. (2012). Based on the number of balls assigned to each bin, we first calculate a discrete cumulative distribution function. To do this, we use the fraction of balls assigned to bins falling below each inter-bin boundary as an estimate of the CDF at this point. Since the outer bins were open, we set them to the value a €100 investment would have had at the 5th and 95th percentile of the historical return distribution of the respective asset over a calendar year, i.e., to €56.35 and €142.98 for the AEX and to €53.23 and €196.88 for Philips. Section B.4 shows further details on the historical distributions.

Next, we connect the 9 points on the resulting CDF using a monotonically increasing cubic spline. When fitting the splines, we require that the first derivative at each

of the 7 interior points coincides with the respective first derivative of the polynomial in the next-higher interval. The resulting estimate of an individual's belief distribution allows us to calculate the mean, standard deviation, and skewness of the individual's estimates. We use the SciPy functions `scipy.interpolate.PchipInterpolator` to fit the splines and we use `scipy.integrate.quad` to integrate over their support when estimating the moments. Figure B.1 shows a number of CDFs interpolated in this way alongside the underlying distribution of balls and the associated density estimates.

The second elicited beliefs in August 2014 are elicited for the same time period as the first elicitation (August 2013 until August 2014) and are, therefore, directly comparable. However, for the rebalancing decision in March 2014, expectations about the performance of the assets between March 2014 and August 2014 matter. These can be backed out from the stated expectations by taking the performance of the assets until the second elicitation of expectations in March 2014 (about which participants were informed before making their decision) into account. In the regressions explaining changes in portfolio choices we use the implied expectations for the remaining half of the year (more detail is provided in Internet Appendix B.6.1.3).

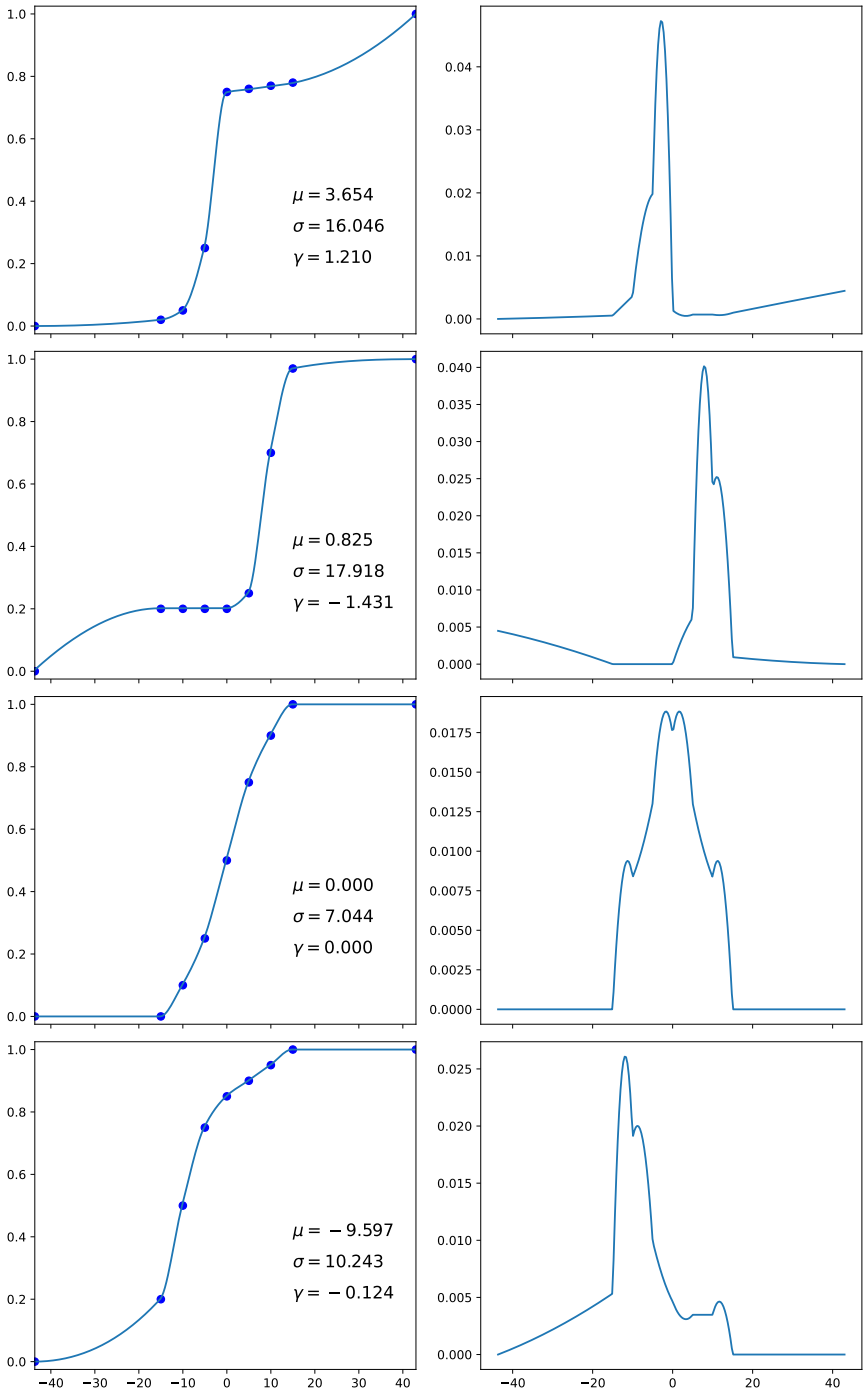

Figure B.1: Example splines

Source: Own calculations. The figure shows estimated splines for 4 hypothetical distributions of balls. The left column shows the estimated splines alongside the distribution of balls (blue dots). The right column shows the associated density estimates.

B.3.2 Additional descriptives for beliefs

Figure B.2, Figure B.3, and Figure B.4 present histograms for the distribution of the means, standard deviations, and skewness of the expected return distributions for the AEX and Philips.

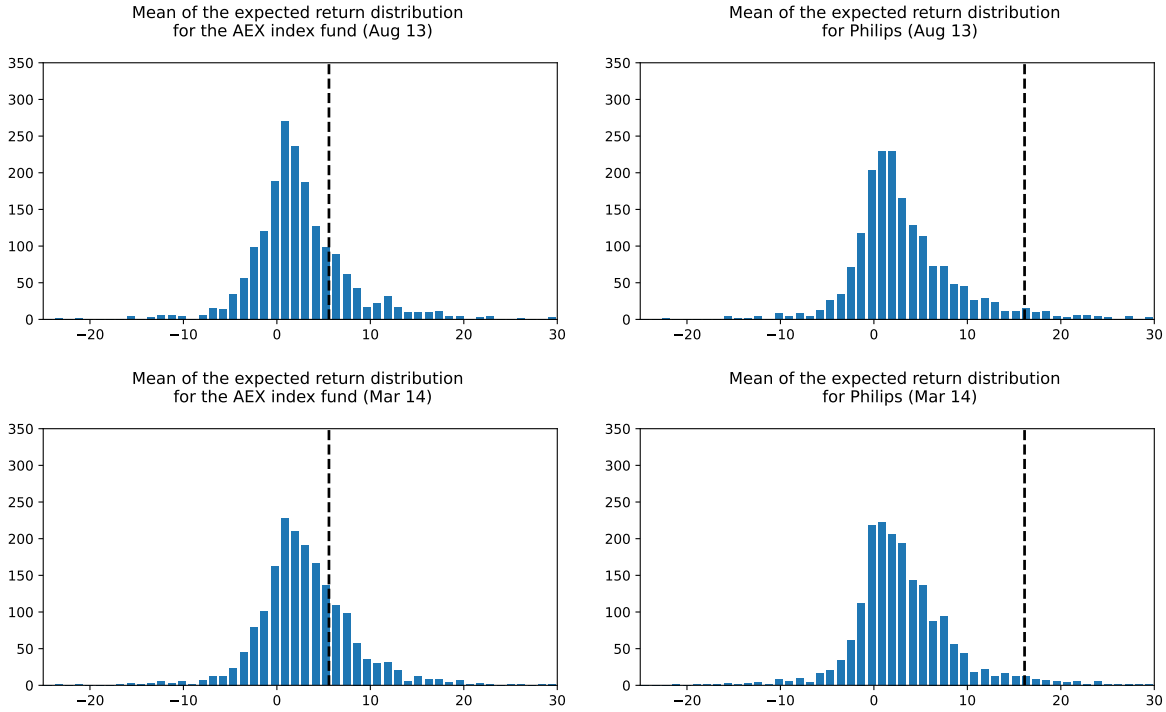

Figure B.2: Cross-sectional distributions of mean return expectations

Sources: LISS panel / yahoo! finance / Statistics Netherlands / own calculations. Distribution of the mean of the expected return distributions for an investment in the AEX (left) and Philips (right) between August 2013 and August 2014 (top) or between March 2014 and August 2014 (bottom).

For Table B.2, we divide participants into eight different groups based on whether they expect a higher mean, standard deviation, and skewness, respectively, for Philips or for AEX. The 0.7% of the subjects who report exactly the same belief distribution for AEX and Philips are not used in this analysis. Altogether, 40% of the subjects expect a higher mean, standard deviation, and skewness for Philips and 21% expect higher standard deviation, and skewness for Philips but a higher mean for the AEX.

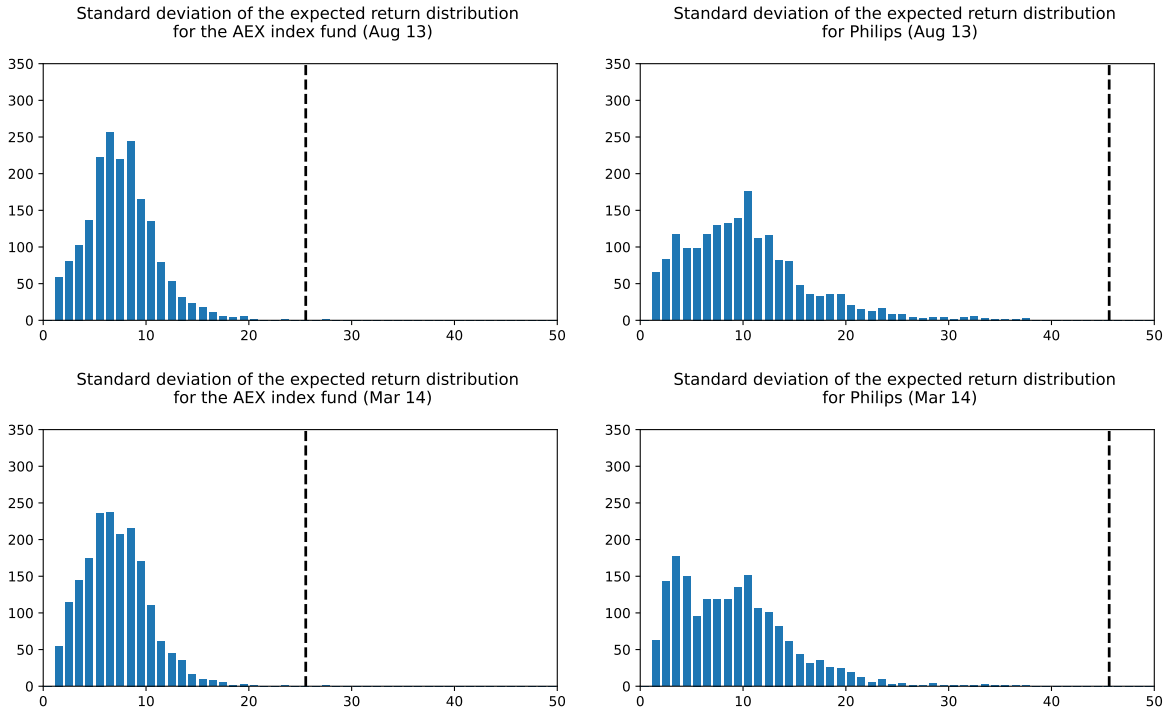

Figure B.3: Cross-sectional distributions of the standard deviation of expected returns

Sources: LISS panel / yahoo! finance / Statistics Netherlands / own calculations. Distribution of the standard deviation of the expected return distributions for an investment in the AEX (left) and Philips (right) between August 2013 and August 2014 (top) or between March 2014 and August 2014 (bottom).

Table B.2: Differences in Moments between Philips and AEX

		philips higher γ	aex higher γ
philips higher μ	philips higher σ	0.40	0.06
	aex higher σ	0.07	0.04
aex higher μ	philips higher σ	0.21	0.04
	aex higher σ	0.09	0.09

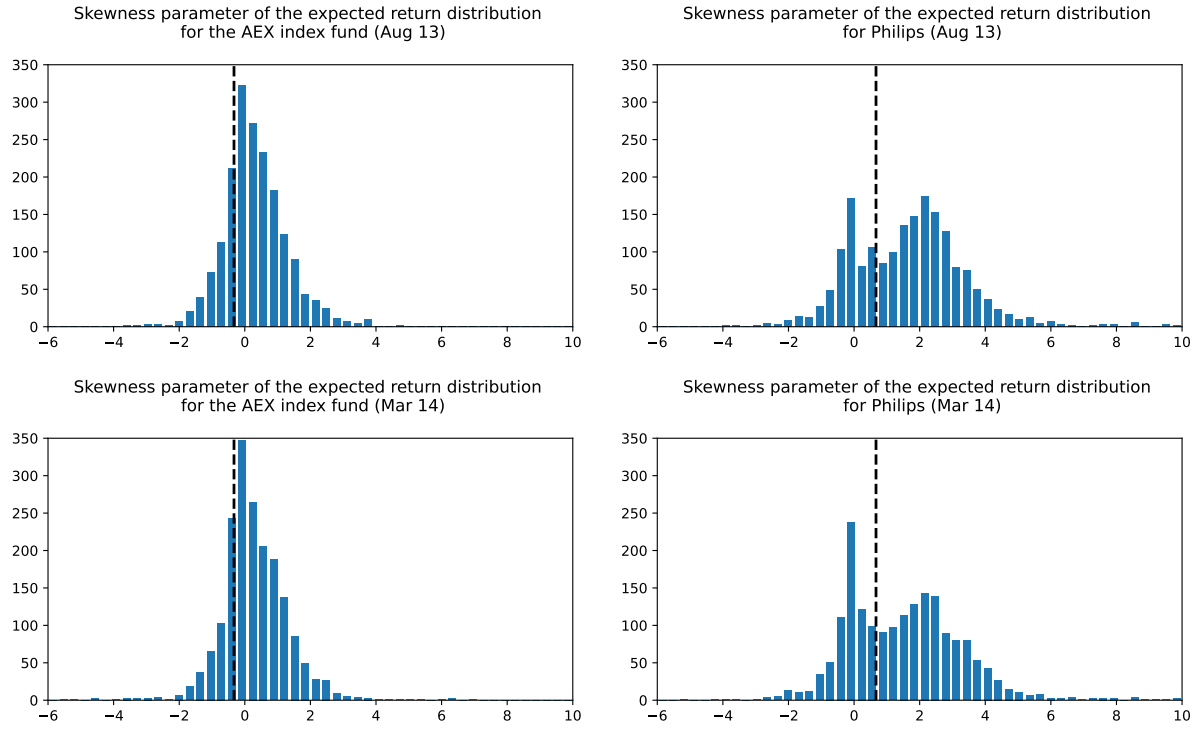

Figure B.4: Cross-sectional distributions of the skewness of expected returns

Sources: LISS panel / yahoo! finance / Statistics Netherlands / own calculations. Distribution of the skewness of the expected return distributions for an investment in the AEX (left) and Philips (right) between August 2013 and August 2014 (top) or between March 2014 and August 2014 (bottom). The top two panels are the same as in the main text.

B.3.3 Additional descriptives for changes in beliefs

Table B.3: Distribution of the changes of the estimated moments of the expected return distributions

	Mean	S.d.	Min.	P10	P30	P50	P70	P90	Max.
$\Delta\mu_{\text{AEX}}$	0.63	3.07	−36.95	−0.35	0.00	0.00	0.39	3.10	29.43
$\Delta\sigma_{\text{AEX}}$	−0.43	1.60	−16.41	−2.02	−0.10	0.00	0.00	0.26	7.11
$\Delta\gamma_{\text{AEX}}$	−0.03	0.68	−6.07	−0.44	0.00	0.00	0.00	0.43	5.54
$\Delta\mu_{\text{Philips}}$	−0.71	5.92	−61.82	−2.25	0.00	0.00	0.00	1.54	24.88
$\Delta\sigma_{\text{Philips}}$	−1.14	3.47	−33.21	−4.44	−0.22	0.00	0.00	0.11	15.81
$\Delta\gamma_{\text{Philips}}$	−0.16	1.31	−9.02	−1.13	0.00	0.00	0.00	0.60	9.78

Table B.4: Share of subjects that increased, decreased, or did not change belief parameters between the two elicitations

	increased	decreased	no change
return aex	0.38	0.14	0.48
std aex	0.17	0.35	0.48
skew aex	0.24	0.28	0.48
return philips	0.27	0.24	0.49
std philips	0.14	0.37	0.49
skew philips	0.26	0.25	0.49

B.3.4 Determinants of belief moments

Table B.5, Table B.6, and Table B.7 show regressions of skewness expectations, expected means, and standard deviations of expectations in August 2013 on sociodemographic covariates. Section A.6 provides definitions for the covariates.

Table B.5: Determinants of skewness expectations

	Expected Skewness	
	AEX	Philips
	(1)	(2)
Constant	0.40***	1.45***
	(0.10)	(0.16)
Female	−0.05	0.11
	(0.05)	(0.09)
Net income $>$ €2500	−0.03	0.05
	(0.06)	(0.09)
Net income missing	−0.07	−0.05
	(0.10)	(0.19)
Financial wealth $\in$ (€10000, €30000]	0.00	−0.05
	(0.07)	(0.11)
Financial wealth $\in$ (€30000, ∞)	0.07	−0.07
	(0.07)	(0.11)
Financial wealth missing	0.00	−0.10
	(0.08)	(0.12)
High education	−0.08	−0.02
	(0.06)	(0.09)
$30 <$ Age ≤ 50	−0.17*	−0.02
	(0.10)	(0.16)
$50 <$ Age ≤ 65	−0.03	0.21
	(0.10)	(0.15)
Age > 65	0.05	0.41***
	(0.10)	(0.16)
Married	−0.03	−0.05
	(0.06)	(0.09)
Has children	0.14**	0.10
	(0.07)	(0.11)
Observations	1,857	1,857
Adjusted R^2 (%)	0.20	0.30

Sources: LISS panel / own calculations. The table shows cross-sectional regressions of the skewness of the expected return distributions in August 2013 for the AEX and Philips on sociodemographic covariates. Section A.6 provides definitions for all covariates. Heteroskedasticity-robust standard errors are reported in parentheses. Table B.6 and Table B.7 show analogous results for the mean and the standard deviation of the expected return distributions.

Table B.6: Determinants of mean expectations

	Expected Mean Return	
	AEX	Philips
	(1)	(2)
Constant	2.90***	6.49***
	(0.59)	(1.09)
Female	−1.63***	−1.23**
	(0.31)	(0.53)
Net income $>$ €2500	0.83***	0.56
	(0.33)	(0.56)
Net income missing	0.46	−1.18
	(0.59)	(0.89)
Financial wealth $\in$ (€10000, €30000]	0.06	−0.45
	(0.38)	(0.64)
Financial wealth $\in$ (€30000, ∞)	1.13***	0.53
	(0.40)	(0.70)
Financial wealth missing	−1.30***	−1.03
	(0.47)	(0.75)
High education	0.34	−0.43
	(0.31)	(0.51)
$30 <$ Age ≤ 50	0.50	−1.51
	(0.59)	(1.08)
$50 <$ Age ≤ 65	0.27	−1.34
	(0.57)	(1.04)
Age > 65	−0.95*	−1.46
	(0.58)	(1.06)
Married	−0.20	−0.16
	(0.32)	(0.52)
Has children	−0.08	0.41
	(0.36)	(0.70)
Observations	1,857	1,857
Adjusted R^2 (%)	5.10	0.50

Sources: LISS panel and own calculations. The table shows cross-sectional regressions of the mean of the expected return distributions for the AEX and Philips on sociodemographic covariates. Section A.6 provides definitions for the covariates. Heteroskedasticity-robust standard errors are reported in parentheses.

Table B.7: Determinants of standard deviation of expectations

	Expected Standard Deviation	
	AEX	Philips
	(1)	(2)
Constant	8.29***	12.73***
	(0.38)	(0.68)
Female	0.25	0.09
	(0.16)	(0.29)
Net income $>$ €2500	0.00	0.46
	(0.17)	(0.32)
Net income missing	−0.16	−0.32
	(0.30)	(0.56)
Financial wealth $\in$ (€10000, €30000]	−0.37*	−0.68*
	(0.20)	(0.37)
Financial wealth $\in$ (€30000, ∞)	−0.66***	−0.59
	(0.21)	(0.40)
Financial wealth missing	0.06	−0.28
	(0.25)	(0.42)
High education	−0.37**	−0.91***
	(0.17)	(0.30)
$30 <$ Age ≤ 50	−0.21	−1.81***
	(0.37)	(0.70)
$50 <$ Age ≤ 65	−0.65*	−2.13***
	(0.36)	(0.69)
Age > 65	−0.31	−1.81***
	(0.37)	(0.69)
Married	−0.03	−0.12
	(0.17)	(0.30)
Has children	−0.17	−0.31
	(0.20)	(0.36)
Observations	1,857	1,857
Adjusted R^2 (%)	1.50	0.80

Sources: LISS panel and own calculations. The table shows cross-sectional regressions of the standard deviation of the expected return distributions for the AEX and Philips on sociodemographic covariates. Section A.6 provides definitions for the covariates. Heteroskedasticity-robust standard errors are reported in parentheses.

B.4 Historical return distributions and moments for the AEX and Philips

To estimate the historical moments for the return distributions of the AEX and Philips, we first obtain return data from *yahoo!* finance (Link to Philips data, Link to AEX data). For both assets and each month of available data before 2013 (since 1988 for Philips, since 1993 for the AEX), we then calculate the 1-year return over the subsequent year. This gives us the distribution of returns an investor would have experienced for a 1-year investment made in a random month. Since we are working with a period involving times of heightened levels of inflation, we calculate these returns in excess of the rate of inflation, which we obtain from Statistics Netherlands (Link).

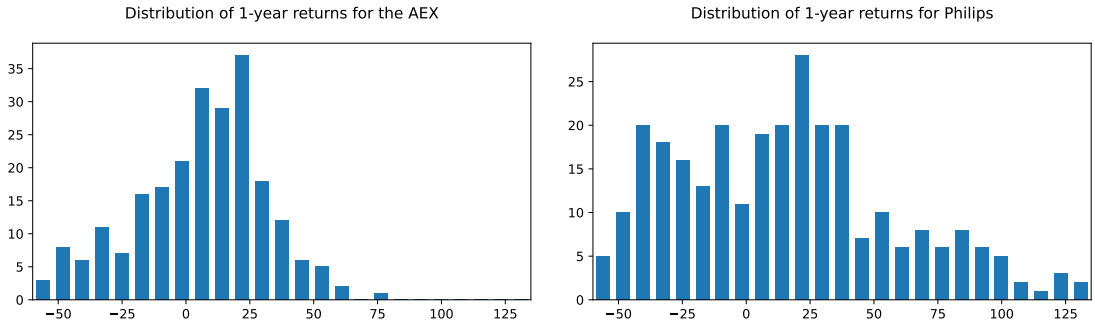

Figure B.5: Historical distributions of 1-year returns for both assets

Sources: Own calculations / yahoo! finance / Statistics Netherlands. The figure shows the distributions of the 1-year returns an investor would have experienced upon investing into either the AEX (left) or Philips (right) in a random month. Returns are expressed in excess of the rate of inflation.

For both assets, we then calculate several moments of the empirical return distribution for the available months T. Specifically, we calculate the empirical mean μ_{Emp} and standard deviation σ_{Emp} of an asset's inflation-adjusted 1-year returns r as

$$\mu_{Emp} = \frac{1}{T}\sum_{t=1}^{T} r_t \quad \text{and} \quad \sigma_{Emp} = \Big(\frac{1}{T}\sum_{t=1}^{T}(r_t - \mu_{Emp})^2\Big)^{1/2},$$

as well as the expected skewness γ_{Emp} as

$$\gamma_{Emp} = \frac{1}{T}\sum_{t=1}^{T}\left(\frac{r_t - \mu_{Emp}}{\sigma_{Emp}}\right)^3.$$

For the AEX, we obtain $\mu_{\text{AEX,Emp}} = 5.57$, $\sigma_{\text{AEX,Emp}} = 25.54$, and $\gamma_{\text{AEX,Emp}} = -0.33$. For Philips, we obtain $\mu_{\text{Philips,Emp}} = 16.12$, $\sigma_{\text{Philips,Emp}} = 45.61$, and $\gamma_{\text{Philips,Emp}} = 0.67$.

B.5 Remaining coefficients for main regression tables

Table B.8: Expectations and portfolio choice — remaining coefficients

	Portfolio Share					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	27.62***	26.80***	28.86***	28.49***	27.56***	29.55***
	(3.30)	(3.33)	(3.42)	(2.83)	(2.85)	(3.08)
Female	−6.26***	−6.23***	−6.10***	−0.71	−0.80	−0.64
	(1.26)	(1.26)	(1.25)	(1.11)	(1.11)	(1.12)
Net income > €2500	2.36*	2.41*	2.45*	−1.34	−1.38	−1.31
	(1.39)	(1.39)	(1.38)	(1.28)	(1.28)	(1.28)
Net income missing	−0.63	−0.55	−1.10	−3.54	−3.48	−3.65*
	(2.42)	(2.43)	(2.40)	(2.24)	(2.22)	(2.24)
Financial wealth ∈ (€10000, €30000]	1.95	1.97	1.77	−1.68	−1.65	−1.72
	(1.53)	(1.53)	(1.52)	(1.45)	(1.45)	(1.44)
Financial wealth ∈ (€30000, ∞)	4.43***	4.41***	4.21***	−2.70*	−2.68*	−2.82*
	(1.69)	(1.69)	(1.68)	(1.58)	(1.57)	(1.57)
Financial wealth missing	−0.70	−0.72	−0.74	−1.52	−1.42	−1.58
	(1.77)	(1.77)	(1.75)	(1.62)	(1.62)	(1.62)
High education	3.78***	3.89***	3.47***	0.08	0.07	−0.15
	(1.36)	(1.37)	(1.35)	(1.23)	(1.23)	(1.23)
30 < Age ≤ 50	7.80***	8.00***	7.14***	2.24	2.21	2.34
	(2.83)	(2.83)	(2.80)	(2.56)	(2.56)	(2.54)
50 < Age ≤ 65	8.59***	8.68***	7.68***	2.87	2.61	2.32
	(2.76)	(2.76)	(2.74)	(2.53)	(2.53)	(2.53)
Age > 65	6.89***	6.86***	6.07**	8.15***	7.72***	7.35***
	(2.77)	(2.77)	(2.77)	(2.55)	(2.55)	(2.54)
Married	−4.91***	−4.87***	−4.96***	0.77	0.81	0.68
	(1.34)	(1.34)	(1.33)	(1.19)	(1.19)	(1.19)
Has children	0.72	0.57	0.66	−2.09	−2.20	−2.26
	(1.64)	(1.64)	(1.61)	(1.48)	(1.47)	(1.47)
Beliefs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	10.07	10.20	11.40	6.02	6.39	6.77

Sources: LISS panel and own calculations. The table contains the missing controls for the regression results reported in Table 2 of the main text. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

Table B.9: Changes in expectations and portfolio dynamics — remaining coefficients

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.90***	5.85***	4.82***	1.54	1.50	2.57
	(2.09)	(2.09)	(1.97)	(1.51)	(1.51)	(1.67)
Female	−0.54	−0.53	−0.59	−0.02	0.07	0.05
	(0.67)	(0.67)	(0.65)	(0.64)	(0.63)	(0.63)
Net income > €2500	−1.09	−1.09	−0.99	0.22	0.25	0.31
	(0.78)	(0.78)	(0.76)	(0.73)	(0.72)	(0.72)
Net income missing	−1.10	−1.07	−0.78	−0.36	−0.36	−0.29
	(1.02)	(1.02)	(1.00)	(0.91)	(0.90)	(0.90)
Financial wealth ∈ (€10000, €30000]	0.76	0.80	0.77	−0.39	−0.47	−0.40
	(0.87)	(0.87)	(0.84)	(0.78)	(0.77)	(0.77)
Financial wealth ∈ (€30000, ∞)	0.44	0.43	0.43	0.66	0.66	0.79
	(0.96)	(0.96)	(0.96)	(0.95)	(0.94)	(0.94)
Financial wealth missing	−0.87	−0.87	−0.79	0.59	0.49	0.45
	(0.90)	(0.90)	(0.88)	(0.88)	(0.87)	(0.86)
High education	1.11	1.15	1.06	−0.60	−0.53	−0.66
	(0.75)	(0.75)	(0.74)	(0.70)	(0.70)	(0.69)
30 < Age ≤ 50	−2.17	−2.17	−1.82	0.72	0.85	0.77
	(1.41)	(1.41)	(1.33)	(1.37)	(1.37)	(1.35)
50 < Age ≤ 65	−2.28*	−2.30*	−2.21*	2.06	2.38*	2.35*
	(1.38)	(1.38)	(1.30)	(1.39)	(1.38)	(1.35)
Age > 65	−3.02**	−3.03**	−2.85**	1.32	1.59	1.53
	(1.46)	(1.46)	(1.37)	(1.42)	(1.41)	(1.39)
Married	0.65	0.66	0.68	0.04	0.05	0.03
	(0.70)	(0.70)	(0.69)	(0.67)	(0.66)	(0.67)
Has children	−0.56	−0.57	−0.83	0.36	0.53	0.58
	(0.87)	(0.87)	(0.84)	(0.79)	(0.78)	(0.79)
2nd elicitation week 2	1.53*	1.54*	1.36	−0.69	−0.68	−0.64
	(0.91)	(0.91)	(0.90)	(0.94)	(0.94)	(0.93)
2nd elicitation week 3	0.70	0.71	2.02*	−5.66***	−5.91***	−6.60***
	(1.17)	(1.17)	(1.15)	(0.98)	(0.97)	(1.06)
2nd elicitation week 4	2.07**	2.09**	3.26***	−4.27***	−4.57***	−4.79***
	(0.96)	(0.96)	(0.99)	(0.96)	(0.96)	(0.96)
Beliefs	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	2.16	2.14	4.78	4.46	5.36	5.83

Sources: LISS panel and own calculations. The table contains the missing controls for the regression results reported in Table 3 of the main text. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

B.6 Robustness

This section provides additional analyses and robustness checks. We focus on the static and dynamic portfolio choice regressions that explore the relation between investment decisions and expectations. Throughout, we focus on the effect of (changes in) expected skewness when interpreting the results of the robustness checks.

Alternative estimation of beliefs moments Our main specification sets the outer bounds of the extreme bins to the 5 and 95% quantiles of the respective asset's historical return distribution. To allow for the possibility that respondents had more extreme returns in mind when putting balls into these bins, Section B.6.1.1 analyzes the case when we set the bounds to more extreme percentiles (2.50 and 97.50%). We also reestimate our main specifications with unimodal histograms only (Section B.6.1.2). Finally, we replicate the dynamic regressions using the second elicited expectations for the full 12 months instead of calculation the beliefs for the remaining six months (Section B.6.1.3). The results of all three alternative estimations qualitatively confirm the main findings.

Additional controls. We also document that our results are robust to including additional control variables. These include data on financial numeracy, sources of financial advice and, for the dynamic analysis, the expected return of the savings account (Section B.6.2).

Alternative specifications. As we argue in Section 4, we chose our main specification for the sake of parsimony. To show the robustness of our results, Section B.6.3 presents three alternative specifications. The first specification shows that our results hold up if we drop all controls but the belief variables, though it is worth pointing out that dropping the controls substantially reduces the explanatory power of the regressions. The second specification shows that we obtain the same result if we run a Tobit regression instead of OLS to account for the fact that our outcome variables are bounded. The third specification shows that the results are robust to including the variance of beliefs instead of the standard deviation. Table B.20 presents alternative

specifications of the dependent variables. Column 1 shows that expected mean and skewness of both assets also predict the overall share invested in risky asset. Columns 2 and 4 show that the difference between the expected means and the difference between the expected skewness for the two assets predicts the absolute difference between the holdings of the two risky assets, and their relative share in the risky part of the portfolio. Columns 4 and 5 show that this also holds for the dynamic regressions.

Piecewise regressions. In Table B.23 we replicate the static main regression and include separate terms for positive and negative skewness. We also replicate the dynamic analysis (Table B.24) in a similar fashion where we include separate terms for positive and negative changes of skewness.

Stock market experience. Our final robustness check concerns the question whether the results of our main analyses differ between participants who were holding stocks or funds at the time of the experiment and those who did not by interacting a stock-holding dummy with our belief variables (B.6.4). Overall, these analyses do not suggest that the relation of portfolio choice and skewness expectations differs by much between participants who invest or do not invest in the stock market.

B.6.1 Alternative estimation of belief moments

B.6.1.1 Alternative bounds for extreme bins

Table B.10 and Table B.11 show the main results when we set the extreme bounds of the outer bins to the 2.5% and 97.5% quantiles of the respective assets' historical distributions.

Table B.10: Expectations and portfolio choice — alternative bounds

	Portfolio Share					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	27.84***	26.89***	28.96***	28.35***	27.44***	29.48***
	(3.25)	(3.29)	(3.38)	(2.82)	(2.84)	(3.04)
μ_{AEX}	0.62***	0.60***	0.76***			−0.19*
	(0.11)	(0.11)	(0.11)			(0.11)
σ_{AEX}	−0.03	0.02	0.25			−0.14
	(0.17)	(0.17)	(0.20)			(0.19)
γ_{AEX}		1.04**	1.16**			0.25
		(0.49)	(0.49)			(0.51)
μ_{Philips}			−0.19***	0.28***	0.30***	0.33***
			(0.08)	(0.08)	(0.08)	(0.09)
σ_{Philips}			−0.18	0.16	0.13	0.17
			(0.12)	(0.10)	(0.10)	(0.12)
γ_{Philips}			0.15		0.71***	0.71***
			(0.29)		(0.26)	(0.26)
Exp. return for savings account			−0.16			−0.25***
			(0.10)			(0.10)
Risk aversion	−2.50***	−2.53***	−2.47***	−3.30***	−3.27***	−3.45***
	(0.63)	(0.62)	(0.62)	(0.59)	(0.59)	(0.59)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	9.94	10.12	11.33	5.79	6.09	6.44

Sources: LISS panel and own calculations. The results in this table differ from those reported in the main text in the assumptions we make concerning the outer bounds for the extreme bins. In the main text, we set them to the values a €100 investment would have returned at the 5th and 95th percentile of the historical return distribution for the AEX (€56.35 and €142.98) and Philips (€53.23 and €196.88), respectively. For the regressions reported in this table, we set them to the 2.5 and 97.5% quantiles (€49.60 and €151.32 for the AEX and €48.54 and €218.58 for Philips) instead.
The table contains OLS regressions of the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, and risk aversion. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

Table B.11: Changes in expectations and portfolio dynamics — alternative bounds

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.81***	5.78***	4.83***	1.29	1.23	2.27
	(2.06)	(2.06)	(1.93)	(1.50)	(1.51)	(1.63)
$\Delta\mu_{\text{AEX}}$	0.42*	0.42*	0.50**			0.26*
	(0.23)	(0.23)	(0.23)			(0.14)
$\Delta\sigma_{\text{AEX}}$	−0.37	−0.37	−0.10			−0.45*
	(0.24)	(0.24)	(0.27)			(0.26)
$\Delta\gamma_{\text{AEX}}$		−0.43	−0.03			0.33
		(0.61)	(0.62)			(0.60)
$\Delta\mu_{\text{Philips}}$			−0.30***	0.15	0.21*	0.16
			(0.09)	(0.12)	(0.12)	(0.12)
$\Delta\sigma_{\text{Philips}}$			0.00	0.35**	0.25	0.37*
			(0.16)	(0.18)	(0.19)	(0.21)
$\Delta\gamma_{\text{Philips}}$			−0.90***		0.87***	0.81***
			(0.31)		(0.31)	(0.31)
Risk aversion	1.20***	1.17***	1.20***	0.08	0.06	0.06
	(0.33)	(0.33)	(0.32)	(0.35)	(0.35)	(0.34)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	2.15	2.15	4.71	4.34	5.16	5.63

Sources: LISS panel and own calculations. The results in this table differ from those reported in the main text in the assumptions we make concerning the outer bounds for the extreme bins. In the main text, we set them to the values which a €100 investment would have returned at the 5th and 95th percentile of the historical return distribution for the AEX (€56.35 and €142.98) and Philips (€53.23 and €196.88), respectively. For the regressions reported in this table, we set them to the 2.5 and 97.5% quantiles (€49.60 and €151.32 for the AEX and €48.54 and €218.58 for Philips) instead.
The table contains OLS regressions of changes in the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, and risk aversion. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

B.6.1.2 Unimodal histograms

The expected return distributions of some respondents in our sample are multimodal, i.e., these respondents' belief histograms contain multiple local maxima. To show that our results are not affected by the presence of such beliefs, we reestimate our main regressions after dropping all respondents whose belief distributions are multimodal. For our purpose, we define multimodality in the following way: First, we round the number of balls in each bin to the nearest multiple of 5. We do this to not be overly strict in defining a local maximum. Then, we check the number of local maxima in the resulting distribution. In this step, we consider consecutive values of equal magnitude part of the same maximum. Some examples:

Keep: $[0.00, 0.00, 0.05, 0.10, 0.15, 0.25, 0.35, 0.10]$ — 1 local max. only

Keep: $[0.00, 0.00, 0.05, 0.15, 0.20, 0.25, 0.25, 0.10]$ — 1 local max. covering 2 bins

Keep: $[0.00, 0.00, 0.05, 0.15, 0.20, 0.19, 0.20, 0.21]$ — 1 local max. covering 4 bins after rounding

Drop: $[0.00, 0.00, 0.05, 0.15, 0.20, 0.15, 0.15, 0.30]$ — 2 local max.

Drop: $[0.15, 0.00, 0.05, 0.60, 0.00, 0.00, 0.00, 0.20]$ — 3 local max.

Table B.12 and Table B.13 present the main results for regressions based on observations with only 1 local maximum in the histogram for the beliefs of the asset under consideration. In Table B.13, we require unimodal belief distributions in both waves.

Table B.12: Expectations and portfolio choice — unimodal histograms

	Portfolio Share					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	28.35***	27.46***	30.45***	26.33***	26.00***	27.83***
	(3.96)	(4.00)	(4.06)	(3.42)	(3.41)	(3.61)
μ_{AEX}	0.95***	0.92***	1.20***			−0.25*
	(0.16)	(0.16)	(0.16)			(0.15)
σ_{AEX}	−0.24	−0.17	0.14			−0.13
	(0.27)	(0.27)	(0.34)			(0.29)
γ_{AEX}		1.13*	1.21*			0.79
		(0.63)	(0.64)			(0.70)
μ_{Philips}			−0.36***	0.34***	0.37***	0.44***
			(0.12)	(0.11)	(0.11)	(0.12)
σ_{Philips}			−0.22	0.34**	0.23	0.31
			(0.20)	(0.17)	(0.17)	(0.22)
γ_{Philips}			0.24		0.91***	0.82***
			(0.38)		(0.33)	(0.33)
Exp. return for savings account			−0.25**			−0.36***
			(0.13)			(0.12)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,391	1,391	1,391	1,441	1,441	1,441
Adjusted R^2 (%)	10.80	10.90	12.90	6.10	6.50	7.10

Sources: LISS panel and own calculations. The results in this table are based on all observations with unimodal histograms for either the AEX (column 1 to 3) or Philips (column 4 to 6) in August 2013.
The table contains OLS regressions of the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, and risk aversion. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

Table B.13: Changes in expectations and portfolio dynamics — unimodal histograms

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	7.19***	7.14***	5.70**	1.59	1.32	2.21
	(2.62)	(2.61)	(2.43)	(1.88)	(1.86)	(2.01)
$\Delta\mu_{\text{AEX}}$	0.84***	0.84***	0.95***			0.25
	(0.34)	(0.33)	(0.34)			(0.19)
$\Delta\sigma_{\text{AEX}}$	−1.09***	−1.09***	−0.75			−0.60*
	(0.42)	(0.42)	(0.48)			(0.36)
$\Delta\gamma_{\text{AEX}}$		−0.65	−0.17			0.78
		(0.84)	(0.86)			(0.74)
$\Delta\mu_{\text{Philips}}$			−0.40***	0.37***	0.44***	0.34***
			(0.12)	(0.14)	(0.14)	(0.13)
$\Delta\sigma_{\text{Philips}}$			0.06	0.52**	0.27	0.54**
			(0.24)	(0.23)	(0.25)	(0.28)
$\Delta\gamma_{\text{Philips}}$			−0.83**		1.10***	0.99***
			(0.43)		(0.39)	(0.38)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,362	1,362	1,362	1,412	1,412	1,412
Adjusted R^2 (%)	4.30	4.40	6.50	5.80	6.80	7.40

Sources: LISS panel and own calculations. The results in this table are based on all observations with unimodal histograms for either the AEX (column 1 to 3) or Philips (column 4 to 6) in both August 2013 and March 2014.
The table contains OLS regressions of changes in the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. To calculate the updated beliefs for the regressions, we divide the associated return of all bins by the performance until the week of the second belief elicitation before calculating the belief moments (more detail is provided in Internet Appendix B.6.1.3). In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, risk aversion, and the week of the second belief elicitation. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

B.6.1.3 Second elicited beliefs over full year

The expectations elicited in August 2013 and March 2014 both concern the same time period (August 2013 until August 2014) and are, therefore, directly comparable. However, for the portfolio choice decision in March 2014, expectations about the performance of the assets between March 2014 and August 2014 matter. These can be backed out from the stated expectations by taking the performance of the assets until the second elicitation of expectations in March 2014 (about which participants were informed before making their decision) into account. In the main regressions in Table 3 we use these backed out expectations to calculate the difference in moments.

In particular to calculate the updated beliefs for the regressions, we divide the associated return of all bins by the performance until the week in March 2014 in which respondents were asked for their beliefs for the second time before calculating the belief moments. For instance for a subject who was shown a performance of the AEX of +2% during the first half of the year, balls put on the performance of the AEX from Aug 2013 to Aug 2014 of +10% are associated with a performance of 7.8% (1.1 / 1.02) during the second half of the year. Note that the individual measures of skewness are unaffected by this adjustment in the estimation procedure, as the skewness is invariant to linear transformations.

In Table B.14, we use updated beliefs over the full year, i.e., we do not adjust the bins before calculating the belief moments as described above. The results hardly change. In particular, the coefficients for the change in skewness for Philips remain almost the same.

Table B.14: Changes in Expectations and Portfolio Dynamics – second elicited beliefs over full year

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	4.80***	4.78***	4.29***	−1.38	−1.63	−1.80
	(1.52)	(1.52)	(1.43)	(1.45)	(1.45)	(1.44)
$\Delta\mu_{\text{AEX}}$	0.46**	0.46**	0.59***			0.26*
	(0.23)	(0.23)	(0.24)			(0.16)
$\Delta\sigma_{\text{AEX}}$	−0.47*	−0.48*	−0.18			−0.43
	(0.27)	(0.27)	(0.31)			(0.29)
$\Delta\gamma_{\text{AEX}}$		−0.38	0.06			0.37
		(0.72)	(0.74)			(0.74)
$\Delta\mu_{\text{Philips}}$			−0.38***	0.25*	0.31**	0.26*
			(0.10)	(0.13)	(0.14)	(0.14)
$\Delta\sigma_{\text{Philips}}$			0.03	0.36*	0.25	0.39
			(0.18)	(0.21)	(0.22)	(0.24)
$\Delta\gamma_{\text{Philips}}$			−1.03***		1.06***	0.99***
			(0.37)		(0.36)	(0.36)
Risk aversion	1.22***	1.19***	1.22***	0.06	0.05	0.06
	(0.33)	(0.33)	(0.32)	(0.36)	(0.35)	(0.35)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	1.96	1.94	4.67	3.01	3.95	4.32

Sources: LISS panel and own calculations. The table contains OLS regressions of the change in the share invested into the AEX (columns 1–3) and Philips (columns 4–6) on varying sets of covariates. In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, and financial wealth. The coefficients for these control variables are shown in Section B.5 of the Internet Appendix. Section A.6 of the Appendix defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

B.6.2 Additional controls

B.6.2.1 Financial numeracy, advice, stock market participation

Table B.15 and Table B.16 show the static and dynamic results when we include financial advice, financial numeracy, and a dummy if the subject holds any stocks or funds as additional control variables. Section B.2 provides definitions for financial numeracy and financial advice. Due to non-response by a small number of respondents in the respective questionnaire and item non-response to the questions about stock market participation, the regressions are based on 1,318 observations. Column (3) and (6) repeat the main regression for this reduced sample without additional control variables.

Table B.15: Expectations and Portfolio Choice (controlling for financial advice, financial numeracy, has stocks or funds)

	Portfolio Share					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	26.46***	28.03***	28.44***	32.20***	33.54***	32.80***
	(4.29)	(4.42)	(4.08)	(3.95)	(4.18)	(3.81)
μ_{AEX}	0.71***	0.93***	1.02***		−0.21	−0.21
	(0.13)	(0.13)	(0.13)		(0.14)	(0.14)
σ_{AEX}	−0.17	−0.05	0.04		0.07	0.03
	(0.24)	(0.29)	(0.28)		(0.28)	(0.28)
γ_{AEX}	1.18*	1.37**	1.35**		0.30	0.34
	(0.68)	(0.68)	(0.69)		(0.74)	(0.74)
μ_{Philips}		−0.31***	−0.29***	0.42***	0.48***	0.47***
		(0.10)	(0.10)	(0.10)	(0.11)	(0.11)
σ_{Philips}		−0.04	−0.10	0.06	0.02	0.05
		(0.18)	(0.18)	(0.14)	(0.17)	(0.17)
γ_{Philips}		0.01	0.08	1.10***	1.10***	1.03***
		(0.40)	(0.41)	(0.37)	(0.37)	(0.36)
Exp. return for savings account		−0.06	−0.11		−0.30**	−0.29**
		(0.12)	(0.13)		(0.13)	(0.13)
Main source financial advice: internet	1.51	1.32		0.29	0.45	
	(2.13)	(2.12)		(2.01)	(2.00)	
Main source financial advice: newspaper/books	7.89***	7.75***		−4.66**	−4.60*	
	(2.66)	(2.65)		(2.42)	(2.40)	
Main source financial advice: parents/friends	−0.39	−0.60		−1.43	−1.34	
	(1.88)	(1.88)		(1.84)	(1.83)	
Main source financial advice: other	0.96	0.82		−2.15	−1.89	
	(2.20)	(2.20)		(2.15)	(2.15)	
Financial numeracy	0.94	0.95		−0.46	−0.69	
	(0.75)	(0.75)		(0.74)	(0.75)	
Holds stocks or funds	7.00***	6.62***		0.15	0.56	
	(2.22)	(2.20)		(2.02)	(2.04)	
Risk aversion	−1.65**	−1.63**	−2.05***	−3.29***	−3.37***	−3.47***
	(0.76)	(0.75)	(0.76)	(0.72)	(0.72)	(0.72)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,318	1,318	1,318	1,318	1,318	1,318
Adjusted R^2 (%)	11.69	12.73	11.30	6.77	7.04	7.04

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 2, but additonally adds as independent variables financial advice, financial numeracy, and a dummy if the subject holds any stocks or funds. In columns 3 and 6, the sample is restricted to the 1318 observations for which we have complete information for all additional variables. Left out category for financial advice: Professional

Table B.16: Changes in Expectations and Portfolio Dynamics (controlling for financial advice, financial numeracy, has stocks or funds)

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	4.52*	4.36*	5.74***	1.76	3.78*	3.59*
	(2.70)	(2.58)	(2.35)	(2.03)	(2.21)	(1.97)
$\Delta\mu_{\text{AEX}}$	0.46	0.62**	0.65**		0.41**	0.41**
	(0.31)	(0.31)	(0.31)		(0.19)	(0.19)
$\Delta\sigma_{\text{AEX}}$	−0.56*	−0.47	−0.50		−0.13	−0.15
	(0.33)	(0.37)	(0.38)		(0.34)	(0.34)
$\Delta\gamma_{\text{AEX}}$	0.19	0.58	0.63		−0.15	−0.21
	(0.83)	(0.88)	(0.87)		(0.79)	(0.78)
$\Delta\mu_{\text{Philips}}$		−0.34***	−0.36***	0.29***	0.22*	0.23*
		(0.11)	(0.12)	(0.11)	(0.12)	(0.12)
$\Delta\sigma_{\text{Philips}}$		0.26	0.28	0.07	0.18	0.20
		(0.19)	(0.20)	(0.17)	(0.19)	(0.19)
$\Delta\gamma_{\text{Philips}}$		−1.45***	−1.46***	1.16***	1.06***	1.04***
		(0.40)	(0.41)	(0.36)	(0.35)	(0.36)
Main source financial advice: internet	3.50***	3.51***		−1.50	−1.48	
	(1.26)	(1.24)		(1.18)	(1.18)	
Main source financial advice: newspaper/books	1.06	0.97		2.13*	2.14*	
	(1.25)	(1.23)		(1.22)	(1.21)	
Main source financial advice: parents/friends	0.44	0.43		0.54	0.54	
	(1.00)	(0.99)		(0.98)	(0.98)	
Main source financial advice: other	−0.12	0.09		0.27	0.36	
	(1.03)	(1.03)		(1.10)	(1.10)	
Financial numeracy	1.15***	1.06***		−0.47	−0.55	
	(0.35)	(0.34)		(0.37)	(0.37)	
Holds stocks or funds	−1.76	−1.52		−0.64	−0.45	
	(1.15)	(1.14)		(1.05)	(1.06)	
Risk aversion	1.00**	1.07***	1.14***	0.19	0.11	0.17
	(0.42)	(0.41)	(0.39)	(0.42)	(0.42)	(0.42)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,318	1,318	1,318	1,318	1,318	1,318
Adjusted R^2 (%)	3.11	5.54	4.40	5.62	6.20	5.88

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 3, but additonally adds as independent variables financial advice, financial numeracy, and a dummy if the subject holds any stocks or funds. In columns 3 and 6, the sample is restricted to the 1318 observations for which we have complete information for all additional variables. Left out category for financial advice: Professional

B.6.2.2 Portfolio dynamics and the expected return for the savings account

The regressions in Table 3 of the main text do not include the expected return for the savings account as a predictor for changes in portfolio compositions. Table B.17 shows the results when we add this variable. The main coefficients are almost unchanged and the coefficient of the expected return for the savings account is not significantly different from zero.

Table B.17: Changes in expectations and portfolio dynamics — adding the expected return for the savings account

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.89***	4.88***	4.82***	1.41	2.48	2.57
	(2.10)	(1.97)	(1.97)	(1.55)	(1.68)	(1.67)
$\Delta\mu_{\text{AEX}}$	0.43*	0.55**	0.55**		0.27*	0.27*
	(0.24)	(0.24)	(0.24)		(0.16)	(0.16)
$\Delta\sigma_{\text{AEX}}$	−0.42	−0.12	−0.12		−0.51*	−0.51*
	(0.27)	(0.30)	(0.30)		(0.29)	(0.29)
$\Delta\gamma_{\text{AEX}}$	−0.38	0.06	0.06		0.35	0.35
	(0.71)	(0.74)	(0.74)		(0.73)	(0.73)
$\Delta\mu_{\text{Philips}}$		−0.36***	−0.36***	0.28**	0.23*	0.23*
		(0.10)	(0.10)	(0.13)	(0.14)	(0.14)
$\Delta\sigma_{\text{Philips}}$		0.00	0.00	0.27	0.43*	0.43*
		(0.18)	(0.18)	(0.21)	(0.24)	(0.24)
$\Delta\gamma_{\text{Philips}}$		−1.02***	−1.02***	1.04***	0.97***	0.97***
		(0.36)	(0.36)	(0.35)	(0.35)	(0.35)
Exp. return for savings account	−0.01	−0.01		0.02	0.02	
	(0.05)	(0.05)		(0.05)	(0.05)	
Risk aversion	1.19***	1.20***	1.20***	0.06	0.07	0.06
	(0.33)	(0.32)	(0.32)	(0.35)	(0.34)	(0.34)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	2.09	4.73	4.78	5.31	5.78	5.83

Sources: LISS panel and own calculations. The results in this table extend the main specification by including the expected return for the savings account as an additional control.
The table contains OLS regressions of changes in the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. To calculate the updated beliefs for the regressions, we divide the associated return of all bins by the performance until the week of the second belief elicitation before calculating the belief moments (more detail is provided in Internet Appendix B.6.1.3). In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, risk aversion, and the week of the second belief elicitation. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.

B.6.3 Alternative Specifications

Tables B.18 and B.19 replicate the main analyses with three alternative specifications: In column 1 and 2, no control variables are added. In columns 3 and 4, a Tobit regression is run instead of an OLS regression. Finally, in the last columns the variance of the assets is used in the specification instead of the standard deviation. The main effects are not affected and still significant – in one case only at the 10 % level (for the relation of skewness expectations of the AEX on investment in the AEX in the regression without controls: column 1 in Table B.18).

Table B.20 shows a regression of the AEX's relative share in total risky investments (i.e., AEX and Philips) on the differences in perceived means, standard deviations, and skewness. Both the difference in perceived means and the difference in perceived skewness are significant in the expected direction (the latter at the 10% level), while the difference in perceived standard deviations is not. When we regress the change of the share of AEX of total risky investments on changes in the differences in perceived means, standard deviations, and skewness, a similar picture emerges. The changes in the difference in perceived means and perceived skewness are significantly correlated with changes in the share of the AEX of total risky investments. Again, we find no significant coefficient for the change in the difference in perceived standard deviations. Taken together, these analyses suggest that the differences between the two assets in expected mean and skewness matter for the relative weight an asset receives in the risky part of the portfolio.

Table B.18: Expectations and Portfolio Choice — alternative specifications

	Portfolio Share					
	No controls		Tobit		Variance instead of Std	
	AEX	Philips	AEX	Philips	AEX	Philips
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	34.39***	29.15***	25.90***	27.43***	28.54***	29.97***
	(1.74)	(1.62)	(4.05)	(3.64)	(3.12)	(2.80)
μ_{AEX}	1.12***	−0.17	1.01***	−0.28**	0.87***	−0.23**
	(0.12)	(0.11)	(7.70)	(2.39)	(0.11)	(0.12)
σ_{AEX}	0.11	−0.10	0.28	−0.12		
	(0.22)	(0.22)	(1.08)	(0.52)		
σ^2_{AEX}					1.64	−0.32
					(1.16)	(1.10)
γ_{AEX}	0.99*	0.31	1.41**	0.27	1.24**	0.33
	(0.57)	(0.61)	(2.04)	(0.43)	(0.56)	(0.59)
μ_{Philips}	−0.24***	0.43***	−0.31***	0.51***	−0.25***	0.45***
	(0.09)	(0.10)	(3.23)	(5.90)	(0.09)	(0.10)
σ_{Philips}	−0.25*	0.13	−0.18	0.18		
	(0.14)	(0.15)	(1.04)	(1.13)		
$\sigma^2_{\text{Philips}}$					−0.47	0.24
					(0.47)	(0.49)
γ_{Philips}	0.16	1.02***	0.34	1.10***	0.11	0.96***
	(0.34)	(0.31)	(0.80)	(2.91)	(0.33)	(0.30)
Exp. return for savings account			−0.17	−0.25**	−0.17*	−0.25***
			(1.18)	(1.97)	(0.10)	(0.10)
Risk aversion			−2.95***	−4.01***	−2.43***	−3.45***
			(3.87)	(5.84)	(0.62)	(0.59)
Controls	No	No	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	6.21	3.76	1.40	0.95	11.41	6.72

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 2, but with three alternative specifications: In column 1 and 2, no control variables are added. In columns 3 and 4, a Tobit regression is run instead of an OLS regression. In column 5 and 6, the variance of the assets is used in the specification instead of the standard deviation.

Table B.19: Changes in expectations and portfolio dynamics — alternative specifications

	Portfolio Share					
	No controls		Tobit		Variance instead of Std	
	AEX (1)	Philips (2)	AEX (3)	Philips (4)	AEX (5)	Philips (6)
Constant	2.13***	−0.12	4.29***	−1.80	4.46***	−1.98
	(0.33)	(0.30)	(1.50)	(1.46)	(1.44)	(1.47)
$\Delta\mu_{\text{AEX}}$	0.60***	0.25	0.59***	0.26**	0.62***	0.22
	(0.24)	(0.16)	(5.58)	(2.51)	(0.23)	(0.16)
$\Delta\sigma_{\text{AEX}}$	−0.17	−0.42	−0.19	−0.42**		
	(0.31)	(0.29)	(0.85)	(1.98)		
$\Delta\sigma^2_{\text{AEX}}$					−0.59	−2.11*
					(1.50)	(1.28)
$\Delta\gamma_{\text{AEX}}$	0.02	0.23	0.06	0.38	0.09	0.33
	(0.75)	(0.74)	(0.12)	(0.82)	(0.75)	(0.74)
$\Delta\mu_{\text{Philips}}$	−0.38***	0.27**	−0.38***	0.27***	−0.46***	0.32**
	(0.10)	(0.14)	(5.74)	(4.06)	(0.10)	(0.16)
$\Delta\sigma_{\text{Philips}}$	0.01	0.38	0.04	0.39***		
	(0.18)	(0.24)	(0.29)	(3.28)		
$\Delta\sigma^2_{\text{Philips}}$					0.78	0.75
					(0.52)	(0.93)
$\Delta\gamma_{\text{Philips}}$	−1.00***	0.95***	−1.03***	0.99***	−1.05***	1.17***
	(0.37)	(0.36)	(4.08)	(4.00)	(0.35)	(0.35)
Risk aversion			1.22***	0.06	1.23***	0.05
			(3.68)	(0.19)	(0.32)	(0.35)
Controls	No	No	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	4.09	4.30	0.72	0.68	11.41	6.72

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 3, but with three alternative specifications: In column 1 and 2, no control variables are added. In columns 3 and 4, a Tobit regression is run instead of an OLS regression. In column 5 and 6, the variance of the assets is used in the specification instead of the standard deviation.

Table B.20: Explain total share of risky investments and share in AEX of risky investments (experimental task)

	Share Risky Assets (AEX + Philips) (1)	Difference AEX - Philips (2)	Change Difference AEX - Philips (3)	Share AEX of Risky Assets (4)	Change in Share AEX of Risky Assets (5)
Constant	58.41***	0.60	4.05	47.52***	3.00*
	(3.78)	(4.64)	(2.59)	(3.20)	(1.65)
μ_{AEX}	0.64***				
	(0.12)				
σ_{AEX}	0.15				
	(0.23)				
γ_{AEX}	1.53***				
	(0.59)				
$\mu_{Philips}$	0.19*				
	(0.10)				
$\sigma_{Philips}$	−0.04				
	(0.16)				
$\gamma_{Philips}$	1.08***				
	(0.37)				
$\mu_{AEX} - \mu_{Philips}$		0.77***		0.54***	
		(0.13)		(0.09)	
$\sigma_{AEX} - \sigma_{Philips}$		0.16		0.04	
		(0.22)		(0.15)	
$\gamma_{AEX} - \gamma_{Philips}$		0.86*		0.84***	
		(0.48)		(0.34)	
$\Delta\mu_{AEX} - \Delta\mu_{Philips}$			0.51***		0.35***
			(0.18)		(0.11)
$\Delta\sigma_{AEX} - \Delta\sigma_{Philips}$			0.53		0.19
			(0.34)		(0.19)
$\Delta\gamma_{AEX} - \Delta\gamma_{Philips}$			1.56***		1.39***
			(0.59)		(0.41)
Exp. return for savings account	−0.42***	0.10	−0.03	0.01	0.02
	(0.13)	(0.16)	(0.08)	(0.11)	(0.06)
Risk aversion	−5.90***	0.74	1.19**	0.23	1.55***
	(0.71)	(0.98)	(0.57)	(0.68)	(0.40)
Controls	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,751	1,749
Adjusted R^2 (%)	14.82	6.26	5.21	7.66	5.62

Sources: LISS panel and own calculations. In the first column, the dependent variable is the sum of the share invested in the AEX and in Philips. In columns 2 the difference between the share invested in the AEX and the share invested in Philips is used (for column 3, the change in this measure between the two elicitations is calculated). In columns 4 and 5, the fraction of investment into the AEX of the total invested in either AEX or Philips is considered. All outcome variables are multiplied by 100 to simplify presentation of coefficients.

B.6.4 Split by Holding Stocks or Funds

In the survey, we asked participants to provide information on their investments in the following four asset groups: riskless assets (banking accounts, saving accounts), stocks, funds, and other risky financial assets (e.g., bonds). Using this information, we repeat our main analyses with a specific focus on whether a participant had any experience in stock markets, proxied by an indicator variable indicating whether the participant has any assets invested in stocks or funds, which was the case for 25% of the sample.

In Table B.21, we regress portfolio shares in the AEX and Philips, respectively, on the moments of participants' expectations interacted with an stock market investor dummy. We detect no clear pattern in the coefficients for the interaction terms between the stock market investor dummy and skewness expectations. The signs of the respective coefficients are mixed and neither of the coefficients is statistically significant. However, the results suggest that mean expectations for Philips tend to be more strongly associated with portfolio shares for participants that invest in the stock market, both for the share invested in the AEX (negatively) and the share invested in Philips (positively). This finding suggests that individuals with stock market experience pay more attention to expected returns in their investment decisions.

In Table B.22, we replicate the exercise for the relation between changes in expectations and changes in portfolio choice, i.e., we interact the stock market investor dummy with the changes in the belief parameters. Again, the interactions between investing in the stock market and changes in skewness expectations are not statistically significant for both assets. Overall, these analyses do not suggest that the relation of portfolio choice and skewness expectations differs by much between participants who invest or do not invest in the stock market with the caveat that we may not have enough data and power to thoroughly analyze heterogeneous effects.

Table B.21: Expectations and Portfolio Choice – split by Holding Stocks or Funds

	Portfolio Share					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	27.51***	26.67***	28.25***	30.64***	29.36***	31.15***
	(3.75)	(3.79)	(3.96)	(3.33)	(3.34)	(3.64)
μ_{AEX}	0.73***	0.71***	0.80***			−0.23
	(0.14)	(0.14)	(0.14)			(0.16)
σ_{AEX}	−0.01	0.06	0.21			−0.10
	(0.24)	(0.24)	(0.29)			(0.28)
Holds stocks or funds	8.45*	8.45*	6.55	−1.77	0.15	0.91
	(4.75)	(4.71)	(4.67)	(3.32)	(3.60)	(4.47)
$\mu_{\text{AEX}} \times$ Holds stocks or funds	0.09	0.10	0.42			−0.12
	(0.31)	(0.31)	(0.28)			(0.29)
$\sigma_{\text{AEX}} \times$ Holds stocks or funds	−0.26	−0.29	0.26			0.12
	(0.60)	(0.60)	(0.69)			(0.69)
γ_{AEX}		1.13*	1.16*			0.36
		(0.67)	(0.68)			(0.76)
$\gamma_{\text{AEX}} \times$ Holds stocks or funds		0.54	1.11			−1.18
		(1.91)	(1.89)			(1.96)
μ_{Philips}			−0.10	0.26***	0.29***	0.34***
			(0.10)	(0.10)	(0.10)	(0.10)
σ_{Philips}			−0.11	0.13	0.08	0.11
			(0.18)	(0.15)	(0.15)	(0.17)
γ_{Philips}			0.12		1.26***	1.24***
			(0.41)		(0.38)	(0.38)
Exp. return for savings account			−0.16			−0.26**
			(0.12)			(0.12)
$\mu_{\text{Philips}} \times$ Holds stocks or funds			−0.68***	0.59***	0.56***	0.62***
			(0.23)	(0.22)	(0.22)	(0.24)
$\sigma_{\text{Philips}} \times$ Holds stocks or funds			−0.17	−0.09	−0.04	−0.07
			(0.41)	(0.34)	(0.33)	(0.42)
$\gamma_{\text{Philips}} \times$ Holds stocks or funds			−0.03		−1.39	−1.13
			(1.05)		(0.92)	(0.92)
Exp. return for savings account × Holds stocks or funds			0.61			−0.34
			(0.45)			(0.44)
Risk aversion	−1.96***	−1.99***	−2.08***	−2.97***	−2.96***	−3.11***
	(0.74)	(0.74)	(0.73)	(0.70)	(0.69)	(0.69)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,454	1,454	1,454	1,454	1,454	1,454
Adjusted R^2 (%)	11.25	11.37	13.11	6.51	6.99	7.22

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 2, but beliefs are interacted with a dummy indicating if the subject owns any stocks or funds.

Table B.22: Changes in Expectations and Portfolio Dynamics – split by Holding Stocks or Funds

	Change in Portfolio Share					
	Δ_{AEX}			Δ_{Philips}		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	5.11**	5.17**	4.77**	1.68	1.61	3.84*
	(2.24)	(2.25)	(2.11)	(1.74)	(1.74)	(2.12)
$\Delta\mu_{\text{AEX}}$	0.19	0.20	0.36			0.46*
	(0.21)	(0.21)	(0.24)			(0.26)
$\Delta\sigma_{\text{AEX}}$	−0.91***	−0.90**	−0.63			0.05
	(0.37)	(0.38)	(0.43)			(0.41)
Holds stocks or funds	2.51	2.41	2.06	−0.50	−0.42	−1.67
	(2.40)	(2.35)	(2.33)	(1.15)	(1.16)	(1.73)
$\Delta\mu_{\text{AEX}} \times$ Holds stocks or funds	0.74	0.72	0.65			−0.14
	(0.57)	(0.55)	(0.57)			(0.31)
$\Delta\sigma_{\text{AEX}} \times$ Holds stocks or funds	1.39*	1.41*	1.35			−1.30*
	(0.79)	(0.80)	(0.92)			(0.75)
$\Delta\gamma_{\text{AEX}}$		0.61	0.99			−0.23
		(0.89)	(0.96)			(0.90)
$\Delta\gamma_{\text{AEX}} \times$ Holds stocks or funds		−2.67	−2.68			0.63
		(1.72)	(1.74)			(1.35)
$\Delta\mu_{\text{Philips}}$			−0.32**	0.23*	0.29**	0.21
			(0.13)	(0.12)	(0.12)	(0.14)
$\Delta\sigma_{\text{Philips}}$			0.10	0.30	0.18	0.32
			(0.24)	(0.21)	(0.21)	(0.25)
$\Delta\gamma_{\text{Philips}}$			−1.14***		0.90**	0.77**
			(0.45)		(0.40)	(0.40)
$\Delta\mu_{\text{Philips}} \times$ Holds stocks or funds			0.01	−0.08	−0.05	0.01
			(0.20)	(0.17)	(0.18)	(0.19)
$\Delta\sigma_{\text{Philips}} \times$ Holds stocks or funds			−0.11	−0.13	−0.13	−0.01
			(0.42)	(0.34)	(0.32)	(0.39)
$\Delta\gamma_{\text{Philips}} \times$ Holds stocks or funds			−0.52		0.67	0.66
			(0.83)		(0.85)	(0.81)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,454	1,454	1,454	1,454	1,454	1,454
Adjusted R^2 (%)	3.17	3.31	5.34	4.27	5.24	5.86

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 3, but beliefs are interacted with a dummy indicating if the subject owns any stocks or funds.

B.6.5 Piecewise Regression

In Table B.23 we replicate the static main regression and include separate terms for positive and negative skewness. We also replicate the dynamic analysis (Table B.24) in a similar fashion where we include separate terms for positive and negative changes of skewness.

In both static regressions, all coefficients are as expected; positive skewness is associated with an increase in the portfolio share of an asset, whereas negative skewness is associated with a reduction. With the exception of positive skewness for the AEX, all coefficients are significant at the 10% level or less. In both cases, the coefficient for negative skewness is larger than the one for positive skewness, suggesting a potentially stronger influence of negative skewness. However, Wald tests (p-values: 0.23 (AEX column 1), 0.41 (AEX column 2), 0.43 (Philips column 3), and 0.19 (Philips column 4)) indicate that the respective coefficients for the positive and negative terms do not significantly differ from each other.

In the dynamic regressions, all coefficients again have the expected direction. As in our main specification, changes in skewness (positive or negative) is not significantly related to changes in investment in the AEX. For Philips, both coefficients are positive and significant. Wald tests (p-values: 0.46 (AEX column 1), 0.96 (AEX column 2), 0.68 (Philips column 3), and 0.67 (Philips column 4)) indicate that the two coefficients are not significantly different from each other for all specifications. The results thus do not provide strong evidence concerning differential effects of positive and negative skewness.

Table B.23: Expectations and Portfolio Choice

	Portfolio Share			
	AEX		Philips	
	(1)	(2)	(3)	(4)
Constant	27.91***	29.92***	28.08***	28.25***
	(3.49)	(3.62)	(2.93)	(3.19)
μ_{AEX}	0.68***	0.86***		−0.21*
	(0.11)	(0.11)		(0.12)
σ_{AEX}	−0.02	0.23		−0.02
	(0.20)	(0.23)		(0.22)
γ_{AEX} +	0.42	0.74		1.59*
	(0.85)	(0.86)		(0.84)
γ_{AEX} -	2.36**	2.08*		−2.21
	(1.09)	(1.10)		(1.44)
μ_{Philips}		−0.23***	0.38***	0.43***
		(0.09)	(0.09)	(0.09)
σ_{Philips}		−0.20	0.10	0.12
		(0.14)	(0.12)	(0.14)
γ_{Philips} +		0.09	0.75**	0.64*
		(0.39)	(0.36)	(0.36)
γ_{Philips} -		0.87	2.13	2.75*
		(1.51)	(1.57)	(1.44)
Exp. return for savings account		−0.17*		−0.25***
		(0.10)		(0.10)
Controls	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	10.22	11.34	6.38	6.99

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 2, but include separate terms for positive and negative skewness.

Table B.24: Changes in Expectations and Portfolio Dynamics

	Change in Portfolio Share			
	Δ_{AEX}		Δ_{Philips}	
	(1)	(2)	(3)	(4)
Constant	5.54***	4.70**	1.48	2.96*
	(2.18)	(2.05)	(1.51)	(1.68)
$\Delta\mu_{\text{AEX}}$	0.41	0.53**		0.31*
	(0.26)	(0.26)		(0.16)
$\Delta\sigma_{\text{AEX}}$	−0.34	−0.09		−0.60**
	(0.27)	(0.30)		(0.29)
$\Delta\gamma_{\text{AEX}}$ +	0.52	0.21		−1.14
	(1.24)	(1.24)		(1.01)
$\Delta\gamma_{\text{AEX}}$ -	−0.99	−0.01		1.42
	(1.07)	(1.16)		(1.19)
$\Delta\mu_{\text{Philips}}$		−0.36***	0.28**	0.22*
		(0.10)	(0.13)	(0.14)
$\Delta\sigma_{\text{Philips}}$		0.03	0.29	0.41*
		(0.19)	(0.22)	(0.24)
$\Delta\gamma_{\text{Philips}}$ +		−0.64	1.27*	1.20*
		(0.74)	(0.67)	(0.66)
$\Delta\gamma_{\text{Philips}}$ -		−1.20***	0.94**	0.85*
		(0.47)	(0.45)	(0.47)
Controls	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	2.18	4.71	5.32	5.98

Sources: LISS panel and own calculations. The results in this table replicate the main specification of Table 3, but include separate terms for positive and negative changes of skewness.

B.6.6 Cross-section based on data from March 2014

Table B.25 repeats the cross-sectional analysis for the data collection during the second elicitation in March 2014.

Table B.25: Expectations and Portfolio Choice (Data from March 2014)

	Portfolio Share (after updating)					
	AEX			Philips		
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	39.21***	38.51***	40.24***	29.54***	29.04***	28.82***
	(3.16)	(3.18)	(3.24)	(2.51)	(2.55)	(2.72)
μ_{AEX}	1.06***	1.03***	1.21***			−0.36***
	(0.13)	(0.13)	(0.13)			(0.13)
σ_{AEX}	−0.47**	−0.43**	0.12			0.26
	(0.20)	(0.20)	(0.25)			(0.23)
γ_{AEX}		1.20**	1.30**			0.12
		(0.56)	(0.56)			(0.58)
μ_{Philips}			−0.21*	0.39***	0.39***	0.56***
			(0.11)	(0.11)	(0.11)	(0.11)
σ_{Philips}			−0.50***	0.15	0.09	−0.05
			(0.16)	(0.11)	(0.11)	(0.15)
γ_{Philips}			0.32		0.68**	0.72***
			(0.33)		(0.29)	(0.29)
Exp. return for savings account			−0.10			−0.24***
			(0.10)			(0.09)
Risk aversion	−1.18**	−1.15*	−1.15**	−3.23***	−3.22***	−3.40***
	(0.61)	(0.60)	(0.59)	(0.55)	(0.54)	(0.54)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1,857	1,857	1,857	1,857	1,857	1,857
Adjusted R^2 (%)	12.92	13.09	14.58	6.80	7.01	7.70

Sources: LISS panel and own calculations. The results in this table use the main specification of Table 2, but uses both investment shares and belief parameters from the second elicitation in March 2014. The table contains OLS regressions of changes in the share invested into the AEX (column 1 to 3) and Philips (column 4 to 6) on varying sets of covariates. In addition to the variables shown in the table, the regressions include controls for gender, age, education, marital status, children, income, financial wealth, and risk aversion. Section A.6 defines all controls that have not been defined in the main text. Heteroskedasticity-robust standard errors are reported in parentheses.