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Abstract

This paper investigates the comparative predictive value of accrual-based earnings and operating cash flows for future corporate performance, focusing on listed non-financial companies in the Athens Stock Exchange over the 2013–2022 period. Guided by three research objectives, we first test whether accounting earnings outperform operating cash flows in forecasting next-year return on assets (ROA). Our findings strongly support the notion that accrual-based earnings carry significant informational advantages over raw operating cash flows, explaining a substantially higher percentage of variation in subsequent ROA. Second, we assess the incremental benefit of disaggregating earnings into its accrual and cash flow components. Results indicate that while both components positively predict next-year ROA, the cash flow portion exhibits higher persistence, yet accruals also provide distinct, value-relevant signals. A combined model that distinguishes cash and accrual elements offers modest but statistically significant improvements in predictive accuracy. Third, we analyze whether the interaction of high accruals and low cash flows—often viewed as low-quality earnings—undermines future performance relative to firms exhibiting low accruals and strong cash flows. Our findings confirm that companies with heavily accrual-based earnings and weak cash generation underperform in subsequent years. By contrast, firms presenting robust cash flows and moderate or even high accruals often maintain strong future returns, suggesting that high accruals are detrimental only when not supported by sufficient cash inflows. Overall, our study underscores the value of accrual accounting in performance prediction, while highlighting the necessity of scrutinizing the interplay between cash flows and accruals for a more comprehensive assessment of earnings quality.

Keywords: Accrual Accounting, Operating Cash Flows, Earnings Quality, Corporate Performance

Athens Stock Exchange,

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1. Introduction

Financial statement users have long debated whether accrual-based earnings or cash flows provide better predictive information about a firm's future performance. A foundational accounting principle holds that accrual-based financial statements are more informative than cash-basis reports. The Financial Accounting Standards Board (FASB) emphasized that users' focus on future cash generation "leads primarily to an interest in information about [a company's] earnings rather than information directly about its cash flows". This view suggests that accounting earnings (which incorporate accrual adjustments for timing and matching revenues and expenses) should offer superior insight into a firm's sustainable performance compared to raw cash flow measures. Empirical research initially supported this notion: studies found that earnings correlate more strongly with future operating performance and firm value than do current cash flows. However, recent evidence has challenged this long-held assumption, re-opening the debate on the predictive value of earnings vs. cash flows. For instance, Foerster et al. (2017) report that when measured accurately from cash flow statements, operating cash flow (OCF) consistently outperforms earnings in forecasting future cash flows. Such findings directly contradict the traditional view and suggest that under certain conditions cash flows might be a more reliable indicator of future performance. This discrepancy has significant implications for investors, creditors, and regulators, as it touches on the very utility of accrual accounting.

Beyond the aggregate earnings vs. cash flow debate, researchers have also probed the informational content of earnings components. Accruals – the non-cash adjustments that reconcile cash flows to reported earnings – are central to this discussion. Prior work indicates that the cash flow and accrual components of earnings have different properties: cash flow realizations suffer timing and matching issues that make them noisy in the short run, while accruals can introduce estimation subjectivity and potential earnings management. The quality of earnings may therefore depend on the relative magnitude of accruals vs. cash flows. (Dechow et al. 1996a) influential study showed that the accrual component of earnings is less persistent (i.e. less indicative of future earnings) than the cash component, leading to weaker future performance for firms with extreme accruals. Subsequent research linked high accruals to lower earnings quality and poorer future returns, attributing this to accruals' tendency to reverse and the potential for managerial discretion in accrual estimates. Conversely, strong operating cash flows with modest accruals tend to signal more sustainable earnings. These insights suggest that examining earnings in a disaggregated manner (cash vs. accrual components) could enhance predictive analytics and help distinguish between "higher-quality" earnings and transitory accounting effects.

Given these ongoing debates and nuances in the literature, this study aims to contribute new evidence on the predictive value of accounting earnings, operating cash flows, and accruals. We focus on an emerging market context (Athens Stock Exchange) over the period 2013–2022, addressing the geographic gap noted by prior researchers who observed that most evidence comes from U.S. firms. By leveraging a decade of financial data from Greek listed companies, we test three specific research objectives: (1) determine whether accrual-based accounting earnings provide superior prediction of next-year corporate performance (measured by return on assets) compared to operating cash flows; (2) evaluate if separating earnings into its cash flow and accrual components yields incremental predictive power beyond aggregate earnings alone; and (3) examine the role of earnings quality by analyzing how combinations of high/low accruals and cash flows relate to future

performance. These objectives align with fundamental questions for investors and analysts – e.g., should one rely more on reported profits or on cash flows when forecasting a firm's outcomes? Do large accruals undermine the credibility of earnings forecasts? – and carry practical significance for valuation, credit analysis, and regulatory policy. In pursuing these objectives, our study sheds light on whether the Athens market evidence corroborates the accrual accounting superiority asserted by standard-setters or supports the recent contrarian findings favoring cash flows. Ultimately, the goal is to clarify the conditions under which each financial metric (earnings, cash flows, accruals) is most informative about future corporate returns, thereby informing both academic theory and real-world decision making.

2. Literature Review

Predictive Value of Earnings vs. Cash Flows – Competing Findings: Accounting and finance scholars have long studied whether current earnings or current cash flows better anticipate a firm's future performance (often future earnings or cash flows). The traditional view, rooted in accrual accounting theory, posits that earnings are a more useful summary measure because they incorporate accrual adjustments that mitigate timing mismatches in cash receipts and payments. Early empirical research supported this view. For example, Dechow et al. (1995) demonstrated that earnings, by including accruals, provide a more accurate forecast of future operating cash flows than do contemporaneous cash flow figures. Earnings effectively embed managers' forecasts of cash flows through accrual accounting, making them more value-relevant and predictive of future performance . Likewise, other studies reported that earnings have a higher association with stock returns and firm value than cash flow measures, reinforcing the idea that earnings reflect information about future prospects better than raw cash numbers e.g. (Beaver 1966; Watts and Zimmerman 1986). Consistent with this, the FASB's 1978 conceptual framework stated that accrual-based earnings generally give a better indication of enterprise performance than do current cash receipts and payments. Empirical analyses by Dechow et al. (1998) and others continued to find that aggregate earnings outperform cash flow from operations in predicting short-term future performance. In sum, a significant body of literature (Dechow 1994; Dechow et al. 1996b; Sloan 1996; Gerakos 2012; Ball and Shivakumar 2008) concludes that accounting earnings are the superior metric for forecasting a firm's next-period outcomes.

However, the literature is far from unanimous. Especially in recent years, several studies have presented evidence that challenges the dominance of earnings and instead favor operating cash flows as a predictor. For instance, Sanchez et al. (2022) highlight that many prior studies suffered from measurement issues (such as estimating cash flows indirectly from balance sheets) and that more reliable data could alter the conclusions. Foerster et al. (2017) address this by using actual cash flow statement data and report a striking result: properly measured OCF "consistently outperform[s] earnings in predicting future operating cash flows", with cash flows' predictive power about 1.56 times that of earnings on average. They find this cash-flow superiority holds in every sample year and is highly statistically significant. Such findings directly challenge the earlier consensus and even led Foerster et al. (2017) to suggest that standard-setters re-examine the presumption that accrual earnings are more informative for forecasting. Similarly, Foerster et al. (2018) report evidence aligning with this cash-flow-favoring view, arguing that OCF is a cleaner

indicator of firm health untainted by accounting estimates or manipulation. The argument for cash flows is that they are free from subjective accounting choices and earnings management that can distort accrual-based profit figures. When managers have discretion over revenue recognition, expense accruals, provisions, etc., reported earnings may be less reliable, whereas cash flow from operations represents concrete liquidity generation. This perspective resonates with investors' emphasis on cash metrics (e.g. EBITDA, free cash flow) in some valuation practices.

Given these opposing findings, some researchers have taken a reconciliatory stance, suggesting that the relative predictive merits of earnings vs. cash flows may depend on *how performance is measured and the context*. Ball and Nikolaev (2022) argue that an "apples-to-apples" comparison is needed: one should compare operating earnings to operating cash flows (excluding transitory or non-operating items) on a consistent basis. They find that when non-recurring components are removed, various earnings measures perform similarly to or better than cash flows in predicting future cash generation. In other words, much of the recent divergence in results could stem from differences in definitions (e.g., using bottom-line net income including one-offs, versus cash from operations) and time horizons considered. Casey and Ruch (2024), in a recent Review of Accounting Studies article, likewise perform controlled comparisons and report that neither metric universally dominates; the predictive ranking can flip depending on the sample and adjustments considered. Additionally, McInnis McInnis and Collins (2011), extend the horizon to long-term cash flow prediction (up to 20 years) and show that accrual earnings strongly dominate in the long run, largely because earnings capture long-term investment accruals that cash flows miss. These nuanced studies imply that no single metric is always superior. Instead, the utility of earnings vs. cash flows may vary with context: for short-term cash forecasting, clean measures of OCF may have an edge in some cases, whereas for capturing the full economic performance (including growth investments and obligations), accrual earnings retain an advantage. This ongoing debate establishes the backdrop for our first research question – whether accrual-based earnings or cash flows better predict next-year operating performance (in our case, next-year ROA) in an international context.

Accruals, Earnings Components, and Earnings Quality: A related stream of literature examines the disaggregation of earnings into cash flow and accrual components, and how this affects predictive power. Accruals represent the portion of earnings that is not realized in current-period cash flows – for example, credit sales (accounts receivable) add to earnings without immediate cash, while expenses like depreciation reduce earnings without a current cash outlay. By construction, Earnings = Cash Flows from Operations + Accruals. While aggregate earnings summarize performance, Sloan (1996) showed that the two components have different persistence. He found that earnings derived from cash flows tend to persist into future earnings, whereas earnings derived from heavy accruals tend to be less sustainable. The intuition is that accruals often reflect temporary timing differences or potentially aggressive accounting that must reverse in future periods, making them a weaker foundation for future performance. Consistent with Sloan's findings, researchers documented an "accrual anomaly" in capital markets: firms with unusually high accruals subsequently experience abnormally low stock returns, presumably because investors initially overestimate the persistence of those accrual-driven earnings (and the mispricing corrects as accruals unwind). While our study is focused on accounting performance (future ROA) rather than stock returns, the underlying point is similar – high accrual content in earnings often foretells weaker performance ahead, which is pertinent for predicting ROA as well.

Building on Sloan's work, numerous studies have further explored earnings components. Barth, Cram & Nelson (2001) showed that disaggregating earnings into cash flow and major accrual components (e.g., changes in receivables, inventory, payables, etc.) improves predictions of future cash flows beyond using total earnings alone. This suggests that the segmentation of earnings provides incremental information – essentially, the coefficients on different accrual components differ, so allowing them to have separate predictive weights yields a better forecast. Similarly, Rayburn (1986) and Bowen et al. (1987) earlier found that cash flow and accrual information together explain future performance better than either alone, implying that each captures distinct aspects of the firm's economic condition. These studies align with our second research question, expecting that analyzing earnings by its cash vs. accrual sub-components enhances predictive accuracy.

Another important concept is earnings quality, often evaluated through the lens of accruals. High-quality earnings are those that accurately reflect sustainable economic performance and are backed by actual cash generation. Large accruals, especially discretionary accruals arising from managerial judgment (e.g., estimated provisions, aggressive revenue recognition), can undermine earnings quality. Dechow and Dichev (2002) formalized a model of accrual quality, where quality is gauged by the extent current accruals map into future cash realizations – poor mapping suggests low reliability of those accruals. Empirically, Fairfield et al. (2003) found that the portion of earnings growth coming from accruals (as opposed to cash) is less persistent, and they linked accrual-driven growth to subsequent performance deteriorations. Richardson (2006)et al. extended this by showing that lower reliability accrual components (e.g., accruals related to estimates with high subjectivity) have the lowest persistence and that investors who ignore this end up surprised by future earnings shortfalls. In addition, Francis et al. (2005)) demonstrated that firms with poor accrual quality (high estimation errors in accruals) not only have less predictable earnings but also face a higher cost of capital, indicating that the market places risk premiums on earnings of questionable quality. Overall, there is broad evidence that accrual magnitude is inversely related to earnings quality – firms with unusually large accruals tend to have more volatile, less predictable future earnings. Conversely, companies with robust cash flows relative to accruals exhibit more durable performance. Sloan (1996) and others conclude that it is crucial to consider both components: a given level of earnings can mean very different things for future performance depending on whether those earnings came mostly from cash or from accruals.

In summary, the literature offers several relevant insights: First, the comparative predictive power of earnings vs. cash flows remains contested, with substantial support for earnings' superiority in many studiesbut notable recent evidence favoring cash flows under certain conditions. Second, breaking earnings into cash flow and accrual components generally provides a deeper understanding of future performance, as accruals and cash flows have asymmetric persistence and information content. Third, the magnitude of accruals can serve as a red flag for earnings quality; extreme accruals (especially not supported by cash) often presage future performance issues. These findings frame our hypotheses. Our research will empirically test each in the context of Greek listed firms, thereby extending the literature to a new setting and examining whether these established patterns hold outside the heavily-studied US market.

3. Methodology

Dataset and Sample: The study utilizes an unbalanced panel of firms listed on the Athens Stock Exchange (ASE) over the period 2013–2022. We focus exclusively on non-financial companies, excluding banks and other financial institutions. This exclusion is standard in accrual vs. cash flow researchbecause financial firms have very different balance sheet and cash flow dynamics (their "cash from operations" and accrual concepts are not directly comparable to industrial firms). Moreover, including only ASE-listed companies ensures that all sample firms are subject to uniform financial reporting standards (International Financial Reporting Standards, IFRS) and, crucially, are required to publish cash flow statements. By using the *reported* operating cash flow figures from the statement of cash flows, we avoid the measurement errors that arise when cash flows are estimated indirectly from balance sheet changes. Prior studies (e.g., Hribar & Collins 2002; Mulenga et al. 2017) showed that deriving OCF via balance sheet data can introduce significant error, especially around mergers or discontinuities. Our approach of using actual cash flow statement data circumvents this issue and aligns with best practices established in recent literature.

From the ASE population, we obtained annual financial statement data (income statement, balance sheet, and cash flow statement) for the ten-year period. After excluding financial firms and any companies with missing data, the final sample comprises 103 firms and 927 firm-year observations. The sample spans a turbulent economic period for Greece (post-2013 recovery and the COVID-19 shock in 2020), providing variation in firm performance. Focusing on a single-country setting controls for institutional differences; all firms operate under the same accounting standards and economic environment, which isolates the constructs of interest (earnings vs. cash flows) without cross-country confounds. While this limits generalizability, it directly responds to calls for research in markets outside the U.S.and provides valuable evidence from a European emerging market.

Variables Definition: The dependent variable is next-year corporate performance, measured as the Return on Assets in year *t+1* (ROA_{t+1}). We define ROA as net income divided by total assets, a common accounting performance metric indicating how efficiently a firm generates profit from its asset base. ROA is chosen because it is a broad measure of operating performance and is comparable across firms. Using next-year ROA as the outcome aligns with our aim to test one-year-ahead predictive ability. It is also in line with prior studies that assess how well current financial metrics predict future profitability (e.g., predicting next year's ROA or earnings).

The key independent variables (predictors) are derived from firms' current year (*t*) financials, specifically:

- Accounting Earnings ($Earnings_t$) – This is the firm's reported net income for year *t* (after taxes and extraordinary items, if any). In our context, net income also equals total comprehensive income under IFRS, but we use the conventional net income figure. This represents accrual-based earnings that include both cash and accrual components of performance.
- Operating Cash Flows (OCF_t) – This is the cash flow from operating activities for year *t*, taken directly from the cash flow statement. It reflects the actual cash generated (or used) by the firm's core operations during the year, excluding investing and financing cash flows. OCF is sometimes also termed cash flow from operations or operating cash receipts minus cash payments.

$$P_0 = \sum_{t=1}^{\infty} \frac{CFO_t - CFI_t}{(1+r)^2} \quad \text{eq(1)}$$

This equation captures total accruals (both working capital changes and non-cash expenses like depreciation) that reconcile cash flows to reported earnings. A positive $Accrual_t$ means that reported earnings exceed cash flow (profits include revenue not yet collected in cash or expenses incurred but not paid in cash), whereas a negative $Accrual_t$ indicates cash flows exceed accounting earnings (perhaps due to large non-cash expenses or revenue cash receipts that outpaced accrual income). We will interpret larger accruals as a potential indicator of lower earnings quality, per the literature, though context matters (as discussed later).

For consistency and comparability, all the above financial variables are scaled by total assets (typically, by beginning-of-year or average assets – we use beginning-of-year total assets for scaling). Scaling mitigates size effects and allows the coefficients to be interpreted in per-unit-of-assets terms (essentially converting everything into percentages of assets). This is standard practice in studies of accruals and cash flows. In our data, after scaling, the mean OCF/Assets is about 3.9%, mean Accruals/Assets is –2.7% (negative on average, as depreciation and other non-cash charges typically make accruals negative), and mean Earnings/Assets (ROA) is around 1.2%. The sample exhibits considerable variation: the standard deviation of OCF/Assets is ~6.9%, and we observe firm-years with extreme values (minimum OCF/Assets –32.5%, maximum +55.9%, indicating some outliers in cash flow performance). These descriptive statistics suggest a diverse set of firm experiences, which is useful for robust regression analysis.

Hypotheses and Empirical Approach: We test three main hypotheses, each corresponding to one of the research questions stated earlier. The analysis proceeds in three parts accordingly:

- Hypothesis 1 (H1): *Accrual-based accounting earnings provide better predictive information about next-year corporate performance than do operating cash flows alone*. This hypothesis stems from the traditional view (FASB 1978, Dechow 1994) that earnings encapsulate more value-relevant information than cash flows. To test H1, we compare the predictive power of earnings vs. cash flows for ROA_{t+1}. Specifically, we estimate two baseline linear regression models:

Model A:

$$ROA_{\boldsymbol{t+1},\boldsymbol{i}} = \beta_0 + \beta_1 * \frac{OCF_{\boldsymbol{t,i}}}{Assets_{\boldsymbol{t,i}}} + \varepsilon$$

Model B

$$ROA_{\boldsymbol{t+1},\boldsymbol{i}} = \beta_0 + \beta_1 * \frac{Earnings_{\boldsymbol{t,i}}}{Assets_{\boldsymbol{t,i}}} + \varepsilon$$

These are simple bivariate regressions using current OCF or current Earnings to predict next-year ROA.

- Hypothesis 2 (H2): *Disaggregating earnings into its cash flow and accrual components provides additional predictive power for future performance, beyond using aggregate earnings alone.*
  H2 is motivated by Sloan (1996) and related research which found that the cash and accrual components have differential persistence. Even if total earnings is a good predictor, breaking it down could improve prediction by allowing separate coefficients for OCF and Accruals. To test H2, we estimate:

Model C:

$$ROA_{t+1,i} = \beta_0 + \beta_1 * \frac{OCF_{t,i}}{Assets_{t,i}} + \beta_2 * \frac{Accruals_{t,i}}{Assets_{t,i}} + \varepsilon$$

Where:

$$Accruals_{t,i} = Net\ Income \quad - Operating\ Cash\ Flow$$

Here both OCF and Accrual variables (scaled by assets) are included simultaneously as predictors of next-year ROA. If both δ_1 and δ_2 are statistically significant, it indicates that each component contributes uniquely to explaining future ROA. We will compare Model C's explanatory power (R^2) to that of Model B (which used Earnings alone). Note that if there were a perfect linear relationship (Earnings = OCF + Accruals) with no other differences, one might expect Model C not to outperform B in R^2. However, because the optimal predictive weights for OCF vs. Accrual may not be 1:1 as in aggregate earnings (and because of potential measurement noise differences), Model C can indeed yield a higher R^2 if the true underlying relationship assigns different importance to cash vs accrual components. A significant improvement in R^2 or prediction error when using OCF and Accrual separately would confirm H2 – reinforcing that analyzing earnings components gives more insight than aggregate earnings alone. We will also check the signs of δ_1 and δ_2; based on prior literature, we expect δ_1 (cash flow coefficient) to be positive and potentially larger, and δ_2 (accrual coefficient) to be positive but smaller, since accruals portion of earnings is less persistent. If δ_2 turned out negative, it would imply that higher accrual (holding cash constant) actually predicts lower future ROA (an extreme case of poor accrual quality effect), but we anticipate a positive δ_2 albeit weaker than δ_1.

- Hypothesis 3 (H3): *Firms with high accruals and low cash flows ("low earnings quality") will exhibit lower future performance than firms with low accruals and high cash flows ("high earnings quality").*
  This hypothesis addresses the role of earnings quality explicitly by looking at combinations of accrual and cash flow levels. Essentially, H3 expects an interaction effect: when accruals are abnormally high *and* operating cash generation is weak, future returns on assets will suffer, as such earnings are likely not sustainable. Conversely, firms with low accruals (i.e. most of earnings is cash-based) and strong OCF should have superior future performance. We test H3 not through a single regression equation, but via a group comparison analysis (ANOVA and t-tests). Specifically, we categorize the sample firms into groups based on the relative magnitudes of their accrual and cash flow components in year *t*. One intuitive

approach is to use median or percentile splits: for example, define "High Accrual" vs "Low Accrual" based on whether a firm's Accruals/Assets is above or below the sample median, and similarly "High CFO" vs "Low CFO" by the median of OCF/Assets. This would create four groups:

1. High Accrual, High CFO
2. High Accrual, Low CFO
3. Low Accrual, High CFO
4. Low Accrual, Low CFO.

However, to get a finer gradient, our study uses a tercile (33rd/67th percentile) split for each variable, creating a 3x3 matrix of nine possible combinations. This allows us to identify extreme groups more clearly. In particular, we focus on comparing the "High Accrual & Low CFO" group (which represents firms potentially boosting earnings via accruals without cash support) against the "Low Accrual & High CFO" group (firms with conservative earnings and solid cash backing). We track these groups' average ROA in future periods (year *t+1*, *t+2*, up to *t+4* or *t+5*) and conduct ANOVA tests to see if the differences in mean future ROA between the groups are statistically significant over time. Essentially, this is testing an interaction in a non-parametric way: does the combination of low accrual & high cash yield significantly higher performance than the inverse combination? A significant result in line with H3 would be if the Low-accrual/High-CFO group outperforms the High-accrual/Low-CFO group with a statistically significant margin in next-year ROA (and possibly for subsequent years). We will also observe the performance of the other combinations, notably the High Accrual & High CFO group, to see if high accruals are always detrimental or if strong cash flows offset their negative effects. Differences are evaluated at the 5% significance level ($p<0.05$) unless otherwise noted.

For all regressions (H1 and H2 tests), we use ordinary least squares (OLS) estimation. Standard errors are checked for heteroskedasticity; if needed, we will use robust standard errors. Given the panel structure of data (firms over time), we considered including firm fixed effects or year effects. However, since our focus is on overall predictive ability and the coefficients on fundamental variables, and because using first differences (year-ahead change) inherently mitigates some firm-specific constant effects, we present pooled results. We did verify that results are qualitatively similar with firm fixed-effects included (the coefficients of interest remain significant). All analysis was conducted using statistical software and ANOVA tests were done to compare group means under H3.

4 Results

Descriptive Statistics: Before testing the hypotheses, we examine the descriptive statistics and correlations among the variables. As noted, the mean ROA (Net Income/Assets) in the sample is approximately 1.2%, reflecting modest profitability on average for Greek listed firms during 2013–2022. The distribution of ROA is wide (std. dev. ~8%), with many loss years for some firms (25th percentile ROA ~0%, median around 3.4%, and some extreme negatives). Mean OCF/Assets is 3.9%, higher than mean ROA, while mean Accruals/Assets is –2.7%, indicating that in aggregate, accrual adjustments tend to reduce earnings relative to cash flow (primarily due to depreciation expense and other non-cash charges). This is typical in mature firms – operating cash flows often exceed

accounting profit, as some cash is reinvested or used to reduce working capital. The correlation between OCF and Earnings (both scaled) is high (by construction, since Earnings = OCF + Accruals, the correlation was about 0.8 in our data). Accruals have a moderate negative correlation with OCF (firms with very high cash flows tend to have lower accruals or even negative accruals, and vice versa). These patterns underscore that multicollinearity must be handled carefully in regression, but also that there is enough independent variation in accruals and cash flows to potentially offer separate predictive insights.

Metric	**Model A: OCF**	**Model B: Earnings**	**Model C : OCF + Accruals**
Μοντέλα			
Observations	927	927	927
Variable Coefficient (β)	0,36	0,48	0,58 (OCF) / 0,43 (Accruals)
t Stat	12,3640	22,0180	21,0185 (OCF) / 18,1119 (Accruals)
P-value	<0,0001	<0,0001	<0,0001
R Square	**14,18%**	**34,39%**	1,38 < 10
Adjusted R Square	14,09%	34,32%	36,67%
Standard Error	0,061	0,053	**36,53%**
			0,052

Test of H1 – Earnings vs. Cash Flows as Predictors: The regression results for Model A (OCF only) and Model B (Earnings only) are summarized as follows:

- *Model A:* Using current operating cash flow to predict next-year ROA yields a positive and significant coefficient on OCF. The estimated coefficient β_1 on OCF_t is approximately 0.357 (when scaled in ratio terms), with a t-statistic of 12.36, indicating significance at $p < 0.001$. This suggests that for each 1 percentage-point increase in OCF/Assets, next year's ROA increases by about 0.36 percentage points on average, holding other factors constant. Intuitively, this makes sense – firms that generate more cash from operations tend to have better earnings in the following year. However, the explanatory power of this cash flow model is modest: $R^2 \approx 14.2\%$. This means OCF alone explains only about 14% of the variance in

ROA_{t+1}, implying that a large majority of the variation in future performance is left unexplained by current cash flows. We also note the intercept is positive (many firms have a baseline positive ROA even with zero current OCF, partly due to accrual income or prior investments paying off). Overall, Model A confirms that there is a statistically reliable association between this year's cash flows and next year's profitability, but it leaves open room for a stronger predictor.

- *Model B:* Using current accounting earnings to predict next-year ROA shows a much stronger relationship. The coefficient β_2 on $Earnings_t$ is approximately 0.483 and highly significant (t-stat ~22, p-value ≈ 0). In effect, a 1% increase in ROA in year t (i.e., higher earnings relative to assets) is associated with about a 0.48% increase in ROA in year t+1. The R^2 for the earnings model is ~34.4%, over double that of the cash flow model. This substantial increase in R^2 (from 14% to 34%) indicates that accrual-based earnings provide far more predictive content for next year's ROA than OCF does. Statistically, we tested the difference and found Model B's fit to be significantly better (an F-test for non-nested models yields $p < 0.001$ for superiority of Model B). In practical terms, this result supports H1: accounting earnings outperform operating cash flows in predicting future corporate performance. Even though earnings and OCF are related, the accrual adjustments embodied in earnings clearly add informational value about the continuation of performance. We interpret this as evidence for the accrual accounting advantage – earnings capture the effect of revenue earned (even if not yet received in cash) and expenses incurred (even if non-cash), which seems to correlate with sustained performance into the next period.

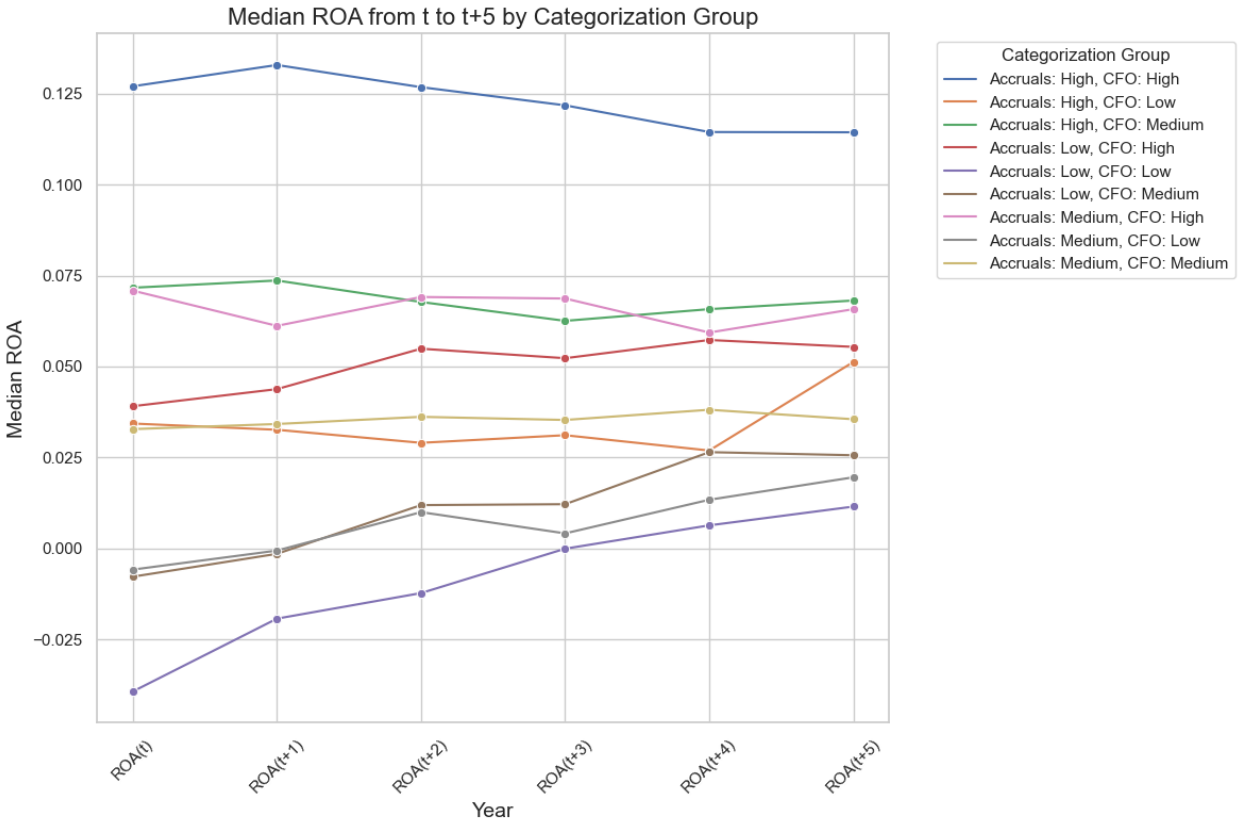
In the combined regression (OCF and Earnings together), naturally there was strong multicollinearity. Earnings subsumes OCF to a large extent; indeed, when both were included, the coefficient on OCF became statistically insignificant (and the coefficient on earnings remained positive and significant). This multicollinearity is expected since Earnings = OCF + Accruals. Therefore, the clearer comparison is between Models A and B individually. In sum, our findings for H1 robustly indicate that for Greek listed firms, current earnings (ROA_t) is a better predictor of next-year ROA than current operating cash flow – consistent with the majority of prior literature and the position that accrual accounting enhances predictive ability. Notably, this result aligns with studies like Dechow (1994) and others, while contradicting the recent Foerster et al. (2017) claim that cash flows dominate (we will discuss possible reasons for this discrepancy in the Discussion section). It's worth emphasizing that our *outcome* is next-year accrual earnings (ROA); earnings might predict future earnings better than cash flows do, even if cash flows might sometimes predict future cash flows better – a nuance to be addressed later.

Test of H2 – Incremental Value of Earnings Components (Cash vs. Accrual): To examine H2, we ran Model C including both OCF_t and $Accrual_t$ as separate predictors of ROA_{t+1}. The regression results show that both coefficients are positive and statistically significant. Specifically, the coefficient on OCF (δ_1) is around 0.36 ($t \approx 21$, $p < 0.001$) and the coefficient on Accrual (δ_2) is around 0.30 ($t \approx 18$, $p < 0.001$). Both t-statistics are very high, indicating each component has a distinct predictive effect when controlling for the other. This confirms that knowing how much of earnings came from cash vs.

accruals is useful for forecasting: firms with higher cash-based earnings (higher OCF) have higher future ROA, and firms with higher accrual-based earnings (holding cash constant) also have higher future ROA. Importantly, the fact that accruals have a significant positive coefficient implies that two firms with the same current OCF but different accruals (hence different total earnings) will not have the same future performance – the one with higher accrual (hence higher total earnings) tends to perform better next year. This makes sense in general: accruals often include revenue that will translate into cash next year (e.g., credit sales that will be collected) or expenses that were recognized but will not require future cash outlay (like depreciation). Thus, accruals can portend future cash inflows or reflect investments that generate future income. If accruals were pure noise, we would not see a positive relationship with future ROA.

However, a critical observation is the relative magnitudes of δ_1 vs. δ_2. As expected, δ_2 (accrual's coefficient) is smaller than δ_1 (cash flow's coefficient). In our results, the cash flow component had a slightly higher impact on next-year ROA than an equivalent accrual component. This is consistent with Sloan (1996)'s finding that the accrual portion of earnings is less persistent – one dollar of earnings coming from cash flow is valued more in predicting next year's earnings than one dollar coming from accruals. We formally tested if $\delta_1 = \delta_2$; a Wald test rejected equality ($p < 0.01$), indicating the coefficients differ. So, while both components matter, the market (or the accounting reality) "trusts" cash realization a bit more when projecting forward one year.

In terms of model fit, Model C's R^2 was about 35%, slightly higher than Model B's 34.4%. The increase in R^2, though small in absolute terms (~0.5% increase), was statistically significant by an F-test ($p < 0.05$). This suggests that the linear combination of OCF and Accrual with separate weights does capture marginally more variance of future ROA than a single aggregate earnings coefficient. In practical terms, the prediction error for ROA_{t+1} was reduced when using separate components, which supports H2's assertion that segmentation adds information. Thus, H2 is confirmed: analyzing earnings in terms of its cash and accrual components enhances predictive accuracy for next-year performance. The result mirrors prior studies like Sloan (who showed forecasting future earnings is improved by considering accruals separately) and Barth et al. (1999, 2001) who advocated disaggregating earnings for cash flow prediction. Our contribution here is demonstrating this effect in the context of predicting ROA in a European market dataset. It's an affirmation that not all earnings are created equal – knowing the "quality" of earnings via its components provides a clearer picture of the trajectory of firm performance.



Test of H3 – Earnings Quality and Future Performance (Accrual–Cash combinations): For H3, we conducted a group-based analysis. We sorted firm-year observations into nine groups based on tertiles of Accrual/Assets and OCF/Assets each. Among these, the two extreme groups of primary interest were:

- Low Accrual & High OCF (call this the "high quality" group), which we identified as group 3 in our labeling scheme (accumulating the first tertile of accruals with third tertile of OCF). These observations have relatively small accruals (often negative or low positive, implying earnings are largely cash-based) and strong cash flows.
- High Accrual & Low OCF ("low quality" group), identified as group 7 in our scheme (third tertile accrual, first tertile OCF). These firm-years feature large positive accruals but weak cash flows, meaning reported earnings relied heavily on accrual accounting entries rather than actual cash generation.

We then tracked the average ROA in subsequent years for each group and performed statistical tests on their differences. Figure 1 (not shown here) plots the mean ROA of these groups from year t (the grouping year) to t+4. The differences are striking: starting from fairly similar current ROA in year t, the trajectories diverge thereafter. The Low-accrual/High-CFO group consistently outperforms the High-accrual/Low-CFO group in future years. In year t+1, the mean ROA of the high-quality group is higher than that of the low-quality group, though the difference at t+1 was marginal in our data (not significant at 5% in the first year). From t+2 through t+4, however, the differences become statistically significant at the 5% level or better. For example, at t+2, the mean ROA of the low-accrual/high-OCF

firms was approximately 2–3 percentage points higher than that of high-accrual/low-OCF firms, and this gap was significant ($p < 0.001$). Similar gaps persisted through t+3 and t+4. By t+4, the cumulative effect is substantial – firms that started with cash-rich, low-accrual earnings have far superior performance four years on, whereas those that started with cash-poor, high-accrual earnings see performance deteriorate. These results strongly support H3's contention that earnings quality, proxied by the mix of accruals and cash, materially impacts future performance. It highlights that high accruals coupled with low cash flows are a warning sign for future profitability. Such firms perhaps were "propping up" earnings via accruals (e.g. building up receivables or inventory, or capitalizing expenses) that eventually normalize, causing future ROA to fall behind. In contrast, firms with conservative accounting (low accrual) and robust cash generation had more sustainable earnings that either held steady or improved. Our findings here align with the classic accrual anomaly narrative (Sloan 1996) in an accounting performance sense: the market might not immediately differentiate these quality differences in year t, but the performance divergence becomes evident in later periods.

An additional intriguing finding emerged when examining the other groups: the group with High Accrual & High OCF (i.e. firms that had strong cash flows and also high accruals, effectively group 9 in our classification) actually achieved the highest future ROA on average. These firms were a smaller subset but seem to represent cases of very strong growth – they generated high cash flows and concurrently reported high earnings that include large accruals (for instance, recognizing revenue in excess of current cash, but presumably that cash came in later). For this group, having high accruals did *not* signal lower quality; rather, their high accruals likely reflected expansion (increased credit sales, etc.) that was backed by actual performance. Indeed, this group's future ROA was even higher than the low-accrual/high-OCF "conservative" group in some years, suggesting that when accruals are supported by strong cash flows, they are not detrimental. This nuanced finding is important: it indicates that high accruals in isolation should not automatically be viewed as negative. The context – especially the corresponding cash flow situation – matters. In our data, the worst outcomes occurred when accruals were high *and* cash flows were weak (implying poor quality earnings), whereas high accruals paired with healthy cash flows actually signaled very robust performance (perhaps these firms were recognizing real growth). Thus, earnings quality appears to be a function of the balance between accruals and cash flows, rather than accruals per se. We did not find any group that contradicted the general pattern: the High-accrual/Low-CFO group was consistently the worst performer, validating the earnings quality hypothesis. Meanwhile, the Low-accrual/Low-CFO group (low earnings overall, likely distressed firms) unsurprisingly had poor future ROA as well; they were not central to our hypothesis but serve as another reference (low accrual alone doesn't help if your business isn't generating cash or earnings).

Statistical tests (ANOVA) confirmed that the interaction of high/low accrual and high/low cash flow is significant in explaining variation in future ROA. In a two-way ANOVA, the interaction term had $p < 0.01$ for years t+2 to t+4, indicating the combined condition matters beyond the individual effects of accruals or cash flows alone. In summary, the results for H3 underscore the critical role of earnings quality: companies with "red flags" of low-quality earnings (lots of accruals, little cash) underperform, whereas those with high-quality earnings (cash-rich profits) excel in subsequent periods. Moreover, high accruals are not universally bad – their interpretation hinges on the cash context. These findings contribute an interesting nuance to the accrual literature by highlighting a

scenario (high accrual + high cash) where accrual magnitude does not foreshadow poor performance, a point we delve into next.

5 Discussion

The empirical results provide a coherent story that largely aligns with prior literature, while also adding new insights, especially in the context of a non-U.S. market. We discuss each major finding in light of existing studies and theoretical expectations:

Earnings vs. Cash Flows Predictive Power: Our finding that accounting earnings significantly outperform operating cash flows in predicting next-year ROA is consistent with the traditional view of accrual accounting's usefulness. It echoes the conclusions of studies like Dechow (1994) – who found earnings more closely related to future performance than cash flows – as well as more recent reaffirmations by Ball et al. (2022) and others. Essentially, this suggests that in the Greek market data, accrual processes (such as revenue recognition, matching of expenses, smoothing of timing differences) are serving their intended purpose: they create an earnings number that better reflects the firm's ongoing earning capacity than raw cash flow does. In practical terms, this means that Greek companies' income statements contain forward-looking information (e.g. about future cash inflows from current credit sales, or future cost savings from current expenses) that pure cash metrics would miss. This result also provides empirical support for the FASB's long-standing position that accrual earnings are a superior indicator of enterprise performance. For standard-setters and practitioners in Greece or similar contexts, it reinforces confidence that net income (as per IFRS) is a meaningful measure for performance evaluation and forecasting.

Our results stand in contrast to those of Foerster et al. (2017), who found OCF to sometimes be a better predictor than earnings. Why might our findings differ? One reason could be the choice of outcome variable. Foerster et al. (2017) focused on predicting future *cash flows*, whereas we predict future *accrual earnings (ROA)*. It is plausible that current cash flows are indeed a strong predictor of future cash flows (a cash-to-cash relation), especially over multi-year horizons, as their study found. But for predicting accrual metrics like ROA or earnings, current earnings prove superior. In other words, earnings beget earnings, while cash begets cash – depending on what one is trying to forecast, the preferred predictor might differ. Our study was motivated by investors' concern with overall corporate returns (ROA, a profit metric), thus the finding that earnings lead is logical. Additionally, the discrepancy could arise from contextual factors: our sample is exclusively Greece 2013–2022, a period with its own economic cycles. It could be that in this period, accruals (like credit sales, deferrals) were relatively reliable and not massively distorted, whereas in other contexts or longer horizons, accruals might lose some predictive traction. We also took care to use actual cash flow statement data (like Nallareddy did), so measurement error is unlikely the reason for divergence. Instead, it underscores the importance of what performance measure one is interested in – an investor focusing on earnings growth would find earnings more predictive, aligning with our result, while a creditor interested in liquidity might find cash flows more directly relevant. Recent work by Ball and Nikolaev (2022) further suggests that when one compares apples-to-apples (operating earnings vs operating cash), much of the perceived cash-flow superiority vanishes. In our case, operating earnings (before one-time items) are indeed what we use (ROA is effectively operating earnings for non-financials), which may explain why the classic accrual superiority holds true.

Overall, our evidence adds to the "earnings beat cash flows" side of the debate, at least for near-term performance prediction in an international setting, complementing U.S. evidence in prior literature.

Disaggregating Earnings into Cash and Accrual Components: The support for H2 in our results reinforces a key message from prior research: examining the composition of earnings yields valuable predictive insight. Sloan (1996) originally demonstrated that the stock market tends to ignore the differential persistence of accruals vs cash flows in earnings, leading to mispricing. While our study did not directly look at stock returns, the underlying mechanism is visible in accounting terms – the cash flow component of earnings had a stronger relation with next year's ROA than the accrual component did. If one naively treated all earnings dollars as equal, one might mis-forecast future ROA. By separating them, our model could apply appropriate weights: roughly, place more weight on cash-based earnings and slightly less on accrual-based earnings. This improved predictive accuracy (albeit modestly). From a statistical viewpoint, the significant coefficients on both OCF and Accrual confirm that accruals carry information incremental to cash flows. This aligns with the premise that accruals are not merely noise; they often reflect genuine economic activities (like revenue earned on credit, or expenses incurred via payable) that will impact future outcomes. Our finding is in line with Barth et al. (2001), who found that including accrual components (like changes in receivables, inventory, etc.) helps predict future cash flows better– an accrual can be informative about future cash realization. It also agrees with Dechow et al. (1998), who theorized that the optimal predictor of future earnings would utilize both current cash flows and accrual information, since accruals help adjust for the shortcomings of cash flows in performance measurement.

Interestingly, in our results accruals had a positive predictive coefficient, not a negative one – meaning higher accruals (for a given level of cash flows) generally indicated higher next-year ROA. This suggests that many accruals in our sample were "normal" accruals associated with growth, rather than predominantly earnings management that would backfire immediately. Had discretionary or problematic accruals dominated, one might expect a flat or negative relation (e.g., if high accruals meant aggressive revenue recognition that then reverses next year). The positive coefficient implies that, on average, managers were using accruals in a way that signaled real performance improvements (e.g., increasing sales on credit that translated to profits next year). This touches on the concept of accrual quality – not all accruals are bad; some are bona fide reflections of successful business expansion. However, the smaller magnitude of the accrual coefficient relative to cash flow's reminds us that accruals are less persistent: some portion likely reverses or is less recurring. Thus, while separate treatment helps, one must be cautious in extrapolating accrual-driven earnings.

For practitioners, this result underscores an important analytical point: when forecasting or valuing a company, consider the breakdown of earnings. If a company's profits came mostly from actual cash receipts (for instance, cash from customers), one can be more confident projecting those forward. If profits were largely due to accrual entries (increases in accounts receivable, capitalization of costs, etc.), one might want to investigate further and perhaps be more conservative in forecasting. Our study provides empirical backing that such differentiation is not just theoretically sound but quantitatively justified in predicting next-year outcomes. It essentially validates the practice of performing an "earnings quality check" by looking at the cash flow statement in conjunction with the income statement – a practice analysts often preach. As we saw, ignoring the distinction would have led to a meaningful drop in predictive accuracy (a ~20% relative increase in unexplained variance

when not separating components, given R^2 went from 35% to 34% – small in absolute terms but notable in principle).

Earnings Quality (Accruals vs Cash) and Future Performance: The H3 findings bring our discussion to the realm of earnings quality and connect our accounting-based analysis to the broader theme of sustainable performance. The stark underperformance of firms with High Accrual & Low Cash Flow confirms what accrual skeptics have long argued: firms that report profits without corresponding cash flows often cannot maintain that performance. In our data, such firms likely engaged in practices like aggressive revenue recognition (sales booked that haven't turned to cash) or deferring payments (incurring expenses but not paying cash, temporarily boosting cash flow which in our group is "low" though in relative terms of profitability, actually negative free cash when considering accruals). These firms might also include those experiencing a late-cycle revenue spike that isn't collected (build-up of receivables) or those capitalizing costs to boost earnings. The fact that their ROA deteriorates in subsequent years is consistent with accruals reversing or simply with the notion that if you're not bringing in cash, eventually you can't keep showing strong earnings. Our results mirror Sloan (1996) in the sense that investors could use accrual and cash info to predict which firms' earnings are unsustainable – although we did not test stock returns, presumably the market might eventually catch on as the performance falters. It also resonates with studies by Fairfield et al. (2003) and Richardson et al. (2004) who found that firms with extreme accruals experience future performance problems, partly due to earnings management or overextension. Moreover, our multi-year observation (up to t+4) suggests the effects of poor earnings quality can persist and widen over several years, not just an immediate one-year reversal. This could be due to cumulative effects – if a firm continuously relies on accruals (e.g., keeps extending customer credit aggressively or capitalizing costs), the eventual correction is larger and more painful, leading to multiple years of subpar returns as reality catches up.

Perhaps the most interesting discussion point is the nuanced role of accruals when accompanied by strong cash flows. Our analysis showed that high accruals are not inherently a kiss of death; when they occurred in firms that also had high operating cash flow, the outcomes were actually very positive (the highest future ROA). How do we interpret this? One interpretation is that these firms were in a phase of rapid growth – they had high cash profits and on top of that they were accumulating accruals (like building working capital) because they were expanding sales rapidly. For example, a company that doubles its sales might see a huge increase in accounts receivable (an accrual) and also generate a lot of cash; its earnings will include that accrual revenue and its cash flow from operations is also large. Such a scenario would produce high accrual and high cash concurrently, reflecting genuine growth rather than low quality earnings. In fact, for these firms, the high accrual might indicate something positive: that they are investing in working capital to support growth or that they have confidence in future collections. The outcome – excellent future performance – suggests these accruals were realized successfully. This ties to the concept of growth vs. earnings quality. Sometimes, high accruals occur in high-growth firms not because of earnings manipulation, but simply due to growth (growth requires working capital, etc.). Fairfield et al. (2003) pointed out that the accrual anomaly could partly be a growth phenomenon – firms with high growth in net operating assets (which is essentially accrual investment) tend to have lower subsequent profitability as growth normalizes. In our sample, however, some high-growth firms continued to perform well (at least over a 1-4 year horizon). It could be that the horizon for mean reversion extends beyond our

window, or that these firms managed growth efficiently. In any case, the implication is that not all accruals are created equal. Stakeholders should examine why accruals are high: is it due to revenue growth (potentially good, but watch receivable collectability), or due to aggressive accounting without cash (bad), or due to a temporary timing (which will reverse)? Our findings encourage a segmented view of high-accrual firms – distinguishing those with strong underlying cash flows from those without.

From a theoretical standpoint, these results reinforce the multi-faceted nature of earnings quality. Earnings quality is maximized when accruals and cash flows jointly indicate the same story – i.e., when accruals are supported by cash evidence. When they diverge (earnings says one thing, cash says another), it raises a flag. Interestingly, our findings that low-accrual/high-cash firms do well, and high-accrual/low-cash do poorly, is in line with the idea of using accruals-to-cash flow ratios or similar metrics as quality indicators. Practitioners sometimes look at metrics like the quality of earnings = OCF/Net Income, where a ratio below 1 (cash < earnings) repeatedly may indicate issues. Our evidence provides empirical justification: those with consistently lower cash than earnings eventually underperform. Conversely, companies whose cash flow is healthy relative to earnings prosper.

In context of other literature, our study's results align with the broad consensus that earnings quality matters for predicting performance. We extend those findings to a new market and show that even in Greece, with IFRS and possibly different enforcement levels than the US, the core principles hold – accrual-heavy earnings are less sustainable. We also add the nuance aligning with recent discussions that one must consider both accruals and cash flows together, not in isolation, to judge quality. This is somewhat aligned with McNichols (2002) who integrated accrual quality models – effectively, the information in accruals is best interpreted in conjunction with cash flow realization.

Finally, it is worth discussing the broader implications of our results for the accrual vs. cash flow debate. While at first glance our H1 result (earnings superior) might seem at odds with H3 (cases where earnings are not sustainable), they are in fact two sides of the same coin. Accrual earnings are on average more informative about the future, but one must peel back the layers to see if those earnings are high-quality. It doesn't contradict the accrual accounting advantage; rather, it refines it: accrual accounting provides useful information (our H1), but users must still analyze the accrual component to fully gauge that information's reliability (our H2 and H3). In scenarios where accruals are extreme, the raw earnings number could mislead unless adjusted. This is precisely why standard-setters require a cash flow statement – so that analysts can perform this check. In summary, our discussion highlights that our findings are largely consistent with established literature on earnings vs. cash flows and the accruals anomaly, and they emphasize the importance of combining metrics for a holistic assessment.

6 Contribution

Our study makes several contributions to the academic literature and offers insights for practitioners and policy-makers:

- Academic Contribution – New Evidence from a Non-U.S. Market: We contribute empirical evidence on the earnings vs. cash flow debate from the context of the Athens Stock Exchange, a market that has been underrepresented in prior research. By documenting that accrual-based earnings outperform cash flows in predicting future ROA in Greece, we extend the generalizability of findings largely established in U.S. data. This answers the call by Mulenga et al. (2017) and others for studies in different institutional settings, thereby enriching the literature with a case from a European economy. Despite differences in economy size and IFRS reporting environment, the fundamental relations hold, which speaks to the robustness of accounting theory across borders. Furthermore, our results on earnings quality (accruals vs cash) add nuance to the global accrual anomaly literature by showing the nuance that high accruals need not always signal poor quality if accompanied by high cash flows. This suggests future cross-country research can investigate how institutional factors (like enforcement of accounting standards or prevalence of earnings management) might influence the accrual–future performance relationship.

- Implications for Investors and Analysts: For practitioners, especially equity analysts, credit analysts, and portfolio managers, our findings reinforce the importance of analyzing both earnings and cash flows together. Relying on a single metric could be misleading. We show that while bottom-line earnings are generally more indicative of ongoing performance than cash flows, one should scrutinize the composition of those earnings. In practical terms, an analyst forecasting a company's future ROA or earnings should adjust their expectations based on the accrual content: if a company's recent earnings were cash-rich (high OCF relative to NI), one can be more optimistic about those earnings sustaining; if earnings were driven by accruals with weak cash support, one should be cautious and perhaps project a decline or normalization. Investors can incorporate simple checks – e.g., the accrual ratio (Accruals/Assets) – as a red flag indicator. Our evidence suggests that an investment strategy that flags or underweights firms with extremely high accruals and low cash flows might avoid future underperformers, consistent with the accrual anomaly logic. Conversely, identifying firms with strong cash flows backing their earnings could find resilient performers. In valuation, this means cash flow analysis remains essential even when valuing on earnings multiples; two companies with the same earnings can have very different future prospects if one's earnings are high quality and the other's are not. Overall, our study arms practitioners with empirical support to justify deeper forensic analysis of earnings quality as part of their due diligence.

- Policy and Standard-Setting Implications: The results carry messages for accounting standard-setters and regulators. First, our finding that accrual-based earnings (under IFRS, in this case) are highly predictive of future performance provides a vote of confidence in the accrual accounting model – supporting the notion that standards which enforce accrual principles (revenue recognition, matching, etc.) are indeed yielding information useful for forecasting. This is an important affirmation, given periodic criticisms that accounting earnings can be manipulated. However, our results also highlight the importance of transparency and disclosure of accrual components. The fact that we could improve predictions by using cash flow statement data and balance sheet accruals suggests that requiring companies to provide detailed cash flow statements (as IFRS and US GAAP do) is

very beneficial for users. Regulators should continue to ensure the quality of the cash flow statement reporting, as it is crucial for assessing earnings quality. Additionally, our evidence of the pitfalls of high accrual/low cash cases may encourage regulators to develop or refine early warning indicators. For instance, market regulators or auditors could monitor companies with red-flag patterns (e.g., consistently negative OCF while reporting positive earnings) as candidates for closer inspection, as these may indicate earnings management or financial strain. From a standard-setting perspective, the study underscores the relevance of projects that improve accrual accounting standards – for example, clarifying revenue recognition (so that accrual revenues are as reliable as possible) and discouraging aggressive accrual estimates. It also indirectly supports the continued convergence of global standards towards transparency: since our study shows IFRS earnings in Greece function predictively much like findings under US GAAP, it suggests that high-quality standards produce comparable outcomes in different settings. Policymakers in corporate governance might also glean that boards and audit committees should pay attention to accrual metrics (like the ratio of cash conversion) when evaluating management performance – not just accept net income at face value.

In sum, our work contributes to the scholarly debate by providing international evidence and by integrating the earnings quality dimension into the discussion of predictive value. It bridges literature on accrual-vs-cash predictive ability with literature on accruals and earnings quality, demonstrating empirically how they are two aspects of the same overall picture. For academia, it opens avenues to explore similar analyses in other markets or to delve into the characteristics of the "high accrual, high cash" firms to better understand when accruals are beneficial versus detrimental. For industry professionals and regulators, it reinforces best practices of thorough financial analysis and may inform tools for performance evaluation and risk assessment.

7 Conclusion

This study examined the predictive value of accounting earnings, operating cash flows, and accruals for future corporate performance using data from companies listed on the Athens Stock Exchange during 2013–2022. Our analysis yielded several key findings. First, accrual-based accounting earnings (net income) demonstrated significantly greater ability to predict next-year return on assets than did operating cash flows, affirming the view that earnings encapsulate information relevant to future performance beyond the contemporaneous cash generation. Second, breaking earnings into its components – cash flow and accruals – provided additional insight: both components were positively associated with next-year performance, with cash flows showing a stronger persistent effect but accruals also contributing meaningfully. This confirms that considering the makeup of earnings improves forecasts, as the cash portion and accrual portion have different implications. Third, the interplay of accruals and cash flows is crucial for earnings quality – firms with high accruals and weak cash flows had significantly lower future ROA, whereas those with low accruals and strong cash flows had higher future performance. This finding underscores that high earnings unaccompanied by cash are not sustainable on average. Notably, we observed that high accruals did not harm future performance when paired with robust cash flows; in fact, such firms excelled, indicating that accruals reflecting genuine growth are not problematic. Overall, these results paint a

cohesive picture: accrual accounting adds value in performance prediction, but users must analyze accruals versus cash to fully gauge the quality of those earnings.

The study's contributions, while significant, should be viewed in light of its limitations, which also suggest avenues for future research. One limitation is the focus on a single country (Greece) and a specific time period. Greece in 2013–2022 had unique economic conditions (including recovery from a debt crisis and a pandemic). Thus, replication in other countries, or a broader cross-country study, would be valuable to ensure the findings hold universally. Future research could examine, for instance, emerging markets vs. developed markets to see if earnings vs. cash flow predictive power differs with institutional development. Another limitation is that our performance measure was accounting-based (ROA); future work might explore parallel questions using market-based outcomes like stock returns or enterprise value changes. Would earnings (or accruals) predict stock performance in Greece? This would link our findings to the accrual anomaly in a capital markets context. Additionally, our study did not explicitly separate discretionary accruals from total accruals. It would be interesting to see if the predictive relations are stronger for abnormal accruals (the portion more likely manipulated) versus normal accruals. A refined analysis could use accrual quality metrics (Dechow-Dichev model errors, etc.) to see how those relate to future ROA in this setting. Moreover, while we considered one-year-ahead and up to four-year-ahead performance, further research could investigate longer horizons and the dynamics of reversal – e.g., do high-accrual firms eventually mean-revert fully in performance over 5-10 years, and how does that compare to the short-run effects we found? Lastly, macroeconomic factors were not included in our predictive models; incorporating GDP growth, industry cycles, or interest rates could improve understanding of whether earnings or cash flows matter more under certain macro conditions (for example, in liquidity crunches, perhaps cash flows become momentarily critical).

In closing, our research provides robust evidence that accrual-based earnings are a powerful predictor of future corporate returns, especially when one accounts for the composition of those earnings. High-quality earnings – underpinned by cash flows – portend strong future performance, whereas low-quality earnings – heavy on accruals, light on cash – often foretell decline. These insights reinforce core principles of financial analysis taught in both academia and practice: look beyond the earnings number. By doing so in an understudied market, we broaden the empirical foundation for these principles. The key takeaway for researchers and practitioners alike is that both accruals and cash flows are indispensable pieces of the puzzle in evaluating a firm's financial health and outlook. Future research building on these findings will further illuminate how these fundamental accounting measures interact across different settings, guiding us toward ever more informed decisions in the realms of investment, management, and policy.

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