Journal of Economics, Finance and Accounting Studies (JEFAS)
ISSN: 2709-0809
DOI: 10.32996/jefas
Journal Homepage: www.al-kindipublisher.com/index.php/jefas

JEFAS
AL-KINDI CENTER FOR RESEARCH AND DEVELOPMENT

| RESEARCH ARTICLE

The Impact of Implementing the New Leasing Standards on Enterprises Financing Decisions

Jinfeng Xue[1]✉, Badrul Hisham Kamaruddin[2]
[1]*Ph.D. candidate, Graduate School, City University, Petaling Jaya 46100, Selangor, Malaysia*
[2]*Assoc. Professor, Ph.D., Graduate School, City University, Petaling Jaya 46100, Selangor, Malaysia*
Corresponding Author: Jinfeng Xue, **E-mail**: 601377197@qq.com

| ABSTRACT
This study aims to investigate the impact of the new lease accounting standards CAS21 on enterprises' financing decisions. This paper uses a multiple-time-point difference-in-difference (DID) model to conduct research. The findings indicate that changes in lease accounting standards are likely to change the financing decisions of enterprises and reduce their financing efficiency. The reduction in financing efficiency is mainly manifested in the increase in the aggressive debt behavior of enterprises. The reduction in enterprise financing efficiency varies significantly among leasing scales in different industries, enterprises of different ownership structures and different ages. The new lease standards reduce the financing efficiency by increasing financial leverage ratios.

| KEYWORDS
Financing decision ; Financing efficiency; New lease accounting standards.

| ARTICLE INFORMATION
ACCEPTED: 19 February 2025 **PUBLISHED:** 13 March 2025 **DOI:** 10.32996/jefas.2025.7.2.9

1. Introduction

'International Financial Reporting Standard 16 - Leases' was released by the International Accounting Standards Board (IASB) in January 2016, which was officially implemented on January 1, 2019. In December 2018, in order to converge with the IFRS system, China released the ‘Enterprise Accounting Standards No. 21 - Leases’ (CAS 21), requiring different types of enterprises to officially implement this new standard on January 1, 2019 or January 1, 2021. With the implementation of the new lease standard framework, significant alterations have been made to the accounting approach for operating leases by lessees. lessees must acknowledge right-of-use assets and lease liabilities for all lease arrangements, excluding short-term leases and low-value asset leases. Additionally, they are mandated to record depreciation and interest expenses associated with these assets in the statement of profit and loss and other comprehensive income. Under the old leasing standards, the lessee's utilization of leased assets does not lead to an augmentation in the enterprise's asset book value, and the ownership risks are assumed by the lessor. Simultaneously, the lessee does not confirm future payment responsibilities to the lessor, allowing the corresponding liabilities from operating leases to remain concealed from the balance sheet.Therefore, operating leases optimize the asset-liability structure listed in the financial statements of the lessee enterprise, improve asset utilization and return on assets , and thus improve the lessee 's financial reporting financing capacity. In contrast, the lessee in financial leases does not have this financing advantage, and the enterprise has the motivation to choose to hide liabilities through operating leases(Gang, Lijun, Qian, & Renji, 2009). Under the new leasing standards framework, achieving off-balance sheet financing through operating leases requires breaking down the leasing business into short-term leases or low-value leases, which actually increases the difficulty of off-balance sheet financing for enterprises.

The changes in accounting treatment of the implementation of the new lease standards will inevitably cause changes in the key financial indicators of the lessee enterprise, making it more difficult for them to obtain financing. For creditors, the deterioration of key financial indicators may affect the bank's credit line for enterprise business, the agreed repayment period, the interest

amount and the extension renewal, etc., and affect the commercial credit line that can be provided to suppliers and customers; For shareholders, it may cause shareholders to change their views on the enterprise 's profit prospects, change their willingness to hold shares, and even cause abnormal stock price movements. Since the operating lease, An uncomplicated and inexpensive off-balance sheet financing avenue is no longer viable. If the enterprise wants to continue to achieve off-balance sheet financing, it will have to pay more path change costs and financing costs; Considering the viewpoint of users of corporate financial statements, especially the stakeholders who provide financing for the enterprise, The straightforward representation of incorporating operating leases on the balance sheet is the deterioration of the enterprise's financial statements. If the enterprise wants to continue financing, it may need to provide additional guarantees, pay higher interest rates and high-value collateral, etc.; With the increase in the asset-liability ratio, it may approach the loan approval red line of financial institutions, and the refinancing space of the enterprise will be squeezed. Therefore, The adoption of the new lease standards will greatly influence the financing decisions of enterprises**.**

At present, the academic research on the new lease standard mainly focuses on the study of key accounting ratios of enterprises(Almeida Campanha & Santos, 2020; Bialek-Jaworska, Dobroszek, & Szatkowska, 2022; Cornaggia, Franzen, & Simin, 2013; Giner, Merello, & Pardo, 2019; Gorowski, Kurek, & Szarucki, 2022; Morales-Diaz & Zamora-Ramirez, 2018; Oliveira, Bonfim, & Fraga, 2019); some literature discusses the value of the enterprise (Chung, 2022; Ferreira, Landsman, & Rountree, 2022), stock value (Oliveira Morais et al., 2023), and some literature discusses the impact on the net cash flow of enterprises(Kim & Choi, 2021). At present, there are few literatures analyzing and testing the effects of the new leasing standards on the overall financing decisions of enterprises. However, the financing decisions of enterprises are crucial to the survival and development of enterprises.This paper examines how the adoption of the new lease standards affects enterprise financing decisions by utilizing a multiple-time-point DID model.

The contributions of this study are as follows: i, It demonstrated the extent and direction of changes in enterprise financing decisions caused by the implementation of the new leasing standards. It has further enriched the research system of enterprise accounting standards from the policy perspective; ii. From the perspective of enterprise financial leverage, this paper reveals the inherent mechanism of the new leasing standards on enterprise financing decisions. At the same time, this paper examines the differences in the implementation of the new standards in different industries leasing scales, enterprises of different ownership structures, and enterprises of different ages. iii, Following alterations in accounting standards, management can prudently devise financing strategies tailored to the prevailing conditions, better utilize leasing financing to optimize the capital structure, and adjust financing decisions in a timely manner to cope with the adverse effects of the change in standards.

2. Literature Review

Financing, investment and dividend distribution are the three core issues of enterprise financial management (Li, Lin, & Song, 2011). Among them, financing not only affects the enterprise governance structure and market value, but also affects the overall economy through the interaction between enterprises and the market(Zhang & Wu, 1995). Enterprise financing decisions are mainly reflected in capital structure, that is, the proportion of debt to equity capital, the ratio of long-term to short-term capital, etc. Capital structure and capital allocation efficiency affect each other, and optimizing capital structure is the basis for improving financing efficiency(Yan, 2017). Financing efficiency pertains to the variance between an enterprise's actual capital structure and its ideal target capital structure. Existing literature believes that under the equilibrium effect of capital cost and return, each enterprise has an optimal capital structure (target capital structure) (Jiang & Huang, 2011). However, due to changes in accounting standards, information asymmetry, agency cost conflicts and other policy changes and market frictions, the actual capital structure of the enterprise will be out of line with the optimal capital structure (Lu, He, & Dou, 2015), causing changes in the financing structure of the enterprise.

In order to mitigate the adverse effects of policy and market changes on enterprise financing structures, relevant enterprises need to use leasing to adjust their financing decisions. On the one hand, operating leases can be used to adjust enterprise financial leverage (Schallheim, Wells, & Whitby, 2013). Since leasing and liabilities are complementary (Lewis & Schallheim, 1992), management will use leasing to expand the debt capacity, increase the debt level of the lessee enterprise , and even over-indebtedness. On the other hand, enterprise financial statements can be beautified by using operating leases, reducing agency costs, and thus improving the enterprise 's financing environment. Caskey and Ozel (2019) believe that the important driving forces of leasing decisions include increasing financing capabilities, adapting to unstable operating environments, and maximizing tax deductions.

However, the change in lease accounting standards will inevitably lead to changes in the key accounting ratios of the lessee enterprises , affecting the debt capacity of the enterprises, and resulting in alterations to the financing decisions of the enterprises.

El-Gazzar, Lilien, and Pastena (1986) found that after the implementation of SFAS NO.13, financial leases were systematically replaced by operating leases. They believed that the capitalization of financial leases increased the possibility of debt defaults and reduced employee incentive measures such as EBITDA, thereby changing the enterprise 's financing preferences. Imhoff and Thomas (1988) studied the impact of US Financial Accounting Standard No. 13 (SFAC NO.13, 1976) on the capital structure changes of lessee enterprises. SFAC NO.13 requires that financial leases originally disclosed off-balance sheet be recognized on the balance sheet. Their research found that forced internalization led to the systematic replacement of financial leases by operating leases and non-lease financing. By bolstering equity and diminishing conventional debt, lessees decreased book leverage, thereby altering the capital structure of enterprises. Ozturk and Sercemeli (2016) found that capitalizing operating leases will lead to an increase in enterprise debt and a weakening of debt capacity. Bialek-Jaworska et al. (2022) found in their study of the financial data of 494 Polish enterprises in 2018-2019 that an increase in the debt-to-asset ratio of lessees was caused by the implementation of the new leasing standards. Gorowski et al. (2022) found that it would lead to an increase in financial leverage indicators. Bialek-Jaworska et al. (2022) found in their study of Poland that the financial leverage of lessees increased significantly after the capitalization of leases . Fito, Moya, and Orgaz (2013), Giner and Pardo (2017), and Giner et al. (2019) discovered that the implementation of the new leasing standards would result in a decrease in return on assets. Kim and Choi (2021) found in their study of low-cost airlines that the net cash flow decreased.

By combing through the literature, it has been determined that the introduction of the new lease accounting standards will raise the asset-liability ratio of enterprises, deteriorate leverage indicators, weaken debt capacity, and reduce return on assets and net cash flow , which will change the financing environment of lessee enterprises and increase the debt default risk and financial distress risk of lessee enterprises. Therefore, Lessee enterprises are required to adapt their financing strategies to address the negative impacts of modifications in lease accounting standards.

3. Research Samples and Models

3.1 Research Sample

This study focuses on companies listed on China's A-share market between 2018 and 2023, with financial data obtained from the CSMAR and WIND databases.In order to avoid the impact of abnormal samples, this paper processes the original data. Finally, there are 2,792 enterprise samples and 16752 observations of panel data. This paper uses winsorize processing to adjust the continuous variables at the 1% and 99% quantiles.

3.2 Model Construction

Considering that both domestic and international listed companies have started to gradually adopt the new leasing standards, the multiple-time-point DID model was selected for evaluation and the following model was constructed:

$$\mathrm{Influence}_{it} = \alpha + \beta \mathrm{Lease\_Post}_{it} + \gamma \mathrm{Control\_Var}_{it} + \eta_i + \mu_t + \varepsilon_{it} \quad (1)$$

The $\mathrm{Influence}_{it}$ represents the financing decisions of the enterprise; the $\mathrm{Lease\_Post}_{it}$ is a dummy variable, is utilized to gauge the interaction between whether enterprise "i" implemented the new lease standard in year "t" and the dummy variable representing the implementation timing of the standards; $\mathrm{Control\_Var}_{it}$ represents all control variables; The coefficient β quantifies the average variation in the financing decisions of the enterprise pre and post the application of the new lease standard.

3.3 Variables and Their Definitions

3.3.1 Explained Variables

Financing decision, this paper uses financing efficiency to represent the changes in enterprise financing decisions.Drawing on the methods of Harford, Klasa, and Walcott (2009), Denis and McKeon (2012), He, Hu, Mi, and Yu (2021)This article uses the following model to fit the target leverage ratio of the enterprise:

$$\mathrm{Lev}_t = \alpha_0 + \alpha_1 \mathrm{Soe}_{t-1} + \alpha_2 \mathrm{Roa}_{t-1} + \alpha_3 \mathrm{\_Lev\_Med}_{t-1} + \alpha_4 \mathrm{Growth}_{t-1} + \alpha_5 \mathrm{Tgb}_{t-1} + \alpha_6 \mathrm{Size}_{t-1} + \alpha_7 \mathrm{Dyd}_{t-1} + \sum \mathrm{Firm} + \sum \mathrm{Year} + \varepsilon \quad (2)$$

For detailed explanation of relevant variables, please see Appendix A. The model is regressed by Tobit, and the residual obtained is the leverage ratio deviation, which is equal to the actual leverage ratio minus the target leverage ratio. A positive residual suggests that the enterprise is over-indebted, while a negative residual indicates that the enterprise is under-indebted. In this article, the financing efficiency is gauged by taking the absolute value of the residual. A higher absolute value corresponds to lower financing efficiency.

3.3.2 Explanatory Variables

This article presents the interaction term (Lease_Post) between whether enterprise implements the new leasing standards and the dummy variable of the implementation time of the standards, representing the processing effect of standard implementation. Specifically, this article sets the enterprises that implement the new lease standard to 1 as the experimental group, and sets the enterprises that do not implement the new lease standard to 0 as the control group; the time dummy variable Post before and after the implementation of the new lease standard is set to 0 and 1 respectively.

3.3.3 Control Variables

The control variables: enterprise size (Size) , asset tangibility (Tangibility), current ratio (CurrentRatio), income growth rate (Growth), capital expenditure (InvestCash), R&D expenditure (Rd), actual tax rate (Tax), property rights nature (Soe) and the industry median of the debt-to-asset ratio (Lev_Med).

4. Analysis of Empirical Results

4.1 Descriptive Statistics

From the descriptive statistics in Table 1, we can see that tThe experimental group exhibits greater deviations in the financing efficiency index compared to the control group, indicating that overall, the financing efficiency is lower for enterprises in the experimental group than for those in the Control group. Looking at other variables, the experimental group's enterprise size (Size), R&D expenditure (Rd), property rights nature (Soe), current ratio (Currentratio), and income growth rate (Growth) are higher than the control group, while the actual tax rate (Tax) lower than the control group. There are no notable variances in asset tangibility (Tangibility), capital expenditure (Investcash), and the industry median of the debt-to-asset ratio (Lev_Med) .In general, the experimental group enterprises had larger scale, higher R&D expenditures, larger current ratios, faster revenue growth rates, and lower tax rates.

Table 1: Sample descriptive statistics

Variable	Total sample size	Experimental group			Control group		
		N	mean	sd	N	mean	sd
Deviations	16752	8089	0.121	0.092	8663	0.1174	0.0886
Size	16752	8089	22.7625	1.372	8663	22.2966	1.2401
Tangibility	16752	8089	0.2028	0.1513	8663	0.2058	0.1493
Investcash	16752	8089	0.0435	0.0406	8663	0.0454	0.0426
Rd	16752	8089	0.0421	0.0435	8663	0.0392	0.0402
Soe	16752	8089	0.39	0.4878	8663	0.327	0.4692
Lev_Med	16752	8089	0.4137	0.1021	8663	0.412	0.0921
Currentratio	16752	8089	2.0476	1.6119	8663	2.3088	1.8887
Growth	16752	8089	0.1213	0.3219	8663	0.1176	0.304
Tax	16752	8089	0.1183	0.2158	8663	0.1437	0.1845

Table 2 reports the Pearson correlation coefficients between the main variables. It can be seen from the table that the deviation of the enterprise is negatively correlated with the (Lease_Post), indicating that the financing efficiency of the experimental group of enterprises is generally higher than the control group. Among the control variables, the enterprise deviation is negatively correlated with size, tangibility , investcash, lev_med, and tax, and positively correlated with rd, soe, current ratio, and growth, indicating that enterprises with larger scale, higher asset tangibility, more capital expenditure, higher median industry leverage ratio, and higher actual tax rate have higher financing efficiency; while enterprises with higher R&D expenditure, lower current ratio, and faster revenue growth rate have lower financing efficiency. Similarly, in this group of variables, the correlation coefficients are all less than 0.8, Thus, there is no significant issue of collinearity among the variables.

Table 2: Correlation coefficients of main variables

Variables	Deviations	Lease_Post	Size	Tangibility	Investcash	Rd	Soe	Lev_Med	Currentratio	Growth	Tax
Deviations	1										
Lease_Post	0.020*	1									
Size	-0.103*	0.176*	1								
Tangibility	-0.029*	-0.01	0.105*	1							
Investcash	-0.075*	-0.022*	0.011	0.336*	1						

Rd	0.022*	0.035*	-0.295*	-0.209*	0.023*	1					
Soe	0.029*	0.066*	0.374*	0.125*	-0.146*	-0.265*	1				
Lev_Med	-0.014	0.009	0.327*	-0.101*	-0.150*	-0.341*	0.245*	1			
Currentratio	0.220*	-0.074*	-0.353*	-0.229*	-0.117*	0.276*	-0.160*	-0.189*	1		
Growth	-0.017*	0.006	0.050*	-0.001	0.117*	-0.049*	-0.033*	0.013	-0.055*	1	
Tax	-0.033*	-0.063*	0.145*	0.019*	-0.034*	-0.212*	0.102*	0.169*	-0.035*	0.029*	1

4.2 Benchmark Regression Results

Table 3 column (1) is the regression result of the full sample (without distinguishing the direction of inefficient financing). The estimated result passed the test at the significance level of 10 %. The estimated coefficient value of Lease_Post is 0.0058, indicating that enterprises that implement the new lease standards have significantly higher deviations than enterprises that have not implemented them. Since the larger the value of deviations, the lower the financing efficiency. Therefore, the positive coefficient means that the implementation of the new leasing standards has reduced the financing efficiency of the enterprise.

In order to test the impact of the implementation of the new leasing standards on inefficient financing caused by different reasons , this article divides the sample into an over-indebtedness group and an under-indebtedness group according to the direction of inefficient financing before the change of the standard. Specifically, samples with negative residuals in model (2) before the standard change are classified into the under-indebtedness group, otherwise, they are classified into the over-indebtedness group. The group regression results are shown in columns (2) and (3) of Table 3. The results show that in the over-indebtedness group, the coefficient estimate of Lease_Post is positive and significant at the 5% level. It shows that the financing efficiency in the over-indebtedness group has dropped significantly. In other words, the change in standards has increased the aggressive debt behavior of enterprises; in the under-indebtedness group, the coefficient of Lease_Post is positive but not significant, which shows that the impact of standard changes on the enterprises in the group with under-indebtedness is not significant. The regression results show that the change in lease accounting standardshave reduced the financing efficiency of enterprises, mainly by increasing the aggressive debt behavior of enterprises.

Table 3: Benchmark regression results

Variables	(1)	(2)	(3)
	Full sample	Over-indebtedness group	Under-indebtedness group
	deviations	deviations	deviations
Lease_Post	0.0058* (1.8524)	0.0100** (2.1881)	0.0024 (0.6858)
Size	0.0037 (0.9806)	0.0324*** (10.9487)	-0.0485*** (-14.7986)
Tangibility	0.0245 (1.3941)	-0.1038*** (-7.2140)	0.1062*** (6.8432)
Investcash	0.0140 (0.5361)	0.0104 (0.4262)	-0.0346 (-1.2918)
Rd	0.2128*** (3.7885)	0.0996 (1.5197)	0.2364*** (5.3187)
Soe	0.0114* (1.8534)	0.0101* (1.7682)	-0.0086 (-1.3638)
Lve_Med	0.0295 (0.8321)	-0.2216*** (-7.5351)	0.1547*** (5.4574)
Currentratio	0.0123*** (11.8952)	-0.0634*** (-29.5022)	0.0228*** (32.7914)
Growth	0.0104*** (4.3100)	0.0058** (2.4421)	0.0102*** (4.3895)
Tax	-0.0108*** (-3.2846)	-0.0120*** (-3.2878)	0.0003 (0.0738)
Firm Fe	Yes	Yes	Yes

Year Fe	Yes	Yes	Yes
Observations	16,752	7,985	8,214
Adjusted R-squared	0.0328	0.7059	0.7465

Note: The data in brackets are the corresponding t-values under robust standard errors; ***, **, and * are significant at the 1%, 5%, and 10% levels, respectively. The same applies to the following tables.

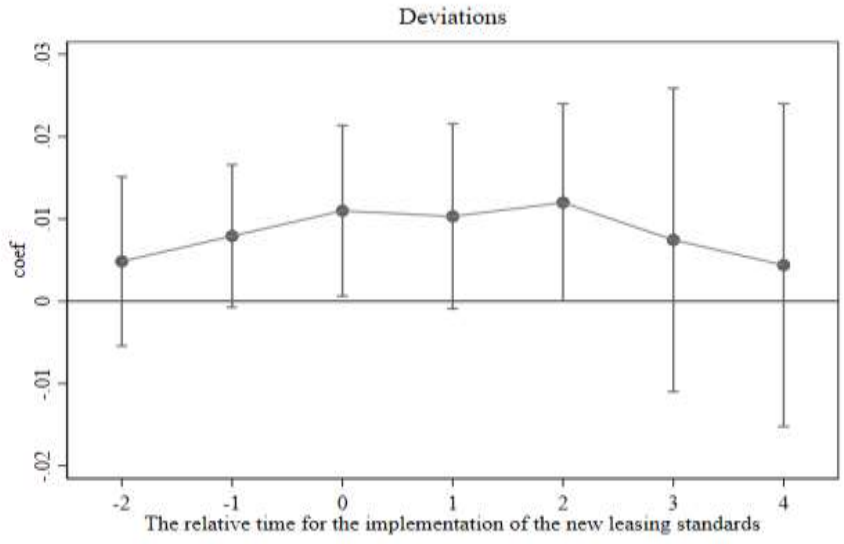
4.3 Parallel Trend Test

The prerequisite for the multiple-time-point (DID) model is to satisfy the parallel trend test hypothesis. Prior to the standard implementation, the experimental group and the control group exhibited comparable trends, whereas post-implementation, their trends diverged. the parallel trend test model is:

$$\text{Influence}_{it} = \alpha + \beta_1 \text{Before4}_{it} + \beta_2 \text{Before3}_{it} + \beta_3 \text{Before2}_{it} + \beta_4 \text{Before1}_{it} + \beta_5 \text{Current}_{it} + \beta_6 \text{After1}_{it} + \beta_7 \text{After2}_{it} + \beta_8 \text{After3}_{it} + \beta_9 \text{After4}_{it} + \gamma \text{Control\_Var}_{it} + \eta_i + \mu_t + \varepsilon_{it} \quad (3)$$

As shown in Figure 1,The coefficient estimates in each pre-implementation period of the standards are not statistically significant, indicating no notable difference in financing efficiency between the two groups. Two years after the introduction of the new leasing standards, the coefficient shows a significant positive value, suggesting that the implementation of these standards has decreased the financing efficiency. Three years post-implementation of the standards, the significance of the impact coefficient of the new lease standards gradually diminished and decreased, indicating that the impact of the new lease standards on enterprise financing efficiency is short-term.

Figure 1: Parallel trend test results

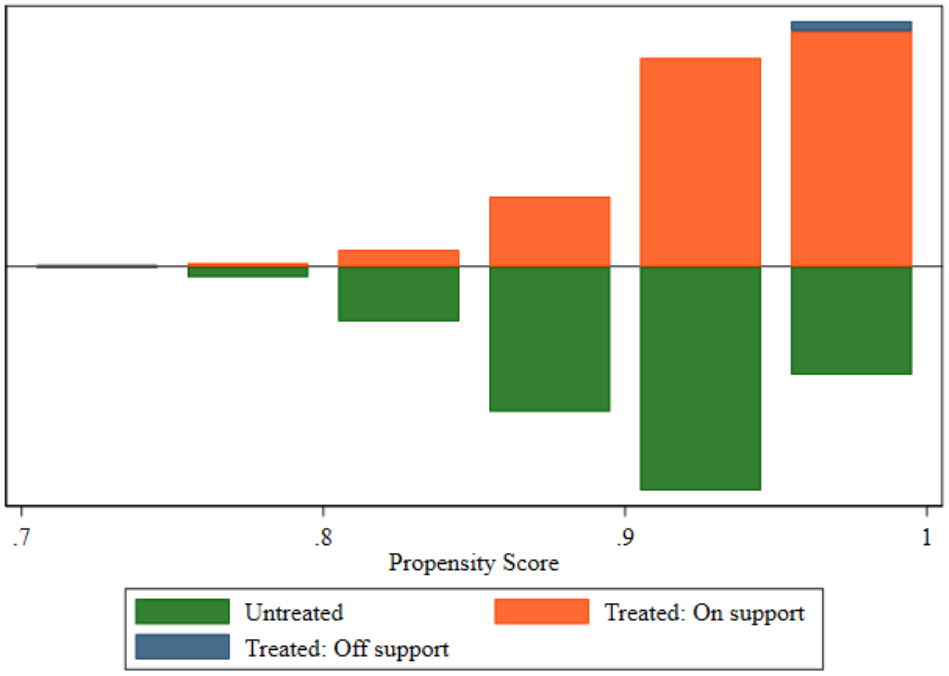


4.4 Robustness Test

4.4.1 Propensity Score Matching Difference-in-Difference Model (PSM-DID)

To prevent the research data from being subject to selective bias and causing endogeneity problems, this study used the PSM-DID method to screen the control group samples. Utilized the caliper nearest neighbor matching method (1:2) for sample matching. Figure 2 shows the PMS-DID matching results. Table 4 Column (1) shows the results that the coefficient estimate of Lease_Post is positively significant at the 10% level. The results are robust.

Figure 2: PMS-DID matching results



4.4.2 Exclude the Impact of Other Accounting Standards

Throughout the study period of this article, the implementation of the new revenue standard and the new financial instruments standard could introduce bias into the benchmark estimation results of the new lease standard.Therefore, in the benchmark regression model (1), this study successively adds the dummy variable for the year of implementation of the new revenue standard (Revenue_Lease) and the year of implementation of the new financial instrument criterion (Imf_Lease) to try to control the impact of these two standards on the benchmark estimate as much as possible. In table 4 Column (2)(3), after controlling these two standards , the coefficient of Lease_Post is still significant, and the main regression results remain unchanged, indicating robustness.

Table 4: Robustness test

Variables	PSM -DID	Excluding the impact of the new revenue standard	Excluding the impact of the new financial instruments standard
	(1)	(2)	(3)
	Deviations	Deviations	Deviations
Lease_Post	0.0059* (1.7475)	0.0057* (1.8185)	0.0059* (1.8729)
Revenue_Lease		0.0042 (1.4668)	
Imf_Lease			-0.0003 (-0.0669)
Control_Var	Yes	Yes	Yes
Firm Fe	Yes	Yes	Yes
Year Fe	Yes	Yes	Yes
Observations	16,405	16,752	16,752
Number of firm	2,761	2,792	2,792
Adjusted R-squared	0.0332	0.0330	0.0328

4.5 Heterogeneity Analysis

4.5.1 Heterogeneity of Leasing Scale in Different Industries

To test the impact of leasing scale in different industries on enterprise financing efficiency, In equation (1), this paper incorporates

an interaction term between the industry dummy variable (Indust) and the implementation of the new lease standard dummy variable (Lease_Post), Table 5 column (1) results show that, the estimated coefficient of Indust*Lease_Post is notably negative and falls below the average treatment effect value observed in the benchmark regression, which was 0.0058, indicating that in industries with smaller leasing scales, the reduction in financing efficiency will be more significant. industries with smaller lease sizes may experience a relatively higher impact from the costs associated with implementing the new lease standard. which generally have limited resources and capital. This could lead to a decrease in financing efficiency as they find it difficult to bear the additional costs required to implement the new standards. At the same time, industries with smaller leasing scales have weaker bargaining power in the market, and the implementation of new leasing standards may make them face more stringent financing conditions or higher financing costs, further affecting financing efficiency.

4.5.2 Heterogeneity of Enterprises of Different Ownership Structures

Enterprises with different ownerships have different operating characteristics . Based on formula (1), this article performs regression on the sample data of state-owned enterprises (SOEs) and non-state-owned enterprises (N-SOEs) respectively. Table 5 column (2) (3) regression results show that, In the N-SOEs group, the estimated coefficient of Lease_Post is significantly positive, This suggests that the adoption of the new lease standards has diminished the financing efficiency of N-SOEs. However, it has no significant impact on the financing efficiency of SOEs . After the implementation of the new leasing standards, enterprises of varying ownership structures will experience divergent effects on their financing efficiency. This difference is mainly because SOEs usually have more stable sources of funds and more channels for financing, such as government support, bank loans, and bond markets. etc., it is easier to obtain financing than N-SOEs. At the same time, SOEs usually have higher status and credibility in the market, which makes it easier for them to obtain support from investors and financial institutions, and their financing efficiency will not be less affected even under the new lease standards. N-SOEs lack such policy preferences and support. The new leasing standards will restrict the financing channels of N-SOEs. Some financing institutions may treat the financing needs of these enterprises more cautiously, making it difficult for N-SOEs to obtain financing. It will be more difficult and reduce financing efficiency.

4.5.3 Heterogeneity of Enterprises of Different Ages

In this article, the sample enterprises are categorized into "old enterprises" and "new enterprises" for regression analysis based on the median age of the sample companies. Table 5 column (4) (5) show that, the estimated coefficient for Lease_Post in the old enterprise sample shows a significant positive relationship, whereas the new enterprise sample did not yield significant results in the significance test. This indicates that the financing efficiency of old enterprises has decreased following the adoption of the new lease standards, while the financing efficiency of new enterprises has not been significantly affected. Variations exist in how the financing efficiency of enterprises of different ages is influenced by the implementation of the new lease standards. This is mainly because the old enterprise has a large number of lease agreements and leased assets with a long history. After implementing the new standards, it will need to spend more time and resources to adjust the financial statements and financing structure. Its financial structure is more complex, and it will face challenges after implementing the new standards. More financial risks and uncertainties, which will affect its financing efficiency. In contrast, new enterprises may not have these legacy problems, have a relatively simple financial structure, be less affected by the market, be more adaptable to new standards, and have no significant change in financing efficiency.

Table 5: Heterogeneity of leasing scale in different industries、different enterprises ownership and enterprise age

Variables	Leasing scale in different industries	Different enterprises ownership		Different enterprises ages	
	(1)	(2)	(3)	(4)	(5)
	Deviation	Soe	N_soe	New	Old
Lease_Post	0.0065** (2.1472)	-0.0009 (-0.2349)	0.0098** (2.2438)	0.0045 (0.9186)	0.0093** (2.1648)
Industry *	-0.0048*				
Control_Var	Yes	Yes	Yes	Yes	Yes
Firm Fe	Yes	Yes	Yes	Yes	Yes
Year Fe	Yes	Yes	Yes	Yes	Yes
Observations	16,752	5,980	10,720	8,260	8,087
Adjusted R-squared	0.0330	0.7323	0.5853	0.6286	0.6925

4.6 Mechanism Test

The mediation mechanism model of this paper is as follows:

$$\text{Inter\_Var}_{it} = \alpha_1 + \beta\text{Lease\_Post}_{it} + \gamma_1\text{Control\_Var}_{it} + \eta_i + \mu_t + \varepsilon_{it} \quad (4)$$

$$\text{Influence}_{it} = \alpha + \delta\text{Lease\_Post}_{it} + \theta\text{Inter\_Var}_{it} + \gamma\text{Control\_Var}_{it} + \eta_i + \mu_t + \varepsilon_{it} \quad (5)$$

The Inter_Var_{it} is the mediating variable, the other variables are consistent with formula (1). In this article, the debt-to-asset ratio (Lev) is introduced as an intermediate variable in models (4) and (5) for regression analysis. Table 6 mechanism test results show that the coefficient values for both Lease_Post β and θ are found to be statistically significant. Additionally, the Sobel test demonstrates a P-value of 0.000, indicating significance at the 1% level, because the Lease_Post coefficient δ is not significant, so the debt-to-asset ratio has a complete mediating effect. It shows that the new leasing standards reduce the financing efficiency of enterprises by increasing the financial leverage ratio of enterprises. The main reason is that the new leasing standards increase the financial leverage ratio of enterprises, which means that enterprises rely on more debt financing, making enterprises bear a heavier debt repayment pressure. At the same time, high financial leverage limits the financing capabilities of enterprises. Excessive debt levels limit financing channels, increase financing costs, and even make it difficult to obtain financing, thus reducing financing efficiency.

Table 6: Influence mechanism test

Variables	(1)	(2)
	Lev	Deviations
Lease_Post	0.0093***	0.0037
	(3.0143)	(1.2489)
Lev		0.2371***
		(29.3716)
Sobel test	Z= 5.213	
Control_Var	Yes	Yes
Firm Fe	Yes	Yes
Year Fe	Yes	Yes
Observations	16,752	16,752
Number of firm	2,792	2,792
Adjusted R-squared	0.3387	0.0892

5. Conclusion

Under the new lease accounting standard, all leasing transactions must reflect associated assets and liabilities on the balance sheet. Relevant research believes that this adjustment is expected to result in alterations to pertinent financial metrics of businesses. However, changes in enterprise financial indicators will trigger adjustments to relevant management decisions, which will have unexpected effects on management financing decisions.

To test this conjecture, in this study, data from 16,752 observations across 2,792 companies listed on China's A-shares market between 2018 and 2023 are utilized to develop a multiple-time-point DID model. The aim is to comprehensively assess the effects of the new lease standards on the financing efficiency of enterprises. The study found that the implementation of the new leasing standards has reduced the financing efficiency of enterprises. The reduction in financing efficiency is mainly reflected in the increase in aggressive debt behavior of enterprises. Heterogeneity analysis found that financing efficiency is significantly reduced in enterprises with smaller leasing scales. At the same time, among enterprises of different ownership structures, the new leasing standards reduce the financing efficiency of non-state-owned enterprises, but have no significant impact on the financing efficiency of state-owned enterprises. Among enterprises of different ages, the new leasing standards reduce the financing efficiency of old enterprises, but have no significant impact on the financing efficiency of new enterprises. Mechanism tests show that the new leasing standards reduce the financing efficiency of enterprises by increasing their financial leverage ratio.

Leasing has become an important financing method. Understanding the potential economic consequences of leasing and leasing accounting is of great significance for enterprises to optimize financing arrangements and the healthy development of my country's leasing market. The research results of this paper suggest that management can better use leasing financing to optimize capital structure and adjust financing decisions in time to cope with the adverse effects of standard changes. It also provides a reference for regulators and standard setters to consider the possible unintended effects of accounting standard changes.

Funding:This research received no external funding.
Conflicts of Interest: The authors declare no conflict of interest.
Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

References

[1] Almeida Campanha, Renata, & Santos, Odilanei Morais (2020). Impacts of adopting IFRS 16 on a Brazilian lessee company. Focus: Accounting Reflection, 39(3), 1-18.
[2] Bialek-Jaworska, Anna, Dobroszek, Justyna, & Szatkowska, Paulina (2022). Does the IFRS 16 affect the key ratios of listed companies? Evidence from Poland. International Journal of Management Economics, 58(3), 299-315.
[3] Caskey, Judson, & Ozel, N Bugra (2019). Reporting and non-reporting incentives in leasing. The Accounting Review94(6), 137-164. List the reference here.
[4] Chung, Hae Jin (2022). The effects of new accounting standards on firm value: The K-IFRS 1116 lease. International Journal of Financial Studies, 10(3), 68.
[5] Cornaggia, Kimberly J, Franzen, Laurel A, & Simin, Timothy (2013). Bringing leased assets onto the balance sheet. Journal of Corporate Finance 22, 345-360.
[6] Denis, David J, & McKeon, Stephen B. (2012). Debt financing and financial flexibility evidence from proactive leverage increases. The Review of Financial Studies 25(6), 1897-1929.
[7] El-Gazzar, Samir, Lilien, Steve, & Pastena, Victor (1986). Accounting for leases by lessees. Journal of Accounting Economics 8(3), 217-237.
[8] Ferreira, Petrus Petri, Landsman, Wayne R, & Rountree, Brian (2022). Capital Structure Effects Associated with the New Lease Accounting Standard. Kenan Institute of Private Enterprise Research Paper(2517124).
[9] Fito, M Angels, Moya, Soledad, & Orgaz, Neus (2013). Considering the effects of operating lease capitalization on key financial ratios. Spanish Journal of Finance Accounting/Spanish Journal of Finance and Accounting, 42(159), 341-369.
[10] Gang, Li, Lijun, Chen, Qian, Chen, & Renji, Zhang. (2009). The real motivation of operating leases: a case study based on China Eastern Airlines. Managing the World, 3-8(B02), 8.
[11] Giner, Begona, Merello, Paloma, & Pardo, Francisca (2019). Assessing the impact of operating lease capitalization with dynamic Monte Carlo simulation. Journal of Business Research, 101, 836-845.
[12] Giner, Begona, & Pardo, Francisca (2017). Operating lease decision and the impact of capitalization in a bank-oriented country. Applied Economics 49(19), 1886-1900.
[13] Gorowski, Ireneusz, Kurek, Bartosz, & Szarucki, Marek (2022). The impact of a new accounting standard on assets, liabilities and leverage of companies: Evidence from energy industry. Energies, 15(4), 1293.
[14] Harford, Jarrad, Klasa, Sandy, & Walcott, Nathan (2009). Do firms have leverage targets? Evidence from acquisitions. Journal of financial economics, 93(1), 1-14.
[15] He, Wen, Hu, Maggie Rong, Mi, Lin, & Yu, Jin (2021). How stable are corporate capital structures? International evidence. Journal of Banking Finance, 126, 106103.
[16] Imhoff , Eugene A, & Thomas, Jacob K %J Journal of Accounting. (1988). Economic consequences of accounting standards: The lease disclosure rule change. Journal of Accounting Economics 10(4), 277-310.
[17] Jiang, Fuxiu, & Huang, Jicheng (2011). Marketization process and dynamic adjustment of capital structure. Management World(3), 12.
[18] Kim, Jung-Ae, & Choi, Jong-Seo (2021). The effect of the revised lease accounting standard on financial statements and credit rating of LCCs. Korean Accounting Journal, 30(30), 341-379.
[19] Lewis, Craig M, & Schallheim, James (1992). Are debt and leases substitutes? Journal of Financial Quantitative Analysis 27(4), 497-511.
[20] Li, Wanfu, Lin, Bin, & Song, Lu (2011). The role of internal control in corporate investment: efficiency promotion or inhibition? Management World(2), 19.
[21] Lu, Zhengfei, He, Jie, & Dou, Huan (2015). Who is more over-indebted: state-owned or non-state-owned enterprises? Economic Research, 50(12), 14.
[22] Morales-Diaz, Jose, & Zamora-Ramirez, Constancio. (2018). The impact of IFRS 16 on key financial ratios: A new methodological approach. Accounting in Europe15(1), 105-133.
[23] Oliveira, Ana Carolina Lima Braz de, Bonfim, Mariana Pereira, & Fraga, Anderson (2019). CPC 06 (R2): an analysis of its application and impact on the lessee's financial statements. Accounting thinking, 21(74).
[24] Antonio Batista. (2023). Impact of CPC 06 (r2) on the share price of Bovespa companies. Management and Secretarial Journal, 14(3), 4134-4151.
[25] Ozturk, Meryem, & Sercemeli, Murat. (2016). Impact of new standard IFRS 16 Leases on statement of financial position and key ratios a case study on an airline company in Turkey. Journal of Business and Economics Research, 7.

[26] Schallheim, James, Wells, Kyle, & Whitby, Ryan (2013). Do leases expand debt capacity? Journal of Corporate Finance, 23, 368-381.
[27] Yan, Chao. (2017). Research on the Unexpected Effects of Accounting Standards Change on Capital Allocation: Theoretical Analysis and Empirical Test. Dongbei University of Finance and Economics.
[28] Zhang, Weiying, & Wu, Youchang (1995). Contractual Theory of Corporate Financing Structure: A Review. Reform(4), 109-116.

Appendix A. Variable Definitions

Variable	Definition
Deviations	This paper uses financing efficiency to represent the changes in enterprise financing decisions.Leverage ratio deviation, the regression residual of model (2) takes the absolute value, and the calculation process is detailed in the previous text.
Lease_Post	The interaction term between whether the enterprise implements the new lease standard and the dummy variable of the implementation time. Lease: dummy variable, if the enterprise implements the new lease standard, the value is 1, otherwise it is 0; Post: dummy variable, if the year belongs to the year when the enterprise implements the new lease standard or later, the value is 1, otherwise it is 0.
Lve	Enterprise's debt-to-asset ratio = Total liabilities/Total assets.
Growth	The enterprise's revenue growth rate = operating revenue for this year and this period - operating revenue for the same period last year) / operating revenue for the same period last year.
Size	Enterprise's size, the natural logarithm of total assets.
Dyd	The shareholding ratio of the enterprise's largest shareholder.
Roa	Enterprise's Return On Assets = EBIT/Total Assets.
Tangibility(Tgb)	Enterprise's asset tangibility= net fixed assets/total assets.
InvestCash	Enterprise's capital expenditure = cash paid for the purchase and construction of fixed assets, intangible assets and other long-term assets / total assets.
Rd	Enterprise's R&D expenditure = current R&D expenses/current operating revenue.
Soe	Enterprise's property rights nature: state-owned enterprises have a value of 1, while non-state-owned enterprises have a value of 0.
Lev_Med	The median leverage ratio of the industry in which the enterprise is located in that year.
CurrentRatio	Enterprise's current ratio = current assets / current liabilities.
Tax	Enterprise's actual tax rate = current income tax expense/total profit.