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Earnings Management Around Seasoned Equity Offerings: A Systematic Literature Review

İkincil Halka Arz Sürecinde Kazanç Yönetimi: Sistematik Literatür Taraması

Mahmoud ASHOUR [1] **Asuman ATİK** [2*]

[1] Marmara University, mahmood_ashour@hotmail.com, ORCID: 0000-0002-8678-6547
[2] Marmara University, aatik@marmara.edu.tr, ORCID: 0000-0001-7727-4585
* Yazışılan Yazar/Corresponding author

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Abstract

Earnings management (EM) is a prevalent topic in accounting, with many literature reviews on it. However, reviews focusing on a specific area are rare. In this study, we concentrate on the studies examining the EM behavior of firms around seasoned equity offerings (SEOs). A systematic literature review is conducted in four databases, namely Emerald, JSTOR, ScienceDirect, and Wiley Online Library, for 1998 and 2022. Thirty-eight articles are included in the sample. The articles are examined and discussed according to (1) the methodology to detect earnings management, (2) the perspective adopted, and (3) the factors affecting earnings management around SEOs. The study has shown that the highest number of studies have been carried out in the United States, revealing a need for studies in other markets, especially in emerging markets. The studies employed well-known and widely accepted methods of detecting earnings management. Most researchers take the opportunistic perspective, and the informative perspective needs more investigation.

Keywords: *Earnings Management, Seasoned Equity Offerings, Systematic Literature Review.*

Jel Codes: *M10, M41.*

Öz

Kazanç yönetimi (KY), muhasebede yaygın bir konudur ve pekçok literatür taraması yapılmıştır. Ancak belirli bir alana odaklanan incelemeler nadirdir. Bu çalışmada, firmaların ikincil halka arzları (İHA) etrafındaki KY davranışlarını inceleyen çalışmalara odaklanılmıştır. Emerald, JSTOR, ScienceDirect ve Wiley Online Library olmak üzere dört veritabanında 1998 ve 2022 yılları için sistematik bir literatür taraması yapılmıştır. Örneklemde 38 makale yer almaktadır. Makaleler (1) kazanç yönetimini tespit etme metodolojisine, (2) benimsenen bakış açısına ve (3) İHA'lar etrafında kazanç yönetimini etkileyen faktörlere göre incelenmiş ve tartışılmıştır. Çalışma, en fazla sayıda çalışmanın Amerika Birleşik Devletleri'nde yapıldığını ve özellikle de gelişmekte olan piyasalarda benzer çalışmalara ihtiyaç duyulduğunu ortaya koymuştur. Çalışmalarda kazanç yönetimini tespit etmek için iyi bilinen ve yaygın olarak kabul edilen yöntemler kullanıldığı, çoğu araştırmacının fırsatçı bakış açısını benimsediği ve bilgilendirici bakış açısının daha fazla araştırılması gerektiği sonucuna varılmıştır.

Anahtar Kelimeler: *Kazanç Yönetimi, İkincil Halka Arzlar, Sistematik Literatür Taraması.*

Jel Kodları: *M10, M41.*

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1. INTRODUCTION

Earnings management research has been the center of attention for the last couple of decades. This attention has been fueled by the continuous occurrence of accounting scandals that highlight the ability of firms to influence reported earnings. Healy and Wahlen (1999: 368) define earnings management as "*using managerial judgment in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers*." This definition highlights the opportunistic perspective, the most used perspective in earnings management research. According to that perspective, earnings management is accepted as an opportunistic activity managers perform to achieve private gain.

On the other hand, another perspective of earnings management is examined in the literature with a lower frequency. This perspective considers earnings management as a beneficial or informative tool managers use to convey private information about the firms' future to the investors. In this case, earnings management is perceived as "*a means for managers to reveal to investors their private expectations about the firm's future cash flows*" (Beneish, 2001: 5), which would be otherwise known only to the managers. This would decrease information asymmetry and hence increase the value of information. Therefore, according to the literature, managers, in an attempt to attain some private gain, could use earnings management opportunistically or utilize it as an informative tool for the benefit of the firm and its stakeholders.

This study makes a literature review of the studies examining earnings management (EM) around seasoned equity offerings (SEOs). It is argued that managers engage in earnings management to manipulate earnings upward before seasoned equity offerings to boost the share price and, hence, boost the amount collected from the offering. They also continue to manipulate earnings upward after the SEO to give positive signals about their financial position and prevent the possible negative impact of SEO on share prices. Most reviewed articles examine open market SEOs in which the shares are offered to the public. A limited number of studies focus on rights issues in which the current owners have the privilege to buy shares first. Bonus issues are not included in the studies' samples because they don't create extra funds, and there is no motivation for earnings management.

There have been several review articles that analyze earnings management research in general. However, these papers fail to comprehensively explore a specific motive, a shortcoming we attempt to cover in this paper. The following part explains the study's methodology and analyzes the articles used in this literature review. Part 3 presents the selected papers in three sections: (1) methodology used to detect earnings management, (2) perspective adopted by the researcher, and (3) factors that affect earnings management around SEO. Part 4 concludes and makes suggestions for future research.

2. DATA AND METHODOLOGY

Four databases have been used to search articles examining earnings management around seasoned equity offerings. These databases are Emerald, JSTOR, ScienceDirect, and Wiley Online Library. We have explored these databases using two key phrases; "earnings

management" and "seasoned equity offerings." The search focuses on the period 1998-2022. The period began in 1998 because the preliminary investigation showed that the examination of SEO as a motive of earnings management started that year. The search results, which provided 846 articles, have been systematically screened to include the articles that examine earnings management practices around seasoned equity offerings. The selection process has provided 38 articles for analysis. Table 1 shows the selected articles categorized by year and by journal. Most articles regarding the subject are published in the International Review of Economics and Finance and the Journal of Financial Economics.

Table 1. Sample Research Articles by Journal and Year

#	Journal	Reference	Year
1	Accounting and Finance	Williams and Tang (2009)	2009
2	Accounting Research Journal	Ibrahim et al. (2011)	2011
3	Asia-Pacific Journal of Financial Studies	S. I. Kim et al. (2018)	2018
4	Contemporary Accounting Research	Marquardt and Wiedman (2004b)	2004
5	Contemporary Accounting Research	Sun (2021)	2021
6	International Journal of Accounting and Information Management	Comiran et al. (2018)	2018
7	International Journal of Law and Management	Njah and Trabelsi (2019)	2019
8	International Journal of Managerial Finance	Iqbal and Strong (2010)	2010
9	International Journal of Managerial Finance	Opare et al. (2022)	2022
10	International Review of Economics and Finance	Chang and Lin (2018)	2018
11	International Review of Economics and Finance	X. Wang et al. (2019)	2019
12	International Review of Economics and Finance	Shu and Chiang (2014)	2014
13	International Review of Economics and Finance	T. H. Yang et al. (2016)	2016
14	Journal of Accounting and Economics	Cohen and Zarowin (2010)	2010
15	Journal of Accounting and Economics	Shivakumar (2000)	2000
16	Journal of Business Ethics	Jo and Kim (2008)	2008
17	Journal of Business Finance and Accounting	Marquardt and Wiedman (2004a)	2004
18	Journal of Contemporary Accounting and Economics	Ching et al. (2006)	2006
19	Journal of Corporate Finance	Guthrie and Sokolowsky (2010)	2010
20	Journal of Corporate Finance	Fauver et al. (2017)	2017
21	Journal of Financial Economics	Jo et al. (2007)	2007
22	Journal of Financial Economics	Rangan (1998)	1998
23	Journal of Financial Economics	Teoh et al. (1998)	1998
24	Journal of Financial Economics	Hibbert et al. (2020)	2020
25	Journal of Financial Reporting and Accounting	Jerbi Maatougui and Halioui (2019)	2019

26	Managerial Auditing Journal	He et al. (2010)	2010
27	Managerial Finance	W. Yang et al. (2013)	2013
28	Managerial Finance	Duc Ngo and Varela (2012)	2012
29	Managerial Finance	Di et al. (2012)	2012
30	Marketing Science	Mizik and Jacobson (2007)	2007
31	Research in International Business and Finance	Zhang et al. (2020)	2020
32	Review of Accounting and Finance	G. Wang and Hagigi (2019)	2019
33	The Accounting Review	Kothari et al. (2016)	2016
34	The International Journal of Accounting	Yoon and Miller (2002)	2002
35	The International Journal of Accounting	G. He (2016)	2016
36	The Journal of Financial and Quantitative Analysis	Kim and Park (2005)	2005
37	The Journal of Financial Research	Qian et al. (2012)	2012
38	The Review of Financial Studies	Teoh and Wong (2002)	2002

Figure 1 shows that the number of published articles has intensely increased in 2010 and afterward, compared with the preceding period. The published articles in 2010 – 2022 account for around 65 percent of the total published articles in our study period. This indicates that the interest in the subject specifically, and in earnings management in general, has increased exponentially in the last decade. Our analysis also shows that most of the published articles in our study period are focused on the U.S. market.

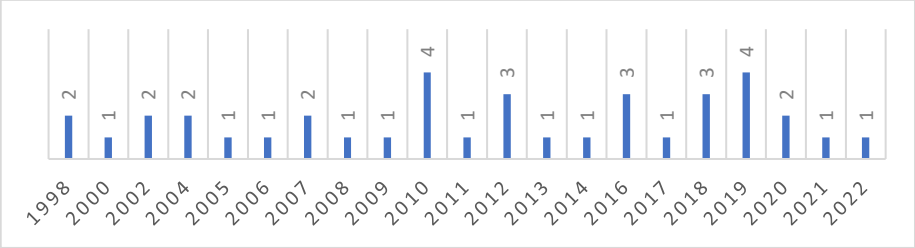

Figure 1. Number of Research Articles by Year

Around sixty-six percent of the published articles in the study period examine the U.S. setting, as shown in Figure 2. This reveals a gap in the literature, especially when emerging economies are considered.

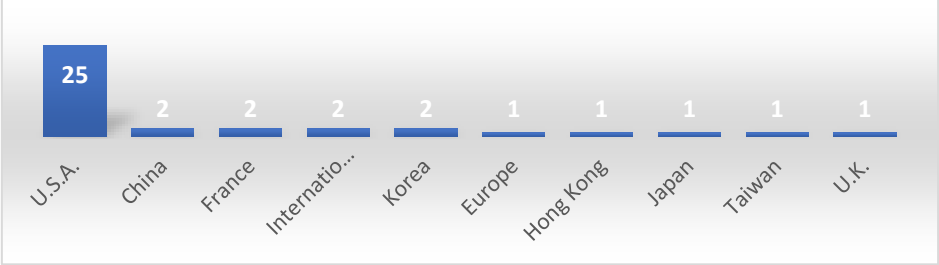

Figure 2. Number of Research Articles by Country/Region

Figure 3 shows that most articles published in the search period focus on accrual earnings management. This could be explained by the late attention to real earnings management,

which was brought to the spotlight by the survey of Graham et al. (2005) and the detection models of Roychowdhury (2006). Preceding these studies, some would even consider that accepting real earnings management as a form of manipulation is problematic (Beneish, 2001).

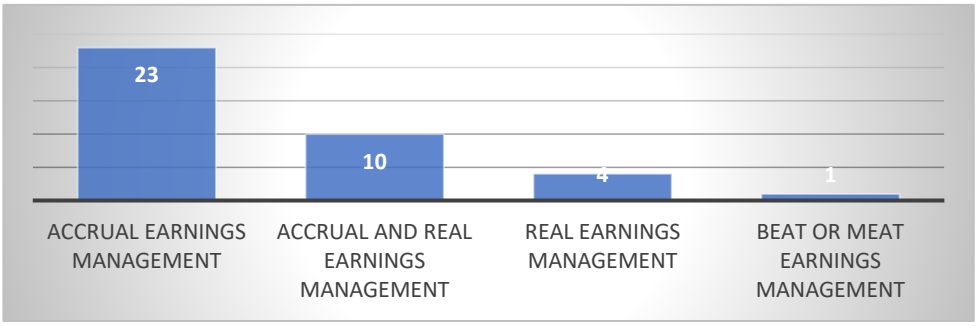

Figure 3. Earnings Management Type

3. ANALYSIS OF THE ARTICLES ON EARNINGS MANAGEMENT AROUND SEOS

The analysis of selected articles revealed differences in the methods they have used, the perspectives they have employed, and the factors that are assumed to affect earnings management around SEOs. Therefore, the articles are summarized in three sections:

i- Methodology used to detect earnings management.

ii- Perspective of earnings management.

iii- Factors that affect the practice of earnings management.

The compact summary of the articles is also provided in the Appendix in order of publishing year.

3.1 Methodology Used to Detect Earnings Management

As shown in Figure 4, the Modified Jones model introduced by Dechow et al. (1995) is the most utilized model to measure accrual earnings management, followed by the performance-matching Jones model introduced by Kothari et al. (2005). On the other hand, almost all the selected articles that study real earnings management have utilized the Roychowdhury (2006) model.

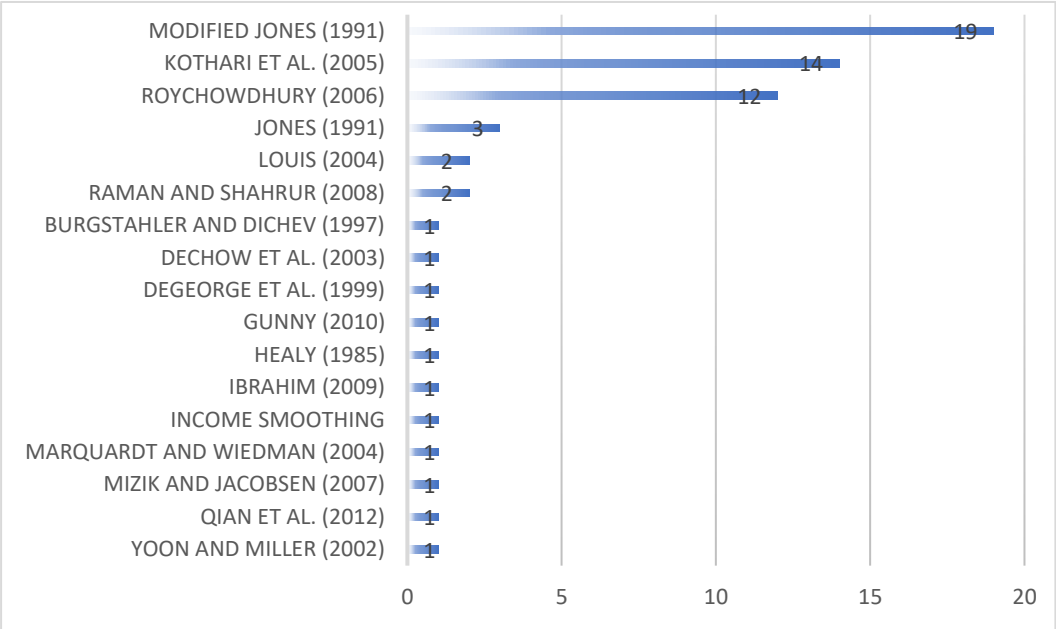

Figure 4. Frequency of the Methodologies Used to Detect Earnings Management by Sample Articles

3.1.1. Accrual Earnings Management

One of the first models used to measure discretionary accruals is the model suggested by Healy (1985). He examines managers' motives to manage earnings to maximize their bonuses and compensation payouts. He considers any deviation from the Total Accruals long-run average to be discretionary. The Jones (1991) model, deemed a milestone in detecting and measuring accrual earnings management, is more complex. In her study, she examines whether U.S. firms have managed their earnings downward during government import relief investigations. The model does not assume non-discretionary accruals to be constant as the Healy (1985) model does but considers the effect of some economic factors on them (Dechow et al., 1995). It is regarded as an event study model that divides the study period into two: an estimation and an event period. This model works under the assumption that firms do not engage in any earnings management practices in the estimation period. The estimation period is used to form a model that can predict the normal level of accruals in the event years. Consequently, the difference between the predicted normal and actual levels of accruals in the event years would be considered the measure of earnings management.

The model used for the estimation period to set the normal level of accruals is as follows:

$$TA_{i,p}/A_{i,p-1} = \alpha_1 (1/Ai,_{p-1}) + \beta_1 (\Delta REV_{i,p}/A_{i,p-1}) + \beta_2 (PPE_{i,p}/A_{i,p-1}) + \varepsilon_{i,p}$$

(Equation 1)

Where;

TA = Total Accruals
A = Total Assets
REV = Revenues
PPE = Gross Property, Plant, and Equipment
ε = Error term

i = Reference for firm (i = 1, 2, 3 … N)
p = Reference for year (p = 1, 2, 3 … T)
△ = Change in a given variable

After running the first model (Equation 1), the parameters α_1, β_1, and β_2 would be used in the same model but for the event period (Equation 2). The error term of Equation 2 would be considered the residual accruals or discretionary accruals, as this residual amount would be the abnormal accruals that are different from the estimated normal accruals.

$$DA_{i,t} = TA_{i,t}/A_{i,t-1} - [a_{1,i}(1/A_{i,t-1}) + b_{1,i}(\triangle REV_{i,t}/A_{i,t-1}) + b_{2,i}(PPE_{i,t}/A_{i,t-1}) \quad \text{(Equation 2)}$$

There are two methods to calculate Total Accruals: the Balance Sheet method and the Cash flows statement method. The balance sheet method, which is used by Jones (1991), calculates total accruals as the difference between the change in current assets, change in cash, change in current liabilities, change in current long-term debt maturities, change in income tax payables, and depreciation and amortization expense. This method of calculating total accruals has its weaknesses. First, it does not consider the income statement items; second, it considers non-current accruals, such as accruals from discontinued operations. Therefore, using the Cash flow statement method is preferred as it overcomes these hindrances. This method calculates the total accruals as the difference between income before discontinued operations / extraordinary items and cash flows from operations.

One of the areas for improvement in the Jones (1991) model is the assumption that there are no earnings management activities in the estimation period. Therefore, any manipulations present in the estimation period would skew and distort the results for the event period. Another area for improvement is that the Jones (1991) model is a time series model, which assumes that the parameters measured in the estimation period would stay the same over time. As a result, the changes between the estimation and the event period are not considered, and this might affect the results' power. This issue can be overcome using a cross-sectional model instead of a time-series one. The Jones (1991) model, modified by Dechow et al. (1995), solves the issue of credit sales manipulations that might affect normal accruals in the event period. This modified version of the time series model deducts the change in Accounts Receivable from the change in Sales only in the event period's model (Equation 2), as shown in Equation 3. On the other hand, both models for the estimation and event periods are adjusted, as mentioned above, when the cross-sectional model is used.

$$DA_{i,t} = TA_{i,t}/A_{i,t-1} - [a_i(1/A_{i,t-1}) + b_{1,i}(\triangle REV_{i,t}/A_{i,t-1} - \triangle REC_{i,t}/A_{i,t-1}) + b_{2,i}(PPE_{i,t}/A_{i,t-1})] \quad \text{(Equation 3)}$$

Where;

REC = Accounts Receivable

Dechow et al. (2003) extend the separation of discretionary and non-discretionary parts of credit sales to increase the power of the Jones (1991) model further. They argue that the non-discretionary part of Accounts receivable should be added back to cash sales. The following regression model is used to separate the discretionary Accounts receivables from the non-discretionary:

$$\triangle REC_{i,t}/A_{i,t-1} = a_i + k \triangle Sales_{i,t}/A_{i,t-1} + \varepsilon_{i,t}$$

The k parameter indicates how much Accounts receivables change as Sales change. The closer the parameter to 1, the lower the discretionary part available in the change of Accounts receivable. Moreover, this adaptation adds a lagged Total Accruals variable to the primary model to increase its power and control for reversals. Furthermore, they acknowledge the effect of growth on accruals by incorporating it within the model. Therefore, the adapted model is as follows:

$$DA_{i,t} = TA_{i,t}/A_{i,t-1} - [\alpha_1 + \beta_{1,i}((1+k)\triangle Sales_{i,t}/A_{i,t-1} - \triangle REC_{i,t}/A_{i,t-1}) + \beta_{2,i}(PPE_{i,t}/A_{i,t-1}) + \beta_{3,i}(TA_{i,t-1}/A_{i,t-2}) + \beta_{4,i}(Sales\_Growth_{i,t+1}/A_{i,t-1})]$$

Where;

Sales_Growth = Sales in t + Sales in t+1 / Sales in t

Yoon and Miller (2002) follow the same methodology as the modified Jones (1991) model, although they adjust the explanatory parameters that explain the variation in total accruals.

$$DA_{i,t} = TA_{i,t}/A_{i,t-1} - [\alpha_1 + \beta_{1,i}(\triangle REV_{i,t}/A_{i,t-1} - \triangle REC_{i,t}/A_{i,t-1}) + \beta_{2,i}(\triangle EXP_{i,t}/A_{i,t-1} - \triangle PAY_{i,t}/A_{i,t-1}) + \beta_{3,i}((NCASH_{i,t} * PPE\_Growth)/A_{i,t-1})]$$

Where;

EXP = Operating expenses, non-cash expenses not included

PAY = Accounts Payable

NCASH = Non-cash expenses

PPE_Growth = Growth rate in Property, Plant, and Equipment (Gross)

Yoon and Miller (2002) have noted that accruals and accrual earnings management are affected by performance. This implies that abnormal accruals might be mistakenly identified as earnings management when it merely reflects abnormal performance. In addition, they have noted that the relation between accruals and performance is not linear. Kothari et al. (2005) have proposed two ways to deal with these shortcomings. The first one is a comparison method between identical firms' performance. The difference in accruals between these comparable firms would be considered earnings management. The second method is an adjustment to the Jones (1991) model to account for the differences in performance. They add an intercept and a lagged Return on Assets to the model, as follows:

$$TA_{i,p}/A_{i,p-1} = \alpha_0 + \alpha_1(1/Ai_{,p-1}) + \beta_1(\triangle REV_{i,p}/A_{i,p-1}) + \beta_2(PPE_{i,p}/A_{i,p-1}) + \beta_3 ROA_{i,p-1}$$

Where;

ROA = Return on Assets

Raman and Shahrur (2008) extend the Kothari et al. (2005) model by adding the Book-to-Market ratio to control for growth opportunities, which might inflate accruals.

$$TA_{i,p}/A_{i,p-1} = \alpha_0 + \alpha_1(1/Ai_{,p-1}) + \beta_1(\triangle REV_{i,p}/A_{i,p-1}) + \beta_2(PPE_{i,p}/A_{i,p-1}) + \beta_3 ROA_{i,p-1} + \beta_4 BM_{i,p}$$

Where;

BM = Book to Market Ratio

On the other hand, Louis (2004) follows the same rationale as the modified Jones (1991) model but with some alterations. The Property, Plant, and Equipment and its parameters are dropped because the model aims to measure discretionary current accruals. Ibrahim (2009) also follows a similar alteration to the Kothari et al. (2005) model, which also drops the Property, Plant, and Equipment and its parameters from the model. Alternatively, Marquardt and Wiedman (2004a) follow a different path to measure earnings management for specific accrual accounts. They calculate the abnormal part of the account by subtracting the actual amount from the estimated expected amount, which is computed by multiplying the past year's closing amount by the growth in a specific account that would affect it directly. For instance, Accounts receivables would be influenced by Sales. Therefore, the increase in Sales would be used to calculate the expected balance of Accounts receivable.

$$DAR_{j,t} = [AR_{j,t} - (AR_{j,t-1} * Sales_{j,t} / Sales_{j,t-1})] / TA_{j,t-1}$$

3.1.2. Real Earnings Management

After the novel work of Graham et al. (2005) and Roychowdhury (2006), researchers have paid more attention to real-based earnings management. Roychowdhury (2006) identifies three different ways they can manage their earnings using real investment/financing decisions: manipulation of sales, production costs, and discretionary expenses. Firms can accelerate sales by offering customers discounts and lenient credit terms. The increase in sales would inflate the amount of revenues reported on the Income statement, hence, the amount of reported income. Although this tactic would increase the sales figure under the accrual basis of accounting, it will affect the reported cash flows from operations differently. Therefore, any abnormal level of cash flows given a particular level of sales would be considered earnings management. The second method firms can influence their reported income is by increasing their production level, although the demand needs to justify it. This increase in production will spread the fixed manufacturing costs over larger units, decreasing the cost per unit. The decrease in the cost per unit will reduce the amount of costs of goods sold reported on the Income statement. These costs will be shifted from the income statement to the balance sheet and reported as inventory. Therefore, any abnormal level of production costs given a particular level of sales would be considered earnings management. The third-way firms can manipulate their earnings is using their discretionary expenses, such as advertisement, research, and development, administration, etc. These expenses do not generate revenues immediately; therefore, their manipulation would not affect revenues in the short run but would influence the amount of reported earnings. Thus, any abnormal level of discretionary expenses given a particular level of sales would be considered earnings management. The models Roychowdhury (2006) developed follow a similar mechanism as the Jones (1991) model. Earnings management is measured in two stages: first, estimating what is normal and then calculating the abnormal. The models for each method are as follows:

$$CFO_{i,p} / A_{i,p-1} = \alpha_0 + \alpha_1 (1 / A_{i,p-1}) + \alpha_2 (S_{i,p} / A_{i,p-1}) + \alpha_3 (\Delta S_{i,p} / A_{p-1}) + \varepsilon_{i,p}$$

Where;

CFO = Cash flow from operations
S = Sales

$$PROD_{i,p} / A_{i,t-1} = \alpha_0 + \alpha_1 (1 / A_{i,p-1}) + \alpha_2 (S_{i,p} / A_{i,p-1}) + \alpha_3 (\Delta S_{i,p} / A_{i,p-1}) + \alpha_4 (\Delta S_{i,p-1} / A_{i,p-1}) + \varepsilon_{i,p}$$

Where;

PROD = Production Costs (Sum of COGS and change in Inventory)

$$DISX_{i,p} / A_{i,p-1} = \alpha_0 + \alpha_1 (1 / A_{i,p-1}) + \alpha_2 (S_{i,p-1} / A_{i,p-1}) + \varepsilon_{i,p}$$

Where;

DISX = discretionary expenditures (the sum of selling, general, administrative, and R&D expenditures)

Gunny (2010) follows the same methodology for measuring abnormal items, although she provides alternative parameters that explain the change in these items. The models are as follows:

$$RD_{i,p} / A_{i,p-1} = \alpha_0 + \alpha_1 (1 / A_{i,p-1}) + \alpha_2 MV_{i,p} + \alpha_3 Q_{i,p} + \alpha_4 (INT_{i,p} / A_{i,p-1}) + \alpha_5 (RD_{i,p-1} / A_{i,p-1}) + \varepsilon_{i,p}$$

Where;

RD = Research and Development expense

MV = Market value natural logarithm

Q = Tobin's Q

INT = Internal Funds

$$SGA_{i,p} / A_{i,p-1} = \alpha_0 + \alpha_1 (1 / A_{i,p-1}) + \alpha_2 MV_{i,p} + \alpha_3 Q_{i,p} + \alpha_4 (INT_{i,p} / A_{i,p-1}) + \alpha_5 (\Delta S_{i,p} / A_{i,p-1}) + \alpha_6 ((\Delta S_{i,p} / A_{i,p-1})*DD) + \varepsilon_{i,p}$$

Where;

SGA = Selling, General, and Administrative expenses

DD = Dummy variable, which equals 1 when Sales decrease between t and t-1, 0 otherwise

3.1.3. Meet or Beat a Specific Threshold

This methodology is based on the notion that managers seek to beat or at least meet some specific thresholds or benchmarks. These thresholds could be zero earnings, consistent earnings, or analysts' forecasts. Firms that fail to at least meet these thresholds, even by a small margin, are punished by the market (Burgstahler and Dichev, 1997; Degeorge et al., 1999; Graham et al., 2005). Therefore, in an attempt to meet or beat these thresholds, managers would engage in earnings management, disturbing the normal distribution of earnings around these thresholds. The assumption is that earnings that have not been manipulated or managed would follow a normal distribution, and any disruption to this normal distribution would be a sign of earnings management. Income smoothing could be considered as one of the meet-or-beat strategies as it aims to reduce fluctuations in the long-run reported earnings. It also follows the same rationale as meet or beat strategies as it provides the users of financial reports with a view of stability regarding the firm (Duc Ngo and Varela, 2012).

3.2. Opportunistic and Informative Perspectives in the Studies

Both perspectives, the opportunistic and the informative, of earnings management are considered in the analyzed literature. Seventy-six percent of the selected articles are based on the opportunistic perspective, while only 11 percent consider the informative perspective. The remaining 13 percent mention both perspectives in their analysis. The opportunistic view considers earnings management to be corrupt and immoral as managers employ these tactics to convey a manipulated perception of the firm for their private gains. The other perspective of earnings management, the informative or beneficial one, considers the act of earnings management as a tool to provide financial statement users with information regarding the future of the firm; the information otherwise would be private and known only to the managers.

Researchers adopting the opportunistic perspective argue that managers engage in earnings management activities to increase income to provide an enhanced view of firms' performances. This manipulation is claimed to deceive investors into believing a better-than-actual picture of the firms. This would, subsequently, increase the share prices to be sold at the seasoned equity offerings, increasing the amount of cash flows generated by the offering. Teoh et al. (1998) and Rangan (1998) find evidence of accrual earnings management around seasoned equity offerings in the U.S., the former using yearly data and the latter using quarterly data. They argue that the revealed income-boosting earnings management is opportunistic as it explains the underperformance of shares and net income in the short run (Rangan, 1998) and the long run (Teoh et al., 1998). Williams and Tang (2009) reach a similar conclusion regarding the relation between accrual earnings management and the underperformance of shares after issuing convertible securities. Y. Kim and Park (2005) support the previously mentioned evidence of opportunistic behavior by reporting that income-boosting accrual earnings management is related to higher offering prices, which does not affect the closing share price as much.

W. Yang et al. (2013) find that insider selling is more aggressive after seasoned equity offerings in firms with higher accrual earnings management, which implies the opportunistic behavior of managers. In a comprehensive study that examines specific accruals manipulations in multiple contexts, Marquardt and Wiedman (2004b) find that issuing firms manipulate accounts receivables precisely to accelerate revenue recognition. Cohen and Zarowin (2010) also state evidence of the relationship between income-boosting real and accrual earnings management and the operating underperformance following the offering. Their evidence shows that real earnings management has a more pertinent effect on post-offering operating performance than accrual earnings management. These results are complemented by the results reported by Kothari et al. (2016). They find that issuing firms prefer to engage in real earnings management rather than accrual earnings management, as they are more scrutinized during these procedures. They also report that the manipulations of Research and Development and Selling, General, and Administrative accounts explain the long-run negative impact on share performance. Mizik and Jacobson (2007) also report a long-run underperformance of share performance for firms that manipulated marketing expenses at the time of the issue.

The evidence of opportunistic earnings management behavior has also been reported outside of the U.S. Yoon and Miller (2002) report evidence that Korean firms engage in income-boosting accrual earnings management before the issue, especially when their performances are poor or the offerings are large. Although evidence of earnings management is reported, unlike the evidence from the U.S., they did not find evidence of share price underperformance after the offerings. By studying Japanese private placements, He et al. (2010) find evidence of opportunistic accrual earnings management around the offerings, which explains the negative impact on long-run share performance. Shu and Chiang (2014) study the Taiwanese share market seasoned equity offerings and report accrual income-boosting earnings management, which is related to the long-run underperformance of the offering firms. They add a distinction to the literature regarding this issue that separates large and small firms. Their evidence suggests that opportunistic earnings management behavior is only confined to large firms, while small firms time their offerings to increase their proceeds.

Chang and Lin (2018) find evidence that firms are more likely to engage in opportunistic earnings management if they have already done so in a previous offering. They also find evidence that the magnitude of underperformance of the shares is related to the magnitude of earnings management engaged during all last offerings. Zhang et al. (2020) argue that firms depending on external financing (i.e., seasoned equity offerings) would be more motivated to engage in earnings management to boost their proceeds than firms relying on internal funding. Analyzing data from 43 different countries, they found evidence to support their hypothesis, which is more pertinent to equity financing than debt financing.

On the other hand, other researchers believe that managers engage in earnings management to enhance information quality and signal private information to potential investors regarding the firm's future. They argue that these practices do not deceive the users of financial statements and consider it a vital signaling tool used by management. Shivakumar (2000) challenges the evidence reported by Teoh et al. (1998) and Rangan (1998), stating that their conclusions about investors' naivety could be due to test misspecifications. Shivakumar (2000) reports evidence of accrual earnings management that boosts income before seasoned equity offerings, which explains the underperformance of net income after the offering. However, contrary to the findings of Teoh et al. (1998) and Rangan (1998), he finds that investors are aware of the earnings management practices and adjust the share prices accordingly. Di et al. (2012) also support this evidence, as they find no relation between accrual earnings management and post-offering share performance. They also infer that earnings management practices do not deceive investors, as these practices only temporarily overcome operating performance declines, such as EPS dilution, caused by the offerings.

Duc Ngo and Varela (2012) also support the notion of the beneficial aspect of earnings management. They study the effect of earnings persistence on the value of seasoned equity offerings and post-share underperformance. They find that firms with high-quality earnings information, i.e., persistent earnings using income-smoothing activities, have higher offering value and lower long-run post-offering share underperformance. Qian et al. (2012) examine the use of Research and Development expenditures by offering firms as a signaling tool for future growth. They report that firms increase their R&D investments before the offerings, which investors perceive as a sign of a healthy future. They say these firms have higher

offering proceeds and lower negative performance after the offerings. The same conclusion was reached by Sun (2021), who reports that offering firms have significantly higher discretionary R&D and lower discretionary SGA expenses than control firms. These activities have a positive temporary impact on share prices during the offerings. Through studying heterogeneous beliefs and information quality around seasoned equity offerings, Hibbert et al. (2020) report on the practice of accrual and real earnings management of firms. They report that although offering firms engage in accrual earnings management in the years leading up to the offering, firms decrease their real earnings management in the same period. It is deduced that this would increase earnings' information quality and provide the investors with information about the firms' future.

T. H. Yang et al. (2016) consider both perspectives at the same time. They argue that financially distressed firms with problems in their business have different motives than financially constrained firms that cannot obtain funds but have growth opportunities. Financially distressed firms would be motivated to engage in opportunistic earnings management activities to boost the proceeds from the offering. On the other hand, financially constrained firms would be encouraged to engage in beneficial earnings management to signal future growth opportunities to potential investors. They confirm their hypothesis by analyzing the post offering the long-run performance of shares. Financially distressed firms' shares are performing poorly, while financially constrained firms' shares are performing well. To understand both perspectives further, Teoh and Wong (2002) examine the role of financial analysts in this issue. They analyze and scrutinize issuing firms' financial information to reach a sound prediction about their future, on which investors make investment decisions. When analysts regard abnormally high accruals as a sign of signaling, they will convey a positive prediction about the issuing firms. If they were overoptimistic regarding abnormal accruals, their error in judgment would explain the misvaluation that occurs after the offerings. Consistent with their predictions, they find that high abnormal accruals explain the mistake in analysts' earnings forecasts, which explains the underperformance of shares after the offerings. This implies that financial analysts consider what is to be opportunistic earnings management as informative.

3.3. Factors that Affect Earnings Management

The factors affecting earnings management around seasoned equity offerings could be external or internal. External factors include the passing of new regulations, the rating of the underwriter used for the offering, the type of existing shareholders, media coverage, etc. On the other hand, internal factors are the factors that are influenced by the firm, which could be any corporate governance issue, such as board structure, external auditors, disclosure quality, etc. Table 2 summarizes the articles and the factors that could affect earnings management practices.

Marquardt and Wiedman (2004b) show that U.S. firms that voluntarily issue earnings forecasts before seasoned equity offerings do not exhibit significant accrual earnings management practices compared to firms that do not disclose their earnings forecasts. Jo and Kim (2007) and Jo and Kim (2008) find that firms with higher voluntary disclosure engage in less accrual earnings management, leading to lower long-run share underperformance after the offerings. The need for subsequent equity issues could also be a factor that affects

earnings management practices. As mentioned earlier, these practices have a long-run negative impact on the firm. Therefore, firms that expect to need external equity financing in the near future would opt not to engage aggressively in earnings management (G. Wang and Hagigi, 2019).

Ching et al. (2006) find that family-owned firms in Hong Kong engage in more income-increasing accrual earnings management before offerings than other firms. The presence of independent directors and external blockholders affects the practice of earnings management in these family-owned firms. They also report that offering firms with larger boards engage in more earnings management, as their control over the firm decreases with size. Iqbal and Strong (2010) find complementary evidence to the abovementioned one. The presence of block holders and non-executive directors hinders the practice of accrual earnings management in U.K. firms around offerings. In addition, firms with lower debt-to-equity ratios engage in less earnings management as they are not worried about violating any debt covenants. On the other hand, they need help finding evidence of a relationship between earnings management and the presence of institutional shareholders, management shareholders, and big auditing firms around the offerings. Similarly, in Korea, S. I. Kim et al. (2018) find that an increase in the ownership of the largest investor is related to significantly lower real earnings management before the offering, which is linked to better post-offering share performance. Similar results are reported for French firms, where external block holders hinder accrual earnings management (Jerbi Maatougui and Halioui, 2019; Njah and Trabelsi, 2019). Guthrie and Sokolowsky (2010) find contradicting evidence for the presence of external block holders and their effect on earnings management practices in U.S. firms. Usually, the presence of such shareholders hinders these practices as they have the power to influence and control management. The authors attribute this to market pressures and the conflicts between existing and potential investors.

Ibrahim et al. (2011) studied the effect of passing the Sarbanes-Oxley Act on earnings management practices. They find that U.S. firms engage in both accrual and real earnings management practices in the year before the offering before the passing of the act. This behavior has changed after the act has passed by shifting towards real earnings management, as it is harder to detect. Fauver et al. (2017) study other legislations passed in Europe to regulate and enhance information asymmetry around equity offerings. According to the analysis of 18 European and 22 non-European countries, they report evidence of a decrease in accrual and real earnings management around the offerings after the regulations have been imposed. In addition, there has been an improvement in the long-run performance of the shares after the offerings. G. He (2016) analyzes the effect of governmental fiscal support on earnings management practices. It is argued that firms that can obtain financial support engage in less earnings management as they opt to avoid the cost of these practices. Consistent with this argument, he finds evidence that Chinese firms that enjoy fiscal support engage in less accrual and real earnings management than firms that do not want such support.

Comiran et al. (2018) studied the effect of media coverage and attention on earnings management practices around the offerings. They find that the higher the media attention, the lower the real earnings management activities. However, this attention does not affect accrual earnings management activities. It also has been found that the rating and reputation

of the underwriter used for the seasoned equity offering would affect earnings management practices. The more reputable and highly rated the underwriter is, the lower the accrual and real earnings management activities are (X. Wang et al., 2019).

Table 2. Summary of the Factors Affecting EM

Reference	Factors examined
Jo and Kim (2008)	Disclosure
S. I. Kim et al. (2018)	Availability of the largest stockholders' participation
Marquardt and Wiedman (2004a)	Value relevance
Comiran et al. (2018)	Media coverage
W. Yang et al. (2013)	Institutional investors
Njah and Trabelsi (2019)	Large institutional investors
Ibrahim et al. (2011)	Sarbanes-Oxley Act
Iqbal and Strong (2010)	Board structure, Ownership structure, Adviser structure, and Capital structure
Jerbi Maatougui and Halioui (2019)	Outside block holders
G. Wang and Hagigi (2019)	The need for subsequent equity issuances
Jo et al. (2007)	Disclosure frequency
Chang and Lin (2018)	Past manipulations
X. Wang et al. (2019)	Underwriter rating
Ching et al. (2006)	Family control, Board Independence, Size of the Board, Blockholders, Big auditors
T. H. Yang et al. (2016)	Financial Distress / Constraint
G. He (2016)	Fiscal Support
Guthrie and Sokolowsky (2010)	Large outsider block holdings
Fauver et al. (2017)	Market Abuse Directive and Prospectus Directive

4. CONCLUSION

This paper systemically reviews the literature published in four major databases: Emerald, JSTOR, ScienceDirect, and Wiley Online Library. It focuses on articles that examine earnings management practices in firms that issue seasoned equity. Focusing on a particular motive provides a more comprehensive review than the general literature review papers have. It provides a detailed overview of the examinations carried out by the selected articles and highlights the possible gaps in the literature that could be filled by future research. The search within these databases used two key phrases, "earnings management" and "seasoned equity offerings" for 1998 – 2022. After the results were systematically screened, the final number of articles that were selected was 38.

The study has shown that almost all selected articles have been carried out in the U.S. This revelation highlights a substantial gap in the literature, indicating the deficiency of studies in other markets, especially in emerging markets. The Modified Jones model is the most

utilized in the literature for accrual earnings management measurement, and it is followed by the performance-adjusted Jones model. On the other hand, the Roychowdhury model is the most used for real earnings management measurement. This highlights the need to explore different methodologies of earnings management detection and measurement.

After conducting this review, it has been found that the majority of the articles in the sample have taken an opportunistic approach towards earnings management. To enhance our understanding of earnings management, future studies should delve into its informative aspect and explore the underlying motivations behind EM for informative purposes.

DECLARATION OF THE AUTHORS

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APPENDIX A

Reference	Main Findings	AEM vs. REM	Perspective
Rangan (1998)	Accrual EM practices are most prominent in the quarter of the offering and the following quarter. Discretionary accruals around the offering explain the underperformance of net income and stock price after the offering. Therefore, these practices seem to mislead investors.	Accrual	Opportunistic
Teoh et al. (1998)	Accrual EM practices start in the years leading to the offering year, peak in that year, and then decline. Discretionary accruals around the offering explain the underperformance of net income and stock price after the offering. Therefore, these practices seem to mislead the investors.	Accrual	Opportunistic
Shivakumar (2000)	Firms engage in accrual EM in the quarters leading to the offering. The accrual EM practices predict the underperformance of net income after the offering. Investors seem to adjust the stock price according to the accrual EM practices engaged by the offering firms; hence, they are aware of these practices.	Accrual	Informative
Teoh and Wong (2002)	Financial analysts fail to recognize accrual EM practices by offering firms, contributing to the underperformance of stock after the offering.	Accrual	Both
Yoon and Miller (2002)	Offering firms engage in income-increasing accrual EM the year before the offering, especially when their performances are poor, and the offers are large. The market reacts negatively to accrual EM practice. Therefore, investors are not misled by these practices.	Accrual	Opportunistic
Marquardt and Wiedman (2004a)	Firms where managers sell their shares during the offerings engage in higher accrual EM than a) firms where their managers do not sell their shares and b) firms that did not engage in an offering. The value relevance of accounting information decreases with the presence of accrual EM.	Accrual	Opportunistic
Marquardt and Wiedman (2004b)	Offering firms manage earnings upward around the offerings using Accounts receivable.	Accrual	Opportunistic
Kim and Park (2005)	The higher the extent of EM, the higher the offering price. The higher the information asymmetry, the higher the extent of EM and offering price.	Accrual	Opportunistic
Ching et al. (2006)	Offering firms manipulate earnings upward in the year preceding the offering. These manipulations explain the decline in earnings after the offerings, although they do not explain the reduction in stock price. Larger boards and family ownership are associated with higher accrual EM. On the other hand, outside blockholders and independent directors hinder these practices.	Accrual	Opportunistic
Jo and Kim (2007)	The higher the level of disclosure frequency, the lower the extent of accrual EM, and hence, the better the stock performance after the offering.	Accrual	Opportunistic

	Firms that temporarily increase their disclosure frequency before the offering tend to engage in high levels of accrual EM, negatively impacting stock performance after the issue.		
Mizik and Jacobson (2007)	"Myopic marketing management" by offering firm causes long-term stock price underperformance after SEO.	Real	Opportunistic
Jo and Kim (2008)	A negative relation between disclosure and the extent of EM in offering firms. The higher the disclosure and lower the extent of EM, the better the long-term performance of issuing firms.	Accrual	Opportunistic
Williams and Tang (2009)	Offering firms engage in accruals EM in the years leading to the placements.	Accrual	Opportunistic
Cohen and Zarowin (2010)	Offering firms engage in accrual and real EM in the year of the offering. These practices are related to the underperformance of ROA after the offerings, although more pertinent to real EM. Managers prefer to engage in real EM when the costs of using accrual EM are high.	Accrual and Real	Opportunistic
Guthrie and Sokolowsky (2010)	The accrual EM practices are higher when there are large shareholders. This can be explained by the information asymmetry between existing and potential investors.	Accrual	Opportunistic
He et al. (2010)	Firms engage in accrual EM in the year of the offering to boost income. Accrual EM around the offering contributes to stock underperformance after the issue.	Accrual	Opportunistic
Iqbal and Strong (2010)	The presence of non-executive directors, low debt-to-equity ratios, and/or large shareholders hinder accrual EM practices the year before the offering.	Accrual	Opportunistic
Ibrahim et al. (2011)	Before the passing of the act, both accrual and real EM practices are detected in the year prior to the offering. After the passing, there has been a shift towards real EM. Offering firms facing litigation have higher discretionary accruals than offering firms not facing litigation. While, no such relation exists for real EM. After the passing, there was also a shift towards real EM scrutiny.	Accrual and Real	Opportunistic
Duc Ngo and Varela (2012)	Income smoothing practices using accruals improve the informativeness of reported earnings, decreasing the degree of stock underperformance after the offerings.	Accrual	Informative
Di et al. (2012)	Positive discretionary accruals are detected in the year of the offering to overcome the temporary dilution of EPS. There is no relation between accrual EM in the year of the offering and the underperformance of stock after the offering.	Accrual	Informative
Qian et al. (2012)	High-tech offering firms successfully signal investors through positive discretionary R&D expenditures, which positively affect performance. While as investors do not accept these signals from low-tech firms, which affects performance negatively.	Real	Informative
W. Yang et al. (2013)	The lower the level of institutional shareholders before the offering, the higher the level of accrual EM engaged in. The level of accrual EM around the offering does not affect the level of existing institutional shareholders.	Accrual	Opportunistic

	The higher the level of accrual EM, the more investment from new institutions. The higher the level of accrual EM, the higher the level of insider selling after the offering. The higher the level of accrual EM, the higher the stock underperformance after the offering.		
Shu and Chiang (2014)	Small firms time their offerings when their stock is overpriced, while large firms use accrual EM to boost their offering price.	Accrual	Opportunistic
G. He (2016)	Firms that enjoy financial support engage in less accrual EM around the offerings.	Accrual and Real	Opportunistic
Kothari et al. (2016)	Offering firms engage in real EM in the year of the offering, which explains the underperformance of stock after the offering. High abnormal accruals do not seem to be the source of overvaluation and hence, do not seem to be the source of underperformance after the offering.	Accrual and Real	Opportunistic
T. H. Yang et al. (2016)	Financially constrained firms engage in accrual EM as a signaling tool for investors and hence do not underperform after the offering. Financially distressed firms engage in accrual EM opportunistically to boost their proceeds and underperform after the offering.	Accrual	
Fauver et al. (2017)	The directives help mitigate accrual EM practices in offering firms. The directives help improve stock performances after the offering, and hence, they improve information quality.	Accrual and Real	Opportunistic
Chang and Lin (2018)	Offering firms that engage in accrual EM continue their manipulation strategies in later offerings. Offering firms engage in both accrual and real EM around SEOs. The stock's underperformance after the offering could be explained by past periods' cumulative accrual EM practices.	Accrual and Real	Opportunistic
Comiran et al. (2018)	Media coverage hinders real EM but does not affect the extent of accrual EM.	Accrual and Real	Opportunistic
Kim et al. (2018)	The participation of the largest shareholder in SEO is related to lower real EM. The short-term performance of share price is affected by the extent of real EM and the participation of the largest shareholder.	Real	Opportunistic
G. Wang and Hagigi (2019)	Offering firms engage in lower levels of accrual EM practices before the offering when there is a need for future offerings.	Accrual	Opportunistic
Maatougui and Halioui (2019)	Accrual EM practices are detected in the three years before the offering, peaking in the year before the offering. The presence of outside blockholders hinders accrual EM practices in offering firms.	Accrual	Opportunistic
Njah and Trabelsi (2019)	Offering firms engage in accrual EM in the year before the offering. Large institutional shareholders hinder the engagement of accrual EM before the offering.	Accrual	Opportunistic
X. Wang et al. (2019)	The presence of highly rated underwriters hinders accrual and real EM practices.	Accrual and Real	Opportunistic
Hibbert et al. (2020)	Offering firms engage in accrual EM in the years leading to the offering, although their real EM practices decline in the same period.	Accrual and Real and	

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Zhang et al. (2020)	Firms that rely on external financing engage in more EM than firms that rely on internal financing. The EM practices are more pertinent in equity financing than debt financing.	Accrual and Real	Opportunistic
Sun (2021)	Offering firms have lower SGA and higher R&D discretionary expenditures in the year before the offerings, and investors acknowledge this by overpricing stock in the manipulation period.	Real	Both
Opare et al. (2022)	Real EM causes more negative outcomes in post-SEO firm performance than accrual EM.	Accrual and Real	Informative