Internet Appendix for

"Gender, Competition, and Performance: International Evidence"

Appendix IA1
Unmasking brokerage name, analyst name, and analyst gender via Capital IQ, Bloomberg, and Manual Search

From the I/B/E/S Detail Recommendations file, we obtain a list of 1,687 unique brokerages (both in and outside the U.S.) providing recommendations on global equities over the period 2004–2019. I/B/E/S provides an abbreviated brokerage name in the variable *ESTIMID*, a unique brokerage identifier in the variable *EMASKCD,* the last name and first name initial of each analyst in the variable *ANALYST*, and a unique analyst identifier in the variable *AMASKCD.*

To unmask abbreviated brokerage names and analyst names from I/B/E/S, we manually search each brokerage's full name and its analysts from Capital IQ. Our matching process takes three steps. First, we match abbreviated brokerage names in I/B/E/S (*ESTIMID*) to full brokerage names in Capital IQ by resemblance. For example, the abbreviated brokerage name "ZACKSINV" in I/B/E/S resembles Zacks Investment Research, Inc. in Capital IQ. Second, we ascertain that this match is correct by matching analyst names in I/B/E/S (*ANALYST*) with those in Capital IQ using the last name and first name initial.[28] For example, we are able to match 27 out of the 28 analysts affiliated with Zacks Investment Research in I/B/E/S with those in Capital IQ (more on this later). Third and finally, we supplement the above two steps by checking whether Capital IQ analysts' stock coverage is the same as that by matched I/B/E/S analysts. To do so, we search through Bloomberg's "*PEOP*" function. Of the 1,687 brokerages in I/B/E/S, we are able to unmask full brokerage names for 1,557 observations (a 92.3% matching rate).

We then obtain individual analyst information, including biography, prefix (Mr. vs. Ms.), and office address from their employment history in Capital IQ. Using Zacks Investment Research, Inc. as an example, Figures IA1-IA4 illustrate how we obtain such information.

We start by searching "Zacks Investment Research, Inc." in Capital IQ. Figure IA1 shows that each brokerage is assigned a unique *companyId* by Capital IQ that we use as the brokerage identifier. Figure 1A1 also shows that we can search employment history for analysts affiliated with Zacks by navigating to the "*Professionals"* page under the "*People"* tab. Figure IA2 shows that we can identify both former and current analysts affiliated with the brokerage, with each analyst having a unique personal ID (*personId*). By clicking on an analyst, we get to their personal profile in Capital IQ, shown in Figure IA3. We rely on the biography (i.e., "he" vs. "she" is used when referring to an analyst) and the prefix(es) to determine an analyst's gender. We use the office address as the location of employment and to proxy for an analyst' residential address, as analysts often reside in countries where they are employed. Figure IA4 shows that in the case of Zacks Investment Research, Inc., we are able to match all 28 unique analysts in I/B/E/S to those in Capital IQ. However, we note one analyst, "BECKER M", has two I/B/E/S analyst IDs (*AMASKCD*) pointing to the same analyst in Capital IQ. Out of precaution, we remove this analyst from our sample.[29]

In the end, we are able to unmask 29,285 out of the 37,459 unique analysts in the I/B/E/S Detail Recommendations file (a 78.2% matching rate).

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[28] We keep observations with perfect match on brokerage name and analyst name. In cases in which multiple analysts have identical last names and first name initials in a brokerage, we drop those analysts. We also drop analysts with the name "RESEARCH TEAM" (referring to team coverage) or "PERMDENIED" (referring to those permanently denied).

[29] BROKER_NAME in Figure 4 is the full brokerage name identified via Capital IQ. For analyst "BERCKER M", we are able to match their prior brokerage affiliations in four out of the seven employers, suggesting that Capital IQ have broader coverage in terms of analyst employment history than I/B/E/S.

Figure IA1
Zacks Investment Research, Inc. main page in Capital IQ

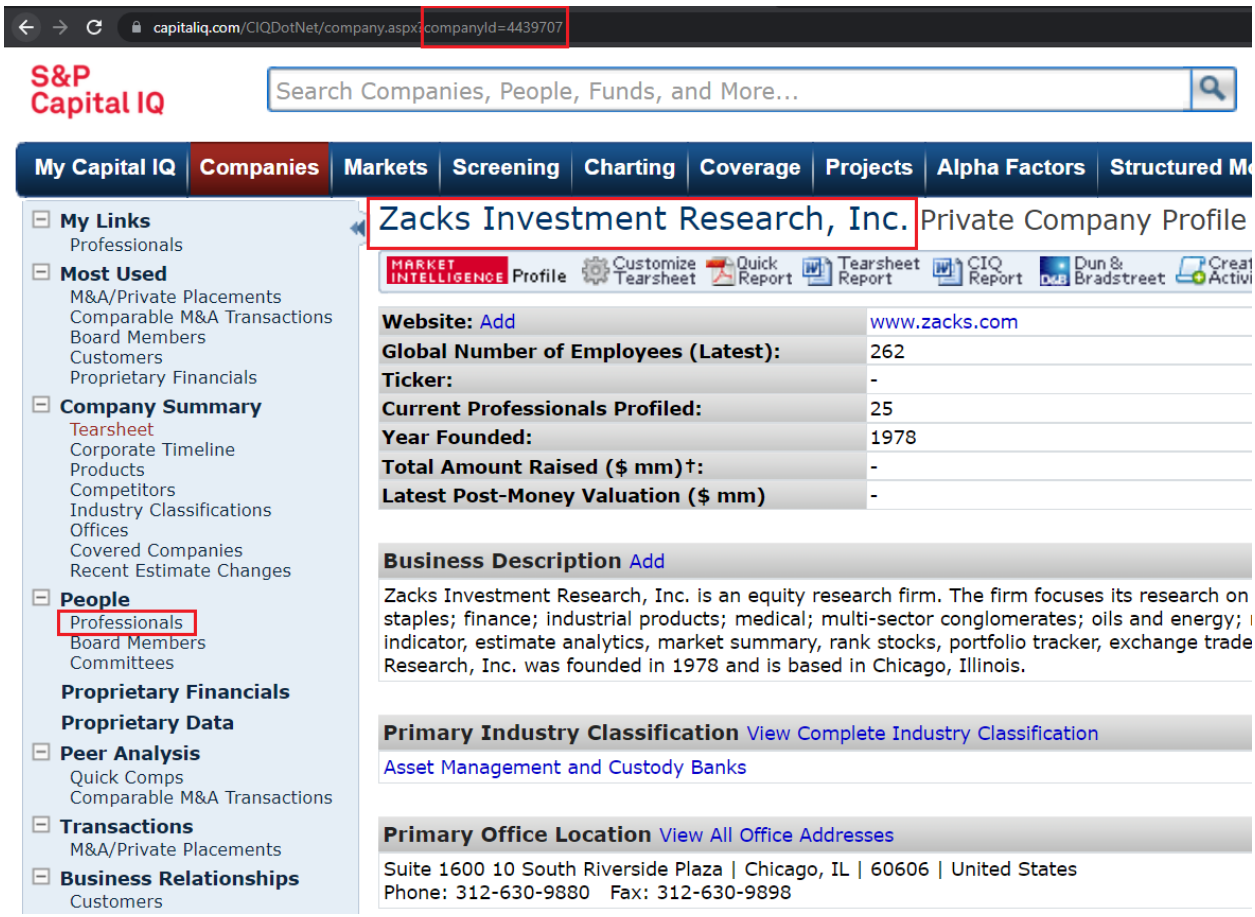
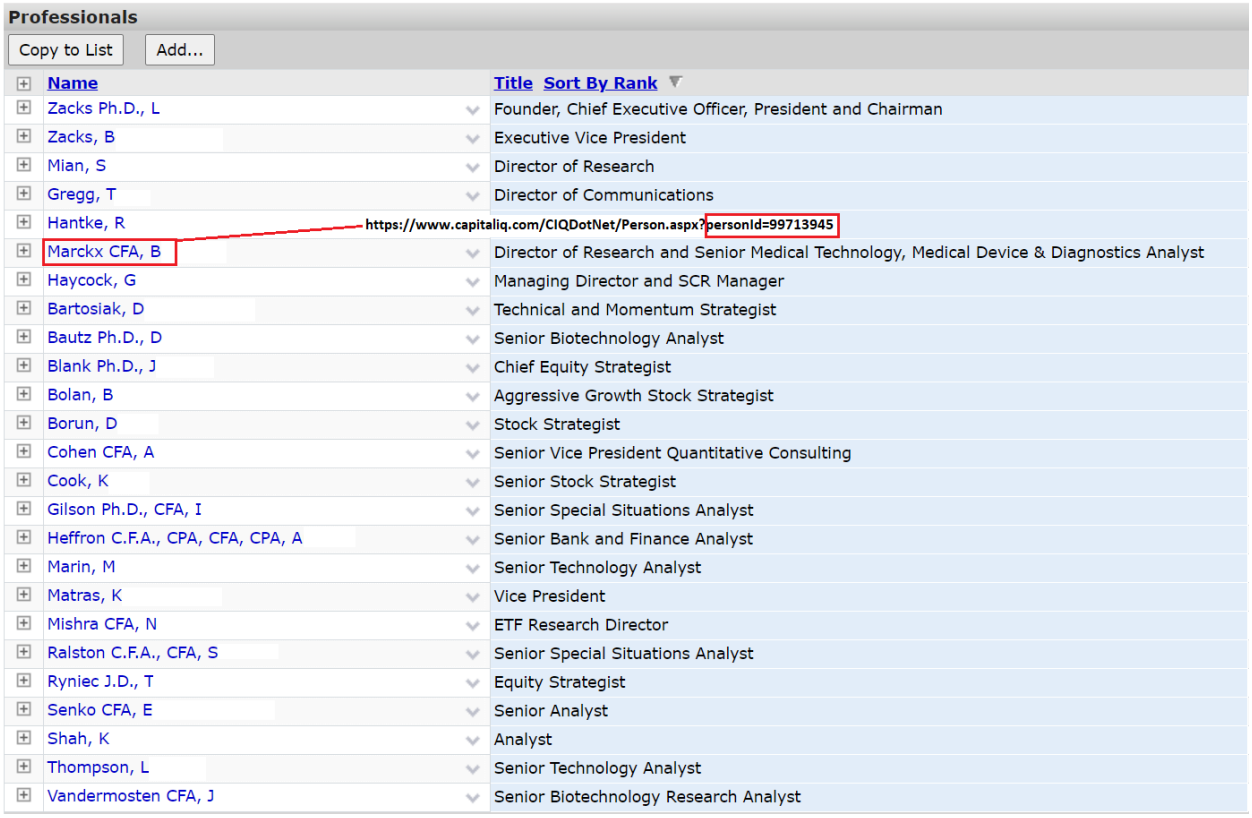


Figure IA2
Analysts affiliated with Zack Investment Research, Inc. as recorded by Capital IQ

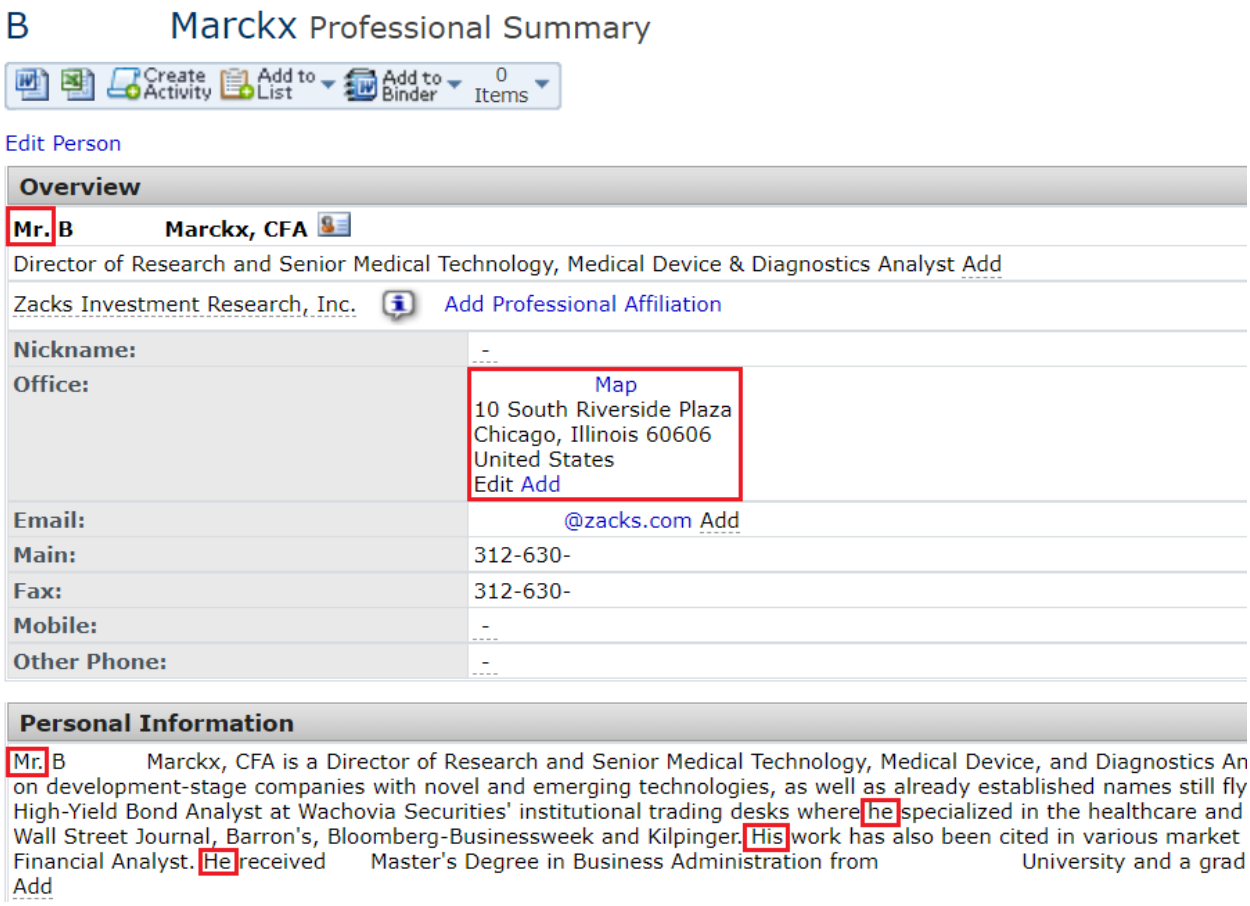


Professionals

Copy to List | Add...

Name	Title Sort By Rank
Zacks Ph.D., L	Founder, Chief Executive Officer, President and Chairman
Zacks, B	Executive Vice President
Mian, S	Director of Research
Gregg, T	Director of Communications
Hantke, R	
Marckx CFA, B	Director of Research and Senior Medical Technology, Medical Device & Diagnostics Analyst
Haycock, G	Managing Director and SCR Manager
Bartosiak, D	Technical and Momentum Strategist
Bautz Ph.D., D	Senior Biotechnology Analyst
Blank Ph.D., J	Chief Equity Strategist
Bolan, B	Aggressive Growth Stock Strategist
Borun, D	Stock Strategist
Cohen CFA, A	Senior Vice President Quantitative Consulting
Cook, K	Senior Stock Strategist
Gilson Ph.D., CFA, I	Senior Special Situations Analyst
Heffron C.F.A., CPA, CFA, CPA, A	Senior Bank and Finance Analyst
Marin, M	Senior Technology Analyst
Matras, K	Vice President
Mishra CFA, N	ETF Research Director
Ralston C.F.A., CFA, S	Senior Special Situations Analyst
Ryniec J.D., T	Equity Strategist
Senko CFA, E	Senior Analyst
Shah, K	Analyst
Thompson, L	Senior Technology Analyst
Vandermosten CFA, J	Senior Biotechnology Research Analyst

Figure IA3
Analyst personal information in Capital IQ



B Marckx Professional Summary

Create Activity | Add to List | Add to Binder | 0 Items

Edit Person

Overview

Mr. B Marckx, CFA

Director of Research and Senior Medical Technology, Medical Device & Diagnostics Analyst Add

Zacks Investment Research, Inc. Add Professional Affiliation

Nickname:	-
Office:	Map 10 South Riverside Plaza Chicago, Illinois 60606 United States Edit Add
Email:	@zacks.com Add
Main:	312-630-
Fax:	312-630-
Mobile:	-
Other Phone:	-

Personal Information

Mr. B Marckx, CFA is a Director of Research and Senior Medical Technology, Medical Device, and Diagnostics An on development-stage companies with novel and emerging technologies, as well as already established names still fly High-Yield Bond Analyst at Wachovia Securities' institutional trading desks where he specialized in the healthcare and Wall Street Journal, Barron's, Bloomberg-Businessweek and Kilpinger. His work has also been cited in various market Financial Analyst. He received Master's Degree in Business Administration from University and a grad Add

Figure IA4
An example of two different I/B/E/S analyst IDs pointing to the same analyst in Capital IQ

I/B/E/S file for analyst "BACKER M"

	ANALYST	AMASKCD	ESTIMID	EMASKCD	BROKER_NAME
BACKER	M	171815	ZACKSINV	7654	Zacks Investment Research, Inc.
BACKER	M	79164	RESASSOC	5797	Research Associates, LLC
BACKER	M	79164	HUDSONSQ	7844	Hudson Square Research, Inc.
BACKER	M	79164	ASCENDIA	41105	Ascendiant Capital Markets LLC, Research Division

Capital IQ file for analyst "BACKER M"

personId		ANALYST	companyId	BROKER_NAME
24165186	BACKER	M	129926045	Ascendiant Capital Markets LLC, Research Division
24165186	BACKER	M	12765513	Hudson Square Research, Inc.
24165186	BACKER	M	24165184	Research Associates, LLC
24165186	BACKER	M	7923367	Sidoti & Company, LLC
24165186	BACKER	M	4891357	Soleil Securities Corporation
24165186	BACKER	M	34211035	Wm Smith & Co.
24165186	BACKER	M	4439707	Zacks Investment Research, Inc.

Two I/B/E/S analyst IDs point to the same analyst in Capital IQ

Appendix IA2
Identification

Informal institutions such as culture change sufficiently slowly that they are not likely to be caused by analyst performance over the time horizon in our study. Further, the individualism scores that we use to moderate analyst performance over the period 2005–2020 were measured in the 1960s and 1970s, which also works against endogeneity or reverse causality. However, the association between individualism and the gender performance gap under competition could be affected by omitted variables (such as the cultural value of masculinity) or some confounding factors (such as economic development). We employ a multi-pronged approach to address those concerns.

IA2.1. The instrumental variables approach

To address the concern that both analyst performance and individualistic values may be determined by a third factor that we fail to control in Equation (1), we employ an instrumental variables approach to isolate the exogenous component of our measure of culture. Following Licht, Goldschmidt, and Schwartz (2007) and Griffin et al. (2018), we use a linguistic variable based on pronoun drop (Kashima and Kashima 1998; Davis and Abdurazokzoda 2016). The instrument is a somatic rule: the license to drop pronouns (*Pronoun drop*). This grammatical rule reflects whether a country's primary language permits speakers to drop a personal pronoun when used as the subject of a sentence. For example, pronoun drop is not permitted in English, as the pronoun "I" is required to make sense of the sentence "I speak". As Kashima and Kashima (1998, p. 465) argue, "An explicit use of 'I' …signals that the person is highlighted as a figure against the speech context that constitutes the ground; its absence reduces the prominence of the speaker's person, thus reducing figure-ground differentiation." The emphasis on the pronominal subject (especially "I" or "you") in languages in which pronoun drop is not permitted is expected to be associated with the cultural dimension of individualism. In contrast, the greater contextualization of the subject in languages that permit pronoun drop is expected to be associated with more collectivistic cultures.

Table IA2-1 in Appendix IA2 presents the results from the instrumental variables analysis. Panel A presents the first-stage regression results where individualism is projected onto the instrumental variable: *Pronoun drop*, as well as all the controls used in Table 4 Panel C. The adjusted R^2 from the first-stage model is 0.831, which shows that our instrumental variable and the control variables have significant explanatory power. To test the strength of the instrument, we note that the Cragg-Donald Wald F-statistic (statistic = 3.10×10^4) is higher than the Stock-Yogo weak ID test critical values. The test rejects the null hypothesis that our instrument is weak. Panel B presents the second-stage regression results. We show that the coefficients on the interaction term *Female × High IDV (instrumented)* are negative and significant in three out of the four specifications. Importantly, we fail to reject the null that there is a gender difference in performance in high IDV countries in three out of the four specifications.

IA2.2. Establishing the cultural channel

To establish that our instrumental variable exerts its effect on narrowing the gender performance gap under competition only through the channel of individualism, we follow Leary and Roberts (2014) to perform a double sort of the data based on the instrumental variable (*Pronoun drop* or not) and a country's individualism score (*High IDV* or not). The intuition for this analysis is as follows. If our instrument (*Pronoun drop*) might affect the gender performance gap through channels other than individualism, we would observe that the gender performance gap varies with our instrument within each high (low) IDV subgroup. If instead, we show the gender performance gap does not vary with our instrument within each IDV subgroup, but only varies between the high and low IDV subgroups after

controlling for our instrument, it is unlikely that our instrument affects the gender performance gap via channels other than individualism.

Table IA2-1 Panel C presents the double sort results. Within each two by two combination, we compute the average gender performance gap across firm-analyst-year observations and conduct a t-test of whether this average is significantly different from zero. The row labeled "Yes – No" presents the t-test for the difference in the average gender performance gap between countries with pronoun drop and those without. We show that after controlling for individualism, there is no difference in the gender performance gap between countries permitting pronoun drop and those that do not. The column labeled "High – Low" presents the t-test for the difference in the average gender performance gap between high IDV and low IDV subgroups. We show that, after controlling for the linguistic rule, the gender performance gap in high IDV countries is significantly smaller than that in low IDV countries. In other words, holding the linguistic rule constant, the gender performance gap is negatively and significantly correlated with the individualism score. The converse is not true. The gender performance gap is largely uncorrelated with the linguistic rule, holding the individualism score constant. This analysis suggests that our instrument affects the gender performance gap only through the channel of individualism.

References:

Davis, Lewis S., and Farangis Abdurazokzoda, 2016. Language, culture and institutions: Evidence from a new linguistic dataset, *Journal of Comparative Economics* 44, 541–561.

Griffin, Dale, Omrane Guedhami, Chuck C.Y. Kwok, Kai Li, and Liang Shao, 2018. National culture and the value implication of corporate governance, *Journal of Law, Finance, and Accounting* 3, 333–372.

Kashima, Emiko S. and Yoshihisa Kashima. 1998. Culture and language: The case of cultural dimensions and personal pronoun use, *Journal of Cross-Cultural Psychology* 29, 461–487.

Leary, Mark T., and Michael R. Roberts, 2014. Do peer firms affect corporate financial policy? *Journal of Finance* 69, 139–178.

Licht, Amir N., Chanan Goldschmidt, and Shalom H. Schwartz, 2007. Culture rules: The foundations of the rule of law and other norms of governance, *Journal of Comparative Economics* 35, 659–688.

Table IA2-1
Cross-country gender differences in performance under competition: identification

This table examines cross-country gender differences in performance under competition using 2SLS regressions and double sort. Panel A reports the first-stage regression results where *High IDV* is instrumented with a linguistic variable *Pronoun drop*. *High IDV* is an indicator variable that takes the value of one if a country is in the top quartile of individualism and zero otherwise. Panel B reports the second-stage regression results where the instrumented *High IDV* from the first stage are used. We use four different measures of analyst forecast performance as the dependent variables: *Average forecast error, First forecast error, Last forecast error,* and *Same week forecast error*. *Female* is an indicator variable that takes the value one if an analyst is a female, and zero otherwise. Panel C presents average gender differences in performance for four groups of firm-analyst-year observations. The groups are formed based on (1) whether a firm-analyst-year observation is from a high IDV or low IDV country; and (2) whether a firm-analyst-year observation is from a country with pronoun drop permitted or not. The row labeled "Yes – No" presents the t-test for the difference in the average gender performance gap between the countries with pronoun drop permitted and those without. The column labeled "High – Low" presents the t-test for the difference in the average gender performance gap between the high IDV and low IDV subgroups. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A. First-stage regression: Instrumenting high IDV

	High IDV
	(1)
Pronoun drop	-0.666***
	(0.009)
Female	0.002*
	(0.001)
GGGI	-2.453***
	(0.091)
Ln(GDP per capita)	-0.021***
	(0.003)
Foreign analyst	0.116***
	(0.004)
Forecast horizon	-0.002***
	(0.000)
Forecast frequency	0.002***
	(0.000)
# firms followed	0.002***
	(0.000)
# industries followed	-0.005***
	(0.000)
Firm experience	-0.000
	(0.000)
General experience	-0.001***
	(0.000)
Ln(Brokerage size)	0.013***
	(0.000)
Firm × Year Fixed Effects	Yes
Intercept	Yes
Obs.	559,905
adj-R^2	0.831

Panel B. Second-stage regression: Cross-country gender differences in performance

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.065***	0.050*	0.076***	0.114***
	(0.024)	(0.029)	(0.028)	(0.042)
Female × High IDV (instrumented)	-0.089***	-0.109***	-0.057	-0.129***
	(0.034)	(0.040)	(0.039)	(0.050)
High IDV (instrumented)	-0.365***	-0.234***	-0.369***	-0.249**
	(0.074)	(0.088)	(0.075)	(0.116)
GGGI	1.028***	0.977**	1.837***	0.608
	(0.361)	(0.417)	(0.410)	(0.496)
Ln(GDP per capita)	-0.000	0.003	-0.003	-0.035
	(0.018)	(0.022)	(0.019)	(0.022)
Foreign analyst	0.104***	0.037	0.128***	0.041
	(0.023)	(0.027)	(0.024)	(0.026)
Forecast horizon	0.154***	0.079***	0.214***	0.011***
	(0.003)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.016***	-0.026***	-0.000
	(0.002)	(0.003)	(0.002)	(0.003)
# firms followed	0.001	0.002**	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.005**	-0.006***	-0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
Firm experience	-0.003**	-0.004**	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003***	-0.001	-0.006***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.002	0.001	-0.006	-0.009**
	(0.003)	(0.004)	(0.004)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV (instrumented) = 0				
F value	0.86	3.73	0.81	0.25
P-value	0.35	0.05	0.37	0.62
Obs.	559,905	559,905	559,905	302,904
adj-R^2	0.911	0.916	0.782	0.943

Panel C. Gender difference in performance sorted by pronoun drop and individualism

Panel C.1. Gender difference in average analyst forecast error

	High IDV			Low IDV			High – Low
Pronoun drop	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Female	Male	Female – Male	Female	Male	Female – Male	
Yes	-0.0628	0.011	-0.073	0.039***	-0.001	0.040***	-0.113*
No	-0.016	-0.004	-0.012	0.069**	0.015	0.054*	-0.066**
Yes – No			-0.061			-0.014	

Panel C.2. Gender difference in first analyst forecast error

	High IDV			Low IDV			High – Low
Pronoun drop	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Female	Male	Female – Male	Female	Male	Female – Male	
Yes	-0.681***	-0.677***	-0.004	-0.616***	-0.797***	0.181***	-0.185*
No	-0.764***	-0.777***	0.013	-0.653***	-0.846***	0.193***	-0.180***
Yes – No			-0.017			-0.012	

Panel C.3. Gender difference in last analyst forecast error

	High IDV			Low IDV			High – Low
Pronoun drop	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Female	Male	Female – Male	Female	Male	Female – Male	
Yes	0.575***	0.791***	-0.216**	0.882***	1.043***	-0.161***	-0.055
No	0.841***	0.856***	-0.015	0.927***	0.996***	-0.069	0.054
Yes – No			-0.201*			-0.092	

Panel C.4. Gender difference in same week analyst forecast error

	High IDV			Low IDV			High – Low
Pronoun drop	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Female	Male	Female – Male	Female	Male	Female – Male	
Yes	-0.740***	-0.537***	-0.203	-0.609***	-0.768***	0.159***	-0.362***
No	-0.710***	-0.748***	0.038*	-0.441***	-0.717***	0.276***	-0.238***
Yes – No			-0.241**			-0.117*	

Table IA1
Equity analyst pay around the world

This table provides an overview of equity analyst pay (in U.S. dollars) in our sample countries. The data for average analyst pay in a country come from the Global Salary Calculator (updated to the most recent month as of February 2023), an online database maintained by the Economic Research Institute. The data for average pay in a country come from Trading Economics (updated as of the end of 2022). The table presents average analyst pay, the ratio of average analyst pay to GDP per capita, average pay, and the ratio of average analyst pay to average pay in each country. N/A indicates pay data is unavailable. Definitions of the variables are provided in the Appendix. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Country	Average analyst pay	GDP per capita	Average analyst pay/GDP per capita	Average pay	Average analyst pay/ Average pay
Argentina	30,767.34	10,636.12	2.89	18,709.69	1.64
Australia	97,535.71	60,443.11	1.61	49,721.26	1.96
Austria	85,849.63	53,637.71	1.60	31,810.73	2.70
Belgium	90,239.75	51,247.01	1.76	N/A	N/A
Brazil	29,794.53	7,507.16	3.97	6,392.45	4.66
Canada	87,389.97	51,987.94	1.68	40,803.08	2.14
Chile	36,288.59	16,265.10	2.23	12,584.85	2.88
China	46,766.62	12,556.33	3.72	15,859.19	2.95
Denmark	99,520.61	68,007.76	1.46	74,128.02	1.34
Finland	79,864.35	53,654.75	1.49	47,873.82	1.67
France	77,176.66	43,658.98	1.77	41,905.36	1.84
Germany	88,515.25	51,203.55	1.73	51,747.63	1.71
Greece	49,279.71	20,192.60	2.44	N/A	N/A
Hong Kong	84,943.24	49,800.54	1.71	26,774.62	3.17
Hungary	27,062.16	18,728.12	1.45	17,289.00	1.57
India	18,342.14	2,256.59	8.13	N/A	N/A
Indonesia	26,570.45	4,332.71	6.13	N/A	N/A
Ireland	83,213.46	100,172.08	0.83	47,242.90	1.76
Israel	71,529.32	52,170.71	1.37	43,923.79	1.63
Italy	67,092.53	35,657.50	1.88	31,230.28	2.15
Japan	66,361.48	39,312.66	1.69	61,239.27	1.08
Malaysia	29,586.80	11,109.26	2.66	8,283.10	3.57
Mexico	25,239.68	10,045.68	2.51	6,931.37	3.64
Netherlands	86,686.65	57,767.88	1.50	38,384.86	2.26
New Zealand	81,962.86	48,781.03	1.68	43,800.56	1.87
Norway	99,380.93	89,154.28	1.11	63,081.71	1.58
Pakistan	10,016.83	1,505.01	6.66	N/A	N/A
Philippines	15,220.22	3,460.53	4.40	N/A	N/A
Poland	35,503.54	17,999.91	1.97	17,650.30	2.01
Portugal	51,048.37	24,567.51	2.08	14,990.54	3.41
Russian Federation	24,036.79	12,194.78	1.97	10,826.42	2.22
Singapore	77,367.81	72,794.00	1.06	57,636.90	1.34

South Korea	61,968.12	34,997.78	1.77	39,612.91	1.56
Spain	64,809.67	30,103.51	2.15	25,640.38	2.53
Sweden	68,148.28	61,028.74	1.12	33,521.14	2.03
Switzerland	131,337.45	91,991.60	1.43	83,602.85	1.57
Thailand	25,895.72	7,066.19	3.66	5,134.03	5.04
Turkey	14,735.75	9,661.24	1.53	2,866.90	5.14
United Arab Emirates	85,385.18	44,315.55	1.93	N/A	N/A
United Kingdom	75,617.99	46,510.28	1.63	40,369.69	1.87
United States	107,939.00	70,248.63	1.54	50,992.34	2.12
Vietnam	23,595.47	3,756.49	6.28	3,485.39	6.77
Mean	60,466.35	36,964.02	2.43	33,315.64	2.50
Median	66,727.01	37,485.08	1.76	33,521.14	2.03

Table IA2
Summary statistics for the U.S. sample

This table provides the summary statistics of analyst-level variables for the U.S. sample. The sample consists of 263,758 firm-analyst-year observations over the period 2005–2020 (the sample size for *Same week forecast error* is 179,153 because we require those forecasts are made within five days after the prior fiscal year's annual earnings announcement). Definitions of the variables are provided in the Appendix.

	Mean (1)	Median (2)	STD (3)	P25 (4)	P75 (5)
Average forecast error	2.244	0.539	6.677	0.210	1.494
First forecast error	3.054	0.714	8.563	0.243	2.142
Last forecast error	1.371	0.214	4.878	0.067	0.702
Same week forecast error	2.962	0.745	7.669	0.261	2.188
Female	0.080	0.000	0.271	0.000	0.000
GGGI	0.724	0.720	0.016	0.704	0.740
High GGGI	0.000	0.000	0.000	0.000	0.000
GDP per capita	49.934	49.596	2.351	48.467	51.052
Ln(GDP per capita)	3.910	3.904	0.047	3.881	3.933
High GDP per capita	1.000	1.000	0.000	1.000	1.000
Individualism (IDV)	0.910	0.910	0.000	0.910	0.910
High IDV	1.000	1.000	0.000	1.000	1.000
Foreign analyst	0.115	0.000	0.319	0.000	0.000
Forecast horizon	7.616	7.500	1.761	6.546	8.292
Forecast frequency	4.665	4.000	2.472	3.000	6.000
# firms followed	17.875	17.000	8.014	13.000	22.000
# industries followed	3.814	3.000	2.489	2.000	5.000
Firm experience	4.222	3.000	3.382	2.000	6.000
General experience	8.578	8.000	4.874	5.000	12.000
Brokerage size	106.813	47.000	119.367	19.000	175.000
Ln(Brokerage size)	3.914	3.850	1.345	2.944	5.165
N	263,758				

Table IA3
Correlation matrix

This table presents the correlations matrix for analyst-level variable in our sample. The sample consists of 610,847 firm-analyst-year observations over the period 2005–2020. Definitions of the variables are provided in the Appendix. Superscripts [a], [b], [c] correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	Average forecast error	1.000																				
2	First forecast error	0.950 [a]	1.000																			
3	Last forecast error	0.894 [a]	0.794 [a]	1.000																		
4	Same day forecast error	0.935 [a]	0.995 [a]	0.758 [a]	1.000																	
5	Female	0.001	-0.001	0.005 [a]	0.000	1.000																
6	GGGI	-0.065 [a]	-0.061 [a]	-0.062 [a]	-0.062 [a]	-0.083 [a]	1.000															
7	High GGGI	0.026 [a]	0.021 [a]	0.032 [a]	0.013 [a]	-0.023 [a]	0.494 [a]	1.000														
8	GDP per capita	-0.033 [a]	-0.021 [a]	-0.052 [a]	-0.021 [a]	-0.127 [a]	0.542 [a]	0.112 [a]	1.000													
9	Ln(GDP per capita)	-0.027 [a]	-0.016 [a]	-0.045 [a]	-0.017 [a]	-0.093 [a]	0.498 [a]	0.097 [a]	0.928 [a]	1.000												
10	High GDP per capita	-0.067 [a]	-0.051 [a]	-0.082 [a]	-0.044 [a]	-0.114 [a]	0.410 [a]	-0.200 [a]	0.649 [a]	0.500 [a]	1.000											
11	IDV	-0.068 [a]	-0.055 [a]	-0.081 [a]	-0.059 [a]	-0.137 [a]	0.598 [a]	0.021 [a]	0.673 [a]	0.593 [a]	0.680 [a]	1.000										
12	High IDV	-0.077 [a]	-0.064 [a]	-0.089 [a]	-0.055 [a]	-0.098 [a]	0.454 [a]	-0.187 [a]	0.524 [a]	0.503 [a]	0.679 [a]	0.883 [a]	1.000									
13	Foreign analyst	0.014 [a]	0.008 [a]	0.023 [a]	0.012 [a]	0.043 [a]	0.141 [a]	0.152 [a]	0.049 [a]	0.099 [a]	-0.137 [a]	0.011 [a]	0.003[b]	1.000								
14	Forecast horizon	0.047 [a]	0.027 [a]	0.079 [a]	0.031 [a]	0.004 [a]	-0.003 [a]	-0.023 [a]	-0.017 [a]	-0.030 [a]	0.028 [a]	-0.009 [a]	0.010 [a]	-0.001	1.000							
15	Forecast frequency	0.002[c]	0.019 [a]	-0.019 [a]	0.037 [a]	-0.039 [a]	0.202 [a]	0.011 [a]	0.226 [a]	0.189 [a]	0.233 [a]	0.248 [a]	0.223 [a]	-0.001	-0.054 [a]	1.000						
16	# firms followed	-0.026 [a]	-0.021 [a]	-0.033 [a]	-0.015 [a]	-0.097 [a]	-0.038 [a]	-0.185 [a]	0.134 [a]	0.112 [a]	0.180 [a]	0.111 [a]	0.130 [a]	-0.115 [a]	0.024 [a]	0.047 [a]	1.000					
17	# industries followed	0.003 [a]	0.002 [c]	0.006 [a]	0.003	-0.006 [a]	-0.067 [a]	0.018 [a]	-0.082 [a]	-0.062 [a]	-0.125 [a]	-0.152 [a]	-0.156 [a]	-0.100 [a]	0.045 [a]	-0.109 [a]	0.403 [a]	1.000				
18	Firm experience	-0.046 [a]	-0.042 [a]	-0.051 [a]	-0.043 [a]	-0.041 [a]	0.100 [a]	-0.008 [a]	0.136 [a]	0.116 [a]	0.057 [a]	0.085 [a]	0.050 [a]	-0.071 [a]	-0.050 [a]	0.209 [a]	0.130 [a]	0.026 [a]	1.000			
19	General experience	-0.045 [a]	-0.041 [a]	-0.051 [a]	-0.039 [a]	-0.069 [a]	0.168 [a]	-0.023 [a]	0.207 [a]	0.179 [a]	0.119 [a]	0.149 [a]	0.112 [a]	-0.056 [a]	-0.025 [a]	0.121 [a]	0.269 [a]	0.108 [a]	0.608 [a]	1.000		
20	Brokerage size	-0.013 [a]	-0.013 [a]	-0.014 [a]	-0.026 [a]	0.051 [a]	-0.013 [a]	-0.043 [a]	0.043 [a]	0.067 [a]	-0.017 [a]	0.036 [a]	0.063 [a]	0.204 [a]	-0.046 [a]	0.102 [a]	0.013 [a]	-0.117 [a]	0.030 [a]	0.025 [a]	1.000	
21	Ln(Brokerage size)	-0.021 [a]	-0.020 [a]	-0.024 [a]	-0.030 [a]	0.035 [a]	-0.003 [a]	-0.044 [a]	0.060 [a]	0.080 [a]	-0.013 [a]	0.035 [a]	0.064 [a]	0.203 [a]	-0.040 [a]	0.116 [a]	0.013 [a]	-0.152 [a]	0.050 [a]	0.047 [a]	0.891 [a]	1.000

Table IA4
Cross-country gender differences in performance under competition: excluding the U.S. and the U.K.

This table examines cross-country gender differences in performance under competition using OLS regression with firm times year fixed effects excluding analysts based in the U.S. and the U.K. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.032*	0.018	0.043*	0.102***
	(0.019)	(0.024)	(0.023)	(0.037)
Female × High IDV	-0.101***	-0.139***	-0.079	-0.147***
	(0.037)	(0.047)	(0.051)	(0.052)
High IDV	0.055	0.010	0.064	0.006
	(0.045)	(0.054)	(0.055)	(0.061)
GGGI	0.725	1.293**	0.638	1.674***
	(0.465)	(0.522)	(0.549)	(0.630)
Ln(GDP per capita)	0.001	-0.014	0.013	-0.057**
	(0.019)	(0.024)	(0.021)	(0.028)
Foreign analyst	0.033	0.012	0.075**	0.040
	(0.024)	(0.028)	(0.029)	(0.035)
Forecast horizon	0.168***	0.098***	0.225***	0.012**
	(0.004)	(0.004)	(0.005)	(0.005)
Forecast frequency	0.001	0.031***	-0.039***	0.002
	(0.003)	(0.004)	(0.004)	(0.005)
# firms followed	-0.002**	-0.001	-0.003**	0.000
	(0.001)	(0.001)	(0.001)	(0.002)
# industries followed	-0.000	-0.002	0.005	-0.007
	(0.003)	(0.004)	(0.004)	(0.004)
Firm experience	-0.007***	-0.005*	-0.008***	-0.001
	(0.002)	(0.003)	(0.003)	(0.003)
General experience	0.000	0.001	-0.000	-0.003
	(0.002)	(0.002)	(0.002)	(0.002)
Ln(Brokerage size)	-0.014***	0.000	-0.036***	-0.016**
	(0.005)	(0.006)	(0.006)	(0.007)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	4.66	8.64	0.62	1.49
P-value	0.03	0.00	0.43	0.22
Obs.	291,245	291,245	291,245	118,601
adj-R^2	0.918	0.918	0.787	0.942

Table IA5
Cross-country gender differences in performance under competition: other culture values

This table examines cross-country gender differences in performance under competition using OLS regression with firm times year fixed effects and other culture values. We sort countries by the three other cultural values of Hofstede (1980, 2001): masculinity (MAS), power distance (PDI), and uncertainty avoidance (UAI). *High MAS* is an indicator variable that takes the value of one if a country is in the top quartile of masculinity, and zero otherwise. *High PDI* is an indicator variable that takes the value of one if a country is in the top quartile of power distance, and zero otherwise. *High UAI* is an indicator variable that takes the value of one if a country is in the top quartile of uncertainty avoidance, and zero otherwise. We use four different measures of analyst forecast performance as the dependent variables: *Average forecast error, First forecast error, Last forecast error,* and *Same week forecast error*. *Female* is an indicator variable that takes the value one if an analyst is a female, and zero otherwise. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	Average forecast error			First forecast error			Last forecast error			Same week forecast error		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Female	0.056**	0.066***	0.008	0.050*	0.033	0.017	0.051**	0.078***	0.019	0.124***	0.133***	0.069**
	(0.024)	(0.025)	(0.023)	(0.029)	(0.031)	(0.028)	(0.026)	(0.029)	(0.026)	(0.041)	(0.051)	(0.034)
Female × High IDV	-0.065**	-0.086***	-0.029	-0.086***	-0.083**	-0.066**	-0.031	-0.059*	-0.001	-0.127***	-0.144***	-0.080**
	(0.027)	(0.029)	(0.028)	(0.033)	(0.036)	(0.034)	(0.029)	(0.034)	(0.031)	(0.043)	(0.055)	(0.038)
Female × High MAS	-0.048			-0.056			-0.006			-0.068		
	(0.034)			(0.041)			(0.035)			(0.061)		
Female × High PDI		-0.076*			-0.002			-0.087*			-0.057	
		(0.039)			(0.047)			(0.045)			(0.067)	
Female × High UAI			0.094**			0.036			0.086*			0.174
			(0.042)			(0.054)			(0.052)			(0.112)
High IDV	-0.085***	-0.084***	-0.051*	-0.067**	-0.076***	-0.027	-0.081***	-0.076***	-0.054*	-0.067**	-0.076***	-0.032
	(0.024)	(0.024)	(0.027)	(0.027)	(0.027)	(0.030)	(0.027)	(0.027)	(0.029)	(0.027)	(0.027)	(0.031)
High MAS	-0.017			-0.023			-0.004			-0.031		
	(0.021)			(0.026)			(0.024)			(0.026)		
High PDI		0.087**			-0.028			0.055			-0.046	
		(0.044)			(0.052)			(0.045)			(0.090)	
High UAI			0.125***			0.154***			0.087**			0.129**
			(0.037)			(0.045)			(0.042)			(0.052)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0												
F value	0.48	1.79	1.91	4.90	7.70	7.73	1.44	1.22	1.14	0.03	0.47	0.46
P-value	0.49	0.18	0.17	0.03	0.01	0.01	0.23	0.27	0.28	0.87	0.49	0.50
Obs.	610,847	610,847	610,847	610,847	610,847	610,847	610,847	610,847	610,847	318,622	318,622	318,622
adj-R^2	0.910	0.910	0.910	0.915	0.915	0.915	0.782	0.782	0.782	0.943	0.943	0.943

Table IA6
Cross-country gender differences in performance under competition: controlling transparency

This table examines cross-country gender differences in performance under competition using OLS regression with firm times year fixed effects and controlling transparency. We follow Bradshaw et al. (2019) to measure country-level transparency. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.045**	0.034	0.051**	0.092**
	(0.022)	(0.026)	(0.024)	(0.037)
Female × High IDV	-0.063**	-0.082**	-0.032	-0.105**
	(0.027)	(0.033)	(0.030)	(0.043)
High IDV	-0.090***	-0.072***	-0.085***	-0.076***
	(0.024)	(0.027)	(0.027)	(0.028)
GGGI	0.937**	1.028**	1.794***	0.916
	(0.411)	(0.493)	(0.456)	(0.565)
Ln(GDP per capita)	-0.002	0.013	-0.013	-0.049
	(0.033)	(0.043)	(0.035)	(0.039)
Transparency	-0.013	-0.020	-0.015	-0.002
	(0.023)	(0.029)	(0.024)	(0.036)
Foreign analyst	0.062***	0.011	0.087***	0.026
	(0.021)	(0.025)	(0.022)	(0.023)
Forecast horizon	0.156***	0.080***	0.216***	0.011***
	(0.003)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.016***	-0.027***	-0.001
	(0.002)	(0.003)	(0.002)	(0.002)
# firms followed	0.000	0.001*	0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.003	-0.005**	0.000	0.000
	(0.002)	(0.002)	(0.003)	(0.002)
Firm experience	-0.003**	-0.004**	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003***	-0.001	-0.006***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.006*	-0.001	-0.009***	-0.010***
	(0.003)	(0.004)	(0.003)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	1.48	7.37	1.22	0.56
P-value	0.22	0.01	0.27	0.46
Obs.	586,880	586,880	586,880	312,723
adj-R^2	0.912	0.916	0.783	0.944

Table IA7
Cross-country gender differences in performance under competition: using a different cutoff

This table examines cross-country gender differences in performance under competition using OLS regression with firm times year fixed effects and an alternative cutoff of individualism. *High IDV_alt* is an indicator variable that takes the value of one if a country is in the top 30th percentile of the individualism score, and zero otherwise. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.040*	0.038	0.047*	0.120***
	(0.021)	(0.026)	(0.024)	(0.039)
Female × High IDV_alt	-0.054**	-0.083***	-0.024	-0.128***
	(0.026)	(0.031)	(0.029)	(0.042)
High IDV_alt	-0.068***	-0.043	-0.058**	-0.054*
	(0.026)	(0.029)	(0.029)	(0.031)
GGGI	0.718**	0.842**	1.496***	0.870*
	(0.353)	(0.408)	(0.395)	(0.465)
Ln(GDP per capita)	-0.012	-0.007	-0.010	-0.060***
	(0.017)	(0.021)	(0.018)	(0.022)
Foreign analyst	0.053***	0.004	0.075***	0.019
	(0.019)	(0.022)	(0.019)	(0.020)
Forecast horizon	0.156***	0.081***	0.215***	0.011***
	(0.003)	(0.003)	(0.003)	(0.003)
Forecast frequency	-0.001	0.016***	-0.028***	-0.001
	(0.002)	(0.003)	(0.002)	(0.002)
# firms followed	0.000	0.001	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.002	-0.005*	0.001	-0.000
	(0.002)	(0.002)	(0.002)	(0.002)
Firm experience	-0.003**	-0.004**	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003***	-0.001	-0.005***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.008***	-0.003	-0.012***	-0.011***
	(0.003)	(0.004)	(0.003)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV_alt = 0				
F value	0.93	7.72	2.06	0.28
P-value	0.34	0.01	0.15	0.60
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.910	0.915	0.782	0.943

Table IA8
Cross-country gender differences in performance under competition: using updated individualism scores

This table examines cross-country gender differences in performance under competition using OLS regression with firm times year fixed effects and updated individualism scores. To create an updated version of Hofstede's individualism score, we follow Schwartz (1994), Triandis (1995), and Beugelsdijk et al. (2015) using survey data from the World Values Survey (WVS) and its equivalent, the European Values Study (EVS), which employs a similar set of survey questions but mostly for European countries, over the period 1981–2002. *High IDV_WVS* is an indicator variable that takes the value of one if a country is in the top quartile of updated individualism scores, and zero otherwise. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.069***	0.061*	0.074**	0.112**
	(0.026)	(0.032)	(0.031)	(0.054)
Female × High IDV_WVS	-0.088***	-0.088**	-0.064*	-0.117**
	(0.029)	(0.036)	(0.035)	(0.057)
High IDV_WVS	-0.097**	-0.173***	0.004	-0.147***
	(0.045)	(0.055)	(0.056)	(0.053)
GGGI	1.607**	1.770**	2.698***	1.349
	(0.680)	(0.794)	(0.735)	(0.923)
Ln(GDP per capita)	-0.007	-0.003	-0.045*	-0.075*
	(0.026)	(0.032)	(0.027)	(0.038)
Foreign analyst	0.018	0.006	0.028	0.026
	(0.022)	(0.027)	(0.027)	(0.028)
Forecast horizon	0.165***	0.079***	0.233***	0.008***
	(0.003)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.021***	-0.028***	0.002
	(0.002)	(0.003)	(0.003)	(0.002)
# firms followed	-0.000	-0.000	0.001	-0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.001	-0.002	-0.001	0.002
	(0.002)	(0.002)	(0.003)	(0.003)
Firm experience	-0.004***	-0.004***	-0.003	-0.000
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.001	0.002	-0.006***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.002	0.000	-0.007*	-0.006*
	(0.003)	(0.004)	(0.004)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV_WVS = 0				
F value	2.37	2.83	0.37	0.07
P-value	0.12	0.09	0.54	0.79
Obs.	482,975	482,975	482,975	272,989
adj-R^2	0.931	0.931	0.801	0.949

Table IA9
Cross-country gender differences in performance under competition: clustering standard errors at different levels

This table examines cross-country gender differences in performance under competition clustering standard errors at different levels. Panel A presents the regression results when standard errors (in parentheses) are clustered at the analyst country times year level. Panel B presents the regression results when standard errors (in parentheses) are clustered at the brokerage times year level. Panel C presents the regression results when standard errors (in parentheses) are clustered at the analyst level. Panel D presents the regression results when standard errors (in parentheses) are clustered at the firm level. Definitions of the variables are provided in the Appendix. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Cross-country gender differences in performance: standard errors clustered at the analyst country times year level

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.042*	0.033	0.050*	0.111***
	(0.023)	(0.028)	(0.028)	(0.039)
Female × High IDV	-0.091***	-0.074**	-0.082***	-0.075**
	(0.027)	(0.031)	(0.031)	(0.029)
High IDV	-0.062**	-0.082**	-0.031	-0.122***
	(0.028)	(0.035)	(0.035)	(0.045)
GGGI	0.853**	0.960**	1.607***	0.897*
	(0.379)	(0.401)	(0.438)	(0.498)
Ln(GDP per capita)	-0.013	-0.008	-0.011	-0.060***
	(0.017)	(0.021)	(0.018)	(0.022)
Foreign analyst	0.059***	0.010	0.080***	0.023
	(0.021)	(0.024)	(0.023)	(0.021)
Forecast horizon	0.156***	0.081***	0.215***	0.011***
	(0.009)	(0.005)	(0.013)	(0.003)
Forecast frequency	-0.001	0.016***	-0.028***	-0.001
	(0.003)	(0.003)	(0.004)	(0.003)
# firms followed	0.000	0.001	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.003	-0.005*	0.001	-0.000
	(0.002)	(0.003)	(0.003)	(0.003)
Firm experience	-0.003**	-0.004*	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003**	-0.001	-0.005***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.007*	-0.002	-0.011*	-0.011**
	(0.004)	(0.004)	(0.007)	(0.005)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	1.65	4.9	0.94	0.27
P-value	0.20	0.03	0.33	0.61
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.910	0.915	0.782	0.943

Panel B. Cross-country gender differences in performance: standard errors clustered at the brokerage times year level

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.042**	0.033	0.050**	0.111***
	(0.021)	(0.024)	(0.025)	(0.037)
Female × High IDV	-0.091***	-0.074**	-0.082***	-0.075**
	(0.027)	(0.031)	(0.029)	(0.031)
High IDV	-0.062**	-0.082***	-0.031	-0.122***
	(0.026)	(0.030)	(0.031)	(0.041)
GGGI	0.853**	0.960**	1.607***	0.897*
	(0.388)	(0.430)	(0.446)	(0.502)
Ln(GDP per capita)	-0.013	-0.008	-0.011	-0.060**
	(0.018)	(0.022)	(0.020)	(0.025)
Foreign analyst	0.059***	0.010	0.080***	0.023
	(0.021)	(0.024)	(0.022)	(0.023)
Forecast horizon	0.156***	0.081***	0.215***	0.011***
	(0.003)	(0.003)	(0.005)	(0.003)
Forecast frequency	-0.001	0.016***	-0.028***	-0.001
	(0.002)	(0.003)	(0.003)	(0.003)
# firms followed	0.000	0.001	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.003	-0.005*	0.001	-0.000
	(0.002)	(0.003)	(0.003)	(0.003)
Firm experience	-0.003**	-0.004**	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003**	-0.001	-0.005***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.007**	-0.002	-0.011**	-0.011**
	(0.004)	(0.004)	(0.005)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	1.64	6.5	0.96	0.42
P-value	0.20	0.01	0.33	0.52
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.910	0.915	0.782	0.943

Panel C. Cross-country gender differences in performance: standard errors clustered at the analyst level

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.042*	0.033	0.050*	0.111**
	(0.025)	(0.029)	(0.028)	(0.045)
Female × High IDV	-0.091***	-0.074**	-0.082***	-0.075**
	(0.030)	(0.032)	(0.031)	(0.033)
High IDV	-0.062**	-0.082**	-0.031	-0.122**
	(0.031)	(0.036)	(0.035)	(0.051)
GGGI	0.853*	0.960**	1.607***	0.897*
	(0.439)	(0.466)	(0.500)	(0.498)
Ln(GDP per capita)	-0.013	-0.008	-0.011	-0.060**
	(0.020)	(0.025)	(0.022)	(0.026)
Foreign analyst	0.059**	0.010	0.080***	0.023
	(0.024)	(0.027)	(0.025)	(0.025)
Forecast horizon	0.156***	0.081***	0.215***	0.011***
	(0.003)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.016***	-0.028***	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
# firms followed	0.000	0.001	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.003	-0.005*	0.001	-0.000
	(0.003)	(0.003)	(0.003)	(0.003)
Firm experience	-0.003**	-0.004*	-0.003	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
General experience	-0.003**	-0.001	-0.005***	-0.002
	(0.001)	(0.001)	(0.002)	(0.001)
Ln(Brokerage size)	-0.007*	-0.002	-0.011**	-0.011**
	(0.004)	(0.005)	(0.005)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	1.23	5.22	0.78	0.29
P-value	0.27	0.02	0.38	0.59
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.910	0.915	0.782	0.943

Panel D. Cross-country gender differences in performance: standard errors clustered at the firm level

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.042*	0.033	0.050*	0.111**
	(0.023)	(0.030)	(0.026)	(0.045)
Female × High IDV	-0.091***	-0.074**	-0.082***	-0.075***
	(0.030)	(0.030)	(0.030)	(0.027)
High IDV	-0.062**	-0.082**	-0.031	-0.122**
	(0.030)	(0.039)	(0.032)	(0.054)
GGGI	0.853**	0.960**	1.607***	0.897*
	(0.387)	(0.407)	(0.452)	(0.473)
Ln(GDP per capita)	-0.013	-0.008	-0.011	-0.060***
	(0.018)	(0.024)	(0.022)	(0.023)
Foreign analyst	0.059**	0.010	0.080***	0.023
	(0.026)	(0.023)	(0.022)	(0.021)
Forecast horizon	0.156***	0.081***	0.215***	0.011***
	(0.004)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.016***	-0.028***	-0.001
	(0.002)	(0.003)	(0.003)	(0.003)
# firms followed	0.000	0.001	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.003	-0.005**	0.001	-0.000
	(0.002)	(0.002)	(0.003)	(0.002)
Firm experience	-0.003**	-0.004**	-0.003*	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.003**	-0.001	-0.005***	-0.002
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.007**	-0.002	-0.011***	-0.011***
	(0.003)	(0.004)	(0.004)	(0.004)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	1.45	6.6	1.1	0.31
P-value	0.23	0.01	0.29	0.58
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.910	0.915	0.782	0.943

Table IA10
Cross-country gender differences in performance under competition: additional robustness checks

This table examines cross-country gender differences in performance under competition using alternative samples or model specifications to Table 4 Panel C. Panel A presents the regression results using firm-forecast-analyst-level observations. The dependent variable is *Absolute forecast error*, the absolute value of the difference between an analyst's annual EPS forecast and actual EPS normalized by the stock price at the prior fiscal year end. Column (1) presents the results with firm times year fixed effects, and column (2) presents the results with firm times year times month fixed effects. Panel B repeats the analysis in Table 4 Panel C adding brokerage times year fixed effects. Panel C repeats the analysis in Table 4 Panel C using an analyst's name to determine their country of origin. The sample consists of 11,444 equity analysts from 42 countries who are from the same high (low) IDV countries based on their last name and first name using the algorithm developed by Origins Info Ltd. as those based on their place of work. Definitions of the variables are provided in the Appendix. Heteroscedasticity-consistent standard errors (in parentheses) are clustered at the firm times year level. ***, **, * correspond to statistical significance at the 1, 5, and 10 percent levels, respectively.

Panel A. Cross-country gender differences in performance under competition using forecast-level observations

	Absolute forecast error	Absolute forecast error
	(1)	(2)
Female	0.063**	0.074*
	(0.031)	(0.045)
Female × High IDV	-0.078**	-0.087*
	(0.036)	(0.051)
High IDV	-0.082***	-0.102***
	(0.025)	(0.032)
GGGI	0.858***	0.713*
	(0.313)	(0.409)
Ln(GDP per capita)	-0.036**	-0.049**
	(0.017)	(0.023)
Foreign analyst	0.083***	0.073***
	(0.022)	(0.027)
Forecast horizon	0.007***	0.006***
	(0.000)	(0.000)
Forecast frequency	-0.003	-0.004
	(0.003)	(0.003)
# firms followed	0.001	0.000
	(0.001)	(0.001)
# industries followed	0.000	0.002
	(0.002)	(0.002)
Firm experience	-0.001	-0.000
	(0.001)	(0.002)
General experience	-0.005***	-0.005***
	(0.001)	(0.001)
Ln(Brokerage size)	-0.006**	-0.009***
	(0.003)	(0.003)
Firm × Year Fixed Effects	Yes	No
Firm × Year × Month Fixed Effects	No	Yes
Intercept	Yes	Yes
Test if Female + Female × High IDV = 0		
F value	0.93	0.43
P-value	0.34	0.51
Obs.	2,629,947	2,629,947
adj-R^2	0.807	0.882

Panel B. Cross-country gender differences in performance under competition including brokerage times year fixed effects

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.019	0.018	0.026	0.133***
	(0.021)	(0.025)	(0.024)	(0.039)
Female × High IDV	-0.028	-0.051	-0.006	-0.152***
	(0.026)	(0.032)	(0.030)	(0.044)
High IDV	-0.046	0.019	-0.028	0.000
	(0.031)	(0.037)	(0.036)	(0.044)
GGGI	0.636	0.374	2.007***	0.918
	(0.480)	(0.582)	(0.539)	(0.676)
Ln(GDP per capita)	-0.013	-0.003	-0.012	-0.053*
	(0.020)	(0.024)	(0.022)	(0.029)
Foreign analyst	0.073***	0.018	0.093***	0.035
	(0.022)	(0.025)	(0.023)	(0.025)
Forecast horizon	0.152***	0.080***	0.209***	0.011***
	(0.003)	(0.003)	(0.004)	(0.003)
Forecast frequency	-0.001	0.011***	-0.022***	-0.003
	(0.002)	(0.003)	(0.002)	(0.002)
# firms followed	0.001	0.002**	-0.000	0.000
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.006**	-0.006**	-0.003	0.000
	(0.002)	(0.003)	(0.003)	(0.003)
Firm experience	-0.003**	-0.002	-0.002	-0.000
	(0.001)	(0.002)	(0.002)	(0.002)
General experience	-0.001	-0.000	-0.002	-0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Ln(Brokerage size)	-0.033**	-0.046***	0.003	-0.005
	(0.014)	(0.018)	(0.014)	(0.015)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Brokerage × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	0.29	3.22	1.37	1.2
P-value	0.59	0.07	0.24	0.27
Obs.	610,847	610,847	610,847	318,622
adj-R^2	0.912	0.916	0.786	0.944

Panel C. Using an analyst's name to determine their country of origin

	Average forecast error (1)	First forecast error (2)	Last forecast error (3)	Same week forecast error (4)
Female	0.079***	0.058**	0.098***	0.149***
	(0.023)	(0.029)	(0.027)	(0.046)
Female × High IDV	-0.089***	-0.065*	-0.069*	-0.130**
	(0.034)	(0.040)	(0.037)	(0.054)
High IDV	-0.077**	-0.086**	-0.070*	-0.166***
	(0.036)	(0.041)	(0.038)	(0.044)
GGGI	0.595	0.750	1.059**	1.209**
	(0.466)	(0.563)	(0.539)	(0.604)
Ln(GDP per capita)	-0.021	-0.023	-0.008	-0.071***
	(0.018)	(0.023)	(0.021)	(0.026)
Foreign analyst	0.089***	0.072**	0.111***	0.067**
	(0.026)	(0.031)	(0.027)	(0.031)
Forecast horizon	0.157***	0.084***	0.214***	0.015***
	(0.004)	(0.004)	(0.004)	(0.004)
Forecast frequency	-0.001	0.019***	-0.031***	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
# firms followed	-0.000	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
# industries followed	-0.001	-0.007**	0.003	-0.001
	(0.003)	(0.003)	(0.003)	(0.003)
Firm experience	-0.000	-0.001	-0.001	-0.001
	(0.002)	(0.002)	(0.002)	(0.002)
General experience	-0.003*	-0.001	-0.007***	-0.001
	(0.001)	(0.002)	(0.002)	(0.002)
Ln(Brokerage size)	-0.009**	-0.002	-0.016***	-0.012**
	(0.004)	(0.005)	(0.005)	(0.005)
Firm × Year Fixed Effects	Yes	Yes	Yes	Yes
Intercept	Yes	Yes	Yes	Yes
Test if Female + Female × High IDV = 0				
F value	0.16	0.09	1.44	0.62
P-value	0.69	0.77	0.23	0.43
Obs.	389,945	389,945	389,945	195,720
adj-R^2	0.916	0.921	0.788	0.948