
Discussion of
Corporate Scandals and Household Stock Market
Participation

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Stock market participation: Conventional framework

- State uncertainty of stock investment payoffs: Nature determines outcome
- Participation decision trades off participation costs with return/risk rewards from participation
- Perception of higher risk or greater aversion to risk can lead to non-participation

Stock market participation: Role of trust

- Strategic uncertainty: Outcome partly under control of other player(s)
- Trust = belief that opponent will not cheat
- Possibility: Strategic uncertainty just adds an additional layer of risk. Aversion to it captured by conventional risk aversion.
- However, evidence (Bohnet and Zeckhauser 2004): **Betrayal aversion** over and above risk aversion.
- Evaluation of prospective returns from stock market participation not only relative to state-uncertainty risks but also betrayal risk: Non-participation if perceived risk of betrayal is high = lack of trust.

Identifying the causal effect of trust

- Prior evidence on cross-sectional determinants of differences in trust, effect on economic outcomes
- Problem: Endogeneity of trust, correlation with unobservables
- Instruments, e.g.,
 - Religion (Guiso et al. 2009)
 - Ethno-linguistic homogeneity (Knack and Keefer 1997)but correlation with unobservable omitted variables hard to rule out.
- Fehr (2009): “The most convincing strategy seems to be to induce optimistic or pessimistic beliefs about other people’s trustworthiness exogenously and observe whether this leads to interesting and lasting changes in behaviors and economic outcomes.”

Experience of fraud as driver of time-variation in trust

- This paper: Experience of fraud as shifter of beliefs about trustworthiness
- Identification: Variation in local corporate fraud experiences
- Main concern: Correlation with local economic conditions, but
 - Controls for local economic conditions
 - Arthur Andersen natural experiment
 - Within-state variation in adult-life fraud experiences
- Overall, evidence is quite compelling.

Comment on analysis 1: Highly skewed fraud variables

Panel B: Distribution of Fraud Revelation by State

State	# of Frauds	State	# of Frauds	State	# of Frauds	State	# of Frauds	State	# of Frauds	State	# of Frauds
AL	5	FL	68	LA	2	NC	8	OK	5	TX	71
AR	1	GA	22	MA	29	NE	2	OR	3	UT	12
AZ	10	IA	1	MD	8	NH	2	PA	24	VA	14
CA	127	ID	1	MI	12	NJ	29	PR	4	WA	6
CO	16	IL	19	MN	13	NM	2	RI	1	WI	3
CT	18	IN	8	MO	8	NV	13	SC	5	WV	1
DC	2	KS	10	MS	2	NY	84	SD	3	WY	1
DE	2	KY	1	MT	1	OH	25	TN	6		

Variable	N	Mean	S.D.
Cumulative # of Frauds	1402	2.430	0.048
Fraud in State	1402	0.010	0.024

- Skewness not necessarily a problem, but useful to keep in mind that there are a few highly influential observations

Comment on analysis 2: Magnitude of 2SLS point estimate

- OLS: Δ Fraud of 2pp \rightarrow 0.72pp decline in prob(participation)

	<i>Panel</i>	
Dependent Variable: Equity Participation	(1)	(2)
Fraud in State	-0.289** (0.146)	-0.363** (0.165) [-0.851]

- 2SLS: Δ Fraud of 2pp \rightarrow 18pp decline in prob(participation)?

	First Stage Fraud in State	Second Stage Equity Participatio
<i>Instrumental Variable</i>		
AA Shock	0.029*** (0.002)	
<i>Endogenous Variable</i>		
Fraud in State		-8.927*** (0.917)

Is the dependent variable the log equity **value** rather than equity **participation**?

Comment on analysis 3: Exclusion restriction

- (1) Exclusion restriction: AA instrument uncorrelated with factors affecting stock market participation **post-2001**
- (2) Table 3, panel B: AA instrument is uncorrelated with factors affecting stock market participation **pre-2001**
- (2) implies (1) only for time-constant factors
- (1) is not directly testable. Label for Table 3, Panel B as “test of exclusion restriction” somewhat misleading.
- But nevertheless plausible that it holds.

Comment on analysis 4: Weighting of experiences of fraud

- Finding: Average state-level fraud intensity since $\max(\text{birthyear} + 18, 1980)$ correlated with stock market participation
- Paper: Unlike experience effects in Malmendier and Nagel (2011), fraud experiences in the distant past weighted equally strongly as recent experiences.
- But: approach in the paper also forces some (complex) overweighting of recent experience.

Comment on analysis 4: Weighting of experiences of fraud

- First, starting at age 18 implies step-function weighting of life-time experience with zero weight on pre-18 experience.
- Second, fraud data not available before 1980, so for all but the youngest individuals this induces further overweighting of recent data
 - 60-year old in 1994: only data from age 46 to 60 is used
 - 60-year old in 2005: only data from age 35 to 60 is used
- Not clear how different this implicit weighting scheme is from the MN weights that are slowly decaying from current period back to birth.
- Not clear whether there is sufficiently long history of data to precisely estimate whether there is a slow decay, as in MN (2011), or not.

Potential additional analyses

- Disentangle effect of fraud experiences on risk aversion from effects on betrayal aversion? Perhaps: PSID 1996 supplement on (job-choice related) risk tolerance
- Is betrayal aversion effect specific to stocks, or does it affect propensity to invest in mutual funds? in index funds? Possible to analyze with brokerage data?
- How big are the effects on participation in aggregate? Based on the cross-sectional estimates, how much aggregate change in the participation rate would the point estimates imply?
- Applications to betrayal risk in delegated portfolio management, e.g.,
 - Hedge funds: Madoff
 - Mutual funds: Market timing scandal

Potential broader implications

- Fraud revelations concentrated in recessions: Part of the reason why empirically observed risk premia rise in recessions?
 - Local price impact documented in this paper is relatively easy to "arbitrage", aggregate effect is not
- Recent literature on "safety" premium of Treasuries, etc. Not clear exactly what safety attribute is about. Is it lack of betrayal risk?
- Welfare
 - Desirability of privatized, self-directed retirement saving? Trust in companies, fund managers, government?
 - Assessment of damage of fraud: Not only direct costs, but also wide-ranging indirect effects on individuals' portfolio choices through betrayal aversion channel