Trust and Delegated Investing: A Money Doctors Experiment

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Money Doctors Idea

- Gennaioli, Shleifer, and Vishny (2015, JF): Trust important for delegated investing
- Despite unbiased beliefs, investors are afraid to take risk
- Trusted/trustworthy money managers reduce anxiety

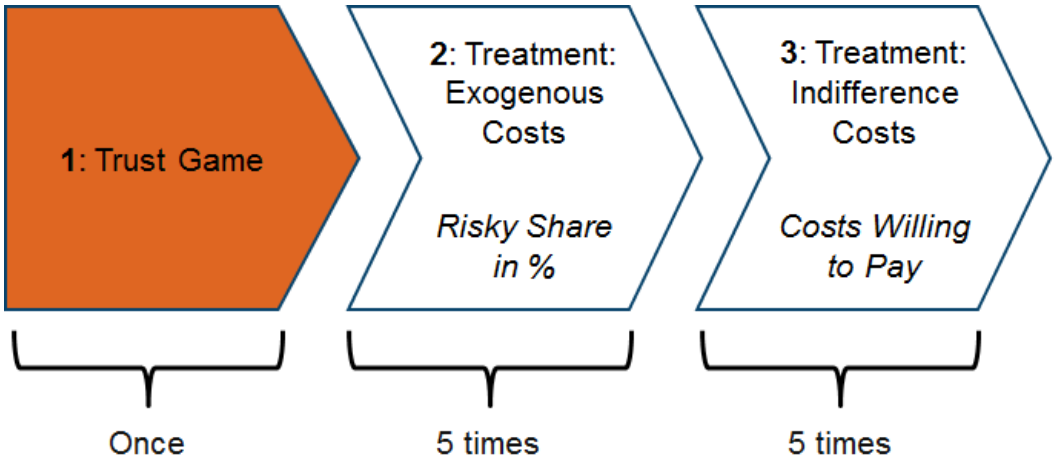
But money managers exploit trust:

- Managers set fees to reflect how trusted they are
- All else equal, more trustworthy managers can set higher fees

Central claim (to be tested):

Investors are better off **with** money managers because higher risk taking overcompensates for the costs of fees

What we do



- Experimental study at Mannheim MLab of Money Doctors theory (Gennaioli, Shleifer, and Vishny, 2015)
  1. Participants play a trust game in the spirit of Berg, Dickhaut, and McCabe (1995).

     Higher returned amounts are considered a signal of higher trustworthiness
  2. Participants make investment decisions with advisers that differ in costs / trust
  3. Participants specify costs willing to bear for investing with an adviser with higher trustworthiness

Main results

- Investors take

  a) substantially more risk (16 pp) with more trustworthy managers

  b) pay higher costs for more trustworthy money managers

- Willingness to take more risk and pay higher costs is increasing in trust difference between money managers

- Investors nonetheless profit from trust

Step 1: Trust Game

This game allows to measure trusting and trustworthy behavior (Camerer, 2003; Fehr, 2009; Johnson and Mislin, 2011).

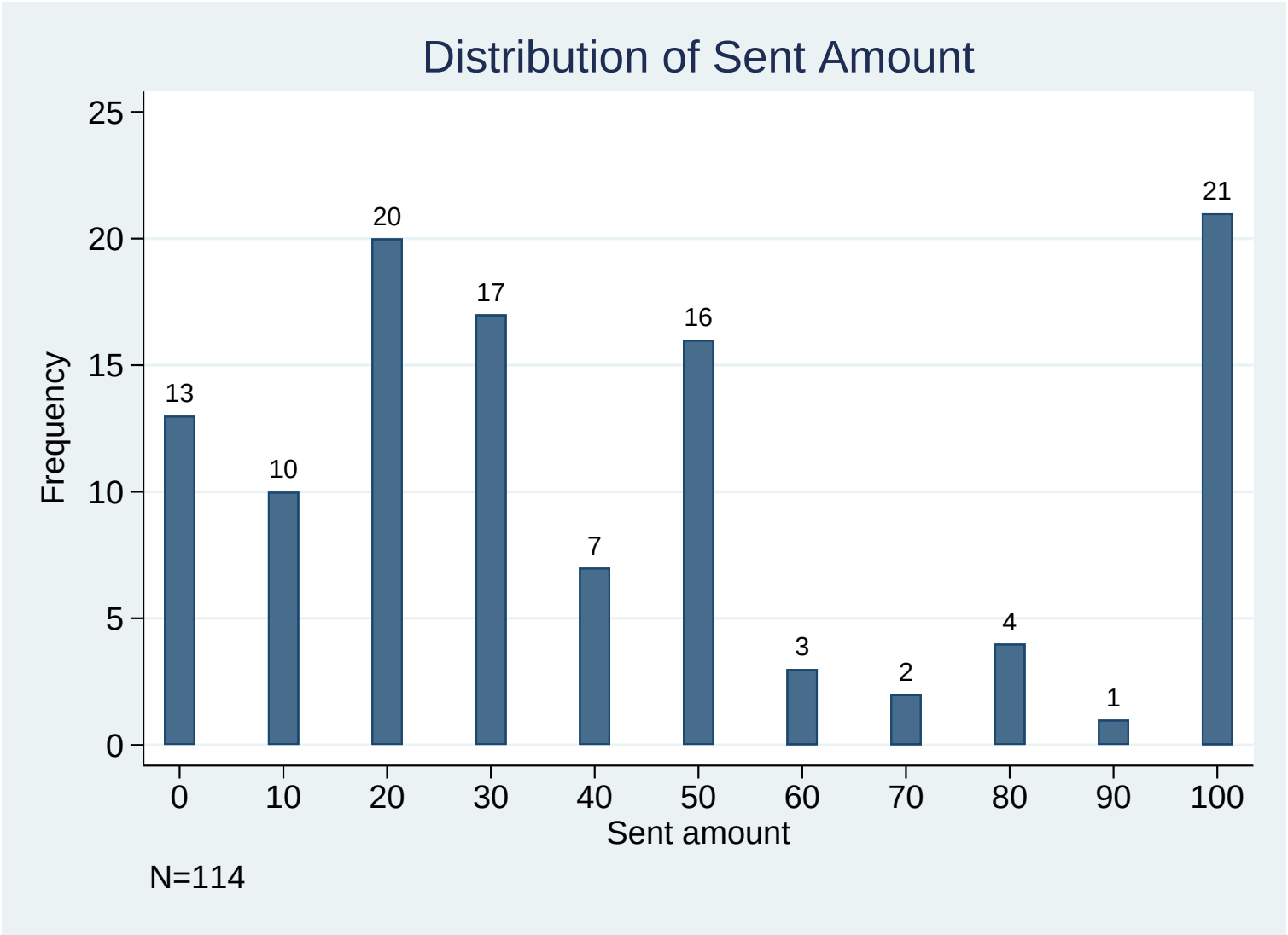
Sender endowed with $X = 100$, can send $S \in [0, 10, 20, ..., 100]$. Receiver receives $3S$, can return $R \in [0, 10, 20, ..., 3S]$.

R = measure of trustworthiness, i.e. higher returned amounts are considered a signal of higher trustworthiness.

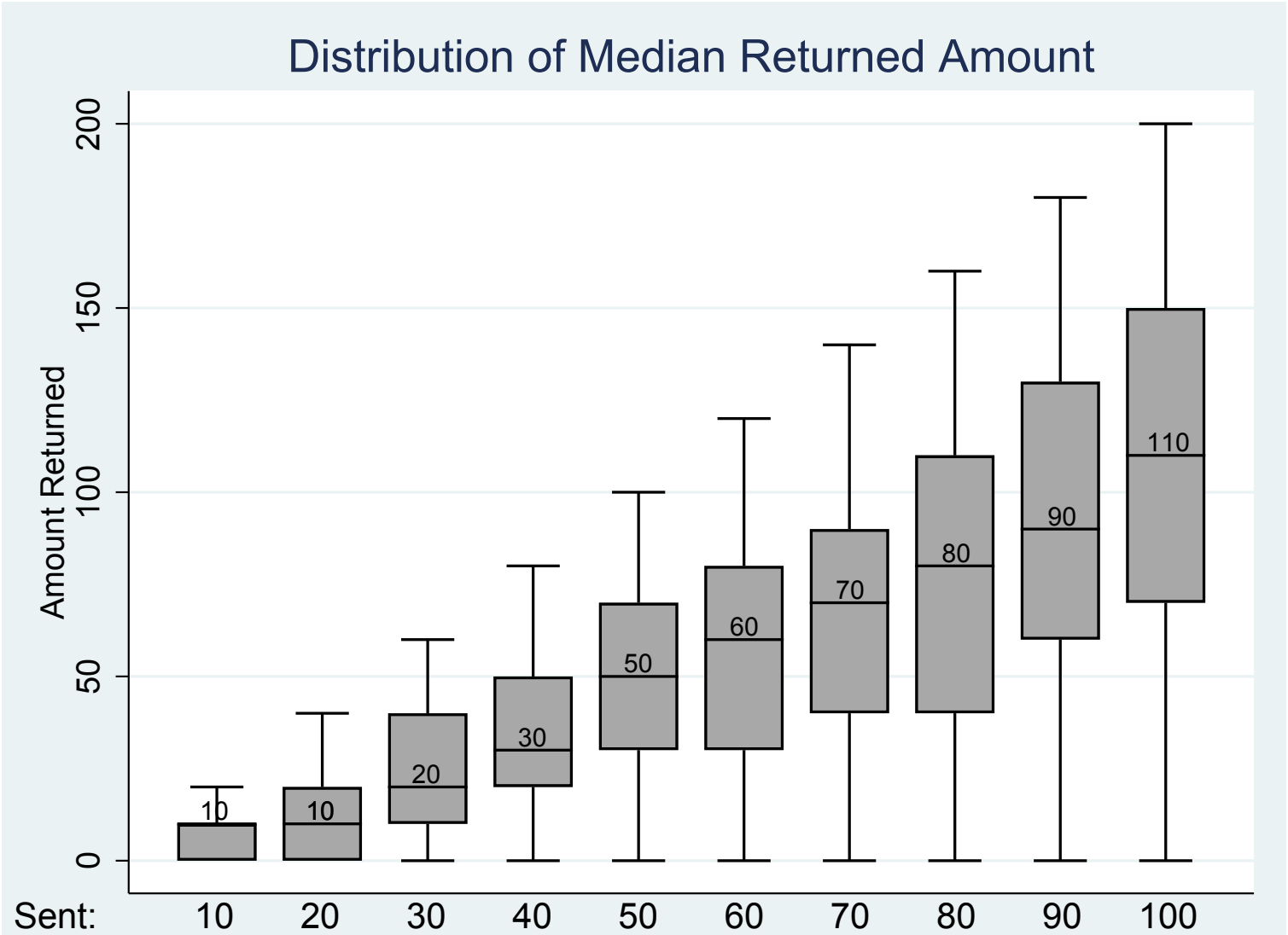
Participants randomly matched. Both participants play as if they were sender & as if they were receiver ("strategy method")

Incentivation: Random draw of round and of one of two risky allocations

Results of Trust Game 1/2



Results of Trust Game 2/2



Step 2: Matching Investors with Money-Managers

Random 1-to-2 matching

Every participant is "investor" and is shown R_S " (amount returned for amount sent) of both matched participants ("managers")

Higher R_S = Higher trustworthiness

Treatment 1: "Exogenous Costs"

Investors make separate risky allocations with each manager:

- Both managers' investments offer identical expected return and volatility **before** costs (E(R)=6% and Vol.=20%)
- Manager with higher trustworthiness (R_S) charges higher costs $C_h = 1.5\%$ (i.e. active fund)
- Manager with lower trustworthiness (R_S) charges lower costs $C_l = 0.75\%$ (i.e. index fund)
- Repeated 5 times with new random 1-to-2

Screenshot of information overview provided to participants:

Advisor	Cost (on risky investment)	Returned amount for amount you sent (You sent: 0 ECU)	Expected Return after costs	Variance
X	0.75%	0 ECU	(6.0 - 0.75)%	20.0%
Y	1.5%	0 ECU	(6.0 - 1.5)%	20.0%

Please indicate how much you would like to invest into the risky investment with advisor X:

ECU

Please indicate how much you would like to invest into the risky investment with advisor Y:

ECU

Hypothesis Treatment 1

- Managers do not effectively act ("homogeneous in skill") $\rightarrow$ Trustworthiness does *not* affect returns of the asset
- Managers cannot be monetarily rewarded for trustworthiness $\rightarrow$ Fees/costs are not transferred to managers

Hypothesis Exogenous Costs

The larger the difference in trustworthiness, the higher the amount invested risky with the high-cost / high-trust manager relative to the low-cost / low-trust manager

Univariate: Exogenous Costs 1/2

Do investors invest more risky with the more trustworthy but more costly manager?

	Risky Share in %				
	N	mean	sd	5th Percentile	95th Percentile
High Trustworthiness, *High Costs*	410	46.15	29.20	0	100
Low Trustworthiness, *Low Costs*	410	29.27	27.07	0	100
Δ t-stat $= 6.58^{***}$					

Investors **better off** in terms of E(R) with costly, but trustworthy manager $\rightarrow 0.46 * 4.50\% = 2.07\% > 0.29 * 5.25\% = 1.52\%$ (p-value $= 0.000^{***}$)

Univariate: Exogenous Costs 2/2

What if managers are by chance equally trustworthy and costs are randomly assigned?

All Participants

	Risky Share in %				
	N	mean	sd	5th Percentile	95th Percentile
Low Costs	160	32.71	28.11	0	100
High Costs	160	25.73	27.32	0	100
		Δ t-stat $= 1.77$*			

Multivariate: Exogenous Costs 1/2

Question: Does difference in risky share increase with difference in money manager trustworthiness?

$$\Delta Risky\ Share_{it} = \alpha + \Delta Trustworthiness_{it}\beta + RE_i + \epsilon_{it}$$

$\Delta Risky\ Share_{it}$ = Risky share of more trustworthy manager minus risky share of less trustworthy manager (if equal R_S, more costly minus less costly)

Several ways to look at $\Delta Trustworthiness$:

- **Absolute** $\Delta Trustworthiness$
- **Relative** $\Delta Trustworthiness \rightarrow (1 - \frac{Lower\ Returned\ Amount}{Higher\ Returned\ Amount}) * 100$
- $\Delta Trustworthiness$ **Relative to Amount Sent** $\rightarrow$ $(\frac{Higher\ Returned\ Amount\ -\ Lower\ Returned\ Amount}{Amount\ Sent}) * 100$

Multivariate: Exogenous Costs 2/2

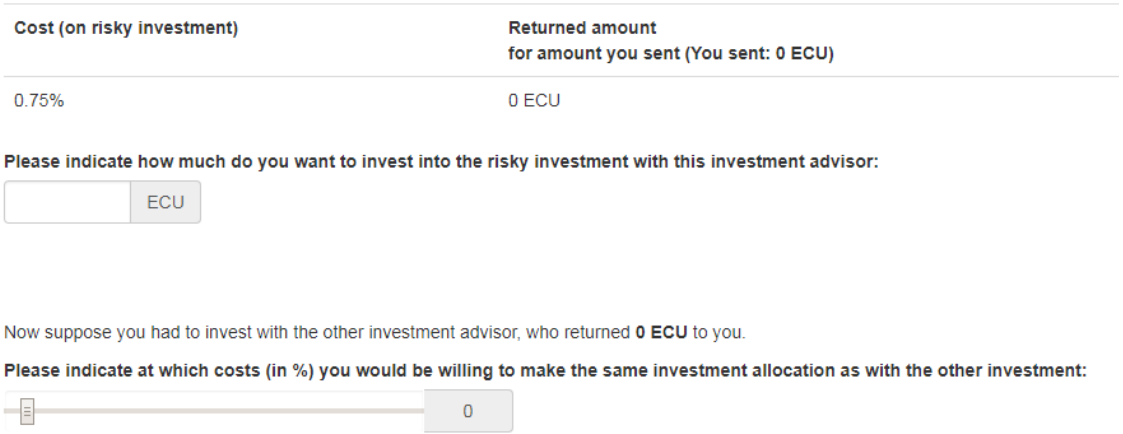
	(1)	(2)	(3)
	Random Effects		
	$y = \Delta Risky\ Share_{it}$		
Δ *Trustworthiness Absolute*	0.330***		
	(0.067)		
Δ *Trustworthiness Relative*		0.248***	
		(0.042)	
Δ *Trustworthiness Relative to Sent*			0.176***
			(0.031)
Constant	-0.669	-3.801	-1.909
	(3.809)	(4.295)	(3.954)
Observations	570	570	570
Cluster-robust S.E.	YES	YES	YES
Round FE	YES	YES	YES
$R^2_{overall}$	0.082	0.054	0.066

Random effects control for unobserved individual heterogeneity;

Standard errors clustered at the individual level

Treatment 2: "Indifference Costs"

- Again random 1-to-2 matching
- Investors first have to make risky allocation with manager who:
  - Charges C_I=0.75%
  - Returned R_S less than or equal to the second manager
- Investors then specify indifference costs at which they would make the same risky allocation with the second manager as with the first manager:
  - Input on slider from 0% to 10%
  - Repeated 5 times with new random 1-to-2 matching from Step 2



Hypothesis Treatment 2

- Managers do not effectively act ("homogeneous in skill") $\rightarrow$ Trustworthiness does *not* affect returns of the asset
- Managers cannot be monetarily rewarded for trustworthiness $\rightarrow$ Fees/costs are not transferred to managers

Hypothesis Indifference Costs

The larger the difference in trustworthiness, the higher the indifference costs accepted with second money manager

Univariate: Indifference Costs

Are investors willing to pay more for investing with more trustworthy managers?

Trustworthiness Second Manager > First Manager

	N	mean	sd	5th Percentile	95th Percentile
Indifference Costs	412	1.946	2.243	0	8.02

Δ t-stat $= 6.42^{***}$

Trustworthiness Second Manager = First Manager

Indifference Costs	158	0.844	1.174	0	5

Δ t-stat $= 0.56$

Alternative Explanations

Instructions make clear that:

1. Trust does not affect (gross) returns
2. Money managers can not be rewarded monetarily

Control questions at end of experiment:

- **Biased Beliefs**: Did you expect investment decisions with advisors who returned more in the trust game to give you higher returns than investment decisions with advisors who returned less?
- **Reward Motivation**: Did you invest more risky with the advisor who returned more in the trust game because you wanted to reward him?

Test: Regress difference in risky shares invested on:

- "Biased Beliefs" and "Reward Motivation" dummies and "Biased Beliefs" x "Reward Motivation"
- Constant remains positive / significant

Robustness of Results, Based on Treatment 1

Dependent variable:

Risky share with more trustworthy manager minus risky share with less trustworthy manager (cases with equal R_S excluded)

	Random Effects
Biased Beliefs	-12.98
	(11.48)
Reward Motivation	1.289
	(8.862)
Biased Beliefs$\times$*Reward Motivation*	18.46
	(13.27)
Constant	17.46**
	(8.633)
Observations	322
Cluster-robust S.E.	YES
Round FE	YES
$R^2_{overall}$	0.057

Conclusion

- Simple experiment with the only difference being advisers' costs and trustworthiness
- Evidence in favor of Money Doctors theory, even after controlling for alternative explanations (Biased beliefs - Reward Motivation)
- Investors profit from trust $\rightarrow$ Risk taking benefits exceed increased costs