

---

# Economic Policy Uncertainty, Financial Reporting Quality, and Audit Fees: Examining the Role of Industry Characteristics and International Accounting Standards

---

Cătălin MOȘ, Ph. D. Student,  
Faculty of Economics and Business Administration,  
Babes-Bolyai University, Cluj-Napoca, Romania,  
e-mail: catalin.mos@econ.ubbcluj.ro

## Abstract

Using a large international sample, the author investigated the effects of economic policy uncertainty (EPU) on financial reporting quality (FRQ) and audit (AF). For this analysis, he used the Baker et al. (2016) EPU index and find a negative association between EPU and FRQ. Furthermore, that this impact was found to be more pronounced for firms operating in sensitive industries and less pronounced for firms that report under the International Financial Reporting Standards (IFRS). However, for firms operating in sensitive industries, reporting under IFRS does not weaken the impact of EPU on FRQ. The results also showed that the EPU is negatively associated with audit fees. Furthermore, the interaction term between IFRS and the EPU is positively associated with AF while the interaction term between the EPU and firms operating in sensitive industries is negative. The present study has important implications for policymakers, investors, auditors, and capital markets, as it provides strong evidence of the impact of the EPU on FRQ and AF. In addition, it enriches the literature by examining the influence of IFRS and industry characteristics on the interaction between EPU, FRQ, and AF

**Key words:** financial reporting; uncertainty; IFRS; sensitive industry; audit fees;

**JEL Classification:** M41, M42, M48

### To cite this article:

Moș, C. (2024), Economic Policy Uncertainty, Financial Reporting Quality, and Audit Fees: Examining the Role of Industry Characteristics and International Accounting Standards, *Audit Financiar*, vol. XXII, no. 4(176)/2024, pp. 791-802, DOI: 10.20869/AUDITF/2024/176/029

### To link this article:

<http://dx.doi.org/10.20869/AUDITF/2024/176/029>  
Received: 1.07.2024  
Revised: 11.07.2024  
Accepted: 20.08.2024

## 1. Introduction

Recent years have been characterized by high uncertainty. The COVID-19 pandemic, Ukraine's invasion by Russian Federation, inflation, and the energy crisis led to an increase in uncertainty. Uncertainty delays important investment decisions, increases financing and production costs, affects supply chains, and worsens the economic environment (Arouri et al., 2016). In terms of the capital market, it has been reported that uncertainty leads to high volatility of stock prices, decrease in returns, decline in firm valuation, and underpricing of IPO (Liu and Zhang, 2015; Arouri et al., 2016; Connolly et al., 2005; Dzielinski, 2012; Tsai, 2017; Boulton, 2022). In this context, Walters et al. (2023), Andrei et al. (2023), and Bird and Yeung (2012) suggest that investors are more responsive to firm-specific information, especially earnings information and earnings announcements. The rationale behind this is that investors can learn valuable information not only about the firm's performance, but also about the evolution of the economy. In this context, the FRQ is critical to the investor learning process and its effectiveness. The literature is scarce, with most of the research conducted in the United States (US) (Bermpei et al., 2021; Dhole et al., 2021; Jin et al., 2019; Nagar et al., 2018; Jiang et al., 2022). Therefore, there is limited understanding of how the EPU impacts FRQ across different countries, industries, and reporting framework, especially in the context of recent global uncertainties. Auditors represent one of the most important mechanisms that affects the FRQ. Audit fees are an indicative of their effort in auditing the financial statements of a firm. Few studies are available in the literature investigating the association between EPU and AF, most of them focusing on a single country (Yun & Shin, 2023; Yun & Hongmin, 2021; Jengfang et al., 2019; Min et al., 2018).

Our study expands the literature by examining an international sample of companies from 29 countries. In our analysis, we accounted for recent events that amplified uncertainty around the world. Therefore, our study provides a comprehensive analysis of FRQ and AF under high uncertainty. In 2005, the European Union (EU) adopted the IFRS to improve FRQ. Subsequently, many countries followed the EU and adopted the IFRS. The literature indicates that IFRS improves FRQ (Barth et al., 2008) and the comparability of financial information (Yip and Young, 2012). In our study, we explore the effects of the interaction between IFRS and EPU on FRQ and contribute to the literature by providing evidence of the

effects of EPU on FRQ for IFRS firms versus non-IFRS firms. Bermpei et al. (2021) explore whether the FRQ is vulnerable to uncertainty in specific sensitive<sup>1</sup> industries in the US. We test this at an international level and provide strong evidence that FRQ is more vulnerable to EPU in certain industries. Additionally, we test whether the IFRS can reduce this vulnerability and we found that IFRS are not enough to counter the industry characteristics. Regarding AF, our study provides strong evidence that AF is negatively associated with EPU, which is in line with the existing evidence. Furthermore, we observe that the negative association between AF and EPU is more pronounced for firms operating in sensitive industries and less pronounced for firms that report under IFRS.

## 2. Literature review

Uncertainty is usually associated with periods of economic downturns or significant events that negatively affect the economy and capital markets. Regarding capital markets and investors, it is noted that uncertainty leads to a decrease in investors return (Arzu O., 2009). Therefore, investors are more interested in the financial performance and pay more attention to the financial statements (Walters et al., 2023 and Andrei et al., 2023). In this context, the researchers were interested in the quality of financial statements and how they reflect firm performance in times of high uncertainty. The literature on this subject has not yet matured, and most studies concern the United States.

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) investigate FRQ in the context of high uncertainty for US firms, while El Ghouli et al. (2021), Yung and Root (2019), and Goncalves et al. (2022) explore the association between FRQ and uncertainty using cross-country samples.

Most of the research done concur to the idea of 'lean against the wind' introduced by Hirshleifer et al. (2009). The findings reveal that when uncertainty increases, management smooths the earnings to show better

<sup>1</sup> Sensitive industries are defined by Bermpei et al. (2021) as being more exposed to EPU due to their susceptibility to legislative changes, they are subject to greater attention from the public, and their impact in society is higher. These industries are oil industry, pharmaceutical industry, defense industry, tobacco industry, and transportation industry. A detailed list can be found in Table no. 4.

performance, creates a sense of stability, avoids small losses, and reduces the uncertainty associated with the firm (Bermpei 2021; Shin 2019; Peng et al. 2020; Chauhan and Jaiswall 2023; Yung and Root, 2019).

On the other hand, Jin et al. (2019) and Nagar et al. (2018) conclude that uncertainty increases the information asymmetry between management and investors. Therefore, it makes it difficult for investors to detect earnings management and provides the opportunity for the management to smooth the earnings.

Bermpei et al. (2021) Yung and Root (2019) investigate the interaction between uncertainty and other characteristics such as industry, institutional settings, and culture. Although certain industries are more sensitive to UPE, institutional settings and culture are not statistically significant.

Yun & Shin (2023), Yun & Hongmin (2021), Jengfang et al. (2019), Min et al. (2018) show that EPU is negatively associated with AF. This indicate that audit fees decrease in times of high EPU. Their studies are in the context of United States and South Korea.

Based on the above key aspects, we aim to expand the current literature by testing the following hypothesis:

- H1. There is a negative association between FRQ and EPU.
- H2. The negative association between FRQ and EPU is reduced by IFRS
- H3. The negative association between FRQ and EPU is exacerbated by industry characteristics.
- H4. There is a negative association between AF and EPU

### 3. Methodology

We measure uncertainty using the index developed by Baker et al. (2016). Economic policy uncertainty consists of three components. The first is newspaper coverage of economic uncertainty-related topics, the second is uncertainty regarding changes in tax legislation and monetary policies, and the third deals with macroeconomic forecast uncertainty. The index is a strong candidate for our study, as it captures all levels of uncertainty, market, political, and macroeconomic. We use the data available for 29 countries from the Economic Policy Uncertainty website. We used changes in the natural logarithm of the EPU index from year to year for each country.

Accrual-based models are widely used to measure FRQ. These models are designed to separate abnormal and reasonable business accruals. Dechow et al. (2010) indicated that reasonable business accruals reflect fundamental firm performance, whereas abnormal accruals reveal management's discretionary behavior in preparing financial information.

Accrual-based models regress total accruals on firm attributes that predict reasonable business accruals. Regression residuals are abnormal accruals that cannot be explained by firm attributes. We used three models in our analysis, Modified Jones Model (FRQ1) developed by Dechow et al. (1995), Modified Jones Model with Performance (FRQ2) proposed by Kothari et al. (2005) and Dechow and Dichev Model advanced by Dechow and Dichev (2002). FRQ is the absolute residual obtained from the following regression:

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

$$ACC_{it} = \alpha_0 + \alpha_1 \frac{1}{TA_{it-1}} + \alpha_2 \left( \frac{\Delta REV_{it}}{TA_{it}} + \frac{\Delta AR_{it}}{TA_{it}} \right) + \alpha_3 \left( \frac{\Delta PPE_{it}}{TA_{it}} \right) + \alpha_4 ROA_{it} \quad (FRQ2)$$

$$ACC_{it} = \alpha_0 + \alpha_1 CFO_{it-1} + \alpha_2 CFO_{it} + \alpha_3 CFO_{it+1} + \alpha_4 \Delta REV_{it} + \alpha_5 PPE_{it} + \varepsilon_{it} \quad (FRQ2)$$

The models were estimated cross-sectionally at the industry-year level. According to the literature, we require at

least 10 observations for each industry year. The variables used in these models are presented in Table no. 1.

**Table no. 1. Description of the variables in the FRQ models**

Variable	Description
ACC	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 $i$ in year $t$
$TA_{it}$	Total assets of firm $i$ in year $t$
$\Delta REV_{it}$	Change in sales of firm $i$ in year $t$
$\Delta Arit$	Change in trade receivables of firm $i$ in year $t$
$\Delta PPE_{it}$	Change in the gross property, plant, and equipment of firm $i$ in year $t$
$CFO_{it}$	Cash flow from the operations of firm $i$ in year $t$ scaled by the lagged total assets of firm $i$ in year $t$
ROA	Net income/total assets of firm $i$ in year $t$

Source: Author's own projections

We extract companies' financial data from Refinitiv, selecting only companies listed on stock exchanges in countries with an available EPU index. We initially retrieved data for 48,973 firms. However, to be able to determine the FRQ, we only retained firms that reported total assets, total liabilities, total equity, market capitalization, cash flow, sales and net income for at least three consecutive years in the sample. The final sample

consists of 27,852 firms for 2006–2022 (285,513 firm-year observations). For the audit fee analysis, we were able to obtain the audit fees only for 165,603 firm-year observations.

Table no. 2 shows the sample distribution per country and reporting standards, Table no. 3 shows the sample distribution per industry, and Table no. 4 shows the number of observations for sensitive industries.

**Table no. 2. Sample distribution by country and by accounting standards**

Country of Exchange	No. of observations	IFRS	NON-IFRS
Japan	47,114	1,533	45,581
United States	43,018	967	42,051
China	41,529	3	41,526
India	29,704	157	29,547
South Korea	25,615	21,413	4,202
Hong Kong	20,347	5,610	14,737
United Kingdom	10,106	9,919	187
Canada	10,094	8,011	2,083
Australia	9,597	9,429	168
Singapore	6,589	3,065	3,524
France	6,210	5,295	915
Germany	5,845	5,073	772
Sweden	5,513	4,143	1,370
Pakistan	3,776	725	3,051
Brazil	3,061	2,814	247
Italy	2,659	2,443	216
Greece	1,863	1,863	-
Chile	1,775	1,554	221
Russia	1,740	1,313	427
Spain	1,517	1,362	155
Mexico	1,395	1,098	297
New Zealand	1,294	988	306

Country of Exchange	No. of observations	IFRS	NON-IFRS
Denmark	1,236	1,142	94
Belgium	1,096	1,080	16
The Netherlands	876	867	9
Nigeria	771	538	233
Croatia	704	704	-
Colombia	301	96	205
Ireland	168	168	-
<b>Total</b>	<b>285,513</b>	<b>93,373</b>	<b>192,140</b>

Source: Author's own projections

**Table no. 3. Distribution of the sample by industries**

Industry	No. of observations	Industry	No. of observations	Industry	No. of observations
Machinery	15,877	Entertainment	4,621	Diversified Telecommunication Services	1,706
Chemicals	14,763	Professional Services	4,148	Air Freight & Logistics	1,634
Metals & Mining	13,048	Health Care Providers & Services	4,033	Life Sciences Tools & Services	1,530
Real Estate Management & Development	12,351	Communications Equipment	4,026	Industrial Conglomerates	1,495
Electronic Equipment, Instruments & Components	12,178	Consumer Staples Distribution & Retail	3,735	Marine Transportation	1,434
Food Products	10,759	Building Products	3,500	Automobiles	1,347
Textiles, Apparel & Luxury Goods	10,172	Construction Materials	3,235	Gas Utilities	1,333
Software	9,537	Containers & Packaging	2,826	Diversified REITs	1,138
Construction & Engineering	8,849	Diversified Consumer Services	2,710	Health Care Technology	1,113
Hotels, Restaurants & Leisure	8,477	Beverages	2,630	Retail REITs	1,069
Pharmaceuticals	8,426	Electric Utilities	2,558	Office REITs	925
Oil, Gas & Consumable Fuels	8,335	Independent Power and Renewable Electricity Producers	2,539	Water Utilities	919
Automobile Components	7,712	Energy Equipment & Services	2,495	Passenger Airlines	806
Electrical Equipment	7,114	Personal Care Products	2,438	Household Products	710
IT Services	6,539	Paper & Forest Products	2,255	Multi-Utilities	651
Commercial Services & Supplies	6,363	Aerospace & Defense	2,229	Wireless Telecommunication Services	621

Industry	No. of observations	Industry	No. of observations	Industry	No. of observations
Specialty Retail	6,320	Transportation Infrastructure	2,229	Residential REITs	567
Semiconductors & Semiconductor Equipment	5,951	Ground Transportation	2,137	Industrial REITs	465
Media	5,877	Technology Hardware, Storage & Peripherals	2,076	Specialized REITs	407
Trading Companies & Distributors	5,726	Broadline Retail	2,056	Hotel & Resort REITs	370
Household Durables	5,620	Distributors	1,962	Health Care REITs	339
Biotechnology	5,369	Interactive Media & Services	1,825	Tobacco	336
Health Care Equipment & Supplies	5,238	Leisure Products	1,734		

Source: Author's own projections

Industry	No. of observations
Pharmaceuticals	8,426
Oil, Gas & Consumable Fuels	5,238
Health Care Equipment & Supplies	4,033
Health Care Providers & Services	1,113
Aerospace & Defense	2,229
Ground Transportation	8,335
Diversified Telecommunication Services	1,434
Marine Transportation	621
Health Care Technology	1,706
Wireless Telecommunication Services	336
Health Care REITs	339
Tobacco	2,137
<b>Total</b>	<b>35,947</b>

Source: Author's own projections after Bermpei et al. (2021)

Of the total sample of 285,513 firm-year observations, 33% prepare financial statements according to IFRS and 67% according to other accounting standards. The five main industries in our sample are machinery (5.6%), chemicals (5.2%), metals & mining (4.6%), real estate management & development (4.3%), and electronic

equipment, instruments & components (4.3%). From the total sample, 35,947 firm-year observations are from sensitive industries.

Our empirical models are presented below, and the summary of the variables is presented in **Table no. 5**.

$$FRQ = \alpha_0 + \alpha_1 EPU + \alpha_2 AS + \alpha_3 AUD + \alpha_4 RES + \alpha_5 LEV + \alpha_6 SIZE + \alpha_7 ROA + \alpha_8 SD\_REV + \alpha_9 SD\_CFO + \varepsilon \quad (\text{Model I})$$

$$AF = \alpha_0 + \alpha_1 EPU + \alpha_2 SIZE + \alpha_3 LEV + \alpha_4 DCE + \alpha_5 AUD + \alpha_6 AS + \varepsilon \quad (\text{Model II})$$



**Table no. 5. Summary of variables**

Variable	Description	Type of variable	Source of data
FRQ	Financial reporting quality	Dependent variable	Refinitiv
EPU	Change in the natural logarithm of the EPU index	Focus variable	Baker et al. (2016)
AS	Dummy variable which equals 1 if the firm reports according to IFRS or 0 otherwise.	Focus variable	World Bank
SENSITIVE	Dummy variable which equals 1 if the firm operates in one of the industries from Table 4 or 0 otherwise.	Focus variable	Bermepe et al. (2021)
AUD	Dummy variable which equals 1 if the financial statements were audited by a BIG4 or 0 otherwise	Control variable	Refinitiv
RES	Dummy variable that equals 1 if the financial statements contain a restatement or 0 otherwise	Control variable	Refinitiv
SIZE	Natural logarithm of the market capitalization of the company	Control variable	Refinitiv
ROA	Return on assets determined as net income scaled by total assets	Control variable	Refinitiv
LEV	Leverage determined as total debt scaled by total assets		
SD_REV	Standard deviation of revenue scaled by total assets	Control variable	Refinitiv
SD_CFO	Standard deviation of net cash flow from operations/total assets	Control variable	Refinitiv
DCE	Dummy variable which equals 1 if the firm has negative equity or 0 otherwise	Control variable	Refinitiv

Our analysis includes several firm-level control variables that have been shown to affect FRQ in previous research. These include auditor type (Che et al., 2020), financial restatements (Ettredge et al., 2010), company size and performance (Dechow et al., 2010), and leverage (Anagnostopoulou and Tsekrekos, 2017). For the second model, we use the most important determinants of audit fees grounded in the literature, size, and risk of the entity (Gonthier-Besacier & Schatt, 2007; Anderson & Zeghal 1994) The Hausman test is used to determine whether fixed or random effects should be used. The fixed-effects approach is appropriate for our data. To control for

potential unobserved effects, we run our models using industry and country fixed effects. We winsorize all continuous variables at the 1st and 99th percentiles to avoid potential outlier effects.

#### 4. Results and discussion

Table no. 6 presents the results for Model I. We present the regression results for the three FRQ models. In each case, we run an ordinary least squares (OLS) regression with country and industry fixed effects.

**Table no. 6. Regression results**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FRQ1	FRQ1	FRQ1	FRQ1	FRQ2	FRQ2	FRQ2	FRQ2	FRQ3	FRQ3	FRQ3	FRQ3
EPU	0.00612*** (12.01)	0.0101*** (15.77)	0.00328*** (6.78)	0.0101*** (15.77)	0.00309*** (11.28)	0.00518*** (15.01)	0.00196*** (6.87)	0.00518*** (15.01)	0.00329*** (7.70)	0.00684*** (12.84)	0.00112* (2.57)	0.00684*** (12.84)
AS	-0.00523*** (-6.27)	-0.00511*** (-6.13)	-0.00522*** (-6.27)	-0.00511*** (-6.12)	-0.00170*** (-3.45)	-0.00163*** (-3.32)	-0.00170*** (-3.45)	-0.00163*** (-3.32)	-0.00409*** (-6.07)	-0.00399*** (-5.91)	-0.00409*** (-6.06)	-0.00398*** (-5.90)
EPU#AS		-0.0111*** (-10.73)		-0.0120*** (-11.46)		-0.00586*** (-10.45)		-0.00645*** (-11.02)		-0.00995*** (-11.38)		-0.0113*** (-12.35)
EPU#SENSITIVE			0.0221*** (10.03)				0.00882*** (9.60)				0.0169*** (11.21)	
EPU#AS#SENSITIVE				0.00654* (2.21)				0.00425** (3.20)				0.00949*** (4.54)
AUD	-0.00618*** (-12.84)	-0.00623*** (-12.96)	-0.00617*** (-12.84)	-0.00623*** (-12.96)	-0.00322*** (-10.10)	-0.00325*** (-10.19)	-0.00322*** (-10.09)	-0.00325*** (-10.19)	-0.00476*** (-11.42)	-0.00481*** (-11.54)	-0.00476*** (-11.41)	-0.00481*** (-11.54)
RES	0.00460*** (7.68)	0.00450*** (7.52)	0.00455*** (7.62)	0.00450*** (7.52)	0.00344*** (10.03)	0.00339*** (9.88)	0.00342*** (9.98)	0.00338*** (9.88)	0.00521*** (10.16)	0.00513*** (10.00)	0.00518*** (10.10)	0.00512*** (10.00)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	FRQ1	FRQ1	FRQ1	FRQ1	FRQ2	FRQ2	FRQ2	FRQ2	FRQ3	FRQ3	FRQ3	FRQ3
LEV	0.0252*** (18.54)	0.0252*** (18.52)	0.0253*** (18.58)	0.0252*** (18.52)	0.0116*** (14.81)	0.0116*** (14.79)	0.0117*** (14.84)	0.0116*** (14.79)	0.00608*** (6.24)	0.00606*** (6.22)	0.00612*** (6.29)	0.00606*** (6.22)
SIZE	-0.00465*** (-33.53)	-0.00464*** (-33.47)	-0.00465*** (-33.52)	-0.00464*** (-33.47)	-0.00294*** (-40.04)	-0.00293*** (-39.97)	-0.00294*** (-40.02)	-0.00293*** (-39.97)	-0.00233*** (-23.18)	-0.00232*** (-23.10)	-0.00233*** (-23.17)	-0.00232*** (-23.10)
ROA	-0.0320*** (-20.94)	-0.0320*** (-20.95)	-0.0319*** (-20.93)	-0.0320*** (-20.95)	-0.0231*** (-25.32)	-0.0231*** (-25.33)	-0.0231*** (-25.31)	-0.0231*** (-25.33)	-0.00908*** (-7.59)	-0.00910*** (-7.61)	-0.00906*** (-7.58)	-0.00909*** (-7.61)
SD_REV	0.0154*** (21.03)	0.0154*** (21.06)	0.0153*** (20.92)	0.0154*** (21.05)	0.00607*** (16.98)	0.00608*** (17.02)	0.00603*** (16.90)	0.00607*** (17.01)	0.00767*** (13.81)	0.00769*** (13.85)	0.00760*** (13.71)	0.00768*** (13.84)
SD_CFO	-0.00262* (-2.21)	-0.00264* (-2.23)	-0.00254* (-2.14)	-0.00263* (-2.23)	-0.000815 (-1.39)	-0.000827 (-1.41)	-0.000781 (-1.34)	-0.000821 (-1.40)	0.0202*** (20.23)	0.0201*** (20.22)	0.0202*** (20.30)	0.0202*** (20.23)
Observations	285,513	285,513	285,513	285,513	285,513	285,513	285,513	285,513	285,513	285,513	285,513	285,513
R-squared	0.1290	0.1294	0.1297	0.1294	0.1220	0.1223	0.1224	0.1224	0.0666	0.0671	0.0673	0.0671
Country and Industry Fixed Effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

This table presents the regression results for Model 1. In each case, we employed an OLS regression with fixed effects. EPU#AS, EPU#SENSITIVE, and EPU#AS#SENSITIVE are the interaction terms for our variable of interest. In the interaction terms, EPU was centered by subtracting the mean value. In each model, the standard errors are clustered at the firm level. T-values are in parentheses. The significance levels at 10%, 5% and 1% are represented by \*, \*\*, and \*\*\*, respectively.

We begin our analysis with Models 1, 5, and 9. The positive and statistically significant coefficient suggests that EPU is negatively associated with FRQ. The results are consistent across all models and raise important concerns regarding the reliability and accuracy of financial statements when EPU increases. The results show that when the EPU increases by one point, the FRQ decreases by 0.00612 in Model 1, by 0.00309 in Model 5, and by 0.00329 in Model 9.

Next, we investigate the effect of the interaction between IFRS and EPU on FRQ in Models 2, 6, and 10. The coefficient is significant at the 1% level for all models. The negative coefficient of the interaction term indicates that the association between FRQ and EPU is less pronounced for IFRS firms than on non-IFRS firms. This is in line with the objectives of the IFRS Foundation Constitution, which states four objectives among which is to develop a set of high qualitative accounting standards. Furthermore, this finding is consistent with the literature (Barth et al., 2008; Yip and Young, 2012). The mechanism through which the IFRS reduce negative association between FRQ and EPU could be linked to:

a) a single set of accounting standards ensure comparability of financial statements and facilitate the investors understanding and analysis of financial statements which can reduce the earnings management;

- b) IFRS are principles-based accounting standards which allows firms to adapt and update their accounting policies and practices to their current circumstances; therefore, in times of uncertainty, they present better in financial statements the actual performance;
- c) IFRS are investors-orientated accounting standards, which help investors to better understand the financial statements and firm performance, and together with the fact that they ensure comparability, may help investors to detect earnings management more frequently compared to other accounting standards.

To examine whether sensitive industries (as defined in Section 3) are more vulnerable to EPU, we introduce an interaction term between SENSITIVE and EPU. The principal effect (SENSITIVE) is not included in the model because it is a time-invariant variable that is perfectly collinear with industry fixed effects. The positive coefficient indicates that the FRQ of firms operating in sensitive industries are more vulnerable to EPU. The coefficient is statistically significant at the 1% level. This finding is similar to what Bermpei et al. (2021) noted for US. Previous research suggests that the reason for the negative association between FRQ and EPU is to show better performance and, therefore, to create a sense of stability when EPU is high. The firms that operate in sensitive industries being subject to more intense scrutiny face a greater pressure compared with other



firms, as a consequence management use earnings management more frequently.

We demonstrate that the FRQ of IFRS firms is less affected by EPU. We analyze whether this result persists for IFRS firms operating in sensitive industries, in Models 4, 8, and 12, by introducing an interaction term between EPU, IFRS, and SENSITIVE. The positive coefficient reveals that IFRS are not sufficiently strong to mitigate the effect of EPU on FRQ in sensitive industries. The coefficient is statistically significant at levels of 10%, 5%, and 1% in Model 4, Model 8, and Model 12, respectively. A possible argument for this finding is

that IFRS allows certain flexibility in accounting practices, which combined with the pressure faced by the management of firms operating in sensitive industries override the benefits of reporting in accordance with IFRS.

The results of the control variables are consistent with those of previous studies (Che et al., 2020; Ettredge et al., 2010; Dechow et al., 2010; Anagnostopoulou and Tsekrekos, 2017). SIZE, AUD, and ROA are positively associated with FRQ while RES and LEV are negatively associated with FRQ.

Table no. 7 show the results for Model II, there are three regressions.

	(1) AF	(2) AF	(3) AF
EPU	-0.0207*** (-9.49)	-0.0249*** (-9.24)	-0.0194*** (-8.78)
SIZE	0.0363*** (32.17)	0.0362*** (32.11)	0.0362*** (32.17)
LEV	0.0502*** (6.52)	0.0501*** (6.52)	0.0502*** (6.53)
DCE	-0.0430*** (-5.54)	-0.0430*** (-5.55)	-0.0430*** (-5.55)
AUD	0.0159*** (4.86)	0.0160*** (4.88)	0.0159*** (4.87)
AS	0.0535*** (10.31)	0.0532*** (10.25)	0.0535*** (10.31)
EPU#AS		0.0106* (2.32)	
EPU#SENSITIVE			-0.0366** (-2.89)
Observation	165,603	165,603	165,603
R-squared	0.1169	0.1177	0.1177
Country and Firm Fixed Effects	Yes	Yes	Yes

This table presents the regression results for Model II. In each case, we employed an OLS regression with fixed effects. EPU#AS, EPU#SENSITIVE, and are the interaction terms for our variable of interest. In the interaction terms, EPU was centered 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 can observe that the EPU is negatively associated with AF. The coefficient is -0.0207 and is statistically significant at the 1% level. This means that when uncertainty increases by one unit, the audit fees decrease by 0.0207. The result is consistent with the previous studies mentioned in Section 2. Furthermore, we can observe that the interaction term between EPU and IFRS

is positive and statistically significant at the 10% level. This indicates that the negative association between EPU and AF is less pronounced for firms that report under IFRS. Regarding the interaction term between EPU and SENSITIVE, we can observe a negative coefficient, which is statistically significant at the 5% level. Therefore, the negative association between AF and EPU is more

pronounced for firms operating in sensitive industries. In this case, we use firm and country fixed effects since audit fees mostly depend on the characteristics of the firm.

EPU is high during certain events that increase financial pressure on firms which negotiate lower audit fees in an attempt to cut their operating costs. Lower audit fees may result in lower audit effort, which is not desirable in the context of high EPU, which is negatively associated with FRQ. However, a recent study argues that even if the auditors decrease their fees, they know that EPU is negatively associated with FRQ; therefore, they involve more senior and experienced employees to perform the audit of listed firms (Yongsuk & Shin, 2023). Consistently, Yongsuk & Hongmin (2021) demonstrated that audit hours increase during high EPU. Therefore, despite the fact that AF decrease when EPU is high, auditors concentrate their effort by increasing the seniority level and the number of hours to combat the decrease in FRQ.

## 5. Conclusions

We examined the impact of EPU on FRQ using a large international sample of 285,513 firm-year observations from 29 countries. Our results revealed that the EPU negatively impacts FRQ and that this effect is more pronounced for firms operating in sensitive industries. Furthermore, we demonstrate that IFRS plays a significant role in combating the effects of EPU on FRQ. However,

this effect is not observed for all firms. For firms operating in sensitive industries, which are more vulnerable to EPU, industry characteristics prevail over the positive impact of IFRS on FRQ.

We also show that AF is negatively associated with EPU, which means that auditors reduce fees when EPU is high. The results are consistent with those of the literature. However, we argue that this does not impact the audit effort. Auditors acknowledge that EPU is negatively associated with FRQ and allocate more senior resources and more ours to the audit of listed entities. Our results were analyzed including fixed effects of country, industry and firm in the regression models. Therefore, our results are robust since we control for country, industry, and firm characteristics.

Our study has several limitations. The FRQ has many dimensions, and there are many empirical models through which this can be measured. In our study, we mostly focused on accrual-based models, and we are not able to generalize the findings to other FRQ dimensions. Potential research could try to identify and use other models to measure the FRQ. We are able to determine only the impact of EPU on AF. Our results are consistent with the literature. However, we refer to previous literature to argue the connection between lower FRQ and lower AF during high EPU. Future research could obtain a more in-depth connection using other measures for audit effort more directly connected with audit work.

## REFERENCES

1. Anagnostopoluou S.C. and Tsekrekos A.E., (2017). The effect of financial leverage on real and accrual-based earnings management. *Accounting and Business Research*, 191-236, <https://doi.org/10.1080/00014788.2016.1204217>
2. Anderson T. & Zeghal D., (1994). The pricing of audit services: Further Evidence from the Canadian Market. *Accounting and Business Research*, Vol. 24, No. 94, 195-207, <https://doi.org/10.1080/00014788.1994.9729479>
3. Andrei D., Frideman H., & Ozel N.B., (2023). Economic uncertainty and investor attention. *Journal of Financial Economics*, Vol.149, 179-217, <https://doi.org/10.1016/j.jfineco.2023.05.003>
4. Arouri M., Estay C., Rault C., & Roubaud D., (2016). Economic Policy Uncertainty and Stock Markets: Long-Run Evidence from the US. *Finance Research Letters*, Vol. 18, 136-141, <https://doi.org/10.1016/j.frl.2016.04.011>
5. Arzu O., (2009). Good times or bad times? Investors' uncertainty and stock returns. *Review of Financial Studies*, Vol. 22, No. 11, 4377-4422, <http://dx.doi.org/hhn097>
6. Baker S., Bloom N., & Davis S.J., (2016). Measuring economic policy uncertainty. *The Quarterly Journal of Economics*, Vol.131, 1593-1636, <https://doi.org/10.1093/qje/qjw024>
7. Barth M.E., Landsman W.R., & Lang M.H., (2008). International Accounting Standards and Accounting

- Quality. *Journal of Accounting Research*, Vol.46, No.3, 467-498, <https://doi.org/10.1111/j.1475-679X.2008.00287.x>
8. Bermpei T., Kalyvas A.N., Neri L., & Russo A., (2021). Does economic policy uncertainty matter for financial reporting quality? Evidence from the United States. *Review of Quantitative Finance and Accounting*, Vol.58, No. 1, 795-845, <http://dx.doi.org/10.2139/ssrn.3423646>
  9. Bird R., & Yeung D., (2012). How do investors react under uncertainty? *Pacific-Basin Finance Journal*, Vol. 20, 310-327, <https://doi.org/10.1016/j.pacfin.2011.10.001>
  10. Boulton T.J. (2022). Economic Policy Uncertainty and International IPO Underpricing. *Journal of International Financial Markets, Institutions and Money*, Vol.81, 1-57, <http://dx.doi.org/10.2139/ssrn.4112290>
  11. Chauhan Y. & Jaiswall M., (2023). Economic policy uncertainty and incentive to smooth earnings. *International Review of Economics and Finance*, Vol.85, 93-106, <https://doi.org/10.1016/j.iref.2023.01.014>
  12. Che L., Hope O.K., & Langli J.C., (2020). How Big-4 Firms Improve Audit Quality. *Management Science*, Vol. 66, No.10, 4359-4919, <http://dx.doi.org/10.2139/ssrn.3364952>
  13. Connolly R., Stivers C., & Sun L., (2005). Stock Market Uncertainty and the Stock-Bond Return Relation. *Journal of Financial and Quantitative Analysis*, Vol.40, No.1, 161-194, <https://doi.org/10.1017/S0022109000001782>
  14. Dai L. & Ngo P., (2020). Political Uncertainty and Accounting Conservatorism. *European Accounting Review*, Vol.30, 277-307, <https://doi.org/10.1080/09638180.2020.1760117>
  15. Dechow P., Ge W., & Schrand C., (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and economics*, Vol. 50, No. 2-3, 344-401, <https://doi.org/10.1016/j.jacceco.2010.09.001>
  16. Dechow P.M. & Dichev I.D., (2002). The Quality of Accruals and Earnings: The Role of Accrual Estimation Errors. *The Accounting Review*, Vol.77, 35-59, <https://doi.org/10.2308/accr.2002.77.s-1.35>
  17. Dechow P.M., Sloan R.G., & Sweeney A., (1995). Detecting Earnings Management. *The Accounting Review*, Vol. 70, No. 2, 193-225.
  18. Dhole S., Liu L., Lobo G.J., & Mishra S., (2021). Economic policy uncertainty and financial statement comparability. *Journal of Accounting and Public Policy*, Vol.40, <https://doi.org/10.1016/j.jaccpubpol.2020.106800>
  19. Dzielinski, M. (2012). Measuring economic uncertainty and its impact on the stock market. *Finance Research Letters*, Vol. 9, No. 3, 167-175, <https://doi.org/10.1016/j.frl.2011.10.003>
  20. El Ghouli S., Guedhami O., Kim Y., & Yoon H.J., (2021). Policy Uncertainty and Accounting Quality. *The Accounting Review*, Vol.96, 233-260, <https://doi.org/10.2308/TAR-2018-0057>
  21. Ettredge M., Scholz S., Smith K.R., & Sun L., (2010). How Do Restatements Begin? Evidence of Earnings Management Preceding Restated Financial Reports. *Journal of Business Finance & Accounting*, Vol. 37, No. 3-4, 332-355, <https://doi.org/10.1111/j.1468-5957.2010.02199.x>
  22. Gonçalves T., Barros V., & Serra G., (2022). Political elections uncertainty and earnings management: Does firm size really matter? *Economic Letters*, Vol. 214, <https://doi.org/10.1016/j.econlet.2022.110438>
  23. Gonthier-Besacier N. & Schatt A., (2007). Determinants of audit fees for French quoted firms. *Managerial Auditing Journal*, Vol.22, No.2, 139-160, <https://doi.org/10.1108/02686900710718654>
  24. Hirshleifer D., Hou K., & Teoh S.H., (2009). Accruals, cash flows, and aggregate stock returns. *Journal of Financial Economics*. Vol. 91, 389-406, <https://doi.org/10.1016/j.jfineco.2007.11.009>
  25. Jain A., Jackson D., & Sakaki H., (2021). Political, economic, financial uncertainty, and real earnings. *Journal of Corporate Accounting and Finance*, Vol.32, 52-66, <https://doi.org/10.1002/jcaf.22485>
  26. Jengfang C., Rong-Ruey D., Cheng-Ta W., & Lin-Hui Y., (2019). Macroeconomic uncertainty and audit pricing. *Accounting Horizons*, Vol.33, No.2, 75-97, <https://doi.org/10.2308/acch-52423>
  27. Jiang L., Pittman J.A., & Saffar W., (2022). Policy Uncertainty and Textual Disclosure. *Accounting Horizons*, Vol.36, 113-131, <https://doi.org/10.2308/HORIZONS-2019-515>

28. Jin J.Y., Kanagaretnam K., Liu Y., & Lobo G.J., (2019). Economic policy uncertainty and bank earnings opacity. *Journal of Accounting and Public Policy*, Vol.38, 199-218, <https://doi.org/10.1016/j.jaccpubpol.2019.05.002>
29. Kothari S.P., Leone A.J., & Wasley C.E., (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, Vol. 39, No.1, 163-197, <https://doi.org/10.1016/j.jacceco.2004.11.002>
30. Liu L. & Z.hang T., (2015). Economic policy uncertainty and stock market volatility. *Finance Research Letters*, 1-7, <https://doi.org/10.1016/j.frl.2015.08.009>
31. Min Z., Haoran X., Lijing T., & Ye T., (2018). International evidence on economic policy uncertainty and asymmetric adjustment of audit pricing: Big 4 versus non-big 4 auditors. *Journal of Business Finance and Accounting*, Vol.45, No.5-6, 728-756, <https://doi.org/10.1111/jbfa.12299>
32. Nagar V., Schoenfeld J., & Wellman L., (2018). The Effect of Economic Policy Uncertainty on Investor Information Asymmetry and Management Disclosures. *Journal of Accounting and Economics*, Vol.67, 36-57, <https://doi.org/10.1016/j.jacceco.2018.08.011>
33. Peng Z., Jhonstone D., Christodoulou D., (2020). Asymmetric impact of earnings news on investor uncertainty. *Journal of Business Finance and Accounting*, Vol.47, 3-26, <https://doi.org/10.1111/jbfa.12428>
34. Shin J.E. (2019). Asymmetric Investor Reaction around Earnings Benchmark under Economic Uncertainty. *Asia-Pacific Journal of Financial Studies*, Vol.48, 98-122, <https://doi.org/10.1111/ajfs.12246>
35. Tsai I.C. (2017). The source of global stock market risk: A viewpoint of economic policy uncertainty. *Economic Modelling*, Vol.60, 122-131, <https://doi.org/10.1016/j.econmod.2016.09.002>
36. Walters D.J., Tannenbaum D., Ülkümen G., & Erner C., (2023). Investor Behavior Under Epistemic vs. Aleatory Uncertainty. *Management Science*, Vol.69, 2761-2777, <https://doi.org/10.1287/mnsc.2022.4489>
37. Yip R., Young D., & Rita W., (2012). Does Mandatory IFRS Adoption Improve Information Comparability? *The Accounting Review*, Vol.87, No.5, 1767-1789, <https://doi.org/10.2308/accr-50192>
38. Yongsuk Y. & Hongmin C., (2021). Economic policy uncertainty and audit effort: evidence from audit hours. *Managerial Auditing Journal*, Vol.36, No.4, 643-662, <https://doi.org/10.1108/MAJ-08-2020-2808>
39. Yongsuk Y. & Shin E.J., (2023). Macroeconomic Uncertainty, Audit Pricing, and Audit Effort: Evidence from Korea. *Korean Accounting Review*, Vol.48, No.3, 33-57, <https://doi.org/10.24056/KAR.2023.06.002>
40. Yung K. & Root A., (2019). Policy uncertainty and earnings management: International evidence. *Journal of Business Research*, Vol.100, 255-267, <https://doi.org/10.1016/j.jbusres.2019.03.058>