



University of  
Zurich<sup>UZH</sup>

# Munich Lecture in Economics 2

## Economic and cultural influences on risk aversion and honesty

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# Countercyclical risk aversion

## An experiment with financial professionals

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# Motivation

- A key puzzle in finance is why the risk premium of many assets varies strongly and systematically over time [Cochrane 2011]
- During a boom
  - For many assets high prices relative to dividends are followed by low returns (traders seem to demand only low returns to hold the asset)
- During a bust
  - For many assets low prices relative to dividends are followed by high returns (traders seem to demand high returns to hold the asset)

- Asset pricing models that **assume** countercyclical risk aversion can account for this pattern
  - **Investors are assumed to be less risk averse during financial booms compared to busts**
    - Consumption-based asset pricing model with habit [Campbell & Cochrane 1999]
    - Mental cushion model [Barberis, Huang & Santos 2001]; accumulated losses (gains) make people more (less) risk averse
- **Whether investors in fact exhibit countercyclical risk aversion is still an open question [Mehra 2012]**

# Difficulties in measuring countercyclical risk aversion

- Booms and busts are associated with a host of factors that are difficult to control for
  - Subjective expected asset returns are typically radically different
  - Actual and expected wealth is different
  - Asset volatility, changes in habits, background risks
- People display a lot of inertia so that asset holdings may not be optimal at any given point in time (e.g. Brunnermeier-Nagel 2008)

**→ Inferring risk preferences from people's asset allocations is extremely difficult if not impossible (due to imperfect controls)**

# Priming

- Activation of mental representations or associations in the memory system by attentional or environmental cues
- Rendering booms and bust mentally salient while keeping expectations, wealth and other factors constant
- **Does the mere mental priming of booms and busts affect risk aversion?**
- **If the mere priming of booms/busts affects risk preferences actual booms/busts, which constitute much more powerful primes (i.e. are extremely salient), are also likely to have these effects**

# Experimental setup

We set up a mobile laboratory at a financial trade fair...



... and recruited financial professionals (N = 162)



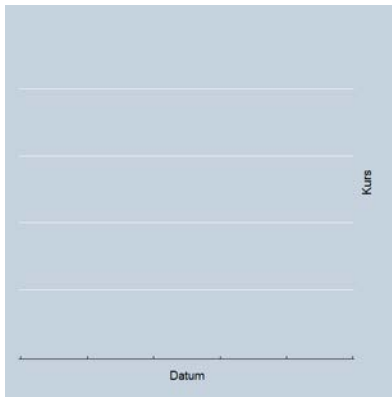
# Financial market survey

1. Filler questions
2. Priming a boom or a bust
3. Measurement of emotions
4. Measurement of risk aversion (investment task)
5. Measurement of expectations
6. Financial literacy test and socio-economic data



# Treatments

## Boom

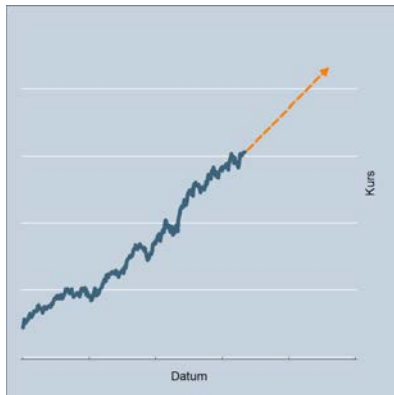


Imagine you find yourself in a continuing stock market **boom**, would you ...

- 1) buy or sell particular stocks?
- 2) invest in gold or other precious metals?
- 3) deposit part of your assets on your savings account?
- 4) invest in Exchange Traded Funds?
- 5) consider purchasing real estate (e.g. a house)?

# Treatments

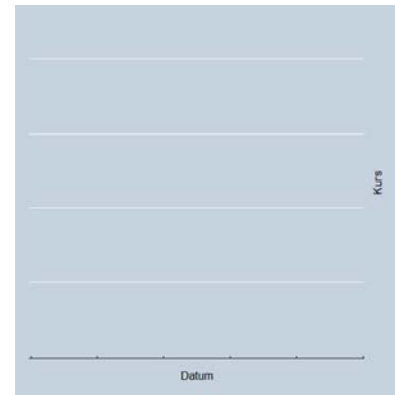
## Boom



Imagine you find yourself in a continuing stock market **boom**, would you ...

- 1) buy or sell particular stocks?
- 2) invest in gold or other precious metals?
- 3) deposit part of your assets on your savings account?
- 4) invest in exchange traded funds (ETFs)?
- 5) consider purchasing real estate (e.g. house)?

## Bust

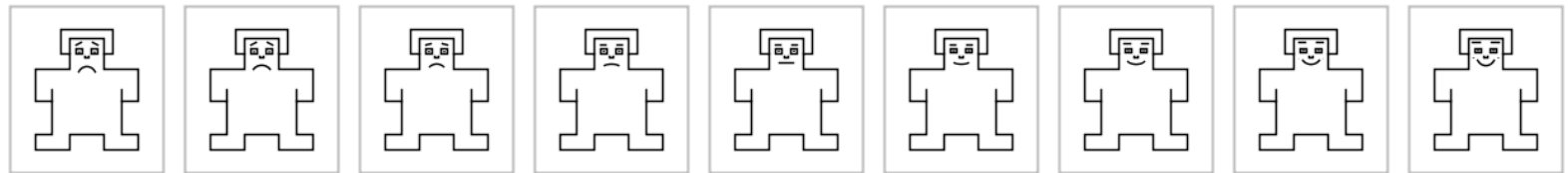


Imagine you find yourself in a continuing stock market **bust**, would you ...

- 1) buy or sell particular stocks?
- 2) invest in gold or other precious metals?
- 3) deposit part of your assets on your savings account?
- 4) invest in exchange traded funds (ETFs)?
- 5) consider purchasing real estate (e.g. house)?

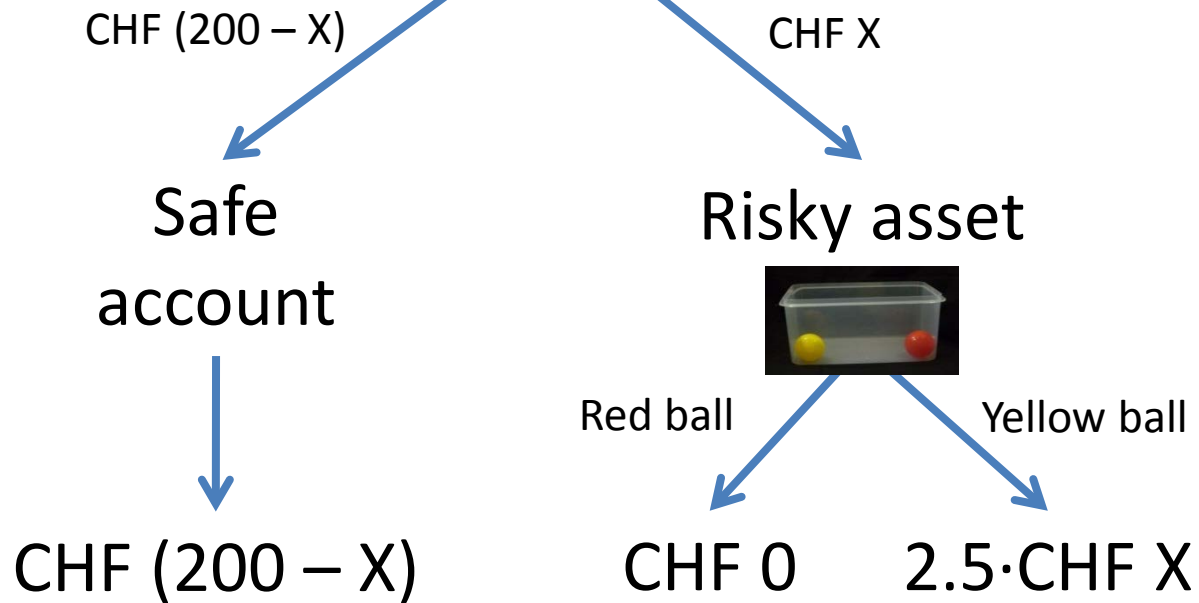
# Measuring general affective state and fear

- Positive-Negative Affect: Self-assessments manikin (SAM)

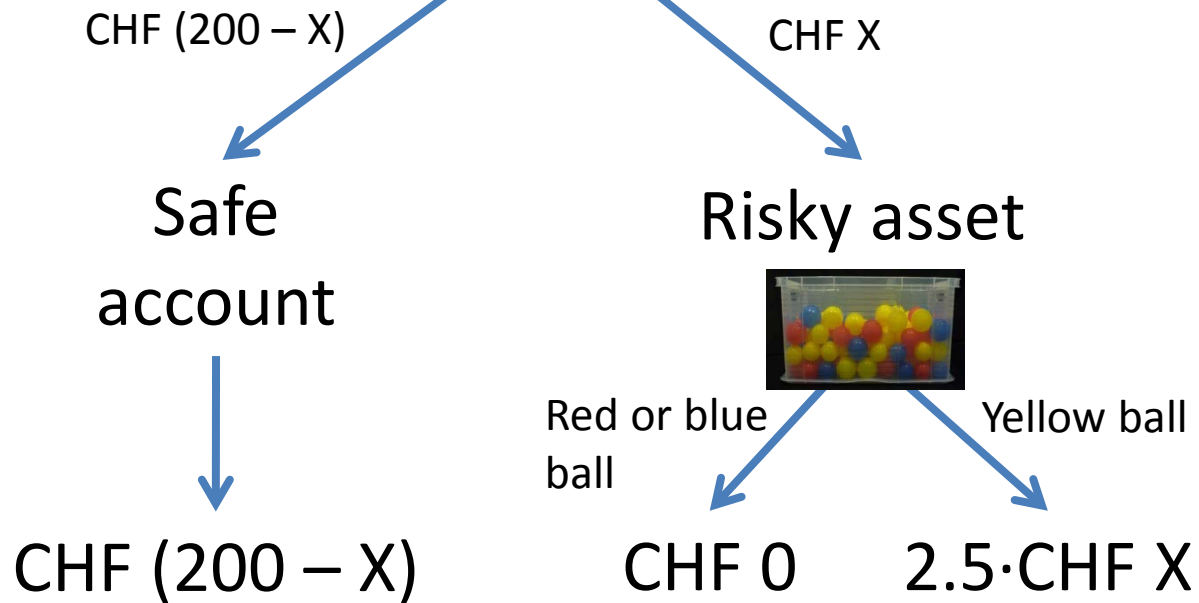


- Fear: *Indicate how intensely you feel the emotion fear right now?*

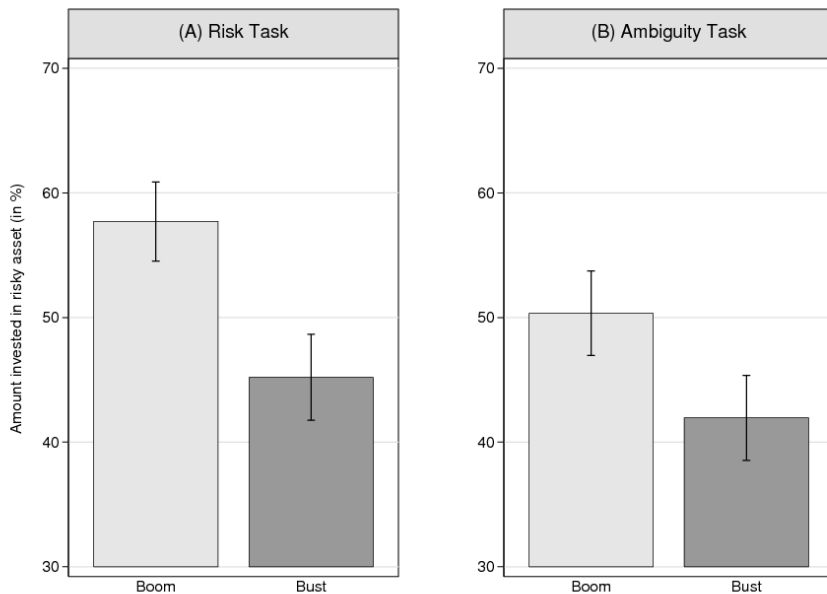
# Risk task



# Ambiguity task



# How does priming affect risk aversion?

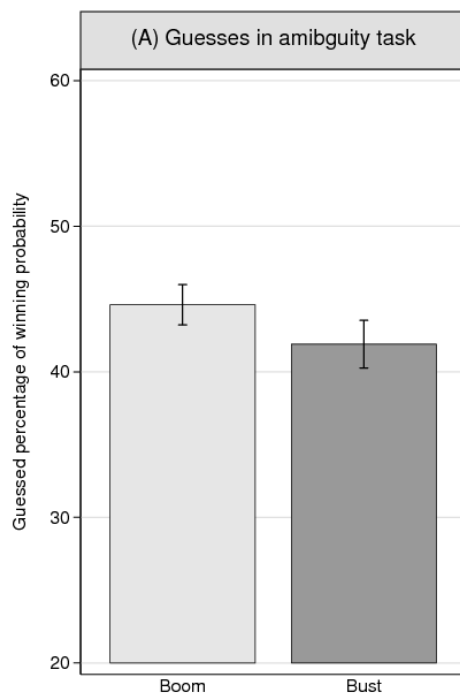


Dependent variable:	Share invested in risky asset	
	(1)	(2)
Bust	-9.827** (4.177)	-11.879** (4.699)
Bust × Ambiguity		4.106 (4.544)
Ambiguity	-5.407** (2.255)	-7.359** (2.891)
Age	-0.080 (0.188)	-0.080 (0.188)
Male	5.181 (4.153)	5.181 (4.160)
Financial literacy	0.660 (2.470)	0.660 (2.474)
High trading frequency	-1.766 (4.439)	-1.766 (4.446)
Constant	54.585*** (8.676)	55.561*** (8.706)
N	324	324

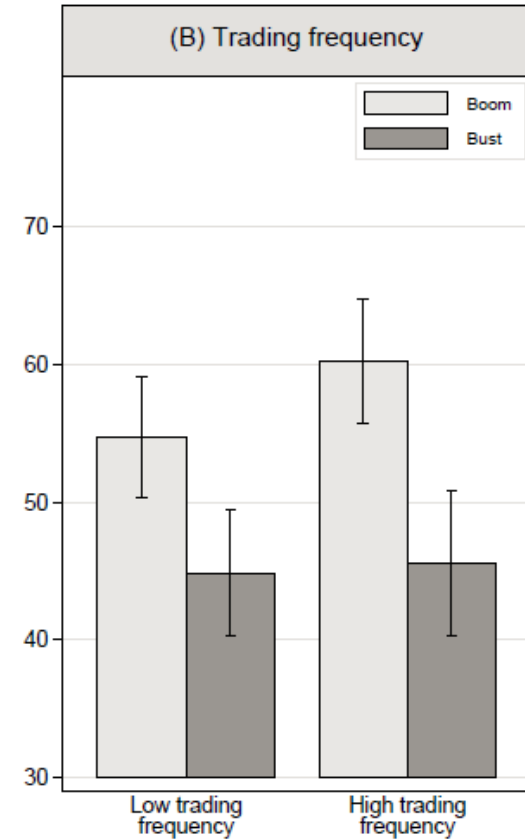
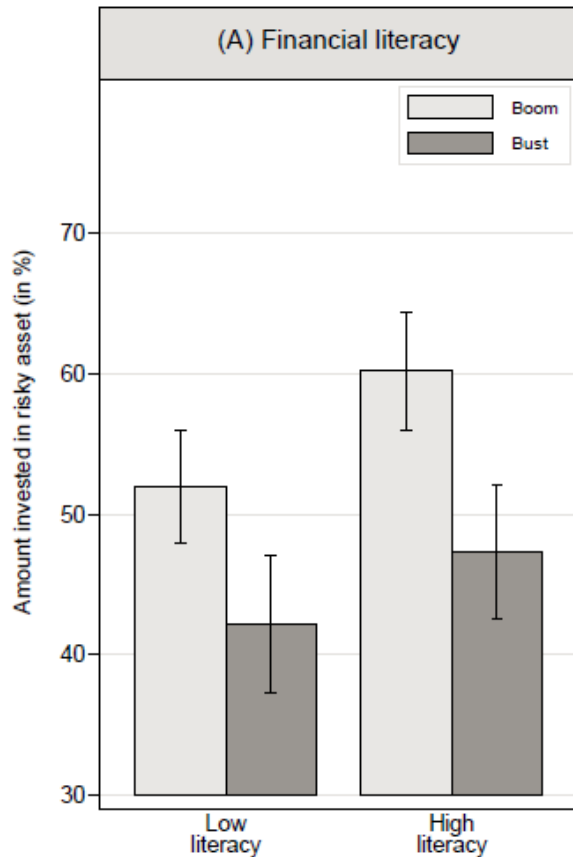
- During bust 22% lower investment in risky asset

# Does priming affect expectations and general optimism?

How many winning balls are in the pot?



# Does financial literacy or trading experience affect the treatment effect?



- Index based on several financial literacy questions?

- Trading on a monthly basis or less frequently



# Possible mechanism: Emotions

Dependent variable:	General wellbeing (1)
Bust	-0.351* (0.193)
General wellbeing	
Fear	
Age	-0.003 (0.009)
Male	0.110 (0.273)
Financial literacy	0.030 (0.125)
High trading frequency	0.104 (0.195)
Ambiguity	
Constant	2.151*** (0.509)
N	162

# Does fear per se – regardless of its source – cause higher risk aversion?

Table A2: Regression analysis of fear induction experiment

Dependent variable:	Share invested in risky asset			
	(1)		(2)	
Threat of Shock	-4.273	***	-3.794	***
	(1.234)		(1.189)	
Feedback	-6.353	***	-5.869	**
	(2.459)		(2.567)	
Threat × Feedback			-0.967	
			(1.376)	
Painful Shock	0.577		0.584	
	(1.843)		(1.841)	
Non-painful Shock	0.061		-0.048	
	(1.762)		(1.763)	
Age	1.720		1.720	
	(1.382)		(1.382)	
Male	4.628		4.628	
	(6.540)		(6.540)	
Constant	14.319		14.077	
	(29.118)		(29.041)	
N	3399		3399	

# Conclusion

- Our results offer direct evidence for countercyclical risk aversion: investors were more risk averse in the bust than in the boom scenario
- Investors were **not** more pessimistic in the bust scenario
- Financial literacy and trading experience does not affect the impact of booms and busts on risk preferences
- The specific emotion “fear” increases risk aversion, regardless of its source.
- Boom and bust also affect fear which may thus be the psychological mechanism underlying time-varying risk aversion.

- The proposed mechanism could lead to self-enforcing feedback loops that amplify market trends
- If a price decline evokes fear among investors, and thus renders them more risk averse, this may create additional downward momentum for prices (i.e. panic sales)

# A Culture of Cheating?

## Honesty and Business Culture in the Banking Industry

Alain Cohn  
Ernst Fehr  
Michel Maréchal



€4.9bn loss

“The culture of the trading room was to make as much money as possible  
as quickly as possible”

[Jerome Kerviel, interview in the Financial Times 2010]

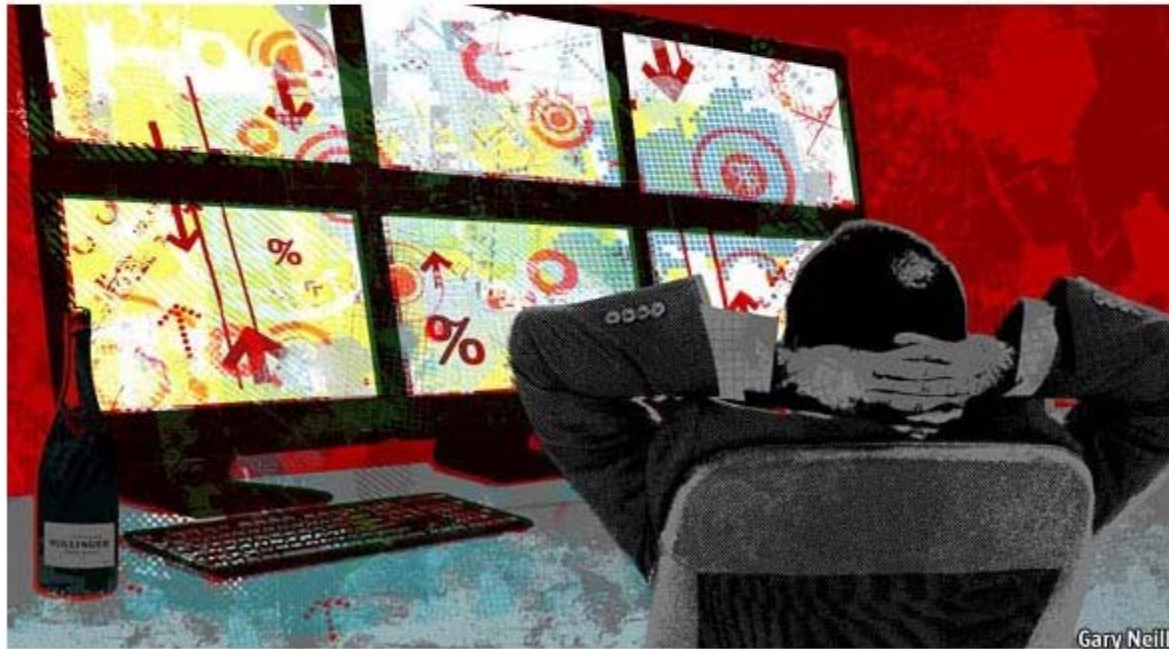
The  
Economist

The **LIBOR scandal**

## The rotten heart of finance

A scandal over key interest rates is about to go global

Jul 7th 2012 | from the print edition

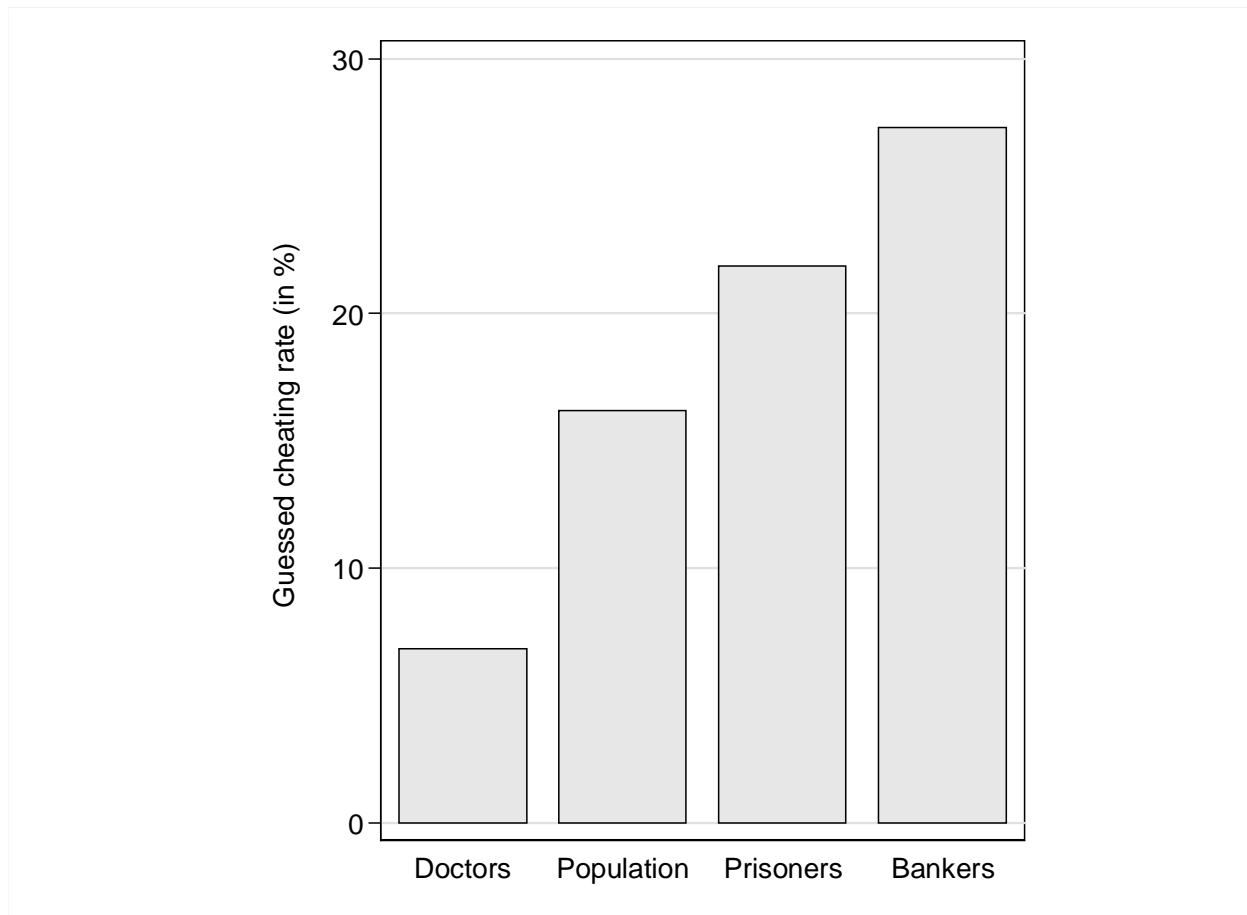




# Trust in professions

1	firefighter	93%
2	pilot	88%
3	nurse	85%
...		
<b>16</b>	<b>financial advisor</b>	<b>26%</b>
...		
19	car dealer	16%
20	politician	8%

# Public perception of honesty in different social groups



# Conclusions

- Making bank employees' professional identity more salient increases their dishonesty
- Many scholars blame the bonus incentive structure for the unethical behavior of bank employees (Murphy, 2012)
- Our results suggest that banks can promote honesty by changing the corporate culture and norms associated with the professional identity (e.g. code of conducts, ethics programs etc.)