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Research Article

The Effect of Cash Flow Risk on Corporate Bankruptcy with the Moderating Role of Earnings Management

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ABSTRACT

Entering the business world is accompanied by numerous challenges, one of the most important of which is cash flow management. Cash flow risk can expose companies to more serious risks such as bankruptcy. In this study, an attempt is made to examine the role of earnings management in moderating these effects by analyzing the data carefully and examining the relationships between cash flow risk and corporate bankruptcy. The statistical population of this study included all companies listed on the Tehran Stock Exchange between 1391 and 1401, and after applying research restrictions, 141 companies were selected as a statistical sample. To collect theoretical foundations and literature, a library method was used. The data required to test the hypotheses were collected by reviewing financial statements, explanatory notes, board reports, statistical archives of the Tehran Stock Exchange Organization, and the Kodal website. Then, by measuring the research variables, multiple regression analysis was used using Eviews software, version 12, to analyze the data. The results show that cash flow risk does not have a significant effect on corporate bankruptcy, so that changes in this risk alone cannot explain bankruptcy and require examining multiple factors. Instead, earnings management has a positive and significant effect on bankruptcy, so that companies that implement accrual earnings management are more exposed to bankruptcy. Also, accrual earnings management cannot moderate the effect of cash flow risk on corporate bankruptcy.

Keywords: Cash flow risk, corporate bankruptcy, earnings management.

1- Introduction

Economists generally agree that cash flows help investors assess the going concern status of companies by providing information about their solvency. In recent years, the importance of cash flow risk (CFR) has also been recognized by credit rating agencies (Sari et al., 2021). Predicting and assessing the risk of a company going bankrupt has always attracted the attention of investors. This is because investment acts as a means of optimizing value in terms of capital or dividends. However, achieving value maximization depends on selecting capital providers for a profitable and sustainable business that can generate maximum profits. In the current financial and accounting literature, the risk of a company going bankrupt is an interesting topic due to its impact on the decision-making process of other stakeholders (Lin et al., 2019). Bankruptcy risk represents the threat that companies may not be able to pay their debts, which requires that the debt structure be reorganized or assets be revalued (Kampa et al., 2013). Since corporate bankruptcy affects creditors, employees, managers, society, and shareholders, assessing the risk of bankruptcy and its determinants is very important for business stakeholders, especially shareholders. Earnings management poses challenges in assessing bankruptcy risk. This occurs when management intentionally distorts financial data to hide true economic conditions and achieve personal benefits (Healey and Whalen, 1999). Unlike fraud, earnings management does not result in a violation of generally accepted accounting principles and financial reporting standards. However, it can compromise the quality of earnings presented in financial statements. Poor quality accounting earnings can have negative effects on a company's financial performance (Lema et al., 2018). Managers of bankrupt companies may resort to manipulating accounting earnings to hide their poor performance and delay the company's bankruptcy. This reduces the reliability of reported earnings. Reduced earnings quality can lead to incorrect decisions by users of this information. The goal of earnings management is to provide earnings

quality that is consistent with the expectations of shareholders and stakeholders (Lee et al., 2013). When management manipulates a company's earnings, it leads to a decrease in the quality of accounting earnings. This is because earnings quality decreases as debts increase and profits increase relative to cash flows (Saghfi and Kordestani, 2004). Earnings management is very related to the financial position of a business entity. Therefore, earnings management is expected to have a positive and significant relationship with bankruptcy risk (Agustia et al., 2020).

Cash flow risk refers to uncertainty and changes in the volume and timing of a company's cash inflows and outflows. This risk can affect the company's financial position and performance and, if not managed properly, can lead to the company's bankruptcy. One of the factors affecting cash flow risk on company bankruptcy is the amount of liquidity available to the company when needed. If the company does not have enough liquidity to pay its debts and current expenses, it may encounter financial problems and go bankrupt. In addition, the moderating role of earnings management is also important in reducing the impact of cash flow risk on company bankruptcy. Earnings management attempts to regulate and control the company's financial and economic activities in order to increase financial stability and prevent the occurrence of bankruptcy. This management includes the use of effective financial policies, appropriate investment, cost control, and improving liquidity performance. In general, if a company has the ability to properly manage cash flow risk and earnings management, it can prevent bankruptcy. However, if it is not properly managed, this risk can be considered an important factor in the company's bankruptcy. Therefore, companies should consider appropriate strategies and methods to manage and control their cash flow risk and earnings management. So in this research, we want to answer the question; What is the effect of cash flow risk on corporate bankruptcy with the moderating role of earnings management in companies listed on the Tehran Stock Exchange?

2- Theoretical Basis of the Research

1-2- Cash Flow Risk

High cash flow fluctuations not only cause insufficient internal cash flows over time, but also increase the cost of accessing capital and worsen the financial crisis situation of the company. Due to the importance of its fundamental information that affects the financial health of companies, cash flow risk is widely used as a determinant of corporate return spreads (Guntai and Hackbarth, 2010; Tang and Yan, 2010; Douglas et al., 2014; Molina, 2015). Tang and Yan (2010) found that cash flow risk has a statistically significant relationship with spreads. This study measures cash flow risk using the coefficient of variation of operating cash flows. Douglas et al. (2014) show a strong economic effect of cash flow risk on bond yield spreads, especially for companies whose bonds are close to default.

2.2- Examining the impact of cash flow risk on corporate bankruptcy

There is a long history in the accounting and finance literature of using financial statement information to predict companies in financial distress, with early research by Smith and Winakor (1935), Beaver (1966), and Altman (1968), as well as important methodological contributions by Olson (1980), Shumway (2001), and Hensher and Jones (2007). Examining the impact of cash flow risk on corporate bankruptcy has been examined from different perspectives and in different studies. One study found that operating cash flow and firm size are negatively related to corporate bankruptcy (Pottery and Herningsje, 2023). Also, another study showed that bankruptcy risk can significantly affect stock valuation using discounted cash flow models (Skogsvik et al., 2023). In this regard, the first hypothesis is as follows:

Hypothesis 1: Cash flow risk has a significant effect on corporate bankruptcy.

3-2- Examining the moderating role of earnings management in the impact of cash flow risk on corporate bankruptcy

Research shows that cash flow management is one of the main factors that is essential for the sustainable development of companies. In fact, corporate liquidity is one of the most important resources that provides the conditions for sustainable development, maintaining debt solvency, and dealing with corporate bankruptcy risk (Plaskova et al., 2020). Also, earnings management can reduce the problems of inefficient investment and asset replacement by reducing cash flow fluctuations. On the other hand, earnings management can contribute to the value of companies by reducing direct and indirect bankruptcy costs, external financial costs, and financial costs associated with ownership (Artz et al., 2007). In this regard, the second and third hypotheses are as follows:

Hypothesis 2: Earnings management has a significant effect on corporate bankruptcy.

Hypothesis 3: Earnings management moderates the effect of cash flow risk on corporate bankruptcy.

4-2- Research Background

Mariati et al. (2023) addressed financial crisis, free cash flow, employee diversity, and earnings management and showed that free cash flow has a positive effect on earnings management, but financial crisis and employee diversity did not affect earnings management. Lee et al. (2023) also emphasized the effect of cash flow risk on bankruptcy and found that cash flow risk has a strong positive effect on the probability of financial distress of companies. Nourieh and Amir (2023) showed that free cash flow has a positive effect on earnings management, but financial leverage and managerial ownership did not have an effect. Phan et al. (2022) examined the effect of cash flow on financial distress of Vietnamese companies and found a negative relationship between operating and financial cash flow and financial distress. Lee et al. (2021) also showed that companies with financial problems are more inclined to earnings management. Augustia et al. (2020) examined the effect of earnings management on bankruptcy risk and found that business strategies can reduce this risk. Rabiei and Fotohi Fashtami (2014) showed that earnings management does not have a nonlinear effect on bankruptcy risk, while business strategy has a significant effect. Hassan Maleki et al. (2014) found that operating cash flow ambiguity has a negative effect on stock liquidity. Karimipour et al. (2014) assessed the effect of cash flow fluctuations on the risk of stock price collapse as positive. Mirzaei et al. (2014) showed that lack of transparency of cash flows has a negative effect on stock returns. Khajoo et al. (2000) examined the negative relationship between cash flow risk and capital structure. Khoshkar et al. (2010) found that abnormal accruals can predict future cash flows and bankruptcy risk has a negative effect on this relationship.

3-Methodology

The present study is a quantitative research and is conducted with an inductive approach. Also, considering that the data used in the present study are real and historical information, it can be classified as a post-event (quasi-experimental) type; Also, to collect theoretical foundations of information regarding the explanation of the literature of the research subject, library method and document studies were used, and to obtain the required information, financial statements of companies listed on the Tehran Stock Exchange were used to process the research hypotheses. Research data were collected from the website www.codal.ir and were collected using Excel software. The method of testing the hypotheses in the present study is using Eviews12 statistical software. The statistical population for the data collection of this study includes all companies that were listed on the stock exchange from 1391 to 1401 that meet the following conditions:

1. They were listed on the Stock Exchange Organization before 1391 and were on the list of listed companies by the end of 1401.

2. In order to increase the uniformity and comparability of the conditions of the selected companies, the company's fiscal year ends at the end of Esfand of each year and this date has not changed during the period of access to information.

3. In order to ensure similarity in classification and type of items in their financial statements, the selected company does not belong to the listed industries of "credit institutions, banks and other monetary institutions", "other financial intermediaries", "financial investments" and "multi-disciplinary industrial companies".

4. To have a reliable market price, the company should not have a trading halt for more than 3 months during the research period and should have traded throughout the entire research period.

Applying the above restrictions, 141 companies were selected as a statistical sample.

Table 1: Different stages of sampling

Number	Different stages of sampling
563	Number of companies listed on the Tehran Stock Exchange at the end of 1401.
(131)	Number of companies that have exited or entered the stock exchange within the time frame.
(65)	Number of companies that included "banks, credit institutions and other monetary institutions", "other financial intermediation", "financial investments" and "industrial multidisciplinary companies".
(112)	Number of companies whose fiscal year does not end on 12/29.
(44)	Inaccessibility of data required for this study.
(12)	Number of companies that had a change in fiscal year within the time frame of the study.
(58)	Number of companies that had a trading break of more than 3 months within the time frame of the study.
141	Number of sample companies

1-3- Variables and Research Model

The hypothesis testing model is as follows:

$$T\text{-}Score_{it} = \beta_0 + \beta_1 CFR + \beta_2 DA_{it} + \beta_3 CFR*DA_{it} + \beta_4 BM_{it} + \beta_5 LEV_{it} + \beta_6 SIZE_{it} + \varepsilon_{it}$$

β_0: Constant value

β_1, β_2, β_3, β_4 and ... are regression coefficients.

"ε": Model error

"t": Time period

"i": Company

T-Score represents the dependent variable, which in this case can be the bankruptcy of companies.

CFR represents the independent variable that represents cash flow risk.

DA represents the moderating variable, which represents earnings management as a moderating role to examine the effect of cash flow risk on the bankruptcy of companies.

BM is the ratio of the book value to the market value of the company and is the control variable.

LEV is the financial leverage that is the control variable.

SIZE is the size of the company that is the control variable.

Table 2: Operational definition of research variables

Calculation method	Symbol	Variable title	Variable type
Measuring corporate bankruptcy will be done with the financial bankruptcy prediction model of Gholamreza Kordestani et al.:$T=0.291X_1+2.458X_2-0.301X_3-0.079X_4-0.05X_5$ Accumulated Working capital to total assets.$=X_2$ $=X_1$ Earnings before interest and profit (loss) on all assets.$=X_3$ The $=X_4$ .taxes (operating profit and loss) to total assets $= X_5$.book value of shareholders' equity to total liabilities : Model range.Net sales to total assets **T" domain"** **Stage** $T \leq -0.14$ **Bankruptcy** $-0.14 < T \leq 0.02$ **Complete financial insolvency** $0.02 < T \leq 0.36$ **Cash deficit** $0.36 < T \leq 0.6$ **Insolvency** $0.6 < T$ **Financial health**	T-Score	Bankruptcy	Dependent
Standard deviation of the ratio of operating cash flow to sales	CFR	Cash Flow Risk	Independent
To specify discretionary accruals, the modified Jones (1995) model will be estimated: Model: $TACC_{j,t}/A_{j,t-1} = \alpha_1(1/A_{j,t-1})+\alpha_2(\Delta REV_{j,t}-\Delta REC_{j,t}/A_{j,t-1})+\alpha_3(PPE_{j,t}/A_{j,t-1})+\varepsilon_{j,t}$ "TAC" "C" _"j,t" : Total accruals of company j in year t, which "A" _"j,t-1" : Beginning assets of company j "ΔRE" "C" _"j,t" : Changes in accounts and receivables of com "ΔRE" "V" _"j,t" : Changes in income of company j in year t c "PP" "E" _"j,t" : Gross property, plant and equipment of comp "ε" is the model error, a measure of earnings management ba	DA	Accrual Profit Management	Modifier
It is equal to dividing the book value of equity by the market value of equity (the market value of a stock is calculated by multiplying the market price of each share by the number of shares of the company).	BM	Book-to-market ratio	Control
Ratio of total liabilities to total assets	LEV	Financial leverage	Control
Natural logarithm of the sum of assets	SIZE	Company size	Control

4-Data Analysis

1-4-Descriptive Statistics

Table (3) shows the descriptive statistics of the data related to the variables used in the research. Descriptive statistics related to 141 companies were selected as a statistical sample and the time period 1391-1401 was used to test the research hypotheses (1551 company-years). Also, if the number of observations in the sample is large enough, the data distribution will approach normal and even if the population is not normal, parametric tests can be used. The stationarity of the variables was also examined, and the results showed that the variables are stationary.

Table 3: Descriptive statistics of the research variables (Number of observations: 1551)

Company size	Financial leverage	Book-to-market ratio	Accrued Profit Management	Cash flow risk	Bankruptcy	Variable
SIZE	LEV	BM	DA	CFR	T-Score	Symbol
14.81400	0.521164	0.430930	0.000039	0.126134	0.317069	Mean
14.59146	0.531622	0.342419	-0.032198	0.079373	0.326473	Median
21.57166	1.194909	5.215191	1.164145	3.126408	1.635334	Maximum
10.49166	0.012733	-0.891948	-1.621425	0.001712	-4.661984	Minimum
1.699876	0.200151	0.386667	0.203683	0.201631	0.517348	Standard Deviation
0.664037	-0.210266	3.501365	0.178371	8.220396	-2.148492	Skewness
3.876323	2.476052	29.41392	11.32779	98.44428	17.71089	Skewness

(Source: Researcher's findings)

2-4- Model test results

In order to test the model, considering that it is based on ordinary least squares (OLS) regression, the model assumptions are first examined. In regressions with an ordinary least squares structure, the variance heterogeneity test is used to determine the regression method (OLS or EGLS) used to estimate the model, which is performed using the Eviews software. Considering that the year-industry effect is controlled in the model, the main posttest of this study was performed assuming variance heterogeneity. Considering the results obtained, it can be stated that the model has a significance level of less than 5 percent error, so the model has a variance heterogeneity problem. Therefore, to fix it, the generalized least squares method is used instead of the ordinary least squares method (Brush-Pagan-Godfrey test (F statistic: 12.41187; significance level: 0.0000)). In addition, autocorrelation is a problem that occurs as a result of correlation between disturbance components. Disturbances in different observations are uncorrelated or independent of each other. According to the results obtained, it can be stated that autocorrelation is observed between the model errors, in order to fix it, the AR(-1) lag can be used (Brush-Godfrey serial correlation LM test (F statistic: 730.4915; significance level: 0.0000)).

Also, to use regression in the panel data structure, in addition to performing various tests and using control variables, it is necessary to control the two influential factors of year and industry in order to obtain reliable results; because the data in the panel structure changes both between different years and different industries. Therefore, in order to control the effect of changes in year and industry on the relationship between the main research variables, these two control variables are also used in the regression model. In panel data, it is important to perform the Chow test to determine the type of data (panel and combined) and the Hausman test to determine fixed and random effects. The results of the study showed that the panel data method has been accepted. Also, the Hausman test of the model shows

that their probability level is less than 5 percent, so the fixed effects method should be used. The results of the model test are as follows:

Table 4, Results from estimating the research model (dependent variable: corporate bankruptcy)

$T\text{-}Score_{it}= \beta_0+\beta_1 CFR+\beta_2 DA_{it}+\beta_3 CFR*DA_{it}+\beta_4 BM_{it}+\beta_5 LEV_{it}+\beta_6 SIZE_{it}+\varepsilon_{it}$					
Results	Significance level at 95% confidence *level	t-statistic	Coefficient	Variables	
-	0.1118	1.591383	0.364317	Constant	
Meaningless	0.8557	-0.181848	-0.011930	Cash flow risk	CFR
Positive and meaningful	*0.0096	2.594205	0.148144	Accrual earnings management	DA
Meaningless	0.0504	-1.958680	0.205936 -	Cash flow risk*Accrual earnings management	CFR*DA
Negative and significant	*0.0000	-7.194252	-0.196290	Book-to-market ratio	BM
Negative and significant	*0.0000	-9.808678	0.872044 -	Leverage	LEV
Positive and significant	*0.0224	2.286176	0.032044	Company size	SIZE
Positive and significant	*0.0000	13.64662	0.364762	-	AR (1)
Controlled			Industry effects		
Controlled			Year effects		
20.05282 (0.000000)			F statistic (significance level)		
0.700221			Coefficient of determination		
0.665302			Adjusted coefficient of determination		
2.136231			Watson camera		

(Source: Researcher's findings)

The F-statistic of the model is 20.05282 with a significance level of 0.000000, which indicates the overall significance of the model at a confidence level of 99%. The coefficient of determination of the model is 0.700221 and the adjusted coefficient of determination is 0.665302, which indicates that the model is able to explain about 70% of the changes in corporate bankruptcy. The Durbin-Watson statistic is also 2.136231, which indicates the absence of autocorrelation in the model. The effects of industry and year are also controlled in the model, which helps to increase the accuracy of the results. To prove the first hypothesis, which states that "cash flow risk has a significant effect on corporate bankruptcy," the results in Table 4 can be cited. The analysis of these results is as follows:

The negative coefficient of -0.011930 for the cash flow risk (CFR) variable indicates a very weak negative effect of this variable on corporate bankruptcy. That is, with an increase in cash flow risk, the probability of bankruptcy decreases slightly, but this effect is very small and insignificant. The t-statistic of -0.181848 indicates that the cash flow risk coefficient is extremely close to zero and is not statistically significantly different from zero. The significance level of 0.8557 indicates that this variable is not significant at the 95 percent confidence level (p-value < 0.05) and even at the 90 percent confidence level (p-value < 0.10). This value is much larger than 0.05 and 0.10, so no significant effect of cash flow risk on corporate bankruptcy can be assumed. Based on the results presented in Table 4, the first hypothesis that states that "cash flow risk has a significant effect on corporate bankruptcy" is rejected. The coefficient of cash flow risk along with the t-statistic and significance level show that this variable does not have a significant effect on corporate bankruptcy. Therefore, there is insufficient evidence to accept this hypothesis and this hypothesis should be rejected.

To prove the second hypothesis that "earnings management has a significant effect on corporate bankruptcy", we can refer to the results of Table 4. In this table, the coefficient of the variable "earnings management (DA)" is equal to 0.148144 and the t-statistic is equal to 2.594205, which shows a significance level of 0.0096. This value is less than 0.05, so it can be concluded that earnings management has a positive and significant effect on corporate bankruptcy.

To prove the third hypothesis, which states that "earnings management moderates the effect of cash flow risk on corporate bankruptcy," we can refer to the results of Table 4:

The coefficient of the variable cash flow risk*accrual earnings management (CFR*DA) is -0.205936, which with a t-statistic of -1.958680 and a significance level of 0.0504 shows that this variable is not significant at the 95% confidence level. These results indicate that accrual earnings management does not moderate the negative effect of cash flow risk on corporate bankruptcy, and the third hypothesis is rejected.

Also, by examining the control variables, it can be stated that the coefficient of the variable book-to-market ratio (BM) is -0.196290, which with a t-statistic of -7.194252 and a significance level of 0.0000. This relationship is negative and significant, indicating that an increase in the book-to-market ratio is associated with a decrease in the probability of bankruptcy. The coefficient of the financial leverage variable (LEV) is -0.872044, which is indicated by a t-statistic of -9.808678 and a significance level of 0.0000. This negative and significant relationship indicates the negative effect of financial leverage on corporate bankruptcy. The coefficient of the company size variable (SIZE) is 0.032044, which is indicated by a t-statistic of 2.286176 and a significance level of 0.0224. This relationship is positive and significant, indicating that as the size of the company increases, the probability of bankruptcy also increases.

5- Discussion and Conclusion

Entering the world of business is accompanied by numerous challenges, one of the most important of which is cash flow management. Cash flow, as the lifeblood of any organization, plays a fundamental role in the sustainability and continuity of economic activities. Cash flow risk, meaning the fluctuations and uncertainties associated with cash inflows and outflows, can have profound effects on the financial health and performance of companies. Increased cash flow volatility can expose companies to more serious risks such as bankruptcy, as the inability to effectively manage cash flow may lead to the inability to finance short-term and long-term needs. Earnings management, as one of the vital tools in the hands of managers, plays an important role in moderating and reducing the negative effects of cash flow risk on companies. Earnings management, using accounting methods and techniques, can strategically adjust reported earnings to reduce the effects of cash flow fluctuations. This process allows managers to present a better picture of the company's financial health and maintain the trust of investors and other stakeholders. The moderating role of earnings management in this regard becomes more important, especially in adverse economic conditions and unstable markets. This research examined the impact of cash flow risk on corporate bankruptcy and the moderating role of earnings management.

The first hypothesis examined the effect of cash flow risk on corporate bankruptcy. The results of the study showed that the coefficient of cash flow risk is not significant and its significance level is 0.8557. This led to the rejection of the first hypothesis, because there is insufficient evidence to prove the effect of cash flow risk on bankruptcy. In other words, changes in cash flow risk have not been able to have a significant effect on corporate bankruptcy, and this may be due to the complex nature of bankruptcy, which is affected by various factors. Other studies such as Li et al. (2023)

and Fan et al. (2022) indicate a positive effect of cash flow risk on financial difficulties, but the results of this study are not in line with them. This contradiction can be attributed to various factors. One of these factors may be the difference in economic and financial conditions in different time periods or between different countries. Also, differences in statistical and modeling methods, samples used, and even differences in the type of data examined (such as financial, accounting, or management data) can lead to contradictory results. Therefore, the lack of significance of the effect of cash flow risk on bankruptcy in this study may be due to the failure to consider all factors affecting bankruptcy. These findings indicate that in order to better and more comprehensively understand the factors affecting corporate bankruptcy, a set of internal and external factors should be examined comprehensively and integratedly and not be limited to one or a few limited factors. In other words, bankruptcy is a complex phenomenon that is affected by multiple factors, and only by comprehensively examining these factors can more accurate and reliable results be achieved. The second hypothesis examines the effect of earnings management on corporate bankruptcy. The results of the study show that earnings management has a positive and significant effect on bankruptcy, so that the variable "accrual earnings management" has a positive and significant coefficient of 0.148144 and is directly related to bankruptcy. These findings indicate that companies that implement accrual earnings management are more likely to go bankrupt. The results of this hypothesis are consistent with the research of Lee et al. (2023) and (2021). It is also suggested that companies implement stronger financial management and reporting systems to more closely monitor cash flows and accrued earnings. These systems should include advanced analytical tools and scenario simulations so that managers can accurately assess the effects of financial decisions. Also, continuous training in the field of earnings and cash flow management is essential for finance and management teams to increase awareness of the risks associated with bankruptcy. With these approaches, companies can make smarter decisions and improve their financial resilience to economic challenges. The third hypothesis examines the moderating role of earnings management in the impact of cash flow risk on corporate bankruptcy. The results of the research model estimation show that the coefficient of the moderating variable of earnings management*cash flow risk is -0.205936. This value indicates that accrual earnings management has no significant effect on the relationship between cash flow risk and corporate bankruptcy. The t-statistic is -1.958680 and the significance level is 0.0504, indicating that this coefficient is not significant at the 95% confidence level. These results mean that accrual earnings management cannot play a significant moderating role in the relationship between cash flow risk and bankruptcy. In other words, the presence or absence of accrual earnings management does not have a specific and significant effect on this relationship. There are other studies such as those by Lee et al. (2023) and (2021) that indicate the moderating role of earnings management in dealing with financial risks, but the results of this study are not in line with them; one of the possible reasons for the lack of significance of this coefficient could be the complexity and multidimensionality of the bankruptcy phenomenon. Earnings management, as an internal and managerial factor, may have limited or temporary effects and may not significantly affect the relationship between cash flow risk and bankruptcy. In addition, factors such as financial transparency, accounting rules, internal controls, and even macroeconomic conditions may play a more prominent role in moderating this relationship and overshadow the effects of accrual earnings management. Also, it is possible that the use of earnings management in companies is not in a way that can effectively and sustainably reduce financial risks. In fact, earnings management can in some cases lead to a false picture of the financial health of the company, which in the long run leads to aggravation of financial problems and an increase in the likelihood of bankruptcy. Thus, although earnings management may help reduce financial pressures in the short term, it may not be able to play an effective role in preventing bankruptcy in the long term. Finally, a significance level close to the 0.05 threshold may indicate the existence of some hidden or complex relationships that require further investigation and the use of more sophisticated models. Also, larger samples or different statistical methods may be needed to achieve more precise results about the moderating role of earnings management in this relationship.

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