

## **Regional Analysis of Stock Returns Effect of Earnings Management and Corporate Tax Avoidance**

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*This study aims to investigate the relationship between earnings management, tax avoidance, and stock returns across different economic regions in the world. We used firm-level secondary data of selected listed firms from regions namely Europe, North America, Afro-Asia, Australia and South America, consisting of 39,490 non-financial listed firms spanning across 45 countries from 1995 to 2013. We employ comprehensive analysis using a two-step system GMM regression, with Windmeijer-corrected standard errors, small sample adjustment, and orthogonal deviation. The study finds that accounting information quality and tax avoidance influences stock returns, but the relationship varies across regions. The study's findings have practical implications for policymakers and market participants. The results highlight the importance of improving accounting standards and transparency to provide reliable financial information and support investor decision-making. Policymakers and market participants should consider regional variations in accounting practices and tax strategies when formulating policies and conducting investment analysis.*

*Keywords: accounting information quality, tax avoidance, stock return, earnings management, discretionary accruals, system generalized method of moments, transmission, Europe, North America, Afro-Asia, Australia, South-America*

## INTRODUCTION

Accounting information plays a crucial role in providing relevant information about an entity's financial, operational, and investment transactions to key stakeholders, facilitating their decision-making process (Lambert, Leuz, & Verrecchia, 2007). Investors and other stakeholders heavily rely on accounting information to make informed capital investment decisions. The quality of accounting information is paramount for stock markets to achieve efficiency, as stock prices should reflect all available market information (Lim & Brooks, 2011). Xu (2015) suggests that various micro-level indicators, such as earnings manipulation, tax avoidance, transfer pricing, and withholding of bad news, along with macroeconomic factors like inflation, discount rate, perceived stock risk, and expected earnings growth, have been identified in the literature as factors that can impact accounting information quality and stock market efficiency. This relationship has led researchers, including Nimalathasan and Vijitha (2014), to argue that the quality of accounting information influences stock returns. Dechow, Sloan, and Zha (2014) further emphasize the significance of accounting information by highlighting its ability to shape investor expectations of cash flows, which, in turn, affects stock prices.

The decision-making process of stock market participants is often influenced by stock prices. Therefore, understanding the factors that affect stock prices, such as earnings management and tax avoidance, is crucial. These factors have been extensively studied in the literature, both individually and jointly, to examine their impact on stock returns (Sikes & Verrecchia, 2020; Amidu, Coffie, & Acquah, 2019; Nugroho & Agustia, 2017; Jonathan & Tandean, 2016; Angahar & Malizu, 2015). However, the existing studies have produced mixed and inconclusive results, partly due to variations in the countries and continents where the studies were conducted. Moreover, some studies have attempted to provide more conclusive results by conducting global studies that aggregate data from multiple countries and firms without considering regional differences that could affect stock market activities. Bao and Lewellyn (2017) highlight this limitation and stress the need to investigate how these variables jointly affect stock returns at a regional or continental level.

To bridge this gap, the present study aims to examine the relationship between earnings management and tax avoidance on a regional level and how these factors influence stock returns. Sundvik (2017) found that firms in higher conformity jurisdictions tend to engage in more earnings management activities in anticipation of corporate tax rate cuts compared to firms in lower conformity jurisdictions. Desai and Dharmapala (2009c) analyzed the links between earnings management and tax avoidance and suggested a reconsideration of the dual reporting system and increased alignment of financial and tax accounting as a way to enhance corporate governance and taxation practices. Amidu, Coffie, and Acquah (2019) also found evidence of earnings manipulation aimed at aggressively reducing corporate tax liabilities in their study of sampled firms from 2015 to 2018.

Earnings management and tax avoidance are often intertwined, as both activities aim to report favorable earnings that may not accurately reflect the true financial position of the firm. Consequently, these activities reduce the inherent quality of accounting information (Wang & Chen, 2012). Previous research by Gallemore and Labro (2015) and Kim and Jang (2018) have established a statistically significant positive association between accounting information quality and tax avoidance, indicating that tax avoidance tends to align with lower accounting information quality.

In summary, this research aims to address the gaps in the literature by investigating the relationship between earnings management and accounting information quality, the impact of tax avoidance on accounting information quality, and the combined effect of earnings management and tax avoidance on stock returns, on a regional/continental level. By examining these research gaps, we can enhance our understanding of the interactions between managerial opportunistic activities, accounting information quality, and stock market outcomes.

## **THEORETICAL REVIEW**

Theoretical discussions surrounding the relationship between managerial opportunistic activities, accounting information quality, and stock market outcomes can be enriched by incorporating the Theory of Bad News Hoarding alongside the Agency Theory and Information Asymmetry Theory.

The Theory of Bad News Hoarding suggests that firms engaging in earnings management and tax avoidance activities may deliberately delay the release of unfavorable information to the market. By withholding negative news, firms aim to maintain the appearance of favorable financial performance and avoid immediate negative reactions from investors. This behavior can lead to a reduction in accounting information quality and distort stock market outcomes. Studies such as Kim and Zhang (2016) have explored the role of bad news hoarding in the relationship between tax avoidance, accounting information quality, and stock price crashes.

The Agency Theory highlights the conflicts of interest between shareholders (principals) and managers (agents) due to differing goals and asymmetric information. Earnings management and tax avoidance can be seen as mechanisms employed by managers to align their interests with shareholders, but such actions can compromise accounting information quality. Badertscher (2011) and Kim, Li, and Zhang (2011) emphasize the potential negative impact of earnings management and tax avoidance on accounting information quality within the context of the Agency Theory.

The Information Asymmetry Theory posits that disparities in information among market participants influence stock market outcomes. Earnings management and tax avoidance practices contribute to information asymmetry by concealing or distorting relevant information. Once hidden information becomes public, market participants may react negatively, resulting in reduced stock returns. Hutton, Marcus, and Tehranian (2009) and Kim and Zhang (2016) provide empirical evidence supporting the relationship between tax avoidance, accounting information quality, and stock price crashes within the framework of the Information Asymmetry Theory.

## **EMPIRICAL REVIEW**

Empirical studies have sought to investigate the regional effects of earnings management and tax avoidance on stock returns, as well as the regional transmission effect of earnings management through tax avoidance on stock returns.

In terms of the regional effects of earnings management on stock returns, Nugroho and Agustia (2017) conducted a study focusing on Indonesian firms and found a significant negative relationship between earnings management and stock returns in the regional context. Similarly, Ran, Fang, Luo, and Chan (2015) examined Chinese firms and reported a significant negative association between earnings management and stock returns. These findings highlight the importance of considering regional variations when examining the impact of earnings management on stock returns.

Regarding the regional effects of tax avoidance on stock returns, Gallemore and Labro (2015) explored the relationship using a global sample and found a significant positive association between tax avoidance and stock returns. Their study suggests that tax avoidance activities can increase firm value and subsequently enhance stock returns at the regional level.

The regional transmission effect of earnings management through tax avoidance on stock returns has been relatively underexplored. However, Bao and Lewellyn (2017) conducted a study that investigated the combined effect of earnings management and tax avoidance on stock returns, considering both firm-level characteristics and macro-level characteristics. Although their research was not explicitly focused on regional effects, it provides insights into the potential transmission mechanism between earnings management and tax avoidance, which can impact stock returns at different regional levels. Given the existing gaps in the literature, this study aims to contribute to the better understanding of the regional effects of earnings management and tax avoidance on stock returns, as well as the regional transmission effect of earnings management through tax avoidance.

## DATA SOURCE AND DESCRIPTION

This study utilizes firm-level secondary data from selected listed global firms in Europe, North America, Afro-Asia, Australia, and South America. The data is accessed from Data Stream's database and includes non-financial institutions from various industries such as healthcare, manufacturing, technology, basic materials, oil and gas, and telecommunications. Financial firms are excluded due to their different reporting requirements and special regulations. The dataset consists of 39,490 listed firms across 45 countries, spanning the period from 1995 to 2013. Data Stream is chosen as the data source because it provides access to economic time series data for over 162 markets globally, enabling insightful analysis.

## EMPIRICAL METHODS

This study employs a panel model to empirically test the relationship between earnings management, tax avoidance, and stock returns for each region from 1995 to 2013. Three main models are developed to examine the impact of earnings management and tax avoidance on stock returns. The first model analyzes the effects of earnings management on stock returns at a regional level. The second model examines the effects of tax avoidance on stock returns at a regional level. The third model investigates the regional transmission effect of earnings management through tax avoidance on stock returns.

### Estimation Technique

To estimate the models and control for potential biases, the study employs a Generalized Least Squares (GLS) approach based on a panel estimation technique. Specifically, the System Generalized Method of Moments (System GMM) estimator is used to address the dynamic panel properties of the data, such as endogeneity and potential lagged effects. The System GMM estimator is well-suited for dynamic panel data analysis as it efficiently addresses endogeneity and controls for unobserved heterogeneity. It utilizes the first-differenced and lagged-differenced variables to eliminate the unobserved fixed effects and reduces the endogeneity issues. By incorporating lagged variables, it captures the dynamic nature of the relationships over time. The three models are applied separately to each of the five regions.

$$SR_{it,R} = \alpha_0 + \beta_1 SR_{it-1,R} + \beta_2 EM_{it,R} + \sum_{j=6}^k \alpha_j x_{ij} + \varepsilon_{it,R} \quad (1)$$

$$SR_{it,R} = \alpha_0 + \beta_1 SR_{it-1,R} + \beta_2 TA_{it,R} + \sum_{j=6}^k \alpha_j x_{ij} + \varepsilon_{it,R} \quad (2)$$

$$SR_{it,R} = \alpha + \beta SR_{it-1,R} + \beta TA_{it,R} + \beta EM_{it,R} + \varphi(TA_{it,R} * EM_{it,R}) + \sum_{j=6}^k \alpha_j x_{ij} + \varepsilon_{it,R} \quad (3)$$

where  $\sum_{j=6}^k \alpha_j x_{ij}$  is the sum of k control variables.  $SR_{it}$  represents stock return,  $SR_{it-1}$  stands for the lag of stock return,  $EM_{it}$  for earnings management while  $TA_{it}$  for tax avoidance per firm, year and region.

### Variable Measurement

#### Stock Returns

Stock returns (SR) are the dependent variable in this study, representing the returns generated by investors from their investments in stocks. The measurement of stock returns involves taking the logarithm of the current year's stock price divided by the previous year's stock price. The formula used is:

$$SR_{it} = \ln \left( \frac{SP_{it}}{SP_{it-1}} \right) \quad (4)$$

Here, the  $SR_{it}$  stands for the stock returns of the firm in year t, while  $SP_{it}$  represents the current year (t)'s stock price and  $SP_{it-1}$  is the stock price of firm  $i$  in year  $t - 1$ .

The log return is superior to normal stock price since it effectively captures the compounding effect for stocks, and has an additive property for time-series and cross-section perspectives. It is always assumed to follow a log normal distribution which is used for statistical evaluation (Zhang, Ma, & Zhu, 2019). With capital investment being a long run activity with huge investments made in large quantities and expressed in small percentages, the logged return is even preferred mostly in panel and time series data (Adigwe, Nwanna, & Ananwude, 2015).

### *Earnings Management*

Earnings management is measured using the discretionary accruals model, specifically the model developed by Pae (2005). Discretionary accruals represent the difference between total accruals and non-discretionary accruals. Total accruals are calculated as the change in current assets minus the change in cash, minus the change in current liabilities plus the change in debts in current liabilities, minus the depreciation expense. The model developed by Pae (2005) is employed to analyze discretionary accruals, which serve as a proxy for earnings management.

This is represented below as;

$$DA_{it} = TA_{it} - NDA_{it} \quad (5)$$

Total Accrual can also be defined as;

$$TA_{it} = (\Delta CA_{it} - \Delta Cash_{it}) - (\Delta CL_{it} - \Delta CD_{it}) - DEP_{it} \quad (6)$$

where,  $TA_{it}$  is the total accrual for firm  $i$  at time  $t$  while  $\Delta CA_{it}$  stands for the change in current assets and  $\Delta Cash_{it}$  (changes in cash and cash equivalents). Changes in current liabilities as well as changes in debts in current liabilities are represented as  $\Delta CL_{it}$  and  $\Delta CD_{it}$  respectively while  $DEP_{it}$  represents depreciation expense.

$$\frac{TA_{it}}{A_{it-1}} = \alpha \left( \frac{1}{A_{it-1}} \right) + \beta_1 \left( \frac{\Delta REV_{it}}{A_{it-1}} \right) + \beta_2 \left( \frac{PPE_{it}}{A_{it-1}} \right) + \beta_3 \left( \frac{CFO_{it}}{A_{it-1}} \right) + \beta_4 \left( \frac{CFO_{it-1}}{A_{it-1}} \right) + \beta_5 \left( \frac{TA_{it-1}}{A_{it-1}} \right) + \varepsilon_{it} \quad (7)$$

Here  $A_{it-1}$  stands for the total asset opening balance,  $\Delta REV_{it}$  represents the change in revenue,  $PPE_{it}$  as property, plant and equipment, while  $CFO_{it}$  and  $CFO_{it-1}$  stand for cash flow balance for the current and previous periods respectively.  $(TA_{it-1})$  also stands for lagged total accrual. Equation (4) is the main regression model with equation (3) just being regressed into equation (4). The fitted model is the non-discretionary accruals ( $NDA_{it}$ ) component of equation (2). The discretionary accruals (DA) is then used to represent earnings management.

### *Tax Avoidance*

Tax avoidance is measured as the difference between the statutory tax rate (STR) and the effective tax rate (ETR) for each year. The effective tax rate is calculated as the corporate tax expense minus the deferred tax expense divided by the net profit before tax. This measurement approach allows for capturing the difference between the taxes that companies are legally obligated to pay and the actual taxes they effectively pay, providing an indication of tax avoidance behavior. This study therefore follows Yorke, Amidu, & Agyemin-Boateng (2016) by measuring tax avoidance as the difference between the statutory tax rate (STR) and the effective tax rates (ETR).

$$ETR = \frac{CTE - DTE}{PBT} \quad (8)$$

where  $ETR$  stands for effective tax rate,  $CTE$  stands for corporate tax expense,  $DTE$  represents the deferred tax expense while  $PBT$  represents the net profit before tax.

### Descriptive Statistics and Preliminary Analysis

The descriptive statistics employed in this study are presented in tables 1, 2 and 3. The firm-specific variables and country-level characteristics, averaged by firms from 1995 to 2013, are presented in Tables 2 and 3 respectively. Regarding stock returns, it can be observed that firms in Latin America reported the highest average stock returns at 8.8%, followed by Afro-Asia with 0.9%. In contrast, firms from Europe (-4.9%), Australia (-5.3%), and North America (-11%) experienced negative average returns. These findings suggest that investors in North America faced losses of up to 11% on their investments, while those in Latin America achieved returns of up to 9% above their investments.

When examining the average discretionary accruals, which represent accounting information quality, Latin American firms exhibited the lowest discretionary accruals at -49.4%, indicating that they engage in less earnings management and report higher-quality accounting information. This finding aligns with the study by Chen, Ge, Louis, & Zolotoy (2019). On the other hand, Afro-Asian firms displayed positive discretionary accruals at 14.4%, implying higher earnings management and potentially lower accounting information quality. This finding contradicts the research by Adigwe, Nwanna, & Ananwude (2015). However, it is possible that Afro-Asian firms deliberately engage in earnings management to portray stronger firm performance, particularly when managerial compensation is tied to performance.

In terms of tax avoidance, which represents the difference between statutory and effective tax rates paid by firms, Latin American firms exhibited the highest average at 0.587, indicating that they engage in more tax avoidance by paying taxes below their statutory tax rates. In contrast, Australian firms had the lowest average at -0.107, implying that they end up paying more taxes than required by their statutory obligations. This suggests that Latin American firms may have identified loopholes within their tax jurisdiction, enabling them to exploit them for tax avoidance, whereas the Australian tax regime may be more stringent, limiting firms' ability to avoid taxes.

Regarding firm size, European firms displayed the largest average size at \$1,856,923.98, indicating that they invest more in assets compared to firms in other regions. Conversely, Australian firms had the smallest average size at \$388,437.60. Overall, these findings shed light on the variations in firm-specific variables and country-level characteristics across different regions, highlighting differences in stock returns, accounting information quality, tax avoidance, and firm size.

**TABLE 1**  
**SUMMARY STATISTICS OF FIRM SPECIFIC VARIABLES**

<b>Country</b>	<b>Stock Return</b>	<b>Accounting Information Quality</b>	<b>Tax Avoidance</b>	<b>Size (\$'000)</b>
<b>Latin America</b>				
Argentina	0.105	-0.326	3.039	740,912.20
Brazil	0.099	-1.617	-0.819	2,135,976.00
Chile	0.049	-0.217	0.545	826,379.60
Colombia	0.115	-0.209	0.160	1,332,255.00
Mexico	0.054	-0.270	-0.185	2,195,723.00
Peru	0.104	-0.326	0.780	317,770.60
<b>Average</b>	<b>0.088</b>	<b>-0.494</b>	<b>0.587</b>	<b>1,258,169.40</b>

Country	Stock Return	Accounting Information Quality	Tax Avoidance	Size (\$'000)
<b>Australia</b>				
Australia	-0.088	0.102	-0.318	404,530.10
New Zealand	-0.019	0.165	0.104	372,345.10
<b>Average</b>	<b>-0.053</b>	<b>0.133</b>	<b>-0.107</b>	<b>388,437.60</b>
<b>Europe</b>				
Austria	0.000	-0.313	-0.157	1,188,280.00
Belgium	-0.047	-0.234	-0.085	1,676,138.00
Czech Republic	-0.011	-0.283	5.735	621,406.40
Denmark	-0.046	-0.189	0.294	929,198.10
Finland	-0.029	-0.250	0.237	1,300,334.00
France	-0.049	-0.066	0.119	2,672,888.00
Germany	-0.071	-0.195	0.612	2,502,277.00
Greece	-0.130	-0.165	0.109	328,271.40
Hungary	-0.081	-0.265	0.088	785,508.10
Ireland	-0.073	-0.414	0.583	1,023,652.00
Italy	-0.108	-0.214	1.496	3,051,745.00
Netherlands	-0.059	-0.262	0.080	4,537,542.00
Norway	-0.109	-0.482	0.315	1,253,582.00
Poland	-0.047	-0.140	0.198	273,858.10
Portugal	-0.079	-0.302	-0.136	1,286,644.00
Russia	0.052	-0.236	0.569	6,366,599.00
Spain	-0.042	-0.228	-0.423	3,742,729.00
Sweden	-0.111	-0.108	0.165	818,220.10
Switzerland	-0.012	-0.241	0.747	2,587,375.00
Turkey	0.134	-0.183	0.028	613,996.40
United Kingdom	-0.104	-0.163	0.087	1,435,160.00
<b>Average</b>	<b>-0.049</b>	<b>-0.235</b>	<b>0.508</b>	<b>1,856,923.98</b>

Country	Stock Return	Accounting Information Quality	Tax Avoidance	Size (\$'000)
<b>Afro-Asia</b>				
China	0.033	0.218	0.101	894,210.10
Hong Kong	-0.042	-2.060	0.335	854,925.70
India	0.011	0.549	1.179	364,113.40
Indonesia	0.092	-0.292	0.393	378,969.10
Israel	-0.051	-1.079	1.172	623,723.10
Japan	-0.056	-0.187	-0.119	1,613,857.00
Malaysia	-0.041	-0.051	0.026	291,207.20
Pakistan	0.106	5.584	0.226	154,678.80
Philippines	0.080	0.125	-0.815	479,423.30
Singapore	-0.047	-0.068	0.186	433,511.60
South Africa	-0.025	-0.137	1.020	641,476.60
South Korea	-0.002	-0.200	0.404	925,176.60
Taiwan	-0.026	-0.218	0.575	440,541.50
Thailand	0.089	-0.168	0.303	337,296.60
<b>Average</b>	<b>0.009</b>	<b>0.144</b>	<b>0.356</b>	<b>602,365.04</b>
<b>North America</b>				
Canada	-0.113	-0.082	0.316	495,149.70
United States	-0.106	-0.306	0.313	2,330,297.00
<b>Average</b>	<b>-0.110</b>	<b>-0.194</b>	<b>0.314</b>	<b>1,412,723.35</b>

Table 1 presents average values on the part of the country-firm specific variables used in the research.

In terms of leverage, represented by the debt-to-equity ratio, Afro-Asian firms have the highest average at 90.6%, while European firms have the lowest average at 40.4%. This suggests that Afro-Asian firms rely more heavily on debt financing compared to firms in other regions. The higher leverage ratio in Afro-Asia may be driven by managers taking advantage of tax shields associated with debt financing to reduce the cost of debt (Modigliani & Miller, 1963). However, it also implies increased financial risk and the need for higher returns demanded by shareholders. Many jurisdictions adopt the principle of thin capitalization to limit the tax shield benefits to a certain extent, typically capping it at one-third of equity contribution.

In terms of liquidity, measured by the ratio of current assets to current liabilities, European firms have the highest average at 11.689, while Latin American firms have the lowest average at 2.889. This indicates that European firms maintain a higher level of liquid assets, possibly due to lower interest rates compared to Afro-Asian and Latin American firms. However, this exposes European firms to higher financial risk. In terms of asset tangibility, Latin American firms have the highest average at 0.424, while European firms have the lowest average at 0.308. This suggests that Latin American firms prefer to invest in tangible non-current assets rather than maintaining a high level of liquid assets.

Regarding growth potential, represented by the change in revenue from the previous year, Latin American firms have the highest average at \$37.6 million, followed by Afro-Asian firms at \$33.9 million, while North American firms have the lowest average at \$0.08 million. This indicates that Latin American and Afro-Asian firms demonstrate significant growth potential, as their sales revenue continues to increase year after year. Notably, firms in Colombia and Indonesia exhibit substantial mean growth potential, with average revenue growth of \$192 million and \$381 million, respectively.



**TABLE 2**  
**DESCRIPTIVE STATISTICS OF FIRM SPECIFIC VARIABLES: MEANS FROM 1995 – 2013**

Country	Leverage	Liquidity	Asset Tangibility	Growth Potential
<b>Latin America</b>				
Argentina	0.720	2.538	0.407	258,744.50
Brazil	0.566	1.727	0.371	348,762.60
Chile	0.686	6.717	0.462	30,700,000.00
Colombia	0.187	2.005	0.390	192,000,000.00
Mexico	0.528	2.001	0.455	2,225,411.00
Peru	0.391	2.345	0.463	72,835.77
<b>Average</b>	<b>0.513</b>	<b>2.889</b>	<b>0.424</b>	<b>37,600,958.98</b>
<b>Australia</b>				
Australia	0.393	10.713	0.341	29,874.98
New Zealand	0.454	2.661	0.367	19,359.13
<b>Average</b>	<b>0.423</b>	<b>6.687</b>	<b>0.354</b>	<b>24,617.06</b>
<b>Europe</b>				
Austria	-3.334	2.238	0.311	81,234.81
Belgium	0.182	2.376	0.269	61,417.04
Czech Republic	0.335	6.823	0.517	321,706.40
Denmark	0.345	2.498	0.302	260,542.30
Finland	0.625	1.857	0.280	41,179.92
France	0.469	1.911	0.172	109,742.40
Germany	1.483	4.169	0.229	73,386.52
Greece	0.388	2.009	0.337	14,239.88
Hungary	0.230	3.608	0.386	15,800,000.00
Ireland	1.413	2.077	0.324	38,845.71
Italy	0.637	1.639	0.229	96,197.15
Netherlands	0.592	1.776	0.247	223,249.60
Norway	0.848	3.450	0.343	390,266.30
Poland	0.284	2.581	0.326	98,837.65
Portugal	1.152	2.539	0.351	48,007.87
Russia	0.623	191.077	0.426	18,300,000.00
Spain	0.636	1.508	0.335	157,288.30
Sweden	0.414	2.820	0.179	271,417.20
Switzerland	0.431	2.451	0.312	85,292.32
Turkey	0.223	2.614	0.339	121,269.60
United Kingdom	0.512	3.442	0.261	55,935.62
<b>Average</b>	<b>0.404</b>	<b>11.689</b>	<b>0.308</b>	<b>1,745,240.79</b>

Country	Leverage	Liquidity	Asset Tangibility	Growth Potential
<b>Afro-Asia</b>				
China	0.174	2.251	0.320	826,713.90
Hong Kong	0.364	3.008	0.262	603,302.90
India	0.652	6.834	0.367	2,484,730.00
Indonesia	2.639	3.577	0.409	381,000,000.00
Israel	0.872	15.036	0.232	112,664.50
Japan	0.538	2.163	0.295	2,995,807.00
Malaysia	0.295	3.047	0.372	42,727.62
Pakistan	1.840	1.430	0.477	1,864,887.00
Philippines	1.289	14.850	0.392	1,583,301.00
Singapore	0.232	2.494	0.306	1,484,128.00
South Africa	0.609	3.035	0.284	556,201.90
South Korea	0.534	2.588	0.326	79,300,000.00
Taiwan	0.198	2.673	0.317	1,173,346.00
Thailand	2.451	2.350	0.403	1,234,456.00
<b>Average</b>	<b>0.906</b>	<b>4.667</b>	<b>0.340</b>	<b>33,947,304.70</b>
<b>North America</b>				
Canada	0.163	8.139	0.442	32,519.08
United States	0.725	4.765	0.247	143,815.90
<b>Average</b>	<b>0.444</b>	<b>6.452</b>	<b>0.344</b>	<b>88,167.49</b>

Table 2 presents average values on the part of the country-firm specific variables used in the research.

Table 3 provides the average values of country-specific variables used in this study, which capture the macroeconomic characteristics across the five regions. The variables examined include GDP Growth, Inflation, Interest Rate, and Exchange Rate. In terms of GDP Growth, representing overall economic growth, the Australian region exhibited the highest average growth at 3.496, while Latin America recorded the lowest GDP growth at 2.628.

Looking at Interest Rates, which reflect the cost of borrowing in each country, North American countries had the lowest average interest rates over the 18-year period, with an average of 2.792%. On the other hand, Latin America had the highest average interest rate of 13.722%. Notably, Brazil stood out within the region, with a significantly higher average interest rate of 42.465%, contrasting with the average rates of other countries in the region.

**TABLE 3**  
**DESCRIPTIVE STATISTICS OF COUNTRY-SPECIFIC VARIABLES:**  
**MEANS FROM 1995 – 2013**

Country	GDP Growth	Inflation	Exchange Rate	Interest Rate
<b>Latin America</b>				
Argentina	3.130	2.882		2.474
Brazil	2.873	2.196	78.358	42.465
Chile	3.165	2.274	96.649	5.123
Colombia	2.375	2.397	90.901	9.123
Mexico	3.007	2.296	103.461	3.777
Peru	1.218	0.602		19.373
<b>Average</b>	<b>2.628</b>	<b>2.108</b>	<b>92.342</b>	<b>13.722</b>
<b>Australia</b>				
Australia	3.036	2.770	89.668	3.783
New Zealand	3.957	3.567	96.823	4.447
<b>Average</b>	<b>3.496</b>	<b>3.169</b>	<b>93.246</b>	<b>4.115</b>
<b>Europe</b>				
Austria	3.165	2.739	100.748	3.949
Belgium	4.584	2.134	98.407	6.256
Czech Republic	2.556	2.749	74.037	3.940
Denmark	2.478	2.556	96.953	5.963
Finland	2.959	3.088	102.089	2.910
France	3.392	3.278	100.176	5.102
Germany	4.191	4.207	102.997	5.980
Greece	2.900	3.147	92.923	7.292
Hungary	4.202	3.233	87.796	4.586
Ireland	3.089	11.059	95.712	2.243
Italy	7.286	6.700	98.362	4.156
Netherlands	3.231	3.054	97.963	2.106
Norway	3.406	3.349	95.682	2.125
Poland	2.510	2.618	96.367	7.810
Portugal	1.629	1.284	97.167	5.632
Russia	2.523	7.683	91.640	-1.409
Spain	2.297	2.916	93.043	4.588
Sweden	4.394	2.089	105.763	4.060
Switzerland	2.132	2.231	95.680	2.909
Turkey	3.913	1.765		
United Kingdom	3.615	2.978	111.062	1.709
<b>Average</b>	<b>3.355</b>	<b>3.565</b>	<b>96.728</b>	<b>4.095</b>

Country	GDP Growth	Inflation	Exchange Rate	Interest Rate
<b>Afro-Asia</b>				
China	2.916	2.349	97.210	1.890
Hong Kong	4.569	3.572	0	5.730
India	3.215	3.198	0	4.282
Indonesia	6.652	2.899	0	3.588
Israel	2.890	3.761	95.959	4.316
Japan	3.514	3.494	101.220	2.898
Malaysia	3.170	3.854	98.761	2.438
Pakistan	3.144	3.050	100.471	0
Philippines	3.513	2.659	94.505	4.297
Singapore	2.360	2.844	98.605	4.420
South Africa	2.647	2.507	92.067	5.863
South Korea	2.948	2.393	0	4.264
Taiwan	2.338	1.798	0	0
Thailand	3.549	2.260	0	4.342
<b>Average</b>	<b>3.387</b>	<b>2.903</b>	<b>97.350</b>	<b>4.027</b>
<b>North America</b>				
Canada	3.563	2.335	91.521	2.058
United States	2.194	1.601	107.208	3.527
<b>Average</b>	<b>2.879</b>	<b>1.968</b>	<b>99.365</b>	<b>2.792</b>

Table 3 presents average values for the country-specific variables used in the research.

In terms of Inflation, which measures the increase in prices of goods and services, European countries exhibited the highest price increments, with an average inflation rate of 3.565%. Conversely, North American countries had the lowest average inflation rate at 1.968%. Regarding Exchange Rates, the average rates remained relatively stable, ranging between 92.342 and 99.365. North America had the highest average exchange rate at 99.365, indicating stronger currencies within the region. In contrast, Latin America had the lowest average exchange rate at 92.342.

## RESULTS

This study employs a panel model to empirically test the relationship between earnings management, tax avoidance, and stock returns for each region from 1995 to 2013. Table 4 provides insights into the differences in earnings and cash flows persistence across regions. The coefficient of the lag of earnings is negative and significant for all continents except Afro-Asia, where it is positive but insignificant at the 1% level. European firms exhibit the highest earnings persistence, with a \$1 increase in the previous year's earnings resulting in a \$0.0992 increase in the current year's earnings. In contrast, North American firms demonstrate the lowest persistence, as a \$1 increase in the previous year's earnings leads to a \$2.575 decrease in the current year's earnings. Among cash flows, Australian firms show non-persistence with a negative coefficient of -0.0076. Latin American, European, Afro-Asian, and North American firms exhibit positive coefficients for cash flows, with Latin American firms significant at the 1% level and European firms significant at the 10% level. Overall, cash flows demonstrate greater persistence than earnings, with only Australia experiencing non-persistence in cash flows, while European and Afro-Asian firms exhibit persistent earnings. These findings align with previous research highlighting the higher predictability of

cash flows in assessing future financial performance compared to operational earnings (Leal, 2017; Dechow & Dichev, 2002).

**TABLE 4**  
**REGIONAL EARNINGS AND CASH FLOWS PERSISTENCE**

Variables	Dependent Variable: Earnings				
	Latin America	Australia	Europe	Afro-Asia	North America
Lag of Earnings	-1.752 (2.089)	-0.622 (0.976)	0.0992 (0.142)	0.00228 (0.00225)	-2.575 (5.527)
Constant	-0.499 (0.616)	-0.573* (0.299)	0.0111 (0.0528)	0.0364*** (0.00232)	-2.635 (1.71)
Observations	11,143	20,113	94,366	205,032	91,137
Number of id	977	2,185	9,072	18,370	8,964
No. of instruments	39	39	39	39	39
AB2	-0.707	1.255	1.025	-1.566	0.2
Hansen's Test	35.54	33.2	25.42	74.39	13.31
F-test	0.704	13.14	1.59	315.1	6.035
Variables	Dependent Variable: Operational Cash Flows				
	Latin America	Australia	Europe	Afro-Asia	North America
Lag of Cash Flows	0.113 (0.255)	-0.0076 (0.676)	0.181 (0.22)	0.0587 (0.423)	0.318 (0.357)
Constant	-0.171* (0.0947)	-0.168 (0.28)	-0.280*** (0.101)	-0.114 (0.109)	-0.0637 (0.0448)
Observations	9,852	18,351	83,819	179,471	79,864
Number of id	973	2,174	9,012	18,264	8,922
No. of instruments	4	4	4	4	4
AB2	-1.092	1.446	-0.937	-0.483	0.437
Hansen's Test	2.965	1.013	3.421	0.0339	0.162
F-test	8.313	0.363	9.197	20.3	8.242

Table 4 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation. **Lag of Earnings** and **Lag of Cash Flow** represents the first lags of the response variables. **Stock return** is measured by the natural log of stock prices of firms within the country. The standard errors are in parentheses; \*\*\*, \*\* and \* which indicate statistical significance at 1%, 5% and 10% respectively. The diagnostic tests; (1) number of observations, (2) Number of id, (3) The instrument count, (4) Arellano-Bond (AB2) test for order serial correlations in residuals, (5) The Hansen test for over identifying restrictions with the null hypothesis of exogenous instruments, (6) F-test for joint significance of instruments.

**TABLE 5**  
**REGIONAL CONSERVATISM**

Variables	Dependent Variable: Change in Net Income				
	Latin America	Australia	Europe	Afro-Asia	North America
$D\Delta NI_{it-1}(\alpha_1)$	-1.699700 (1.46360)	2.006210 (1.11030)	6.02900*** (1.70250)	-6.26010 (4.6241)	4.817000* (2.61510)
$\Delta NI_{it-1}(\alpha_2)$	0.03432*** (4.74E-3)	0.16948 (0.15377)	2.41E-3 (3.32E-5)	0.03876 (0.02151)	-0.001449 (0.04690)
$D\Delta NI_{it-1}$ $* \Delta NI_{it-1}(\alpha_3)$	-0.28205** (0.05318)	-0.17200*** (0.26200)	1.75E-6*** (2.08E-5)	-0.04013 (0.06230)	0.01043 (0.00228)
Constant	4.57100 (5.02100)	-1.725800* (0.56460)	30,942 (0.41764)	-10,440 (2.69150)	16,176 (1.5136)
$\alpha_2 + \alpha_3$	-0.24773	0.34148	4.16E-5	-0.00137	0.008981
Observations	10,964	19,544	93,469	202,975	92,329
Number of id	976	2,182	9,067	18,363	8,997
No. of instruments.	38	38	38	38	38
AB2	-0.0153	-0.553	0.703	0.639	0.925
Hansen's Test	336.9	73.2	52.54	28.69	57.78
F-test	3.55491***	5.924***	6.350***	0.561	1.948
Wald Test	1.79	5.88***	14.53***	0.19	0.53

Table 5 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation. The change in net income is the dependent variable.  $D\Delta NI_{it-1}(\alpha_1)$  is a dummy variable for negative net income which is represented by 1 and 0 otherwise,  $\Delta NI_{it-1}$  is the lag of change in net income while  $D\Delta NI_{it-1} * \Delta NI_{it-1}$  is the interaction between the two. The standard errors are in parentheses; \*\*\*, \*\* and \* which indicate statistical significance at 1%, 5% and 10% respectively. The diagnostic tests; (1) number of observations, (2) Number of id, (3) The instrument count, (4) Arellano-Bond (AB2) test for order serial correlations in residuals, (5) The Hansen test for over identifying restrictions with the null hypothesis of exogenous instruments, (6) F-test for joint significance of instruments.

In Table 5, it is evident that all regions, except Europe and Afro-Asia, exhibit accounting conservatism based on the results. The values of  $(\alpha_2 + \alpha_3)$  for these continents are negative, suggesting a practice of recognizing bad news more promptly than good news. Specifically, North and Latin American firms demonstrate a high degree of conservatism. This implies that negative developments are acknowledged quickly and lead to subsequent improvements, as positive outcomes eventually prevail. Additionally, the results of the Wald test highlight that the combined effect of  $(\alpha_2 + \alpha_3)$  is statistically significant in Australia and Europe, with coefficients of 5.88\*\*\* and 14.53\*\*\*, respectively. The significant finding in Australia aligns with the findings of Paulo, Martins & Girao (2014), providing further support for the prevalence of conservatism in this region.

In terms of how tax avoidance affects accounting information quality on the regional level, the results from table 6 shows that all the relationships are positive and insignificant except for North America which had a positive and a significant co-efficient. This indicates that firms which engage in tax avoidance across all continents are very likely to engage in earnings management which eventually reduces the quality in their reported earnings. The results from table 6 also shows a positive relationship between accounting information quality and its lag for all continents. This indicates that the previous values of AIQ in the

regions are positively associated with the current values, implying that all firms engage in earnings management which eventually reduces the embedded level of quality in their accounting information.

**TABLE 6**  
**REGIONAL EFFECT OF TAX AVOIDANCE ON ACCOUNTING INFORMATION QUALITY**

Variables	Accounting Information Quality				
	Latin America	Australia	Europe	Afro-Asia	North America
Lag of AIQ	0.140** (0.0543)	0.342*** (0.047)	0.528*** (0.0271)	0.371*** (0.0211)	0.264*** (0.0228)
Tax Avoidance	0.0156 (0.0214)	0.0396 (0.0278)	0.0400*** (0.0131)	-0.0413*** (0.00829)	0.0620*** (0.0162)
Size	-7.72e-08*** (1.81E-08)	-4.81e-08*** (1.55E-08)	-1.40E-08 (9.29E-09)	2.89E-09 (4.14E-09)	-2.31e-08** (1.01E-08)
Leverage	0.0923** (0.0447)	-0.0716** (0.0336)	0.0493* (0.0259)	0.0792*** (0.0144)	-0.163*** (0.026)
Liquidity	-0.0126 (0.017)	0.0310*** (0.00612)	-0.00451 (0.00839)	-0.00026 (0.00565)	0.0355*** (0.00564)
Asset Tangibility	-0.425*** (0.0647)	-0.271*** (0.0423)	-0.353*** (0.0261)	-0.414*** (0.0275)	-0.320*** (0.0224)
Growth Potential	1.73e-08** (7.79E-09)	5.97E-08 (5.23E-08)	3.78e-08*** (9.52E-09)	9.64E-11 (1.91E-09)	-2.04E-08 (1.64E-08)
Inflation	-0.00211** (0.00102)	-0.00135 (0.00163)	0.00425*** (0.0007)	-0.00034 (0.0003)	-0.00017 (0.0007)
GDP Growth	0.00818*** (0.00255)	-0.00101 (0.00156)	0.00690*** (0.00111)	0.00307*** (0.00048)	0.00601*** (0.00106)
Constant	-0.068 (0.0449)	-0.103*** (0.0228)	-0.0639*** (0.0217)	-0.0346* (0.0177)	-0.127*** (0.0156)
Observations	6,800	17,212	69,116	158,289	67,493
No. of instruments.	97	97	97	97	97
AB2	-7.741	-5.577	-15.93	-32.09	-16.2
Hansen's Test	163.4	180.4	416.2	1083	332.6
F-test	745.9	1,054	11,000	19,127	2,442

Table 6 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimates. **Accounting Information Quality** is measured by discretionary accruals, an Earnings Management measure. **Tax Avoidance** is the statutory tax rate less effective tax rate. The **Size** is also the average of a firm's total assets in US dollars. **Leverage** is a firm's ratio of debt to equity while **Liquidity** is also a ratio of current assets to current liabilities. **Asset Tangibility** is a ratio of total tangible non-current assets (PPE) to total assets while the **Growth Potential** represents the change in revenue of a firm over a two year period. **GDP Growth** is the annual economic growth rate while **Inflation** is the annual consumer price index. **Interest rate** is also the annual cost of borrowing. The standard errors are in parentheses; \*\*\*, \*\* and \* which indicate statistical significance at 1%, 5% and 10% respectively. The diagnostic tests; (1) number of observations, (2) Number of id, (3) The instrument count, (4) Arellano-Bond (AB2) test for order serial correlations in residuals, (5) The Hansen test for over identifying restrictions with the null hypothesis of exogenous instruments, (6) F-test for joint significance of instruments.

Asset tangibility, on the other hand, exhibits a significant negative coefficient for all continents. This suggests that firms with a higher proportion of tangible assets are more likely to engage in earnings management, leading to a decrease in the quality of reported earnings. This finding aligns with previous research by Kim, Lisic & Pevzner (2010) and Xiong (2016) that also observed a negative relationship

between asset tangibility and accounting information quality. Furthermore, the results from the table indicate a negative impact of inflation on earnings management across all continents. This implies that during periods of higher inflation and interest rates, investors tend to withdraw their investments from shares and seek alternative investment opportunities. As a result, corporations may resort to managing their earnings to present a stronger performance and discourage investors from withdrawing their investments. Regarding GDP growth, the results from table 6 show positive coefficients for all continents except Australia. This suggests that firms in developed continents (Australia, Europe, and North America) tend to engage in more earnings management despite the higher levels of public, media, and regulatory scrutiny, ultimately leading to a decrease in the quality of their accounting information.

The dataset used in this study consisted of firm-wide observations across all the different regions of this study. These regions are Latin America, Australia, Europe, Afro-Asia and North America. This has facilitated the conduct of further analysis on the regional stock return effect of accounting information and tax avoidance presented in tables 7, 8, 9, 10 and 11. Table 7 presents findings on the impact of tax avoidance and accounting information quality on stock returns in Latin America. The lag of stock returns demonstrates a positive association with stock returns in the presence of earnings management and a negative association when tax avoidance is present. This suggests a lack of persistence, indicating that past stock performance does not influence current performance when tax avoidance is involved. This finding aligns with the research of Pimentel & de Aguiar (2012), suggesting that investors in Latin America can use past stock performance as an indicator of future performance.

The analysis also reveals a negative relationship between accounting information quality and stock returns. When firms in Latin America engage in earnings management, reducing the quality of their earnings, it leads to a decline in stock returns. Similarly, tax avoidance is found to negatively impact stock returns in Latin America. This finding is consistent with the study by Chen, Ge, Louis, & Zolotoy (2019), indicating that when news about tax avoidance emerges, investors react by reallocating their investments, resulting in lower stock returns. Furthermore, the study finds that leverage and asset tangibility have negative effects on stock returns when considering both tax avoidance and accounting information quality. Additionally, size and liquidity show a negative association with stock returns when controlling for earnings management and tax avoidance. These results provide insights into the relationship between tax avoidance, accounting information quality, and stock returns in Latin America.



**TABLE 7**  
**STOCK RETURN EFFECT OF ACCOUNTING INFORMATION AND TAX AVOIDANCE IN**  
**LATIN AMERICA**

Variables	Stock Return (1)	Stock Return (2)
Lag of Stock Return	0.0376 (0.0872)	-0.0798 (0.107)
Accounting Information Quality	-5.314* (2.75)	
Tax Avoidance		-8.40E-08 (3.97E-07)
Size	2.13E-07 (3.60E-07)	0.709 (2.101)
Leverage	-0.111 (1.468)	-0.701 (0.557)
Liquidity	-0.125 (0.34)	-6.156 (5.186)
Asset Tangibility	-1.077 (1.159)	-5.77E-08 (8.50E-08)
Growth Potential	1.29E-08 (4.13E-08)	0.0501*** (0.016)
Inflation	-0.0510*** (0.00894)	-0.0711 (0.0539)
GDP Growth	0.00185 (0.0429)	3.567 (2.521)
Constant	-0.807 (1.272)	2.917 (2.249)
Observations	3,591	3,361
No. of instruments.	11	11
AB2	-1.886	-0.708
Hansen's Test	3.3	0.04
F-test	7.529	2.607

Table 7 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation.

Table 8 provides results on the Australian stock return impact of tax avoidance and accounting information quality. Accounting information quality exhibits a negative coefficient, indicating a negative relationship between earnings management and stock returns. This suggests that Australian stocks have lower returns when firms engage in earnings management and report lower quality earnings. Conversely, tax avoidance shows a positive coefficient, indicating higher stock returns when firms pay taxes below their statutory rates. Such tax avoidance activities may not be widely publicized in Australia due to the country's relatively lower tax rates. However, consistently paying lower taxes reduces public confidence in these firms, leading to decreased patronage and lower stock returns. Leverage and liquidity have a positive effect on stock returns when accounting for tax avoidance and accounting information quality. Conversely, firm

size has a negative relationship with stock returns when considering both factors. Lastly, asset tangibility exhibits a positive relationship with stock returns when accounting for tax avoidance but a negative relationship when considering accounting information quality.

**TABLE 8**  
**STOCK RETURN EFFECT OF ACCOUNTING INFORMATION AND**  
**TAX AVOIDANCE IN AUSTRALIA**

Variables	Stock Return (1)	Stock Return (2)
Lag of Stock Return	-0.0439 (0.0615)	-0.0692 (0.101)
Accounting Information Quality	-1.648** (5.138)	
Tax Avoidance		2.51E-07* (2.68E-07)
Size	-1.73E-07 (4.72E-07)	-2.43 (3.834)
Leverage	1.801* (3.712)	0.57** (0.563)
Liquidity	0.444 (0.51)	9.13 (9.696)
Asset Tangibility	4.61** (11.2)	1.06E-07 (8.71E-08)
Growth Potential	8.86E-08 (7.62E-08)	0.0832*** (0.0317)
Inflation	0.0828* (0.0573)	0.0538 (0.0423)
GDP Growth	-0.0591 (0.0499)	-1.052 (2.156)
Constant	-3.16 (3.49)	-4.345 (3.368)
Observations	4,057	3,985
No. of instruments.	11	11
AB2	-0.576	-0.42
Hansen's Test	0.278	0.109
F-test	4.166	3.477

Table 8 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation.

Based on the information provided in Table 9, the findings suggest that in Europe, there is a negative relationship between tax avoidance and stock returns, indicating that firms with tax avoidance activities tend to have lower returns on their stocks. This can be attributed to the high level of transparency in European stock markets, where news and information on tax avoidance quickly impact stock prices, aligning with the Efficient Market Theory. Additionally, the results show a negative association between

accounting information quality and stock returns, indicating that when firms engage in earnings management, which compromises the quality of their accounting information, it leads to lower returns on their stocks. These findings are consistent with the results observed in Latin America and the pooled sample.

**TABLE 9**  
**STOCK RETURN EFFECT OF ACCOUNTING INFORMATION AND**  
**TAX AVOIDANCE IN EUROPE**

Variables	Stock Return (1)	Stock Return (2)
Lag of Stock Return	0.0325** (0.0164)	0.0859*** (0.0255)
Accounting Information Quality	-2.644*** (0.632)	
Tax Avoidance		-1.58E-07 (1.70E-07)
Size	8.63E-08 (1.47E-07)	1.546* (0.893)
Leverage	-1.03 (0.863)	-0.364* (0.197)
Liquidity	-0.136 (0.145)	4.753*** (1.035)
Asset Tangibility	5.417*** (0.958)	6.61e-08*** (1.45E-08)
Growth Potential	6.09e-08*** (1.09E-08)	0.103*** (0.00757)
Inflation	-0.0936*** (0.00553)	-0.106*** (0.0158)
GDP Growth	0.0790*** (0.0184)	1.576** (0.615)
Constant	0.683* (0.408)	1.146*** (0.428)
Observations	52,843	46,862
No. of instruments.	11	11
AB2	-5.307	-3.207
Hansen's Test	2.221	1.266
F-test	175.9	86.31

Table 9 presents results on two-step system GMM regression, Windmeijer-corrected standard error, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation.

Table 10 provides insights into the stock return effects of tax avoidance and accounting information quality in Afro-Asian firms. The findings reveal a negative coefficient for accounting information quality, indicating a negative relationship between earnings management and stock returns in Afro-Asia. This suggests that when there is evidence of earnings management, Afro-Asian firms experience lower returns on their stocks. Similarly, tax avoidance shows a negative relationship with stock returns, as indicated by

the negative coefficient. These results align with the concept of efficient securities, as published news regarding earnings management and tax avoidance would be reflected in stock returns. Consequently, these findings discourage earnings management and tax avoidance practices among Afro-Asian firms, given their impact on stock returns.

**TABLE 10**  
**STOCK RETURN EFFECT OF ACCOUNTING INFORMATION AND**  
**TAX AVOIDANCE IN AFRO-ASIA**

Variables	Stock Return (1)	Stock Return (2)
Lag of Stock Return	-0.0441*** (0.0162)	-0.0393*** (0.00852)
Accounting Information Quality	-7.791** (3.102)	
Tax Avoidance		-3.77e-07*** (7.54E-08)
Size	7.59e-07*** (2.73E-07)	1.315*** (0.424)
Leverage	-0.63 (0.524)	-0.478*** (0.114)
Liquidity	-1.454*** (0.556)	-4.564*** (0.777)
Asset Tangibility	-11.47*** (3.913)	3.97e-08*** (3.96E-09)
Growth Potential	1.90E-08 (2.58E-08)	0.0507*** (0.00238)
Inflation	0.0377*** (0.0049)	-0.00313 (0.00353)
GDP Growth	0.0285** (0.0129)	1.174*** (0.31)
Constant	4.566*** (2)	1.804*** (0)
Observations	107,569	102,592
No. of instruments.	11	11
AB2	-2.504	-4.513
Hansen's Test	8.865	47.55
F-test	32.91	129.9

Table 10 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation.

**TABLE 11**  
**STOCK RETURN EFFECT OF ACCOUNTING INFORMATION AND TAX AVOIDANCE IN NORTH AMERICA**

Variables	Stock Return (1)	Stock Return (2)
Lag of Stock Return	-0.0920*** (0.014)	-0.0627*** (0.0142)
Accounting Information Quality	2.811** (1.213)	
Tax Avoidance		4.55e-07*** (5.57E-08)
Size	5.25e-07*** (7.86E-08)	-0.772** (0.367)
Leverage	0.466 (0.498)	0.544*** (0.125)
Liquidity	-0.578*** (0.141)	-1.411* (0.796)
Asset Tangibility	3.136*** (0.571)	1.35e-07*** (1.65E-08)
Growth Potential	1.39e-07*** (1.88E-08)	0.0770*** (0.00415)
Inflation	0.0838*** (0.00629)	0.0296*** (0.00451)
GDP Growth	-0.00774 (0.0095)	1.292** (0.608)
Constant	-0.511 (0.418)	-1.478*** (0.273)
Observations	57,900	49,702
No. of instruments.	11	11
AB2	-3.533	-4.92
Hansen's Test	4.361	7.161
F-test	71.24	88.81

Table 11 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation.

Table 11 provides insights into the stock return effects of tax avoidance and accounting information quality in North America. Surprisingly, the results reveal positive coefficients for both variables, indicating that Northern American firms experience higher stock returns when engaging in tax avoidance and earnings management. This contrasts with the findings for European firms, considering the similar high transparency levels in both regions. However, the positive coefficient for accounting information quality aligns with results from other regions, highlighting its significance as a driver of stock returns. Moreover, the analysis demonstrates that liquidity has an inverse relationship with stock returns, while leverage and firm size positively impact stock returns. Additionally, inflation shows a positive influence on stock returns in this

context. These findings underscore the complex dynamics and regional variations in the relationship between accounting information, tax avoidance, and stock returns.

In summary, the results across all regions consistently demonstrate a significant negative relationship between accounting information quality (earnings management) and stock returns. This aligns with previous studies such as Dimitropoulos & Asteriou (2009) and Pourheydari, Aflatooni, & Nikbakhat (2008), who argued that market participants, in accordance with the efficient market theory, become aware of earnings management practices and respond by reducing their investment, leading to lower stock returns. Similarly, the results indicate a negative relationship between tax avoidance and stock returns in all regions except for North America and Australia. These findings are consistent with the research of Sikes & Verrecchia (2020), Jia (2018), and Kim, Li, & Zhang (2011), which suggest that although tax avoidance may result in higher reported earnings, stock returns tend to react negatively, especially when news about tax avoidance becomes public (Antonetti & Anesa, 2017).

Regarding firm size, it is found to have a positive and significant impact on stock returns when controlling for tax avoidance and earnings management, except in the case of Australia where size negatively affects stock returns. This finding is consistent with Amidu, Yorke, & Harvey (2016), suggesting that larger firms tend to experience higher stock returns but engage in lower levels of tax avoidance and earnings management due to increased public scrutiny. On the other hand, leverage is observed to have a negative and significant impact on stock returns, except in Australia and North America, implying that highly leveraged firms tend to have higher stock returns. These results align with the findings of Bhandari (1988) and the Modigliani & Miller (1963) theory regarding the impact of leverage on stock returns.

The regional analysis on the transmission effect of tax avoidance through accounting information quality on stock returns, serving as robustness checks are presented in table 12 below. First, accounting information quality (AIQ) is found to have a significant impact on stock returns in different regions. In Latin America and Australia, higher AIQ is associated with increased stock returns, indicating that firms with better earnings management practices tend to generate higher returns. This finding aligns with the efficient market theory, as investors are more likely to respond positively to transparent and reliable accounting information (Dimitropoulos & Asteriou, 2009; Pourheydari, Aflatooni, & Nikbakhat, 2008).

However, in Europe, Afro-Asia, and North America, the results show a negative relationship between AIQ and stock returns. This suggests that market participants in these regions are more informed about earnings management activities and react by showing lower patronage, resulting in decreased stock returns. This finding is consistent with the studies conducted by Amadi & Amadi (2014) which found a negative relationship between earnings management and stock returns, indicating that investors penalize firms engaged in earnings management.

Furthermore, tax avoidance demonstrates varied effects on stock returns across different regions. In Latin America and North America, the findings indicate a positive relationship between tax avoidance and stock returns. This could be attributed to the tax benefits associated with aggressive tax planning, leading to higher reported earnings and subsequently attracting investor attention (Sikes & Verrecchia, 2020; Jia, 2018; Kim, Li, & Zhang, 2011). On the contrary, in Australia and Afro-Asia, tax avoidance is found to have a negative impact on stock returns. This implies that investors react negatively to news or publicized information about firms' tax avoidance activities, resulting in decreased stock returns (Antonetti & Anesa, 2017).

**TABLE 12**  
**REGIONAL TRANSMISSION EFFECT OF TAX AVOIDANCE THROUGH ACCOUNTING**  
**INFORMATION QUALITY ON STOCK RETURN**

Variables	Dependent Variable: Stock Returns				
	Latin America	Australia	Europe	Afro-Asia	North America
Lag of Stock Return	-0.376 (3.188)	0.0212 (1.069)	0.105 (0.09290)	0.0628 (1.017)	0.881 (1.187)
AIQ	3.006* (7.154)	4.165** (9.463)	-1.387* (1.743)	-6.323 (3.552)	-1.664* (2.187)
Tax Avoidance	1.55*** (9.26)	-2.635* (3.932)	2.338** (1.432)	-1.998* (8.929)	4.107* (2.469)
AIQ*Tax Avoidance	5.497** (3.252)	-9.547* (1.421)	1.018** (6.137)	-1.215 (4.331)	1.608* (9.813)
Size	-3.77E-06* (2.45E-05)	-2.17E-06 (3.22E-05)	3.04E-08* (3.67E-07)	-3.86E-06 (2.05E-05)	1.24E-05** (0.000148)
Leverage	-7.503 (6.262)	-2.64*** (368.2)	4.006 (3.929)	1.158** (6.09)	1.753 (2.06)
Liquidity	0.531** (5.366)	-4.606 (7.405)	-0.322 (0.415)	-9.124* (5.252)	-0.78 (1.929)
Asset Tangibility	-0.871 (1.664)	-1.615 (3.097)	-5.892*** (2.245)	-7.337 (4.279)	5.215* (6.87)
Growth Potential	2.76E-07* (2.08E-06)	-6.96E-07 (1.16E-05)	1.05e-07*** (3.96E-08)	-4.13E-07 (2.56E-06)	-1.09E-07 (3.80E-06)
Inflation	-0.0475* (0.633)	0.251* (2.565)	0.112*** (0.0272)	-0.000951 (0.21)	0.412 (4.045)
GDP Growth	-0.418** (2.804)	0.291 (3.462)	-0.130** (0.0653)	0.277 (1.986)	0.423* (5.191)
Constant	7.466 (6.757)	2.344 (3.918)	0.555 (0.96)	2.453 (1.452)	-2.91 (3.427)
Observations	3,361	3,985	46,862	102,592	49,702
No. of instruments.	12	12	12	12	12
AB2	-0.130	-0.068	-1.114	-0.156	-0.0799
Hansen's Test	0	9.27E-11	0	0	3.13E-10
F-test	0.18	0.0461	35.13	0.632	0.773

Table 12 presents results on two-step system GMM regression, Windmeijer-corrected standard errors, small sample adjustment and orthogonal deviation, using a dynamic panel data estimation. **AIQ\*Tax Avoidance** is the interaction (multiplication) of accounting information quality and tax avoidance.

These findings provide empirical evidence that accounting information quality and tax avoidance play crucial roles in determining stock returns in different regions. The results are consistent with prior research, such as the studies conducted by Dimitropoulos & Asteriou (2009), Pourheydari, Aflatooni, & Nikbakhat

(2008), Amadi & Amadi (2014), Sikes & Verrecchia (2020), Jia (2018), Kim, Li, & Zhang (2011), and Antonetti & Anesa (2017).

In summary, the results highlight the importance of transparent accounting information and the potential consequences of tax avoidance on stock returns. They provide valuable insights for market participants, policymakers, and investors in understanding the regional variations and implications of accounting information quality and tax avoidance on stock market performance.

## CONCLUSION

The research findings, based on the comprehensive analysis presented in tables 1 to 12, provide valuable insights into the relationship between accounting information quality (AIQ), tax avoidance, and stock returns across different regions. The study aimed to address the problem of understanding how accounting information quality and tax avoidance impact stock market performance and to examine the regional variations in these relationships. The results indicate that accounting information quality has a significant impact on stock returns, but this impact varies across regions. In Latin America and Australia, higher accounting information quality is associated with increased stock returns, suggesting that market participants value transparency and reliable financial reporting. In Europe, Afro-Asia, and North America, however, accounting information quality shows a negative relationship with stock returns. This finding supports the argument made by Dimitropoulos & Asteriou (2009) and Pourheydari, Aflatooni, & Nikbakhat (2008) that market participants, consistent with the efficient market theory, become informed about earnings management activities and react with lower patronage, leading to lower stock returns.

The study also explored the relationship between tax avoidance and stock returns. The findings reveal that the impact of tax avoidance on stock returns varies across regions. In Latin America and North America, tax avoidance has a positive impact on stock returns, indicating potential tax benefits and increased reported earnings. This result is consistent with the findings of Sikes & Verrecchia (2020), Jia (2018), and Kim, Li, & Zhang (2011), which suggest that tax avoidance leads to higher earnings but negative reactions from investors when publicized (Antonetti & Anesa, 2017). In Australia and Afro-Asia, however, tax avoidance is associated with decreased stock returns, suggesting a negative investor reaction to publicized tax avoidance activities.

Policymakers should prioritize the enhancement of accounting standards and transparency practices across regions. This can be achieved through the implementation of stricter reporting requirements and ensuring the disclosure of reliable and accurate financial information. By improving accounting information quality, investors can make informed decisions, and stock market efficiency can be enhanced. Authorities should strengthen monitoring mechanisms to detect and prevent tax avoidance practices. Firms engaged in aggressive tax planning should face increased scrutiny, and instances of tax avoidance should be promptly disclosed to the public. This will help investors assess the potential risks associated with tax avoidance and make more informed investment decisions.

Efforts should be made to educate investors about the implications of accounting information quality and tax avoidance on stock returns. Investor awareness programs can be initiated to enhance their understanding of financial statements, earnings management practices, and the potential impact of tax avoidance on stock market performance. This will empower investors to make informed investment choices and reduce the likelihood of negative investor reactions.

It is crucial to recognize the regional variations in the relationship between accounting information quality, tax avoidance, and stock returns. Policymakers and market participants should consider these regional nuances when formulating policies, conducting investment analysis, and assessing the implications of accounting practices and tax strategies. This regional perspective will contribute to a more comprehensive understanding of the dynamics between accounting, taxation, and stock market outcomes.

By implementing these policy recommendations, stakeholders can foster transparency, integrity, and investor confidence in financial markets, ultimately leading to more efficient and resilient stock market performance.



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