

Wednesday Seminar in Shanxi University

文化与金融决策

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山西大学
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➤文化

与经济、法律、制度等正式约束相比，文化无处不在、潜移默化，因而对个体行为的影响更为深远。

将文化描述为信仰、观念和风俗习惯的一个集合（Fernandez和Fogli，2006）。

➤金融决策

决策主体分为企业和家庭、机构和个人，以及信息传递者。

由于主体的文化属性、文化认知不同，因而对金融决策的影响也存在差异。



- 1. Pursiainen V. Cultural Biases in Equity Analysis. Journal of Finance, 2022, 77(1): 163-211.**
- 2. Ray Fisman, Wei Huang, Bo Ning, Yue Pan, Jiaping Qiu, Yongxiang Wang. Superstition and Risk Taking: Evidence from “Zodiac Year” Beliefs in China. Management Science, <https://doi.org/10.1287/mnsc.2022.4594>.**



Cultural Biases in Equity Analysis

Pursiainen V.

Journal of Finance, 2022, 77(1): 163-211.



我们来自哪，影响了我们会信任什么人，以及我们会被什么人信任。



I. Data and Methodology



- **卖方分析师：**在调研和分析公司的基础上撰写研究报告，给出对公司股票的投资建议，并预测股票目标价格和每股收益。
- **信任偏差效应：**当分析师对某公司跟踪调研时，如果分析师的母国与公司所在国之间存在文化认同，那么分析师就会对该公司产生正向的信任偏差，从而给出积极的投资建议。
 - 如果该公司名称中包含国家名称，这种文化信任偏差的效应会更强。
 - 如果市场处于低情绪时，这种文化信任偏差的效应会更强。
 - 反之，这个道理也成立，并且通过欧洲债务危机和英国脱欧进行了验证。
- **信任偏差的信息含量：**当对公司有正向信任偏差的分析师给出消极建议时，被认为比给出积极建议更富有信息含量。
- **进一步研究：**正向信任偏差越高的分析师也会给出越高的目标价格。



➤ **Bilateral trust**

I use a trust measure based on Eurobarometer Surveys in 1996. The specific question asked is: “I would like to ask you a question about how much trust you have in people from various countries. For each, please tell me whether you have a lot of trust, some trust, not very much trust, or no trust at all.”

I define bilateral trust as the proportion of respondents indicating they have **a lot of trust** toward the country in question.

➤ **Trust bias**

Some nationalities may be more trustworthy than others, and some nationalities may trust people more than others.

$$Trust_{i,j,t} = \lambda_i + \kappa_j + \gamma_t + \epsilon_{i,j,t}, \quad (1)$$



➤ Recommendations

Stock recommendations for all listed companies based in the 15 West European countries included in the Eurobarometer trust data.

For each analyst-firm-month, I use the latest available recommendation. I code recommendations on a five-point scale where strong buy is denoted by 5 and strong sell by 1.

➤ Target price

I next construct a comprehensive monthly panel data set of analyst target prices from IBES, using the latest target price issued by each analyst.

I scale each target price by the share price at the beginning of the month and exclude observations for which the target price is above 400% or below 70% of the current stock price (adjusted for currency and split adjustment factors).



➤ **Earnings estimate**

forecast bias $FB_{i,j,t} = EPS\ estimate_{i,j,t} - Actual\ EPS_{j,t},$ (2)

proportional mean forecast bias $PMFB_{i,j,t} = \frac{FB_{i,j,t} - MFB_{j,t}}{|MFB_{j,t}|}$ (3)

proportional mean absolute forecast error

$$PMAFE_{i,j,t} = \frac{AFE_{i,j,t} - MAFE_{j,t}}{MAFE_{j,t}},$$
 (4)

➤ **Analyst nationalities**

I assign an estimated nationality for each analyst based on the country that has the highest frequency of the analyst's surname.



II. Cultural Biases in Analyst Recommendations



Table I
Summary Statistics

This table presents summary statistics for the analyst-firm-month observations in the sample. The sample period is 1996 to 2018. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Sell recommendation* is a dummy taking the value of one if the recommendation is 1 (*Strong sell*) or 2 (*Sell*). All variables are defined in the [Appendix](#).

	Mean	Std	p10	p50	p90
<i>Recommendations</i>					
Recommendation	3.528	1.151	2.000	4.000	5.000
Buy rec.	0.508	0.500	0.000	1.000	1.000
Sell rec.	0.169	0.375	0.000	0.000	1.000
<i>Trust bias and geography</i>					
Trust bias	0.218	0.148	-0.012	0.246	0.387
Same country	0.738	0.440	0.000	1.000	1.000
Distance ('000 km)	0.502	1.354	0.000	0.194	0.841
<i>Broker</i>					
Broker HHI	0.464	0.234	0.182	0.433	0.792
Broker nationalities	8.382	7.002	2.000	6.000	20.000
Broker size	46.014	51.895	8.000	25.000	112.000
Top 10	0.304	0.460	0.000	0.000	1.000
<i>Analyst</i>					
Analyst <i>N</i> firms	11.534	8.275	4.000	10.000	20.000
Years covered	3.008	3.233	0.318	1.912	7.263
Ana. experience (yrs)	5.834	4.769	1.036	4.419	12.934
Anti-globalization	0.441	0.135	0.299	0.393	0.651

$$Recommendation_{i,j,t} = \alpha_{i,t} + \gamma_{j,t} + \beta Trust\ bias_{i,j} + \phi X_{i,j,t} + \epsilon_{i,j,t}, \quad (5)$$

Table II
Recommendations and Trust Bias

This table presents regression results for analyst recommendations. The dependent variable is shown above each column. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Sell recommendation* is a dummy taking the value of one if the recommendation is 1 (*Strong sell*) or 2 (*Sell*). The sample period is 1996 to 2018. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and month, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

Panel A: All analysts				
	Rec. (1-5)		Buy rec.	Sell rec.
	(1)	(2)		
Trust bias	0.9583*** (0.0873)	0.5916*** (0.1514)	0.2802*** (0.0724)	-0.1421*** (0.0468)
Same country		0.0702 (0.0488)	0.0244 (0.0238)	-0.0151 (0.0141)
ln(Distance)		-0.0158*** (0.0053)	-0.0078*** (0.0016)	0.0056*** (0.0010)
IB relationship		0.0763*** (0.0159)	0.0302*** (0.0060)	-0.0323*** (0.0083)

Panel B: Excluding domestic analysts

	Rec. (1-5)		Buy rec.	Sell rec.
	(1)	(2)	(3)	(4)
Trust bias	0.7611** (0.3429)	0.6883* (0.3496)	0.2576* (0.1453)	-0.2086** (0.0959)
ln(Distance)		-0.0256*** (0.0093)	-0.0115*** (0.0044)	0.0103*** (0.0030)
IB relationship		0.1396** (0.0536)	0.0481* (0.0248)	-0.0712*** (0.0168)
IB potential		0.0406 (0.0619)	-0.0003 (0.0280)	0.0073 (0.0188)
Share - syndicated loans		-0.0712 (0.2391)	-0.0295 (0.0809)	0.0254 (0.0814)
Share - underwriting		0.5384** (0.2353)	0.2787** (0.1176)	0.0055 (0.0595)
Share - advisory		0.2406 (0.1518)	0.1491** (0.0710)	-0.0345 (0.0465)
Firm-Month FE	Yes	Yes	Yes	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes
<i>N</i>	173,274	173,274	173,274	173,274
<i>R</i> ²	0.683	0.684	0.685	0.673



Table III
Eponymous Firms and the Salience of Nationality

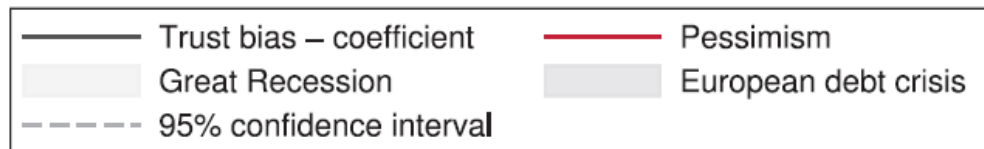
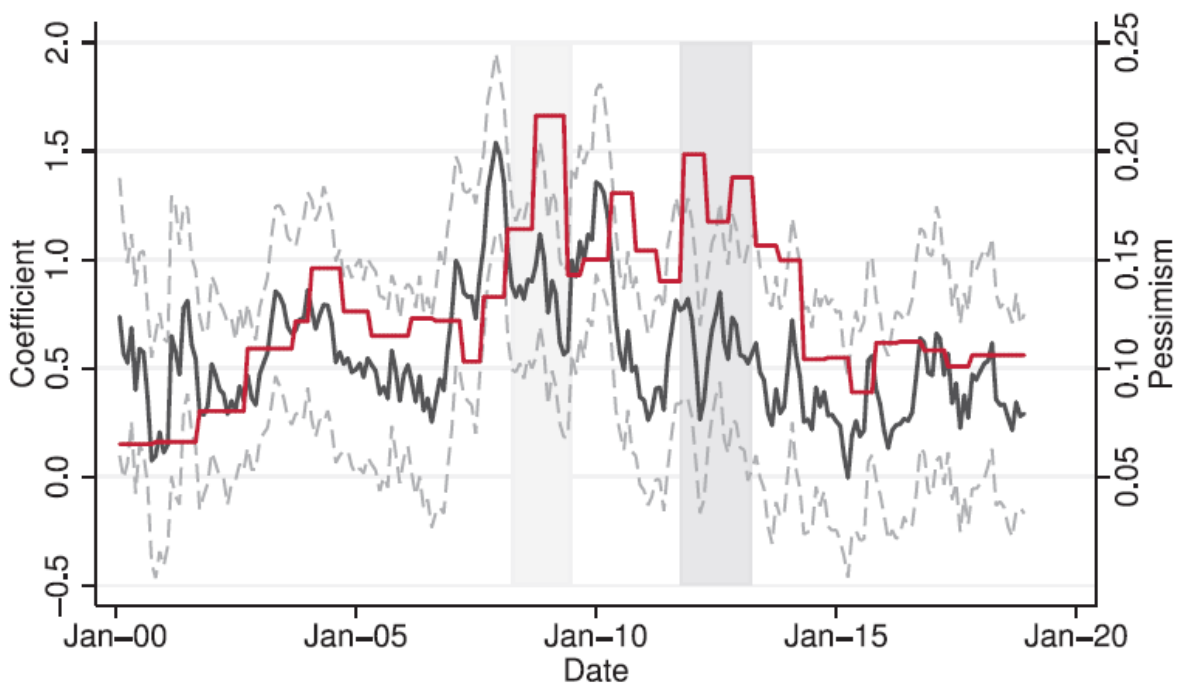
This table presents regression results for analyst recommendations. The dependent variable is shown above each column. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Eponymous* is a dummy taking the value of one if the firm name includes the name of its home country. *Controls* include *Same country*, $\ln(\text{Distance})$, *IB relationship*, *IB potential*, *Share - syndicated loans*, *Share - underwriting*, and *Share - advisory*. The sample period is 1996 to 2018. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and month, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
Eponymous × Trust bias	0.3208** (0.1325)	0.3188** (0.1354)	0.2659* (0.1475)	0.1170** (0.0472)	0.1198** (0.0512)	0.1052* (0.0552)
$\ln(\text{Market cap}) \times \text{Trust bias}$			0.0983*** (0.0256)			0.0271*** (0.0104)
Trust bias	0.5384*** (0.1480)			0.2608*** (0.0725)		



$$Recommendation_{i,j,t} = \alpha_{i,t} + \gamma_{j,t} + \beta Month_t \times Trust\ bias_{i,j} + \phi X_{i,j,t} + \epsilon_{i,j,t}, \quad (6)$$

Panel (a) Estimated trust bias effect vs. pessimism



Panel (b) Estimated trust bias effect vs. consumer confidence

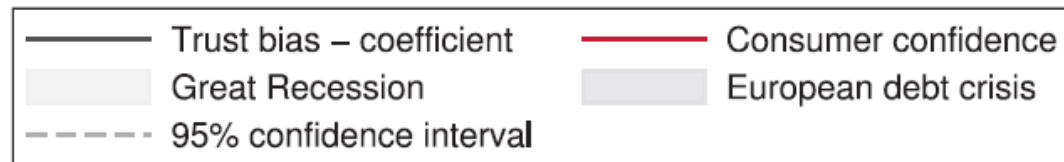
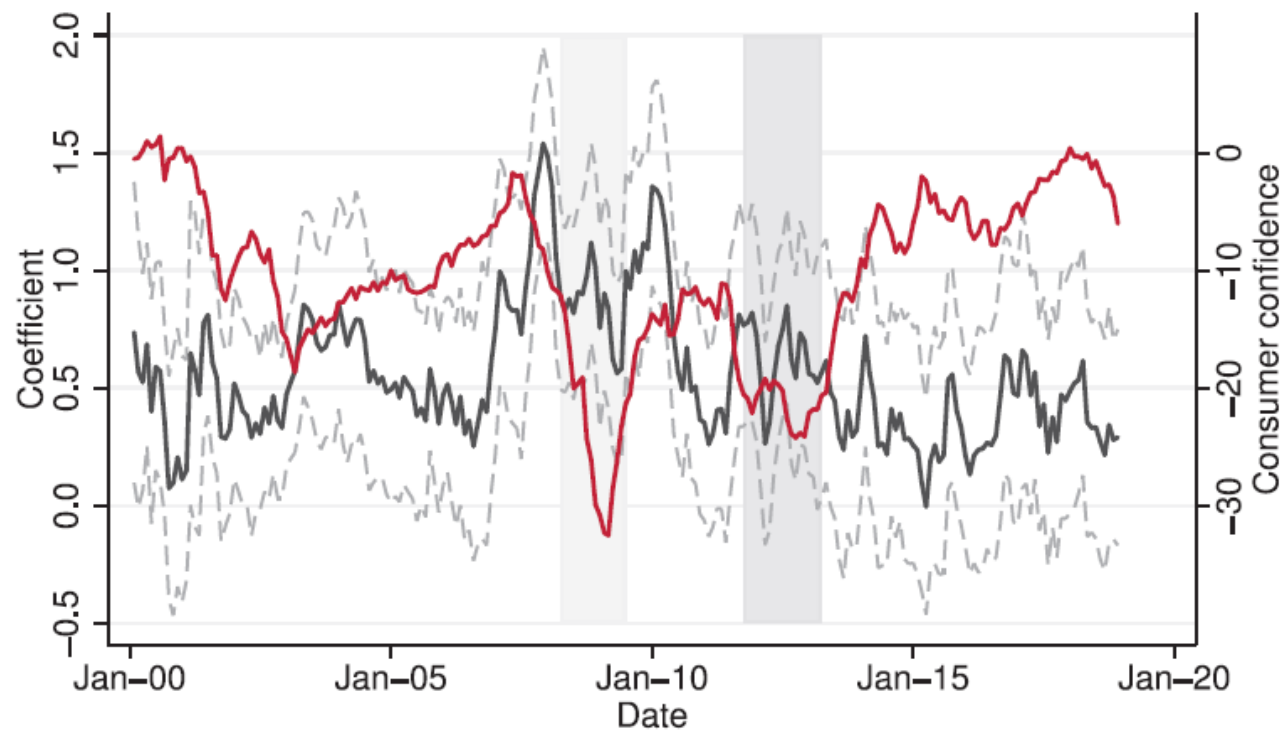


Table IV
The Effect of Cultural Bias versus Sentiment

This table presents regression results for analyst recommendations. The dependent variable is shown above each column. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Pessimism* is the proportion of people who expect their life to be worse in the next year, based on Eurobarometer surveys. *Consumer confidence* is the Consumer Confidence Indicator for the EU, published by the European Commission. *Controls* include *Same country*, $\ln(\text{Distance})$, *IB relationship*, *IB potential*, *Share - syndicated loans*, *Share - underwriting*, and *Share - advisory*. The sample period is 1996 to 2018. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and month, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

Panel A: Trust bias vs. pessimism

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
Pessimism × Trust bias	2.9518*** (0.9387)	3.4093*** (0.9664)	3.3153*** (1.2630)	0.8864** (0.3977)	1.1468*** (0.4000)	1.3807** (0.5538)
Trust bias	0.2179 (0.2009)			0.1705* (0.0873)		

Panel B: Trust bias vs. consumer confidence

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
CCI × Trust bias	−0.0155*** (0.0046)	−0.0166*** (0.0046)	−0.0164*** (0.0060)	−0.0045** (0.0020)	−0.0053*** (0.0019)	−0.0053* (0.0028)
Trust bias	0.4135** (0.1718)			0.2286*** (0.0789)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FE	No	Yes	No	No	Yes	No
Analyst-Firm FE	No	No	Yes	No	No	Yes
<i>N</i>	1,035,166	1,035,166	1,034,964	1,035,166	1,035,166	1,034,964
<i>R</i> ²	0.565	0.566	0.793	0.547	0.549	0.774



III. Shocks to Cultural Biases



Table V
European Debt Crisis and North-South Biases

This table presents regression results for analyst recommendations. The dependent variable is shown above each column. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Crisis* is a dummy taking the value of one during the Eurozone recession of Q4 2011 to Q1 2013. *Northern analyst* is a dummy taking the value one if the analyst is from Germany, the United Kingdom, Netherlands, Austria, Sweden, Denmark, or Finland. *Southern firm* is a dummy taking the value one if the firm is from Portugal, Italy, Greece, or Spain. *Controls* include *Same country*, *ln(Distance)*, *IB relationship*, *IB potential*, *Share - syndicated loans*, *Share - underwriting*, and *Share - advisory*. The sample period is 2008 to 2014. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and month, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

Panel A: Northern analyst and Southern firm

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
Crisis × Northern a. × Southern f.	−0.3740*** (0.1179)	−0.4259*** (0.1303)	−0.2173* (0.1159)	−0.2257*** (0.0589)	−0.2466*** (0.0615)	−0.1143** (0.0564)
Northern a. × Southern f.	0.0077 (0.1062)			0.0638* (0.0360)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FE	No	Yes	No	No	Yes	No
Analyst-Firm FE	No	No	Yes	No	No	Yes
<i>N</i>	362,547	362,547	362,291	362,547	362,547	362,291
<i>R</i> ²	0.565	0.569	0.793	0.544	0.549	0.774



Table V—Continued

Panel B: Southern analyst and Northern firm

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
Crisis × Southern a. × Northern f.	−0.1203 (0.1029)	−0.1486 (0.1054)	−0.1311 (0.1031)	−0.0684 (0.0498)	−0.0776 (0.0484)	−0.0918** (0.0447)
Southern a. × Northern f.	−0.0309 (0.0847)			−0.0331 (0.0377)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FE	No	Yes	No	No	Yes	No
Analyst-Firm FE	No	No	Yes	No	No	Yes
<i>N</i>	362,547	362,547	362,291	362,547	362,547	362,291
<i>R</i> ²	0.565	0.569	0.793	0.544	0.549	0.774



$$\begin{aligned}
 Recommendation_{i,j,t} = & \alpha_{i,t} + \gamma_{j,t} + \beta Month_t \times Northern\ analyst_i \times Southern\ firm_j \\
 & + \phi X_{i,j,t} + \epsilon_{i,j,t},
 \end{aligned}$$

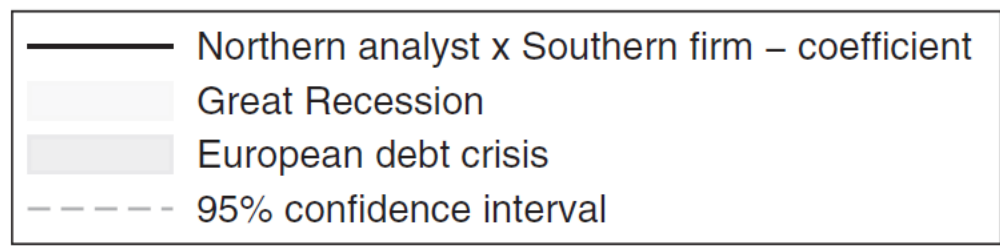
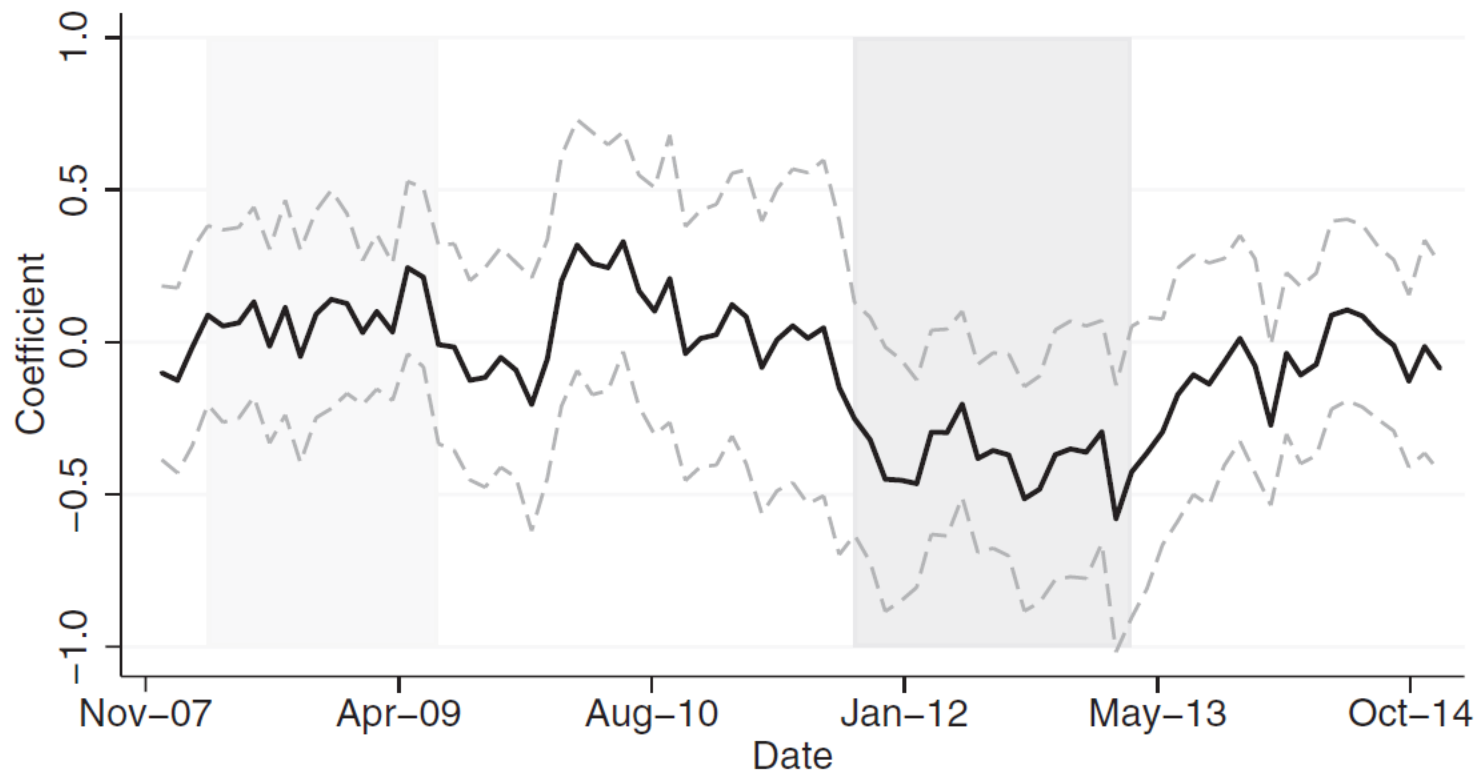


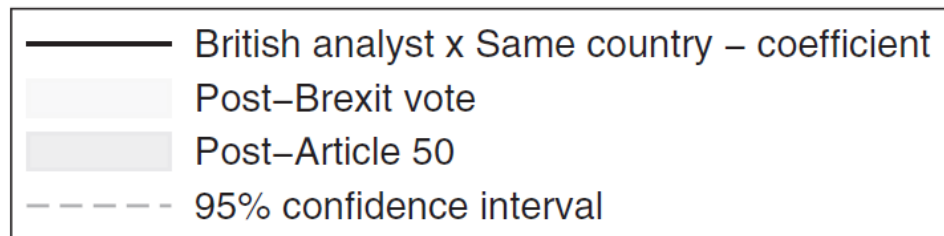
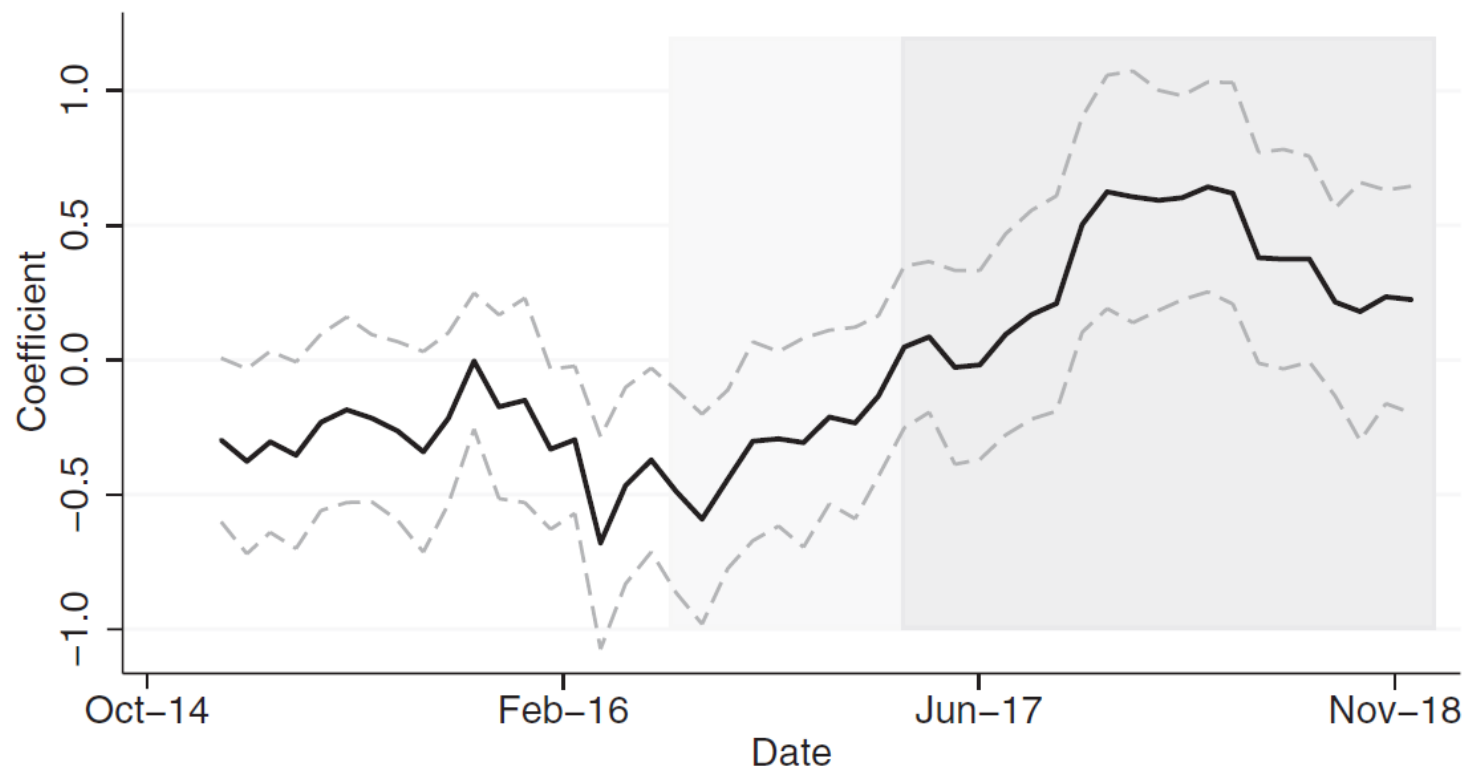
Table VI
Brexit and United Kingdom versus the Rest of Europe

This table presents regression results for analyst recommendations. The dependent variable is shown above each column. *Recommendation* is the analyst recommendation, coded from 1 (lowest, *Strong sell*) to 5 (highest, *Strong buy*). *Buy recommendation* is a dummy taking the value of one if the recommendation is 5 (*Strong buy*) or 4 (*Buy*). *Post* is a dummy taking the value of one after March 29, 2017, which is when the United Kingdom invoked Article 50, formally beginning the Brexit process. *Controls* include *Same country*, $\ln(\text{Distance})$, *IB relationship*, *IB potential*, *Share - syndicated loans*, *Share - underwriting*, and *Share - advisory*. The sample period is 2015 to 2018. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and month, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

	Rec. (1–5)			Buy rec.		
	(1)	(2)	(3)	(4)	(5)	(6)
Post × British × Same country	0.7002*** (0.1494)	0.6886*** (0.1582)	0.4778*** (0.1235)	0.3217*** (0.0639)	0.3357*** (0.0731)	0.1685** (0.0640)
Post × Same country	-0.0721** (0.0357)	-0.0895** (0.0353)	0.0270 (0.0356)	-0.0115 (0.0173)	-0.0284 (0.0171)	0.0244 (0.0197)
British × Same country				-0.0588 (0.0794)		
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst-Month FE	Yes	Yes	Yes	Yes	Yes	Yes
Country-pair FE	No	Yes	No	No	Yes	No
Analyst-Firm FE	No	No	Yes	No	No	Yes
<i>N</i>	147,331	147,331	147,259	147,331	147,331	147,259
<i>R</i> ²	0.570	0.578	0.830	0.553	0.562	0.817



$$\begin{aligned}
 Recommendation_{i,j,t} = & \alpha_{i,t} + \gamma_{j,t} + \beta Month_t \times British\ analyst_i \times Same\ country_{i,j} \\
 & + \psi Month_t \times Same\ country_{i,j} + \phi X_{i,j,t} + \epsilon_{i,j,t},
 \end{aligned}$$



IV. Cultural Biases and Stock Returns



- 分析师的信任偏差将影响建议的信息含量。
- 对于同样发布的买的建议，正向信任偏差的分析师就不如负向信任偏差的分析师值得信赖。
- 当分析师具有正向信任偏差时，买的建议和卖的建议都会产生负的公告收益（分析师公告）。由于买的建议信息含量少于卖的建议，因而基于股票收益的反应相对温和。
- 以[-1,1]为事件窗，以FFC四因子模型估计预期收益，进而计算累计超额收益。

$$CAR_{i,j,t} = \alpha_i + \gamma_j + \lambda_t + \beta Trust\ bias_{i,j} + \phi X_{i,j,t} + \epsilon_{i,j,t}. \quad (8)$$



Table VII
Recommendation Announcement Returns

This table presents regression results for recommendation announcement returns. The dependent variable in Panels B and C is the three-day cumulative abnormal return over days -1 to 1 relative to the recommendation announcement day. Abnormal returns are estimated based on the Fama-French four-factor model at the country level and factor betas are estimated from daily returns during trading days ($-252, -42$) relative to the event date. *Controls* include *Same country*, $\ln(\text{Distance})$, *IB relationship*, *IB potential*, *Share - syndicated loans*, *Share - underwriting*, and *Share - advisory*. The sample period is 1996 to 2018. Variables are defined in the [Appendix](#). Heteroskedasticity-consistent standard errors, double-clustered by analyst-firm country pair and announcement date, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

Panel A: Summary statistics	Mean	Std	p10	p50	p90
CAR	-0.000	0.038	-0.043	-0.001	0.045
CAR - Buy	0.005	0.038	-0.037	0.003	0.052
CAR - Sell	-0.007	0.040	-0.053	-0.006	0.038
CAR - Upgrade to buy	0.009	0.038	-0.032	0.006	0.057
CAR - Downgrade to sell	-0.009	0.041	-0.057	-0.008	0.037
Trust bias	0.218	0.149	-0.018	0.246	0.387
<i>N</i>	92,084				



Panel B: Buy recommendations

	Buy (all)		Buy (active analysts)		Upgrade to buy	
	(1)	(2)	(3)	(4)	(5)	(6)
Trust bias	-0.0135** (0.0055)	-0.0142** (0.0055)	-0.0179** (0.0073)	-0.0167** (0.0076)	-0.0166* (0.0091)	-0.0162 (0.0101)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No
Year-Month FE	No	Yes	No	Yes	No	Yes
<i>N</i>	42,600	42,600	27,487	27,487	18,269	18,269
<i>R</i> ²	0.182	0.190	0.210	0.223	0.275	0.289



Panel C: Sell recommendations

	Sell (all)		Sell (active analysts)		Downgrade to sell	
	(1)	(2)	(3)	(4)	(5)	(6)
Trust bias	-0.0046 (0.0101)	-0.0033 (0.0096)	-0.0304* (0.0159)	-0.0292* (0.0165)	-0.0387** (0.0181)	-0.0421** (0.0201)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Firm FE	Yes	Yes	Yes	Yes	Yes	Yes
Analyst FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	No	Yes	No	Yes	No
Year-Month FE	No	Yes	No	Yes	No	Yes
<i>N</i>	15,239	15,239	10,684	10,684	8,144	8,144
<i>R</i> ²	0.277	0.293	0.315	0.336	0.353	0.386



Table VIII

Monthly Stock Returns and Trust Bias

This table presents regression results for monthly stock returns. Panel A presents summary statistics for the monthly stock returns sample. The dependent variable in Panel B is *Excess return*, the monthly stock return less the risk-free rate. *Return* is the monthly raw stock return. *Trust bias* is calculated as the average trust bias across all sample analysts covering the stock, on a monthly basis. *Market beta* is calculated using a rolling 12-month window based on monthly returns. *Recommendation quintile* is calculated based on the average recommendation of the sample analysts, on a monthly basis, with limits set by firm country. The sample period is 1996 to 2018. Heteroskedasticity-consistent standard errors, clustered by firm, are shown in parentheses. Significance levels: *0.1, **0.05, ***0.01.

Panel A: Summary statistics

	Mean	Std	p10	p50	p90
<i>Stock return</i>					
Excess return	0.432	10.516	-11.227	0.180	12.065
Return	0.567	10.505	-11.062	0.300	12.205
Return (LTM)	11.235	43.456	-38.394	8.133	60.056
<i>Trust bias and controls</i>					
Trust bias	0.219	0.124	0.044	0.246	0.387
ln(Market cap.)	6.604	2.052	3.918	6.539	9.386
B/M	0.780	0.838	0.176	0.558	1.539
RoE	0.069	2.200	-0.114	0.102	0.265
Market beta	0.852	0.834	-0.023	0.794	1.804

Panel B: Monthly excess return regressions

	(1)	(2)	(3)	(4)	(5)	(6)
Rec. quintile 2	0.4370*** (0.0644)	0.4142*** (0.0712)	0.3865*** (0.0621)	0.3453*** (0.1262)	0.4239*** (0.1396)	0.2960** (0.1248)
Rec. quintile 3	0.4176*** (0.0614)	0.3593*** (0.0693)	0.4163*** (0.0593)	-0.0208 (0.1199)	0.0038 (0.1348)	0.0950 (0.1183)
Rec. quintile 4	0.5439*** (0.0647)	0.5037*** (0.0722)	0.5137*** (0.0626)	0.1400 (0.1386)	0.1741 (0.1488)	0.1052 (0.1327)
Rec. quintile 5	0.5113*** (0.0762)	0.4949*** (0.0875)	0.5893*** (0.0758)	0.4862*** (0.1629)	0.3300* (0.1790)	0.3549** (0.1577)
Rec. quintile 1 × Trust bias				-1.4334*** (0.3502)	-1.1498*** (0.4152)	-0.6634* (0.3921)
Rec. quintile 2 × Trust bias				-0.9680** (0.4016)	-1.1277** (0.4454)	-0.2020 (0.4220)
Rec. quintile 3 × Trust bias				0.6431* (0.3824)	0.5578 (0.4388)	0.8728** (0.4098)
Rec. quintile 4 × Trust bias				0.4394 (0.4210)	0.3822 (0.4302)	1.1853*** (0.4242)
Rec. quintile 5 × Trust bias				-1.1669** (0.5761)	-0.3436 (0.6776)	0.4172 (0.6304)
Market beta		-0.0162 (0.0316)	0.0091 (0.0291)		-0.0158 (0.0316)	0.0087 (0.0292)
ln(Market cap.)		-0.0188 (0.0119)	0.0275** (0.0110)		-0.0252** (0.0123)	0.0289** (0.0115)

Table VIII—Continued

Panel B: Monthly excess return regressions						
	(1)	(2)	(3)	(4)	(5)	(6)
B/M		0.7363*** (0.0581)	0.4033*** (0.0517)		0.7359*** (0.0582)	0.4049*** (0.0517)
RoE		0.0239*** (0.0074)	0.0188** (0.0088)		0.0234*** (0.0074)	0.0184** (0.0087)
Return (t-1)		0.0430*** (0.0033)	-0.0275*** (0.0036)		0.0429*** (0.0033)	-0.0276*** (0.0036)
Return (LTM)		0.0111*** (0.0006)	0.0109*** (0.0008)		0.0111*** (0.0006)	0.0108*** (0.0008)
Constant	0.0895** (0.0441)	-0.2518** (0.1149)		0.3935*** (0.0824)	0.0319 (0.1486)	
Country-Month FE	No	No	Yes	No	No	Yes
<i>N</i>	290,872	194,860	194,684	290,872	194,860	194,684
<i>R</i> ²	0.000	0.007	0.283	0.001	0.007	0.283



V. Conclusion



- **My findings suggest that cultural biases affect analysts' stock recommendations and target prices. Firms based in countries that the analyst is more positively biased toward receive more positive stock recommendations and higher target prices.**
- **When the nationality of the firm is more salient, the trust bias effect is stronger. The effect of trust bias is also stronger in times of negative sentiment, this result might suggest that economic prosperity can help mitigate culture-based prejudices.**



Superstition and Risk Taking: Evidence from “Zodiac Year” Beliefs in China

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Abstract

We show that superstitions—beliefs without scientific grounding—impact the investment and risk-taking of Chinese firms. We focus on widely held beliefs in bad luck during one’s “zodiac year,” which occurs on a 12-year cycle around a person’s birth year, to study superstitions and risk taking. We first show a direct correspondence between zodiac year and risk taking via survey data: respondents are two percentage points more likely to favor no-risk investments if queried during their zodiac year. Turning to corporate decision making, we find that return volatility declines in the chairman’s zodiac year, suggesting a reduction in risk taking overall. Focusing on specific types of risk taking, investment in R&D and corporate acquisitions both decline during the chairman’s zodiac year; returns around acquisition announcements are also lower, suggesting real allocative consequences of zodiac year beliefs.

