

Economic policy uncertainty, financial reporting quality, and accounting enforcement: International evidence**Catalin Robert Mos** 

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Abstract

Purpose: Given recent developments around the world, the purpose of this article is to explore the association between financial reporting quality and economic policy uncertainty. Additionally, we investigated whether accounting enforcement acts as a mediating factor between the two.

Design: To achieve the purpose, we used a large sample consisting of 284 908 firm-year observations from 29 countries. We estimate the quality of financial reporting using traditional accruals models. For economic policy uncertainty, we rely on the index developed by Baker et al. (2016). Accounting enforcement was quantified using the strength of the auditing and reporting standards. Furthermore, for robustness tests, we use alternative measures for all these variables. We ran an OLS regression with country and industry fixed effects.

Findings: We found that uncertainty is negatively associated with the quality of financial reporting. Accounting enforcement plays a key role in reducing this negative association. For the baseline model, for one unit of change in accounting enforcement, the negative association between financial reporting quality and economic policy uncertainty is reduced between 10.41% and 17.54%. For the alternative measures, the decrease is between 1.14% and 6.93%. Our results are consistent and robust.

Practical Implications: This study is important for capital markets and policy makers, since the last 3 years were characterized by high uncertainty. Therefore, the present study provides evidence of the disruptive impact of uncertainty on financial reporting quality. Furthermore, we introduced in discussion the role of accounting enforcement and, therefore, propose a possible instrument available for policy makers to counter the effects of uncertainty.

Originality: Compared to existing research, the present study expands the period of analysis until 2022; therefore, it covers the periods with the highest uncertainty. Combined with the large number of countries, the observations ensure the relevance of the findings. The present study is also one of the first that introduces in discussion the role of accounting enforcement, which is an important topic in accounting research

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INTRODUCTION

The last few years have been marked by macroeconomic uncertainty. This was heightened by a series of consecutive events, namely the coronavirus pandemic, Ukraine's aggression, the energy shortage and the inflation crisis. There is an emerging body of literature that attempts to understand the association between uncertainty and firm outcomes.

Uncertainty worsens the economic environment, delays important investment decisions, and increases financing and production costs (Arouri et al. 2016). The capital market and investors are affected as well, uncertainty leads to high volatility of stock prices, decrease in returns, and underpricing of initial public offerings (Liu and Zhang 2015; Arouri et al. 2016; Connolly et al. 2005; Dzielinski 2012; Boulton 2022). Stanton and Roelich (2021) note that in this context, it is difficult for investors to make decisions because the outcome cannot be reasonably predicted. Therefore, for an efficient decision-making process, investors seek to obtain firm-related information to a greater extent. Walters et al. (2023) and Andrei et al. (2023) provide evidence in this regard, investors are more responsive to available firm information, and their learning process intensifies when uncertainty rise.

Financial reporting and annual reports offer comprehensive information about the firm, are part of the control mechanisms (Shivakumar 2013), and attenuate the information asymmetry between management and investors (Kraft et al. 2012; Healy and Palepu 2001). Considering damaging effects of high uncertainty and the race of investors to get as much information as possible about companies, financial reporting quality (FRQ) becomes a significant aspect. Through a faithful representation of the performance in the financial statements, investors could learn about the risk associated with their holding, assess how business operations are affected, review the performance, and decide. The question that arises is how much the investors could rely on FRQ in times of high uncertainty?

This study provides additional evidence on this subject. One of the key articles in the literature is that by Baker et al. (2016) that provides an appropriate measure for uncertainty. This index covers two sides of uncertainty economic and political. The economic policy uncertainty index (EPU) allows us to observe the association between EPU and FRQ using a large international sample. Our study contributes in several ways to the literature. A high proportion of previous studies analyze uncertainty in the context of US firms. Our analysis focusses on 29 countries, which to the best of our knowledge is one of the largest samples. Therefore, our results provide strong evidence that uncertainty is negatively associated with FRQ. This feature of our sample give us enough variability between macro-attribute (uncertainty) and micro-attribute (FRQ) to capture the full impact. Furthermore, our study covers the period between 2020 and 2022 when the uncertainty increases with 72% compared with the average value of the last 10 years. Unlike previous research, whose sample mostly ends in 2015-2018, our study expands the length of the sample to the period with the most profound uncertainty, allowing us to better understand this phenomenon.

The chair of Security Exchange Commission (SEC) in the US emphasizes that in times of high uncertainty, the SEC is particularly focused on protecting investors (Reuters, 2023). Accounting enforcement (ENF) is one of the instruments used to protect investors. Accounting enforcement is an activity carried out by state institutions to ensure correct applicability of accounting standards in the preparation of financial statements. Christensen et al. (2013), Brown et al. (2015), Ernstberger et al. (2012), Böcking et al. (2015), and Windisch (2021) show that accounting enforcement is positively associated with FRQ. However, the effect of accounting enforcement in the context of uncertainty has not yet been tested in the literature. The second objective of our study is to address and analyze this point. In this regard, we rely on the strength of auditing and reporting standards index and introduce an interaction term between EPU and ENF in our regression analysis.

Our results suggest that the uncertainty is negatively associated with FRQ. Furthermore, we observe that accounting enforcement has the ability to reduce this negative association. Our results are robust to different measures of FRQ, alternative measures of accounting enforcement and uncertainty, controlling for economic conditions, and controlling for firm characteristics. Additionally, we included in our regression analysis country and industry fixed effects which allow us to control for potential unobserved effects. Together, the conclusions of this study are valid and emphasize the negative consequences of uncertainty.

Our findings are of interest to investors and policymakers. In the first place, we show that uncertainty declines the firm information environment because of negative association between uncertainty and FRQ. This affects the trust of investors in financial reporting, which is one of the pillars that guarantee the functioning of the capital market. However, policy makers can counteract the uncertainty effects by strengthening accounting enforcement. Therefore, this study not only provides evidence of the negative effects of uncertainty on FRQ, but also discusses the available instrument to attenuate these effects.

The remaining of this paper is structured as follows. In Section 2 we provide the theoretical background for this study. Section 3 shows the methodology applied in this study, Section 4 presents the findings, and the conclusions are drawn in Section 5.

LITERATURE REVIEW AND HYPOTHESIS

Uncertainty

Economic policy uncertainty generates serious shocks in the capital markets and triggers investors. Graham et al. (2005) surveyed more than 400 executives about the incentives behind the reported earnings. The authors highlight that investors hate uncertainty, management is concerned about this, and CFOs prefer to smooth earnings to reduce the uncertainty. Starting from this theory, a new topic emerged in the literature about FRQ in times of uncertainty.

El Ghouli et al. (2021), Yung and Root (2019), Goncalves et al. (2022), and Kurniawan et al. (2023) analyze the impact of high uncertainty on FRQ using cross-country samples while Bermpei et al. (2021), Dhole et al. (2021), Jin et al. (2019), Dai and Ngo (2020), Nagar et al. (2018), Jain et al. (2021), Shin (2019), and Jiang et al. (2022) explore the effects of uncertainty for US firms. We can observe that the previous literature investigates mostly the United States. This can be argued by the fact that the most widely used measure of uncertainty in previous studies was initially developed for the US in 2016 and subsequently expanded to other countries. There are limited studies in previous research with cross-country samples. Evaluation of the association between FRQ and uncertainty implies a combination of macro- (uncertainty) and micro- (FRQ) features. Therefore, the sample consisting only of firms from one country does not allow enough variability to support solid conclusions. On the other hand, cross-country sample enables to consider other macro characteristics such as institutional settings.

In terms of sample period, previous research covered the period until 2015-2018 (El Ghouli et al. 2021; Yung and Root 2019; Goncalves et al. 2022; Bermpei et al. 2021; Jin et al. 2019; Dai and Ngo 2020; Nagar et al. 2018; Jain et al. 2021; and Jiang et al. 2022). The fact that previous research does not capture 2020, 2021, and 2022 constitutes a significant gap that needs to be addressed. These three years can be distinguished by intense increase in uncertainty compared with the previous decade and therefore enhance applicability of the results, allow proper detection of relationships, and increase the accuracy of the model.

The uncertainty is estimated in three ways. Dai and Ngo (2020), Jain et al. (2021), and Goncalves et al. (2022) use the elections to quantify the uncertainty. During election years, uncertainty about the future policies of the incoming government tends to increase. Shin (2019) relays on market shocks to capture uncertainty, while the rest of the authors use the index developed by Baker et al. (2016).

Most of the findings suggest that uncertainty produces negative effects on FRQ. On the other hand, El Ghouli et al. (2021) find positive effects, and the authors show that the capacity of accounting to measure performance is significantly better under high uncertainty. However, there are some differences between the study by El Ghouli et al. (2021) and other research that can lead to contradictory findings. El Ghouli et al. (2021) use the Nikolaev model to estimate FRQ. This model is more complex compared to the other models, but it has some limitations acknowledged by the authors. The model does not allow to estimate the FRQ at firm-year level; therefore, it is challenging to evaluate the association between FRQ and uncertainty over time which is a major disadvantage. Furthermore, the sophistication of the model may reduce the focus on management discretionary behavior, which is the objective of earnings management models. Another point is the inclusion of year-fixed effects in the model. Controlling for year-fixed effects underestimate the results due to collinearity between year-fixed effects and uncertainty.

There are two prevalent explanations in the literature for the association between FRQ and uncertainty. The first one agrees that in times of high uncertainty, investors are more engaged in obtaining firm specific financial information. In this case, management incentives are to improve performance and avoid small losses by using earnings management (Shin 2019; Dai and Ngo 2020; Jiang et al. 2022; Bermpei et al. 2021). On the contrary, Jin et al. (2019) and Nagar et al. (2018) emphasize that in periods of high uncertainty, the information asymmetry between management and investors increases. Consequently, management is likely to smooth the earnings because it is difficult for investors to detect earnings management.

Our first hypothesis considers the impact that uncertainty has on the economic environment, the investor reaction, and the management incentives. As presented above, management incentives are to reduce investor concern, reduce the volatility of earnings, and present a better financial situation. We argue that uncertainty, which is produced by a crisis such as the 2008 financial crisis or the pandemic crisis, produces a decline in the economy. This decline is reflected in the performance of the companies; therefore, the management is incentivized to use earnings management. Furthermore, we acknowledge the gaps in the literature presented above and the limited evidence for the recent years.

H1. Uncertainty leads to a decrease in FRQ worldwide.

Accounting enforcement

Jiang et al. (2022) and Cui et al. (2021) and El Ghouli et al. (2021) introduce in discussion the role of external monitoring in times of high uncertainty. They demonstrate that strong external monitoring

mitigates the effects of uncertainty over FRQ. The studies are based on external monitoring under the form of analyst coverage, institutional investors, and auditors. Accounting enforcement (ENF) is a component of external monitoring with notable sanctioning power. Market and investors react to the announcement of enforcement results. Dee et al. (2011), Ernstberger et al. (2012), Christensen et al. (2020), Dechow et al. (1996) and Curtis (2016) demonstrate that sanctions lead to decrease in firm valuation and increase in the cost of capital.

A relevant description of accounting enforcement is provided by Hope et al. (2003). In the absence of proper accounting enforcement, even the best accounting standards remain only rules on the paper. The goal of accounting enforcement institutions is to act in the best interest of investors by overseeing and inspecting the financial statements and the work performed by auditors. For example, the mission of the Public Company Accounting Oversight Board (PCAOB) in the United States is to protect investors and further the public interest in the preparation of informative, accurate and independent audit reports (PCAOB 2023). The European Securities Market Authority (ESMA), an institution of the European Union, emphasizes in its last accounting enforcement report that the purpose of this activity is to improve future financial reporting and compliance with accounting standards (ESMA 2023).

In the literature, there is a consensus among researchers that accounting enforcement is beneficial for FRQ. Brown et al. (2015), Christensen et al. (2013), Brown et al. (2015), Ernstberger et al. (2012), Böcking et al. (2015), and Windisch (2021) indicate that accounting enforcement plays a substantial role in securing adequate applicability of accounting and auditing standards. Consequently, investors will benefit from proper financial reports. However, there is no work in the previous literature that analyses accounting enforcement in the context of uncertainty. We expect that for countries with strong accounting enforcement, the impact of uncertainty on FRQ will not be as intense as for countries with weak accounting enforcement. This is because the non-compliance with accounting and auditing standards is sanctioned and penalized in two ways, by enforcement institutions and by the market and investors. This leads to our second hypothesis.

H2. In countries with strong accounting enforcement, the effects of uncertainty on FRQ are less pronounced.

METHODOLOGY

Uncertainty

Our uncertainty measure is the index developed by Baker et al. (2016). The economic policy uncertainty (EPU) consists of three components. The first uses the newspaper's coverage of topics related to economic uncertainty, the second covers uncertainty about changes in tax legislation and monetary policies, while the last component deals with uncertainty about macroeconomic forecasts. Baker et al. (2016) conducted several tests to verify the reliability and accuracy of the methodology used. Analysis of the relationship between the EPU index and other uncertainty measures and audit of the reasonability of the newspapers included in the index show that the methodology was appropriate. As indicated by Baker et al. (2016), there is a strong correlation between EPU and other indicators of capital market uncertainty (implied stock market volatility) therefore, the index is a strong candidate for our study. Brempei et al. (2021), Yung and Root (2019), Jiang et al. (2022), and Nagar et al. (2018) discuss that this index is helpful in analysing the effects of EPU on firm outcomes, in our case, FRQ. Furthermore, they highlight that the index shows large spikes around serious events that cause uncertainty, a feature that is important for our research design. The value of EPU is collected for each of the 29 countries in the sample from the EPU website. However, for the Netherlands there are no data for 2021 and 2022, for Denmark there are no data for 2022, and for Nigeria there are no data for the period between 2005 and 2016. We eliminate from the final sample the observations belonging to these countries and periods. The EPU is determined monthly. To obtain the value for each country year we use the arithmetic mean of the monthly value. Finally, we use in the regression analysis the change in the natural logarithmic value of the EPU from year to year. Table 1 shows the raw data on EPU extracted from the EPU website (<https://www.policyuncertainty.com/>).

The minimum value for the EPU is noted for Mexico in 2014 (27) while the maximum value is observed for Germany in 2022 (669). The most notable changes in mean and median are recorded in 2008 (change in mean: 49, change in median 58), in 2020 (change in mean: 56, change in median 76), and in 2021 (change in mean: -61, change in median -55). Aside from the significant changes, we can observe that the EPU fluctuates over the years, there are periods of growth (2010-2012 and 2015-2016) and periods of decline (2013-2014 and 2017-2018).

Table 1. Raw data on EPU

Countries	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Australia	46	53	152	106	149	174	167	123	77	90	131	83	81	129	182	106	156
Brazil	97	114	174	131	93	134	118	138	149	250	309	346	165	158	255	189	196
Chile	71	61	104	72	71	97	99	100	154	151	140	120	106	171	261	305	338
Colombia	84	66	103	110	85	99	88	79	90	126	148	137	121	151	227	123	136
Denmark	76	93	123	97	99	140	117	119	120	110	125	119	122	188	300	373	N/a
Germany	81	88	135	112	140	191	178	149	125	157	231	178	172	205	322	305	669
Hong Kong	103	112	158	96	128	194	193	134	159	151	189	139	125	236	202	104	220
Ireland	75	82	128	127	149	145	150	157	117	123	194	179	155	152	264	235	320
Japan	65	81	129	129	127	138	127	99	97	94	145	98	97	127	140	95	110
Mexico	62	60	81	79	70	67	54	44	27	33	50	65	69	94	93	72	74
New Zealand	40	66	171	98	128	151	129	74	63	91	87	110	108	124	167	119	157
Pakistan	68	71	76	70	84	92	70	62	80	51	54	81	79	104	123	96	192
Singapore	63	69	130	117	126	151	161	122	99	117	182	184	201	288	326	224	283
Sweden	79	68	94	83	89	106	98	96	107	104	108	101	111	105	116	102	124
United States	67	80	139	126	148	157	158	138	92	113	145	142	153	189	326	175	184
Belgium	65	75	126	181	140	140	135	128	115	99	91	83	88	90	278	168	138
Canada	63	68	155	132	149	232	225	181	152	188	233	244	332	333	464	277	278
China	67	67	144	129	109	152	186	114	112	138	247	289	375	581	575	399	518
Croatia	48	38	36	57	68	98	140	131	140	182	172	190	159	130	281	180	219
Greece	71	75	103	96	118	117	124	97	101	130	118	98	100	79	71	63	59
France	75	116	160	139	207	250	279	248	191	224	310	317	250	256	309	251	341
India	49	53	142	109	109	163	185	133	97	71	74	73	57	73	100	60	81
Italy	69	60	86	105	122	143	137	164	117	106	129	78	115	126	173	114	122
South Korea	91	83	141	147	149	167	163	131	82	128	189	161	145	257	204	176	269
The Netherlands	60	49	102	131	124	124	133	143	95	84	83	74	65	88	126	N/a	N/a
Spain	77	80	100	99	119	141	178	134	125	128	120	110	116	137	197	144	156
United Kingdom	74	70	155	139	232	228	305	222	182	204	543	476	368	431	307	185	294
Russia	101	94	122	89	112	141	146	169	233	206	184	216	198	284	491	334	577
Nigeria	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	N/a	128	93	82	92	125	94	93
Mean	71	75	124	111	123	147	152	130	118	130	167	158	149	185	242	181	233
Median	70	71	129	110	123	142	143	131	114	125	145	120	121	151	227	172	192
Change in Mean	N/a	4	49	-13	12	24	4	-22	-12	13	37	-10	-9	37	56	-61	53
Change in Median	N/a	1	58	-19	13	19	1	-12	-17	11	21	-25	0	30	76	-55	21

Source: Authors' own processing after Baker et al. (2016)

Financial reporting quality

The conceptual accounting framework lists several characteristics of qualitative financial information, such as relevance and faithful representation. The general theory says that management should act in the best interest of shareholders and prepare financial information compatible with the above characteristics. However, the management behavior could be driven by other incentives, and the reporting process is twisted. Investors and analysts often use earnings to evaluate the activity of the company. Earnings include a component that is a management estimate, the accruals, which are not reflected in cash flows. The researchers attempted to estimate the discretionary management behavior applied in the preparation of financial statements by looking at the accruals related to earnings.

Accrual-based models are widely used in the literature. These models aim to separate abnormal accruals from reasonable business accruals. Management uses abnormal accruals to manipulate firm performance, usually to improve it. Dechow et al. (2010) pointed out that business reasonable accruals reflect the fundamental firm performance, whereas abnormal accruals unveil the discretionary behavior applied by management in preparation of the financial information. The authors also note that discretionary accruals reduce the usefulness of the decision-making process. Therefore, we can link these models to the usefulness of financial information or to a faithful representation of firm performance.

Accrual-based models regress total accruals with firm attributes that predict reasonable business accruals. The residuals from regressions are abnormal accruals, accruals that cannot be explained by firm attributes. The standard Jones model (Jones, 1991) considers sales growth and property plant and equipment as primary firm attributes. Dechow et al. (1995) modified the standard Jones model by considering only credit sales, which could be more easily misshaped by the management. Kothari et al. (2005) also added the performance of the firm to the model, which is an important firm attribute, as well, that can explain the evolution of total accruals. Dechow and Dichev (2002) consider that accruals should eventually translate into payments in the future and propose a model that considers present past and future cash flow. In the context of the capital market, where investors make decisions based on firm performance, we consider these models appropriate for our research. We label these models FRQ1, FRQ2, FRQ3, and FRQ4.

$$\text{Model FRQ1: } ACC_{it} = \alpha_0 + \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \left(\frac{\Delta REV_{it}}{TA_{it}} \right) + \alpha_3 \left(\frac{\Delta PPE_{it}}{TA_{it}} \right) + \varepsilon_{it} \quad (1)$$

$$\text{Model FRQ2: } ACC_{it} = \alpha_0 + \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \left(\frac{\Delta REV_{it}}{TA_{it}} + \frac{\Delta AR_{it}}{TA_{it}} \right) + \alpha_3 \left(\frac{\Delta PPE_{it}}{TA_{it}} \right) + \varepsilon_{it} \quad (2)$$

$$\text{Model FRQ3: } ACC_{it} = \alpha_0 + \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \left(\frac{\Delta REV_{it}}{TA_{it}} + \frac{\Delta AR_{it}}{TA_{it}} \right) + \alpha_3 \left(\frac{\Delta PPE_{it}}{TA_{it}} \right) + \alpha_4 ROA_{it} + \varepsilon_{it} \quad (3)$$

$$\text{Model FRQ4: } WC_{it} = \alpha_0 + \alpha_1 CFO_{it-1} + \alpha_2 CFO_{it} + \alpha_3 CFO_{it+1} + \alpha_4 \Delta REV_{it} + \alpha_5 PPE_{it} + \varepsilon_{it} \quad (4)$$

Table 2 describes the variables used in our FRQ models.

Table 2. Description of variables for FRQ models

Variable	Description
ACC_{it}	Change in non-cash current assets – change in current liabilities, change in the current portion of long-term debt – depreciation and amortization expense scaled by lagged total assets for firm <i>i</i> in year <i>t</i>
WC_{it}	Change in receivables + change in inventory – change in accounts payables – change in income tax payable + change in other assets scaled by lagged total assets for firm <i>i</i> in year <i>t</i>
TA_{it}	Total assets of firm <i>i</i> in year <i>t</i>
ΔREV_{it}	Change in sales of firm <i>i</i> in year <i>t</i>
ΔAR_{it}	Change in trade receivables of firm <i>i</i> in year <i>t</i>
ΔPPE_{it}	Change in gross property, plant, and equipment of firm <i>i</i> in year <i>t</i>
CFO_{it}	Cash flow from operations of firm <i>i</i> in year <i>t</i> scaled by lagged total assets of firm <i>i</i> in year <i>t</i>
ROA_{it}	Net income/total assets of firm <i>i</i> in year <i>t</i>

Source: Authors' own processing

The models are estimated cross-sectionally at the industry-year level. In line with the literature, we

required at least 10 observations for each industry-year¹. The larger the residuals from the regressions, the lower the FRQ is.

Accounting enforcement

Our accounting enforcement measure is represented by the strength of the auditing and reporting standards included in the Global Competitiveness Report prepared by the World Economic Forum (WEF). The index is derived from a survey of business leaders who were asked to evaluate the strength of their country's accounting and auditing standards. Business leaders are considered well-suited to assess their country's environment, including aspects of accounting enforcement (World Economic Forum 2019). Boolaky et al. (2015) pointed out that this index shows perceptions of a country's competitiveness from the perspective of auditing and reporting standards. This competitiveness is given by the expected outcome of accounting enforcement, namely correct application of accounting and auditing standards, investor protection, and useful, timely, and comparable information. We collect data from the World Bank database. In our regression analysis, we use the change in the strength of auditing and reporting standards. However, data is only available for the period from 2006 to 2019. For the years 2020 and 2021, we applied the average index value derived from the 2006–2019 data. To mitigate this aspect, in an additional test, we use another measure for accounting enforcement.

Sample

We extracted financial data about companies from Refinitiv. We selected only companies listed on a stock exchange for countries with the available EPU index. We carefully analyzed the database and performed additional work to prepare it. We eliminate companies that do not report relevant figures to compute the FRQ at least for three consecutive years. The final sample consists of 284,908 firm-year observations.

Tables 3 and 4 show the distribution of our sample per country and industry.

Table 3. Description of variables for FRQ models

Country	No. of observations	Country	No. of observations
Japan	47,114	Italy	2,659
United States	43,018	Greece	1,863
China	41,529	Chile	1,775
India	29,704	Russia	1,740
South Korea	25,615	Spain	1,517
Hong Kong	20,347	Mexico	1,395
United Kingdom	10,106	New Zealand	1,294
Canada	10,094	Denmark	1,123
Australia	9,597	Belgium	1,096
Singapore	6,589	The Netherlands	740
France	6,210	Croatia	704
Germany	5,845	Nigeria	415
Sweden	5,513	Colombia	301
Pakistan	3,776	Ireland	168
Brazil	3,061		

Source: Authors' own processing

¹ We use Global Industry Classification Standard from Refinitiv, detailed information is provided in *section 'Sample'*

Table 4. Sample distribution per industry

Industry	No. of observations	Industry	No. of observations	Industry	No. of observations	Industry	No. of observations
Machinery	15 862	Semiconductors & Semiconductor Equipment	5 946	Independent Power and Renewable Electricity Producers	2 532	Automobiles	1 347
Chemicals	14 728	Media	5 857	Energy Equipment & Services	2 486	Gas Utilities	1 333
Metals & Mining	13 033	Trading Companies & Distributors	5 721	Personal Care Products	2 438	Diversified REITs	1 137
Real Estate Management & Development	12 327	Household Durables	5 603	Paper & Forest Products	2 253	Health Care Technology	1 110
Electronic Equipment, Instruments & Components	12 176	Biotechnology	5 361	Aerospace & Defense	2 227	Retail REITs	1 064
Food Products	10 681	Health Care Equipment & Supplies	5 231	Transportation Infrastructure	2 221	Office REITs	923
Textiles, Apparel & Luxury Goods	10 170	Entertainment	4 613	Ground Transportation Technology	2 129	Water Utilities	919
Software	9 517	Professional Services	4 138	Hardware, Storage & Peripherals	2 071	Passenger Airlines	806
Construction & Engineering	8 834	Health Care Providers & Services	4 027	Broadline Retail	2 054	Household Products	696
Hotels, Restaurants & Leisure	8 450	Communications Equipment	4 025	Distributors	1 960	Multi-Utilities	651
Pharmaceuticals	8 405	Consumer Staples Distribution & Retail	3 729	Interactive Media & Services	1 822	Wireless Telecommunication Services	619
Oil, Gas & Consumable Fuels	8 297	Building Products	3 496	Leisure Products	1 734	Residential REITs	567
Automobile Components	7 709	Construction Materials	3 221	Diversified Telecommunication Services	1 704	Industrial REITs	465
Electrical Equipment	7 095	Containers & Packaging	2 818	Air Freight & Logistics	1 623	Specialized REITs	407
IT Services	6 523	Diversified Consumer Services	2 709	Life Sciences Tools & Services	1 529	Hotel & Resort REITs	370
Commercial Services & Supplies	6 353	Beverages	2 602	Industrial Conglomerates	1 478	Health Care REITs	339
Specialty Retail	6 314	Electric Utilities	2 557	Marine Transportation	1 431	Tobacco	335

Source: Authors' own processing

The largest number of observations are from Japan (47 114), the United States (43 018), China (41 529), India (29 704), and South Korea (25 615). The top 5 industries, representing 25% of our sample, are machinery (15 862), chemicals (14 728), metals and mining (13 033), real estate (12 327), and electronic equipment (12,176). We extracted from Refinitiv the industry classification determined by the Global Industry Classification Standard (GICS). According to MSCI, the GICS was created to help investors understand the key business activities of listed companies (MSCI 2023). This is a four-tier hierarchical classification; we use the third tier which consists of 74 industries. However, we eliminate the financial industry (Banks, Capital Markets, Financial Services, Insurance, Consumer Finance, and Mortgage Investment Trusts) which results in 68 industries in our sample.

Empirical model and control variables

Our empirical model and the summary of the variables are presented below.

$$FRQ = \alpha_0 + \alpha_1 EPU + \alpha_2 ENF + \alpha_3 SIZE + \alpha_4 LEV + \alpha_5 ROA + \alpha_6 DCE + \alpha_7 AUD + \alpha_8 RES + \varepsilon \quad (5)$$

Table 5. Summary of variables

Variable	Description	Type of variable	Source of data
FRQ	Quality of Financial Reporting	Dependent variable	Refinitiv
EPU	Change in Economic Policy Uncertainty	Focus variable	Baker et al. (2016)
ENF	Change Strength of auditing and reporting standards	Focus variable	World Bank (2023)
SIZE	Natural logarithm of the market capitalization of the company	Control variable	Refinitiv
LEV	Leverage, determined as total debt/total equity	Control variable	Refinitiv
ROA	Net income divided by total assets	Control variable	Refinitiv
DCE	Dummy variable if the total equity is negative or not	Control variable	Refinitiv
AUD	Dummy variable if the auditor is from Big4 or not	Control variable	Refinitiv
RES	Dummy variable if the financial statements contain a restatement or not	Control variable	Refinitiv

Source: Authors' own processing

The auditors exert a significant influence on FRQ. Their responsibility is to provide additional assurance to the shareholders, and is expected that, following the audit tests, they will detect the abnormal accruals. Subsequently, management will correct the financial statements. The Big 4 network is widely spread throughout the world, and its audit practices are mostly consistent within the network. There is a consensus that they perform higher quality audits than nonBig 4 auditors (DeFond and Zhang 2014; Che et al. 2020; Krishnan 2003; Krishnan 2003; Behn et al. 2008; Carver et al. 2011). Their industry specialists, their capacity to attract well-prepared people, resources, and audit tools represent an advantage compared to non-Big 4 auditors. We control for auditor by including a dummy variable (AUD) that is equal to 1 if the firm is audited by Big-4 and 0 otherwise.

Restatements occur when a material error is discovered in financial statements. Both international accounting standards (IAS) and United States accounting standards (USGAAP) state that a restatement should be properly presented and disclosed in the financial statements. A restatement could be an indication of weak internal control around the preparation of financial statements. Given this, we could expect that the restatements will indicate a lower FRQ. We included in our model a dummy variable (RES) which equals 1 if the company issue a restated financial statement and 0 otherwise.

Management incentives are an important determinant of FRQ. Meeting debt covenants is essential for management, as it ensures the continuity of financing from the banks. Anagnostopoulou and Tsekrekos (2017), Gu et al. (2005), and Lazzem and Jilani (2018) provide strong evidence that highly leveraged firms engage in earnings management and have lower FRQ. Furthermore, Gu et al. (2005) found that the variability of accruals is positively associated with increased leverage. Dechow et al. (2010) discussed that, for highly levered firms, the management takes discretionary actions to avoid violating a covenant. We include leverage (LEV) as a control variable in our model, determined as the total debt divided by the total equity.

Dechow et al. (2010) point out that small firms mostly have a deficient control over financial reporting due to fixed costs. Therefore, small companies will engage in earnings management more frequently. We control the size of the company; our SIZE variable is determined as the natural logarithm of the market capitalisation of the company.

Dechow et al. (2010) noted that poor performance could provide an incentive for management to engage in discretionary actions. The purpose of management is to create value for shareholders. This value is created through good results and performance; therefore, management is less interested in manipulating the results of a firm that performed well. DeFond and Park (1997) suggested that to reduce the threat of being dismissed, the management of firms with current poor performance but with expected good performance in the future has incentive to manipulate the financial statements. Additionally, Keating and Zimmerman (2000) noted that managers change the accounting policies to offset the poor performance of the firm. We control performance by including the return on assets (ROA) and a dummy variable in our

model, which takes 1 if the company reported negative equity and 0 if otherwise.

RESULTS

Descriptive statistics

The following table shows the descriptive statistics for our variables.

Table 6. Summary of statistics

Variable	Mean	Std. Dev.	Min	Max
FRQ1	5.7936	8.8039	0.0372	61.4595
FRQ2	5.6782	8.459	0.0357	57.7571
FRQ3	5.0831	7.1852	0.0371	47.0644
FRQ4	6.4209	8.5185	0.0677	57.3992
EPU	-7.1733	16.234	-43.5854	32.1983
ENF	9.9027	13.8725	-42.292	42.8672
SIZE	18.8668	2.3415	13.0787	24.3003
LEV	0.2442	0.2418	0	1.4634
ROA	-0.0319	0.288	-2.0467	0.2751
DCE	0.0426	0.2019	0	1
AUD	0.4578	0.4982	0	1
RES	0.0911	0.2878	0	1

Table description: This table presents the summary statistics for our variables. We multiply the FRQ values by 100 to facilitate the interpretation of the results. To be able to correctly interpret the coefficients for EPU and ENF we normalise their value between -50 and 50 using the min-max method. The summary statistics are winsorized at 1%.

The FRQ takes values between 0.0357 (FRQ2) and 61.4595 (FRQ1), and we can observe variability in our measures of FRQ. The mean of EPU is situated at -7.1733 and the standard deviation is 16.2340. There is a high variation of EPU, the minimum is 43.5854 while the maximum is situated at 32.1983. This is an important feature of this research, since our sample captures periods with low uncertainty and extreme uncertainty. The mean of ENF is 9.9027, the minimum is -42.292 while, the maximum is 42.8672.

Regression Analysis

Table 7 illustrates the regression output for FRQ1, FRQ2, FRQ3 and FRQ4.

For the interpretation of the results, we will refer to the positive association between the earnings management measures and the EPU as a negative association between the FRQ and the EPU. The bigger the residuals from earnings management regressions presented in *section 'Financial reporting quality'* the lower the FRQ is. Therefore, the positive association means that earnings management increases and FRQ decreases. The results show that FRQ is negatively associated with EPU. The coefficient is statistically significant in all four models at a level of 1%. A change with one unit in EPU will cause a decrease in FRQ of 0.00599 in Model 1, 0.00838 in Model 2, 0.00562 in Model 3, and by 0.00394 in Model 4. The results validate our first hypothesis, EPU deteriorates the FRQ. This is consistent with Yung and Root (2019), Goncalves et al. (2022), Bermpei et al. (2021), Dhole et al. (2021), Jin et al. (2019), Dai and Ngo (2020), Nagar et al. (2018), Jain et al. (2021), and Jiang et al. (2022).

There is a positive association between ENF and FRQ. The coefficient is statistically significant at the 1% level in all models. For a change with one unit in ENF, the FRQ increases by 0.0107 in Model 1, 0.0101 in Model 2, 0.0106 in Model 3, and by 0.00794 in Model 4. We can conclude that ENF strengthens FRQ, which is consistent with Christensen et al. (2013), Brown et al. (2015), Carson et al. (2021), Ernstberger et al. (2012), Böcking et al. (2015), Florou et al. (2020), Florou and Shuai (2022), Li et al. (2022), and Windisch (2021). The results of this regression are in line with those obtained by Mos (2024a) in a paper that investigates the role of accounting standards, and industry characteristics in mediating the association between uncertainty and financial reporting quality and with a paper that investigates the same association but for European Union (EU) settings Mos (2024b).

Firms that restate their financial statements also have a lower FRQ, as expected. As we explained in

the previous section, a restatement means weak internal control around the preparation of financial statement. Therefore, the earning management could be undetected by internal controls. Firms audited by BIG 4 have a higher FRQ than others, which is consistent with the literature. Large firms report a higher FRQ. Due to their exposure to the market and analysts, large firms are more prudent in using discretionary accruals. Leveraged firms report a lower FRQ due to financial constraints and pressure to meet financial covenants. Taken together, our control variables are in line with the literature which validate our approach.

The adjusted R squared is situated around 10%; this is comparable to the adjusted R squared obtained by Bermpei et al. (2021), Goncalves et al. (2022), Yung and Root (2019), Jain et al. (2021), and El Ghoul et al. (2021).

Table 7. Regression results for EPU

	(1) FRQ1	(2) FRQ2	(3) FRQ3	(4) FRQ4
EPU	0.00599*** (5.95)	0.00838*** (8.92)	0.00562*** (6.85)	0.00394*** (4.03)
ENF	-0.0107*** (-9.07)	-0.0101*** (-8.77)	-0.0106*** (-10.98)	-0.00794*** (-6.88)
SIZE	-0.468*** (-33.44)	-0.457*** (-33.49)	-0.379*** (-34.59)	-0.282*** (-23.73)
LEV	1.949*** (14.16)	1.931*** (14.45)	1.411*** (13.48)	0.646*** (5.04)
ROA	-2.853*** (-17.97)	-2.806*** (-18.20)	-1.713*** (-14.85)	-2.609*** (-15.96)
DCE	1.757*** (9.48)	1.698*** (9.47)	3.141*** (19.98)	0.516** (3.19)
AUD	-0.621*** (-12.60)	-0.609*** (-12.66)	-0.366*** (-9.13)	-0.665*** (-13.42)
RES	0.465*** (7.39)	0.418*** (6.96)	0.462*** (8.99)	0.605*** (9.57)
R-squared	0.1224	0.1273	0.1263	0.0824
No. of observations	284 908	284 908	284 908	284 908
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes

Table description: This table presents the regression results for regression results for EPU. In each case, we employed an OLS regression with fixed effects. In the interaction terms, we center EPU and ENF by subtracting the mean value. In each model, the standard errors are clustered at the firm level. The t-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by *, **, and ***, respectively.

Our results suggest that the EPU exacerbates earning management and reduces the FRQ. In times of high uncertainty, it seems that management incentives prevail over accounting principles and the public mission of accounting. Next, we attempt to identify several reasons why the EPU is negatively associated with FRQ.

Peng et al. (2020) indicate that good news related to earnings diminishes the overall uncertainty. When the EPU increases, investors, analysts, and creditors tend to become more pessimistic. This could mean a decrease in corporate ratings, a withdrawal of investor support, and a shortage of financial resources for companies. Then the management incentives and pressures are to reduce the uncertainty of the firm prospects. Meeting or even exceeding the analyst earnings forecast is a useful tool for management to create good news related to earnings. Upward earnings management will help them achieve this.

Arouri et al. (2016) discussed how EPU affects business operations. Supply chains, production costs, and earnings are affected by EPU. Therefore, the profitability of the company will decrease. Shin (2019) pointed out that the market reacts more negatively to small losses under high uncertainty. Consequently, management incentives are to avoid small losses at any cost. Increase profitability by applying discretionary behavior in determining accruals seems the best option available.

Accounting enforcement and EPU

In this section, we analyze the possible role of high accounting enforcement in countering the effects

of EPU. For this purpose, we introduce in regression an interaction term between EPU and ENF (EPU#ENF). Table 8 shows the results of the regression.

The coefficient of EPU#ENF is negative in all models and is statistically significant at 1% level. This means that accounting enforcement can reduce the negative association between FRQ and EPU. An increase with one unit in the ENF will lead to a decrease in the negative association between FRQ and EPU by 0.00756 in Model 5, 0.000712 in Model 6, 0.000680 in Model 7, and by 0.00768 in Model 8. In relative terms, accounting enforcement reduces the negative association between FRQ and EPU by 17.38% in Model 5, 10.41% in Model 6, 16.39% in Model 7, and 17.54% in Model 8.

Table 8. Regression results with the interaction term between EPU and ENF

	(5) FRQ1	(6) FRQ2	(7) FRQ3	(8) FRQ4
EPU	0.00435*** (4.31)	0.00684*** (7.28)	0.00415*** (5.04)	0.00285** (2.88)
ENF	-0.0102*** (-8.82)	-0.00970*** (-8.53)	-0.0102*** (-10.68)	-0.00768*** (-6.71)
EPU#ENF	-0.000756*** (-9.31)	-0.000712*** (-9.08)	-0.000680*** (-10.20)	-0.000500*** (-6.39)
SIZE	-0.466*** (-33.28)	-0.455*** (-33.33)	-0.377*** (-34.42)	-0.281*** (-23.60)
LEV	1.940*** (14.09)	1.922*** (14.38)	1.402*** (13.40)	0.639*** (4.99)
ROA	-2.854*** (-17.98)	-2.807*** (-18.21)	-1.714*** (-14.87)	-2.610*** (-15.97)
DCE	1.769*** (9.55)	1.709*** (9.53)	3.152*** (20.06)	0.524** (3.24)
AUD	-0.629*** (-12.75)	-0.616*** (-12.81)	-0.373*** (-9.30)	-0.670*** (-13.52)
RES	0.466*** (7.41)	0.419*** (6.98)	0.463*** (9.01)	0.606*** (9.58)
R-squared	0.1227	0.1275	0.1267	0.0825
No. of observations	284 908	284 908	284 908	284 908
Country fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes

Table description: This table presents the regression results for regression results with the interaction term between EPU and ENF. In each case, we employed an OLS regression with fixed effects. In the interaction terms, we center EPU and ENF by subtracting the mean value. In each model, the standard errors are clustered at the firm level. The t-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by *, **, and ***, respectively.

We discussed in previous sections that EPU induces pessimistic sentiment in the market. This sentiment leads to a decrease in the market value of companies and has caused investors to overreact to bad news, especially those related to earnings. Accounting errors discovered following accounting enforcement inspections and actions also lead to a negative reaction from the capital market (Ernstberger et al. 2012; Christensen et al. 2020; Dechow et al. 1996; Curtis (2016). Additionally, we discussed in previous sections that errors related to auditors made publicly by the accounting enforcement institution produce negative reactions in the capital market (Dee et al. 2011). In countries where accounting enforcement is well implemented, the finalization of the process consists of announcing the results. These results are made known to the press and the market. These results usually comprise the accounting errors and the firms where the errors were found. Taking into account these facts, we can build the following argument for our results. We acknowledge that the market is pessimistic and that investors react more prudently to firm information in times of high EPU. Pessimistic sentiment and negative market evolution are general conditions under high EPU. The announcement of negative outcome of the accounting enforcement is limited to few firms annually in each country. This event, in times of high EPU, will only aggravate the general pessimism and condition of the market. Therefore, these firms will face more severe consequences and negative reactions from the market. The explanations and reasons for the obtained results align with those presented by Mos (2024b) in the context of the European Union (EU). In that study, the author employed alternative measures of uncertainty, specifically tailored to the EU's unique circumstances.

Additional tests**Another measure for FRQ**

Real earnings management (RM) is another widely used model to estimate FRQ. Compared with earnings management, this model is designed to identify the discretionary behavior of management when they choose to cut certain expenses to achieve the desired profitability instead of correlated them with the actual needs of the firm. We follow the approach illustrated by Cohen et al. (2008). The RM is the residuals from the below model where DE is discretionary expenses which incorporate general administrative expenses and research and development expenses. The remaining notations are already defined in *Section 'Methodology'*.

$$RM: \frac{DE_{it}}{TA_{it}} = \alpha_0 + \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \left(\frac{REV_{it}}{TA_{it}} \right) + \varepsilon_{it} \quad (5)$$

The residuals are the deviation from the predicted discretionary expenses. A negative or low value of the residuals from the RM means low FRQ. To ease the interpretation of the results, we multiplied the residuals by -1. Therefore, in line with earnings management models, we expect a positive association between RM and EPU. Table 9 presents the results of the regressions.

Table 9. Regression results with the interaction term between EPU and ENF

	(9)	(10)
	RM	RM
EPU	0.0577*** (16.35)	0.0534*** (15.73)
ENF	-0.0362*** (-6.81)	-0.0352*** (-6.60)
EPU#ENF		-0.00195*** (-5.94)
SIZE	1.623*** (20.64)	1.629*** (20.71)
LEV	0.0102 (0.01)	-0.0145 (-0.02)
ROA	13.45*** (11.90)	13.45*** (11.89)
DCE	-23.50*** (-19.90)	-23.46*** (-19.87)
AUD	2.978*** (11.14)	2.957*** (11.06)
RES	1.728*** (6.47)	1.731*** (6.49)
R-squared	0.2188	0.2189
No. of observations	284 908	284 908
Country fixed effects	Yes	Yes
Industry fixed effects	Yes	Yes

Table description: This table presents the regression results for the regression results for RM with the interaction term between EPU and ENF. In both cases, we used an OLS regression with fixed effects. In the interaction terms, we center EPU and ENF by subtracting the mean value. In each model, the standard errors are clustered at the firm level. The t-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by *, **, and ***, respectively.

The results are as expected; the RM is positively associated with EPU, which further validates our previous results. The coefficient of EPU is 0.0577 signifying that when uncertainty increases by one unit, the FRQ decreases by 0.0577. The coefficient is statistically significant at the 1% level. In periods with high uncertainty, the actual discretionary expenses are lower than the predicted ones. The management uses the discretionary expenses as an instrument to improve the firm performance. Regarding accounting enforcement, we observe, similar to previous results, a negative and statistical significant coefficient. For one unit change in ENF, the association between EPU and RM decreases by 0.00195. Therefore, even if we

use another measure for FRQ, accounting enforcement retains its role in countering the effects of uncertainty. In relative terms, this translates to a 3.65% decrease in the negative association between RM and EPU.

Another measure for uncertainty

Dai and Ngo (2020), Jain et al. (2021), and Goncalves et al. (2022) use in their studies a dummy variable for the years with elections to estimate the uncertainty. In election years, there is an increase in uncertainty because the new elected political power will usually change certain aspects of the fiscal and monetary policy. Furthermore, we can argue that this casts a major uncertainty on the budgeting process, which is an important part of planning the business. The inability to know possible future changes in legislation may affect the accuracy of forecasts.

To measure the uncertainty using the elections we rely on Database of Political Institutions prepared by Carlos et al. (2020) . However, their database contains data only until 2020. For 2021 and 2022 we checked if there were elections for countries in our sample. Furthermore, for United States, China, South Korea, and Hong Kong, we collected information regarding the elections since the database does not contain information about these countries.

We use a dummy variable that equals 1 if there were elections in a specific year for a specific country in our sample. Table 10 presents detailed information on the years with elections for each country and year.

Table 10. Descriptive statistics for the variable ELECT (dummy variable which takes value 1 for years with elections)

Countries	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Australia	-	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-	1
Brazil	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1
Chile	-	-	-	1	1	-	-	1	-	-	-	1	1	1	1	1	-
Colombia	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1
Denmark	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-
Germany	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-
Hong Kong	-	1	1	-	-	-	1	-	-	-	1	1	-	-	-	1	1
Ireland	-	1	-	-	-	1	-	-	-	-	1	-	-	-	1	-	-
Japan	-	-	-	1	1	-	-	-	1	-	-	1	-	-	-	1	-
Mexico	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-	-	-
New Zealand	-	-	1	-	-	1	-	-	1	-	-	1	-	-	1	-	-
Pakistan	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-
Singapore	1	-	-	-	-	1	-	-	-	1	-	1	-	-	1	-	-
Sweden	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1
United States	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-
Belgium	-	1	-	-	1	-	-	-	1	-	-	-	-	1	-	-	-
Canada	1	-	1	-	-	1	-	-	-	1	-	-	-	1	-	1	-
China	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-
Croatia	-	1	-	1	1	1	-	-	-	1	1	-	-	-	-	-	-
Greece	-	1	-	1	1	-	1	-	-	1	-	-	-	1	-	-	-
France	-	1	-	-	-	-	1	-	-	-	-	1	1	1	1	-	1
India	-	-	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-
Italy	1	-	1	-	-	-	-	1	-	-	-	-	1	-	-	-	-
South Korea	-	1	1	-	-	-	1	-	-	-	1	1	-	-	1	-	1
The Netherlands	1	-	-	-	1	-	1	-	-	-	-	1	-	-	-	1	-
Spain	-	-	1	-	-	1	-	-	-	-	1	-	-	1	-	-	-
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Russia	-	1	1	-	-	1	1	-	-	-	1	-	-	1	-	1	-
Nigeria	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-

Source: Authors' own processing based on Carlos et al. (2020)

Table 11 shows the results of the regression

Table 11. Regression results for ELECT

	(11)	(12)	(13)	(14)	(15)
	FRQ1	FRQ2	FRQ3	FRQ4	RMS
ELECT	0.229*** (6.77)	0.165*** (5.14)	0.123*** (4.54)	0.220*** (6.43)	1.320*** (10.35)
ENF	-0.0115*** (-9.74)	-0.0108*** (-9.38)	-0.0113*** (-11.67)	-0.00894*** (-7.74)	-0.0402*** (-7.55)
EPU#ENF	-0.00580*** (-3.53)	-0.00671*** (-4.31)	-0.00853*** (-6.27)	-0.0111*** (-6.52)	-0.0151** (-2.75)
SIZE	-0.469*** (-33.49)	-0.459*** (-33.62)	-0.380*** (-34.57)	-0.281*** (-23.65)	1.606*** (20.44)
LEV	1.953*** (14.19)	1.938*** (14.51)	1.415*** (13.53)	0.646*** (5.04)	0.0612 (0.07)
ROA	-2.857*** (-17.99)	-2.813*** (-18.24)	-1.719*** (-14.90)	-2.614*** (-15.99)	13.41*** (11.86)
DCE	1.753*** (9.46)	1.689*** (9.42)	3.137*** (19.96)	0.519** (3.20)	-23.57*** (-19.96)
AUD	-0.613*** (-12.42)	-0.600*** (-12.46)	-0.362*** (-9.02)	-0.663*** (-13.37)	3.062*** (11.44)
RES	0.467*** (7.42)	0.418*** (6.96)	0.462*** (9.00)	0.607*** (9.60)	1.732*** (6.48)
R-squared	0.1224	0.1271	0.1263	0.0826	0.2185
No. of observations	284 908	284 908	284 908	284 908	284 908
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes

Table description: This table presents the regression results for regression results for ELECT which is another measure of uncertainty. The regressions also include the interaction term between ELECT and ENF. In all cases, we used an OLS regression with fixed effects. In interaction terms, we center the ENF by subtracting the mean value. In each model, the standard errors are clustered at the firm level. The t-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by *, **, and ***, respectively.

The results show that even if we measure the uncertainty in another way, the findings of our research are still valid, and we reach the same conclusion. The ELECT is positively associated with real earnings management and, therefore, negatively associated with FRQ. The coefficient is statistically significant in all models. In election years the uncertainty increases and leads to a decrease in FRQ by 0.229 in Model 11, 0.165 in Model 12, 0.123 in Model 13, 0.220 in Model 14, and by 1.320 in Model 15. With respect to accounting enforcement we observe the same pattern, the coefficient of the interaction term is negative and statistically significant at the level of 1% in Models 11-14 and the level of 5% in Model 15. In the election years when uncertainty increases, accounting enforcement reduces the negative association between ELECT and FRQ by 0.00580 in Model 11, 0.00671 in Model 12, 0.00853 in Model 13, 0.0111 in Model 14, and by 0.0151 in Model 15. In relative terms, the decrease is 2.53% in Model 11, 4.07% in Model 12, 6.93% in Model 13, 5.05% in Model 14, and 1.14% in Model 15. Another important aspect is that ELECT reflect mainly the political uncertainty. Therefore, strong accounting enforcement institutions guarantee the FRQ even when the government and the administration of the country change. This is a vital element for the functioning of capital markets.

Another measure for ENF

Accounting enforcement is a reflection of the quality of regulatory environment. This is the reason why in prior research, many of the scholars include rule of law in their studies as a measure for accounting enforcement (for example, Daske et al. 2008 and Hope 2003). As a robustness test, we use another measure of accounting enforcement that is appropriate for our research. The regulatory quality index (RQ) determined by the World Bank (2023) captures the ability of the government to formulate and implement policies and regulations related to the private sector. Compared with rule of law, regulatory quality is a more suitable measure for accounting enforcement because it promotes the implementation of regulations

specifically for the firms and business sector rather than for all categories as rule of law. Therefore, RQ is a more refined version of the rule of law applicable to firms. Table 12 shows the results of the regressions.

Table 12. Regression results for RQ

	(16) FRQ1	(17) FRQ2	(18) FRQ3	(19) FRQ4	(20) RM
EPU	0.00541*** (5.35)	0.00790*** (8.35)	0.00494*** (5.97)	0.00312** (3.17)	0.0542*** (15.09)
RQ	-0.00373* (-2.36)	-0.00183* (-1.23)	-0.00729*** (-5.62)	-0.00491** (-3.09)	-0.0575*** (-8.10)
EPU#RQ	-0.000564*** (-5.78)	-0.000563*** (-6.34)	-0.000470*** (-6.01)	-0.000791*** (-8.07)	-0.00107** (-2.79)
SIZE	-0.471*** (-33.66)	-0.460*** (-33.72)	-0.382*** (-34.79)	-0.284*** (-23.94)	1.619*** (20.61)
LEV	1.950*** (14.15)	1.933*** (14.46)	1.409*** (13.46)	0.641*** (5.00)	-0.0265 (-0.03)
ROA	-2.846*** (-17.91)	-2.800*** (-18.15)	-1.707*** (-14.78)	-2.604*** (-15.91)	13.48*** (11.92)
DCE	1.754*** (9.46)	1.693*** (9.44)	3.141*** (19.97)	0.519** (3.21)	-23.47*** (-19.88)
AUD	-0.620*** (-12.57)	-0.608*** (-12.64)	-0.363*** (-9.05)	-0.667*** (-13.45)	2.999*** (11.22)
RES	0.504*** (8.04)	0.456*** (7.61)	0.501*** (9.76)	0.643*** (10.20)	1.853*** (6.96)
R-squared	0.1223	0.1271	0.1262	0.0826	0.2188
No. of observations	284 908	284 908	284 908	284 908	284 908
Country fixed effects	Yes	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes	Yes

Table description: This table presents the regression results for the regression results for RQ as another measure for accounting enforcement with the interaction term between EPU and RQ. The table also includes the results for real earnings management (RM) defined previously. In all cases, we used an OLS regression with fixed effects. In the interaction terms, we center EPU and RQ by subtracting the mean value. In each model, the standard errors are clustered at the firm level. The t-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by *, **, and ***, respectively.

The results are similar to those already obtained and highlights again the importance of accounting enforcement in reducing the negative impact of EPU on FRQ. The coefficient of the interaction term is negative and statistically significant at 1% in all models. The results suggest that when accounting enforcement increases by one unit the negative impact of EPU on uncertainty decreases by 0.000564 in Model 16, 0.000563 in Model 17, 0.000470 in Model 18, and by 0.00107 Model 20.

CONCLUSIONS

Our study investigates the effects of uncertainty on the quality of financial reporting. We use data from 29 countries. Based on 284,908 firm-year observations, we find that uncertainty is negatively associated with the FRQ. We provide evidence that accounting enforcement is an efficient tool to counteract the effects of uncertainty on FRQ. The findings show that the accounting enforcement reduces the negative association between FRQ and uncertainty. Our findings are robust to other measures for FRQ, uncertainty, and accounting enforcement.

The findings of this study are critical for investors and policy makers. We show that uncertainty is a key determinant of FRQ, and both investors and policymakers should acknowledge this. Furthermore, given all the recent events around the world, the uncertainty will last much longer than previously expected, and we should know how to deal with it. Accounting enforcement is an efficient instrument, strengthening it will prevent the decrease in FRQ when uncertainty rise.

This study contributes to the literature in many ways. We used a large sample consisting of firms from 29 countries and 284,908 which will result in reasonable variability that supports our findings. Furthermore,

accounting enforcement was analyzed for the first time in this study. This is an important topic that enriches the existing literature on accounting enforcement which is one of the main determinants of FRQ.

Note

The current study partially adopts methodologies from two works by Mos (2024a; 2024b). The first examines economic policy uncertainty in the EU using measures specifically designed by EU authorities for the European context. The second explores how international accounting standards and industry characteristics mediate the relationship between economic policy uncertainty and financial reporting quality. Those studies are appropriately cited in this work and indirectly through this statement.

REFERENCES

- Anagnostopoulou S. C., and A. E. Tsekrekos. 2017. The effect of financial leverage on real and accrual-based earnings management. *Accounting and Business Research*, 191-236, DOI: <https://doi.org/10.1080/00014788.2016.1204217>.
- Andrei D., H. Friedman H., and N. B. Ozel. 2023. Economic uncertainty and investor attention. *Journal of Financial Economics*, 149: 179-217, DOI: <https://doi.org/10.1016/j.jfineco.2023.05.003>.
- Arouri M., C. Estay, C. Rault, and D. Roubaud. 2016. Economic policy uncertainty and stock markets: Long-run evidence from the US. *Finance Research Letters*, 18: 136-141, DOI: <https://doi.org/10.1016/j.frl.2016.04.011>.
- Baker S., N. Bloom, and S. Davis. 2016. Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, 131: 1593-1636, DOI: <https://doi.org/10.1093/qje/qjw024>.
- Behn B. K., J. H. Choi, and T. Kang. 2008. Audit quality and properties of analyst earnings forecasts. *The Accounting Review*, 83: 327-349, DOI: <https://doi.org/10.2139/ssrn.1013214>.
- Böcking H. J., M. Gros, and D. Worret. 2015. Enforcement of accounting standards: how effective is the German two-tier system in detecting earnings management? *Review of Managerial Science*, 9:431-485, DOI: <https://doi.org/10.1007/s11846-014-0159-z>.
- Boolakay P. K., and C. Krishnamurti. 2015. Determinants of the Strength of Auditing and Reporting Standards. *Australian Accounting Review*, 25: 292-308, DOI: <https://doi.org/10.14453/aabfj.v7i4.3>.
- Boulton T. J. 2022. Economic policy uncertainty and international IPO underpricing. *Journal of International Financial Markets, Institutions and Money*, 81, DOI: <https://doi.org/10.1016/j.intfin.2022.101689>.
- Brempei T., A. N. Kalyvas, L. Neri, and A. Russo. 2021. Does economic policy uncertainty matter for financial reporting quality? Evidence from the United States. *Review of Quantitative Finance and Accounting*, 58: 795-845, DOI: <https://doi.org/10.1007/s11156-021-01010-2>.
- Brown P., J. Preitator, and A. Tarca. 2015. A Comparison of Between-Country Measures of Legal Setting and Enforcement of Accounting Standards. *Journal of Business Finance & Accounting*, 42:1-50, DOI: <https://doi.org/10.1111/jbfa.12112>.
- Carlos S., C. Cesi, and K. Philip. 2020. The Database of Political Institutions 2020 (DPI2020). *The Database of Political Institutions 2020 (DPI2020)*, DOI: <http://dx.doi.org/10.18235/0003049>.
- Carson E., P. T. Lamoreaux, R. Simnett, U. Thuerheimer, and A. Vanstraelen. 2021. Establishment of National Public Audit Oversight Boards and Audit Quality. *Forthcoming, Available at https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3049828*.
- Carver B. T., C. W. Hollingsworth, and J. D. Stanley. 2011. Recent Auditor Downgrade Activity and Changes in Client's Discretionary Accruals. *Auditing: A Journal of Practice and Theory*, 30: 33-58, DOI: <https://doi.org/10.2308/ajpt-10053>.
- Che L., O. K. Hope, and J. C. Langli. 2020. How Big-4 Firms Improve Audit Quality. *Management Science*, 66: 1-21, DOI: <https://doi.org/10.1287/mnsc.2019.3370>.
- Chen F., O. K. Hope, Q. Li, and X. Wang. 2018. Flight to Quality in International Markets: Investors' Demand for Financial Reporting Quality during Political Uncertainty Events. *Contemporary Accounting Research*, 35:117-155, DOI: <https://doi.org/10.1111/1911-3846.12355>.
- Christensen H. B., L. Hail, and C. Leuz. 2013. Mandatory IFRS reporting and changes in enforcement. *Journal of Accounting and Economics*, 56:147-177, DOI: <https://doi.org/10.1016/j.jacceco.2013.10.007>.
- Christensen H. B., Y. L. Liu, and M. Maffett. 2020. Proactive Financial Reporting Enforcement and Shareholder Wealth. *Journal of Accounting and Economics*, 69, DOI: <https://doi.org/10.1016/j.jacceco.2019.101267>.
- Cohen D. A., A. Dey, and T. Z. Lys. 2008. Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. *The Accounting Review*, 83(3): 757-787, DOI: <https://doi.org/10.2308/accr.2008.83.3.757>.

- Connolly R., C. Stivers, and L. Sun. 2005. Stock market uncertainty and the stock-bond return relation. *Journal of Financial and Quantitative Analysis*, 40: 161-194, DOI: <https://doi.org/10.1017/S002210900001782>.
- CPAB. 2023. *Canadian Public Accountability Board*. Retrieved from CPAB.ca: <https://cpab-ccrc.ca/who-we-are>, 15 April.
- Cui X., S. Yao, Z. Fang, and H. Wang. 2021. Economic policy uncertainty exposure and earnings management: evidence from China. *Accounting and Finance*, 61:3937-3976, DOI: <https://doi.org/10.1111/acfi.12722>.
- Curtis, N. 2016. The impact of SEC investigations and accounting and auditing enforcement releases on firms' cost of equity capital. *Review of Quantitative Finance and Accounting*, 47: 57-82, DOI: <https://doi.org/10.1007/s11156-014-0494-9>.
- Dai L., and P. Ngo. 2020. Political Uncertainty and Accounting Conservatorism. *European Accounting Review*, 30: 77-307, DOI: <https://doi.org/10.1080/09638180.2020.1760117>
- Daske H., L. Hail, C. Leuz, and R. Verdi. 2008. Mandatory IFRS Reporting around the World: Early Evidence on the Economic Consequences. *Journal of Accounting Research*, 46(5); 1085-1142, DOI: <https://doi.org/10.1111/j.1475-679X.2008.00306.x>.
- Dechow P. M., R. G. Sloan, and A. P. Sweeney. 1995. Detecting Earnings Management. *The Accounting Review*, 70: 193-225.
- Dechow P., W. Ge and C. Schrand. 2010. Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and economics*, 50(2-3): 344-401, DOI: <https://doi.org/10.1016/j.jacceco.2010.09.001>.
- Dechow P. M., and I. D. Dichev. 2002. The Quality of Accruals Earnings: The Role of Accrual Estimation Errors. *The Accounting Review*, 77: 35-99, DOI: <http://dx.doi.org/10.2139/ssrn.277231>.
- Dechow P. M., R. G. Sloan, and A. P. Sweeney. 1996. Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the SEC. *Contemporary Accounting Research*, 13: 1-36, DOI: <https://doi.org/10.1111/j.1911-3846.1996.tb00489.x>
- Dee C. C., A. Lulseged, and T. Zhang. 2011. Client Stock Market Reaction to PCAOB Sanctions Against a Big 4 Auditor. *Contemporary Accounting Research*, 28: 263-291, DOI: <https://doi.org/10.1111/j.1911-3846.2010.01044.x>.
- DeFond M., and J. Zhang. 2014. A review of archival auditing research. *Journal of Accounting and Economics*, 58: 275-326, DOI: <https://doi.org/10.1016/j.jacceco.2014.09.002>.
- DeFond M. L., and C. W. Park. 1997. Smoothing income in anticipation of future earnings. *Journal of Accounting and Economics*, 23: 115-139, DOI: [https://doi.org/10.1016/S0165-4101\(97\)00004-9](https://doi.org/10.1016/S0165-4101(97)00004-9).
- Dhole S., L. Liu, G. J. Lobo, and S. Mishra. 2021. Economic policy uncertainty and financial statement comparability. *Journal of Accounting and Public Policy*, 40, DOI: <https://doi.org/10.1016/j.jaccpubpol.2020.106800>.
- Dzielinski M. 2012. Measuring economic uncertainty and its impact on the stock market. *Finance Research Letters*, 9: 167-175, DOI: <https://doi.org/10.1016/j.frl.2011.10.003>.
- El Ghouli S., O. Guedhami, Y. Kim, and H. J. Yoon. 2021. Policy Uncertainty and Accounting Quality. *The Accounting Review*, 96: 233-260, DOI: <https://doi.org/10.2308/TAR-2018-0057>.
- Ernstberger J., M. Stich, and O. Vogler. 2012. Economic Consequences of Accounting Enforcement Reforms: The Case of Germany. *European Accounting Review*, 21: 217-251, DOI: <https://doi.org/10.1080/09638180.2011.628096>.
- ESMA. 2023. *2022 Corporate reporting enforcement and regulatory activities*. ESMA Communication Office.
- Florou A., S. Morricone, and P. F. Pope. 2020. Proactive financial reporting enforcement: Audit fees and financial reporting quality effects. *The Accounting Review*, 95: 167-197, DOI: <https://doi.org/10.2308/accr-52497>.
- Florou A., and S. Yuan. 2022. Public Audit Oversight and Audit Pricing: Evidence from the EU. *European Accounting Review*, forthcoming, DOI: <https://doi.org/10.1080/09638180.2022.2145981>.
- Gonçalves T., V. Baross, and G. Serra. 2022. Political elections uncertainty and earnings management: Does firm size really matter? *Economic Letters*, 214, DOI: <https://doi.org/10.1016/j.econlet.2022.110438>.
- Graham J.R., C. R. Harvey, and S. Rajgopal. 2005. The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, 40: 3-73, DOI: <https://doi.org/10.1016/j.jacceco.2005.01.002>.
- Gu Z., C. W. Lee, and J. G. Rosett. 2005. What Determines the Variability of Accounting Accruals? *Review of Quantitative Finance and Accounting*, 24:313-334, DOI: <https://doi.org/10.1007/s11156-005-6869-1>.
- Healy P. M., and K. G. Palepu. 2001. Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31: 405-440, DOI: [https://doi.org/10.1016/S0165-4101\(01\)00018-0](https://doi.org/10.1016/S0165-4101(01)00018-0).

- Hope O. K. 2003. Disclosure Practices, Enforcement of Accounting and Analyst Forecast Accuracy: An International Study. *Journal of Accounting Research*, 41: 235-272, DOI: <https://doi.org/10.1111/1475-679X.00102>.
- Jain A., D. Jackson, and H. Sakaki. 2021. Political, economic, financial uncertainty, and real earnings. *Journal of Corporate Accounting and Finance*, 32: 52-66, DOI: <https://doi.org/10.1002/jcaf.22485>.
- Jiang L., J. A. Pittman, and W. Saffar. 2022. Policy Uncertainty and Textual Disclosure. *Accounting Horizons*, 36:113-131, DOI: <https://doi.org/10.2308/HORIZONS-2019-515>.
- Jin J. Y., K. Kanagaretnam, Y. Liu, and G. J. Lobo. 2019. Economic policy uncertainty and bank earnings opacity. *Journal of Accounting and Public Policy*, 38: 199-218, DOI: <https://doi.org/10.1016/j.jaccpubpol.2019.05.002>.
- Jones J. J. 1991. Earnings Management During Import Relief Investigations. *Journal of Accounting Research*, 29: 193-228, DOI: <https://doi.org/10.2307/2491047>.
- Keating A. S., and J. L. Zimmerman. 2000. Depreciation-policy changes: tax, earnings management, and investment opportunity incentives. *Journal of Accounting and Economics*, 28: 359-389, DOI: [https://doi.org/10.1016/S0165-4101\(00\)00004-5](https://doi.org/10.1016/S0165-4101(00)00004-5).
- Kothari S. P., A. Leone, and C. E. Wasley. 2005. Performance Matched Discretionary Accruals Measures. *Journal of Accounting and Economics*, 39:163-197, DOI: <https://doi.org/10.1016/j.jacceco.2004.11.002>.
- Kraft A., Fu R., and H. Zhang. 2012. Financial reporting frequency, information asymmetry, and the cost of equity. *Journal of Accounting and Economics*, 54: 132-149, DOI: <https://doi.org/10.1016/j.jacceco.2012.07.003>.
- Krishnan G. V. 2003. Audit Quality and the Pricing of Discretionary Accruals. *Auditing: A Journal of Practice and Theory*, 22: 109-126, DOI: <https://doi.org/10.2308/aud.2003.22.1.109>.
- Krishnan G. V. 2003. Does big 6 auditor industry expertise constrain earnings management? *Accounting Horizons*, 17: 1-16, DOI: <https://doi.org/10.2308/acch.2003.17.s-1.1>.
- Kurniawan F., H. T. Amanati, A. H. Nugroho, and N. A. Pusparini. 2023. Effects of policy and economic uncertainty on investment activities and corporate financial reporting: a study of developing countries in Asia-Pacific. *Asian Review of Accounting*, DOI: <https://doi.org/10.1108/ARA-12-2022-0290>.
- Lazzem S., and F. Jilani. 2018. The impact of leverage on accrual-based earnings management : the case of listed French firms. *Research in International Business and Finance*, 44: 350-358, DOI: <https://doi.org/10.1016/j.ribaf.2017.07.103>.
- Li L., B. Qi, A. Robin, and R. Yang. 2022. The effect of enforcement action on audit fees and the audit reporting lag. *Accounting and Business Research*, 52: 38-66, DOI: <https://doi.org/10.1080/00014788.2020.1808441>.
- Liu L., and T. Zhang. 2015. Economic policy uncertainty and stock market volatility. *Finance Research Letters*, 15: 99-105, DOI: <https://doi.org/10.1016/j.frl.2015.08.009>.
- Mos C, 2024a. Economic Policy Uncertainty, Financial Reporting Quality, and Audit Fees: Examining the Role of Industry Characteristics and International Accounting Standards. *Audit Financiar*, Vol.22, No. 4: 791-802, DOI: <http://dx.doi.org/10.20869/AUDITF/2024/176/029>
- Mos C, 2024b. Uncertainty, financial reporting quality and accounting enforcement: Evidence from the European Union. *Journal of Accounting and Management Information Systems*, Vol.23, No. 3: 616-642, DOI: <http://dx.doi.org/10.24818/jamis.2024.03008>
- MSCI. 2023. *MSCI.com*. Retrieved from <https://www.msci.com/our-solutions/indexes/gics>, 14 April.
- Nagar V., J. Schoenfeld, and L. Wellman. 2018. The Effect of Economic Policy Uncertainty on Investor Information Asymmetry and Management Disclosures. *Journal of Accounting and Economics*, 67: 36-57, DOI: <https://doi.org/10.1016/j.jacceco.2018.08.011>.
- PCAOB. 2023. *Public Company Accounting Oversight Board*. Retrieved from [PCAOB.org: https://pcaobus.org/about/mission-vision-values](https://pcaobus.org/about/mission-vision-values), 25 April.
- Peng Z. 2020. Asymmetric impact of earnings news on investor uncertainty. *Journal of Business Finance and Accounting*, 47: 3-26.
- Reuters. 2023. SEC says it is focused on prosecuting misconduct that might threaten investors, markets. Retrieved from <https://www.reuters.com/markets/us/us-sec-says-focused-prosecuting-misconduct-that-might-threaten-investors-markets-2023-05-04/>, 4 May.
- Shin J. E. 2019. Asymmetric Investor Reaction around Earnings Benchmark under Economic Uncertainty. *Asia-Pacific Journal of Financial Studies*, 48: 98-122, DOI: <https://doi.org/10.1111/ajfs.12246>.
- Shivakumar L. 2013. The role of financial reporting in debt contracting and in stewardship. *Accounting and Business Research*, 43: 362-383, DOI: <https://doi.org/10.1080/00014788.2013.785683>.
- Staton M. C. B., and K. Roelich. 2021. Decision making under deep uncertainties: A review of the applicability of methods in practice. *Technological Forecasting & Social Change*, 171, DOI: <https://doi.org/10.1016/j.techfore.2021.120939>.

- Walters D. J., U. Gülden, T. David, E. Carsten, and F. R. Craig. 2023. Investor Behavior Under Epistemic vs. Aleatory Uncertainty. *Management Science*, 69: 2761-2777, DOI: <https://doi.org/10.1287/mnsc.2022.4489>.
- Windisch D. 2021. Enforcement, Managerial Discretion, and the Informativeness of Accruals. *European Accounting Review*, 30: 705-732. DOI: <https://doi.org/10.1080/09638180.2020.1771393>.
- World Bank. 2023. *World Bank Data Bank*. Retrieved from World Bank Data Bank: <https://databank.worldbank.org/>
- World Economic Forum. 2019. *The Global Competitiveness Report 2019*. World Economic Forum.
- Yung K., and A. Root. 2019. Policy uncertainty and earnings management: International evidence. *Journal of Business Research*, 100: 255-267, DOI: <https://doi.org/10.1016/j.jbusres.2019.03.058>.
- Zhang B. 2019. Economic Policy Uncertainty and Investor Sentiment: linear and nonlinear causality analysis. *Applied Economics Letters*, 26: 1264-1268, DOI: <https://doi.org/10.1080/13504851.2018.1545073>.