

A Study of the Inhibitory Path of Credit Availability on Firm Value

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Abstract: This study examines Chinese A-share non-financial listed firms (2010–2023) through a "credit availability-investment behavior-enterprise value" framework. Using a multi-stage mediation model and fixed-effect panel regression, we find that credit availability significantly reduces firm value, with both mechanisms showing strong inhibitory effects. Heterogeneity analysis reveals that non-asset-intensive and technology-intensive firms are more vulnerable to this negative impact. The study highlights unintended consequences of credit accessibility, offering insights for policymakers and corporate managers.

Keywords: credit availability, firm value, inefficient investment, executive overconfidence

1. Introduction

In recent years, with the deepening of China's financial supply-side structural reform, the convenience of enterprises in obtaining credit funds has been improving. At the end of 2024, the Political Bureau of the CPC Central Committee proposed that the future monetary policy will face a timely adjustment of "loosening when appropriate and tightening when appropriate" to create a favorable monetary and financial environment for stable economic growth and high-quality development in the future, and to further promote China's sustained economic recovery and improvement. However, under the background of macro liquidity remaining abundant and the credit environment tends to be loose, the increase in credit availability may also lead to a series of "invisible risks". Some enterprises have over-financed due to blind expansion and irrational investment, contrary to the requirements of high-quality development, which in turn causes a decline in the efficiency of financial resource allocation [1]. Currently, China's economy is in a critical stage of transition from high-speed growth to high-quality development. How to improve the allocation efficiency of financial resources and avoid the "financing convenience trap" has become the focus of policy attention. The capital market is increasingly emphasizing the sustainable value creation ability of enterprises rather than mere scale expansion. In this context, although credit availability can provide growth momentum for enterprises, if it is not supported by investment efficiency, decision-making rationality and governance ability, it may become the cause of "value erosion". Therefore, understanding the correlation between credit availability and enterprise value is of great theoretical significance and practical value.

Based on the above background, this paper uses A-share non-financial listed companies from 2010-2023 as a sample to examine the impact of credit availability on firm value. The empirical results of this paper find that credit availability depresses firm value to a certain extent, and this depressing effect is more significant when firms are technology-intensive and non-asset-intensive.

Further analyzing its mechanism of action, it is found that credit availability increases the probability of inefficient investment and executive overconfidence, which increases the leverage and financial risk of the enterprise, and ultimately suppresses enterprise value. The results of this paper suggest that credit availability suppresses firm value and reduces firms' market competitiveness and sustainability.

This paper makes the following three contributions: ①Integrating finance, management and institutional economics to empirically test the “double resource curse” hypothesis: when credit resources and internal management capacity are mismatched, over-indebtedness induces inefficient investment and innovation crowding-out effect. ②Integrate corporate governance, resource allocation, industry competition and economic cycle into the unified analytical framework, from theoretical modeling to mechanism testing, proving that the dominant mechanism of the inhibition effect dynamically switches with the internal and external situations of enterprises. ③Exposing how state-owned enterprises' 'soft budget constraints' worsen credit mismatch while private firms face financing bias heightening financial fragility, this study offers a dynamic equilibrium lens on debt's dual effects. It provides fresh insights into emerging market debt research and informs policy optimization, completing an evidence-based analytical framework."

2. Literature review and research hypotheses

(1) The impact of credit availability on firm value. Studies have shown that credit availability is crucial to the operation and development of enterprises. It not only directly affects the enterprise's capital liquidity and investment decision, but also indirectly affects the enterprise's innovation development and enterprise value [2]. According to Lin Zhonggao [3], a good credit record and higher financing ability can not only enhance the credit level of the enterprise, but also increase the confidence of external investors, which in turn pushes up the market valuation and shareholder value of the enterprise. When enterprises have a more robust capital chain and more diversified financing channels, they are more attractive in the capital market. And in an environment with easy access to credit, executives may have overly optimistic expectations about the firm's future performance, which in turn overestimate project returns [4]. In summary, credit availability has an impact on the firm's liability structure, investment efficiency, and management behavior, and all of these factors have the risk of reducing firm value to a certain extent. Based on this, this paper proposes the following research hypotheses:

Hypothesis 1: All else being equal, an increase in the availability of credit to a firm will depress the value of that firm.

(2) The impact of inefficient investment on enterprise value. Inefficient investment not only directly reduces the efficiency of capital utilization, but also indirectly weakens the profitability and market competitiveness of enterprises. When the proportion of bank loans in a firm's financing structure increases, its capital expenditures increase significantly, but the return on assets and the price-to-book ratio decrease significantly during the same period. This suggests that increased credit availability may have an "incentive distortion effect" on firms' investment, pushing them to shift from efficient investment to inefficient expansion, which may have a substantial negative impact on firm value [5]. Rajan and Zingales [6], in their study of multi-country data, pointed out that that in economies with less financial repression and significant bank credit expansion, firms are prone to diminishing returns on investment due to over-reliance on debt financing, even triggering capital allocation imbalances and systemic financial risks at the macro level [7]. This phenomenon is particularly evident in emerging market countries. Based on this, this paper proposes the following research hypotheses:

Hypothesis 2: Credit availability depresses firm value through inefficient investment.

(3) The impact of executive overconfidence on firm value. The higher the availability of credit, the easier it is for firms to obtain external funds, thus weakening the external constraints on investment decisions, making executives more inclined to overinvest or expand aggressively based on subjective judgments, ignoring market signals and financial risks [8]. Overconfidence of executives may not only lead to firms investing beyond their actual capabilities, but also choosing projects with higher risks and greater uncertainty of returns, thus increasing the uncertainty of the firm's operation [9]. This may increase operational uncertainty and ultimately jeopardize the value of the enterprise. Based on this, this paper proposes the following research hypotheses:

Hypothesis 3: Credit availability inhibits enterprise value through executive overconfidence.

3. Data description and research design

3.1. Data description

This paper selects A-share listed companies between 2010 and 2023 as the research sample, and the data comes from CSMAR database, including financial data, innovation investment data and enterprise value of listed companies. The following types of samples are eliminated when data processing is carried out: samples with missing data and data anomalies; samples of ST, *ST and other companies in abnormal trading status; and samples of companies that lack the conditions for control calculation. After screening, 43,471 firm-year sample observations were finally obtained.

3.2. Description of variables

3.2.1. Credit availability

This paper mainly refers to the research method of Liu Haiming and Cao Yanqiu [10], which measures the availability of corporate credit resources by dividing the sum of incremental long-term and short-term borrowing by total assets at the beginning of the year. This indicator not only takes into account the absolute value of corporate borrowing, but also integrates the impact of corporate asset size, thus providing high explanatory power and applicability. In order to further verify the robustness of the findings, this paper also adopts the alternative indicator proposed by Jin Xuejun [11], which is the ratio of the sum of current and long-term liabilities to total assets. The sum of current and long-term liabilities reflects the overall indebtedness of the firm, while total assets represent the resource base of the firm [12]. By dividing these two indicators, it is possible to comprehensively assess the overall debt burden of an enterprise and the availability of its credit resources over time.

3.2.2. Enterprise value

In measuring enterprise value, foreign scholars commonly use Tobin's Q value as a standard. In this paper, Tobin's Q value A is used to measure the enterprise value, which is calculated as follows:

$$\text{Tobin's Q value A} = \frac{\text{market capitalization A}}{\text{total assets}} \quad (1)$$

In order to ensure the accuracy and robustness of the findings, this paper also uses Tobin's Q-value B for robustness testing. The Tobin's Q value B is calculated as:

$$\text{Tobin's Q value B} = \frac{\text{market capitalization A}}{\text{total assets} - \text{net intangible assets} - \text{net goodwill}} \quad (2)$$

3.2.3. Mechanism variables

(1) Inefficient Investment (*Ineffinv*). This paper draws on the Richardson [13] model to estimate investment efficiency. The absolute value of the residuals in the model is an indicator of the

company's investment efficiency, and the larger its value, the higher the degree of inefficient investment and the lower the investment efficiency. Meanwhile, investment cash flow sensitivity is chosen as a proxy variable to ensure the accuracy of the results.

(2) Executive Overconfidence (*Overcon*). This paper draws on the methodology of Chun [14] to study executive overconfidence, and selects the ratio of the sum of the top three executives' compensation to the company's managerial compensation as a proxy variable to measure the latent variable of executive overconfidence, and also selects the proportion of the compensation of the chairman of the board of directors and the general manager of the enterprise in the total compensation of all the management to conduct a robustness test.

3.2.4. Grouping variables

There are two grouping variables in this paper, namely, whether the enterprise is technology-intensive and whether the enterprise is asset-intensive. The two grouping variables are defined as follows: according to the 2012 industry classification standard of the Securities and Exchange Commission [15], all the sample industries are divided into two types of technology-intensive and asset-intensive according to the intensity of production factors. ①When the enterprise belongs to technology-intensive enterprises, *IntsTec* takes the value of 1, otherwise it takes the value of 0. ②When the enterprise belongs to asset-intensive enterprises, *IntsAst* takes the value of 1, otherwise it takes the value of 0.

3.2.5. Grouping variables

The control variables selected in this paper are: firm's asset size (*Size*), return on net assets (*Roa*), risk indicator (*Lev*), growth rate of sales revenue (*Growth*), cash to assets ratio (*Cash*), firm's age (*Age*), and equity structure (*First*).

Table 1: Summary of variables

variable type	variable name	variable symbol	variable metrics approach
explained variables	enterprise value	<i>Value</i>	Tobin's Q value A
explanatory variables	credit availability	<i>Credit</i>	(long-term borrowings + short-term borrowings) / total assets at the beginning of the year
mechanism variables	inefficient investment	<i>Ineffinv</i>	absolute value of Richardson model residuals
	executive overconfidence	<i>Overcon</i>	the sum of the top 3 executives' remuneration as a percentage of the company's managers' remuneration
control variables	size of business assets	<i>Size</i>	natural logarithm of total assets at the end of the year
	return on net assets	<i>Roa</i>	net profit/total assets
	risk indicator	<i>Lev</i>	total liabilities/total assets
	sales revenue growth rate	<i>Growth</i>	(amount of operating income for the current year - amount of operating income for the same period of the previous year) / amount of operating income for the same period of the previous year

Table 1: (continued)

	cash asset ratio	<i>Cash</i>	balance of cash and cash equivalents at the end of the period / total assets
	enterprise age	<i>Age</i>	time elapsed since the birth of the enterprise
	shareholding structure	<i>First</i>	Shareholding ratio of the enterprise's largest shareholder

3.3. Empirical models

In order to test the impact of credit availability (Credit) on enterprise value (Value), this paper constructs the following benchmark regression model based on the research methods of Pan Yue [16]:

$$\text{Value}_{i,t} = \alpha_0 + \beta_1 \text{Credit}_{i,t} + \beta_2 \text{Control}_{i,t} + \mu_i + \lambda_t + \varepsilon_{i,t} \quad (3)$$

Where Credit is the explained variable; Value is the explanatory variable; Control represents other factors that may affect the value of the enterprise; μ_i represents individual fixed effects; λ_t represents time fixed effects and $\varepsilon_{i,t}$ represents the error term in the model.

4. Empirical results and analysis

4.1. Descriptive statistics and correlation tests

Table 2 demonstrates the descriptive statistics of the main variables of this paper. As can be seen from Table 2, the mean value of the explained variable firm value (Value) is 2.710 with a standard deviation of 1.800 during the sample period, indicating that there is a large variation in firm value among different firms. Among the explanatory variables, the mean value of Credit availability (Credit) is 38.5%, which means that enterprises in the sample have 38.5% of their assets financed through liabilities on average, indicating that enterprises prefer sound operation to extreme reliance on liabilities in their operations, but do not completely give up the leverage of external financing.

Table 2: Descriptive statistics

Variable	N	Mean	p50	SD	Min	Max.
Value _a	42603	2.485	1.978	1.622	0.825	11.07
Value _b	42603	2.710	2.149	1.800	0.868	12.42
Credit _a	42603	0.0150	0	0.0860	-0.275	0.557
Credit _b	42603	0.385	0.373	0.197	0.0390	0.881
Ineffinv ₁	34333	0.0380	0.0250	0.0410	0	0.292
Ineffinv ₂	34331	-0.00300	-0.00800	0.0500	-0.177	0.247
Overcon ₁	42892	0.642	0.623	0.181	0.291	1
Overcon ₂	42389	0.878	0.941	0.139	0.523	1.000
Cash	42583	0.172	0.134	0.129	0.0100	0.667
Size	30237	22.27	22.11	1.190	19.90	26.17
Lev	42583	0.408	0.399	0.200	0.0500	0.898
Roa	33061	0.0360	0.0360	0.0560	-0.270	0.198
Growth	42587	0.138	0.0980	0.302	-0.557	2.117
Age	34121	10.16	9	7.222	1	27
First	33062	33.92	31.84	14.05	8.448	73.66

4.2. Main regression results and analysis

In order to test the impact of credit availability on enterprise value, this paper adopts the ratio of the sum of current liabilities and long-term liabilities to total assets as a measure of credit availability and conducts a regression analysis on the full sample based on the model (1), the specific results are shown in Table 3. The regression result (-2.965) is significantly negative at 1% significance level, which indicates that the enhancement of credit availability has a significant inhibitory effect on the value of the enterprise. In summary, hypothesis 1 is proven.

Table 3: Main regression results

Variables	Result Value
Credit	-2.965*** (0.323)
cash	0.458*** (0.0818)
size	-0.456*** (0.00891)
lev	2.450*** (0.325)
roa	5.966*** (0.172)
growth	0.539*** (0.0288)
age	-0.0113*** (0.00134)
first	-0.00102* (0.000610)
Constant	12.66*** (0.222)
Observations	26,542
R-squared	0.401

Standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

4.3. Mechanism testing

Column 1 of Table 4 shows the empirical results of the effect of inefficient investment in the availability of credit on firm value. The data show that the regression result (-0.0545) is significantly negative at the 1% significance level, indicating that inefficient investment depresses firm value to some extent. When firms rely on external debt rather than equity financing, creditors usually lack incentives to monitor investment decisions, leading to increased management moral hazard. When the firm's external financing constraints are low, management tends to utilize redundant funds to make inefficient investments, such as expanding non-core businesses or pursuing personal self-interest, rather than allocating funds to projects with positive net present value. In summary, hypothesis 2 is proven.

Column 2 of Table 4 presents the empirical results of executive overconfidence in the effect of credit availability on firm value. The data shows that the regression result (-0.0547) is significantly negative at the 1% significance level, indicating that executive overconfidence in firms can inhibit

firm value to some extent. Increased credit availability may also be interpreted by executives as market recognition of their strategies, further reinforcing self-attribution bias by selectively focusing on information that supports their decisions and ignoring negative signals. In summary, hypothesis 3 is proven.

Table 4: Mechanism testing results

Variables	1 Ineffinv	2 Overcon
Credit	0.0545*** (0.0101)	0.0547*** (0.0168)
cash	-0.00419 (0.00255)	-0.00768* (0.00427)
size	-0.00394*** (0.000277)	-0.00194*** (0.000463)
lev	0.0609*** (0.0101)	0.0534*** (0.0169)
roa	0.0167*** (0.00536)	0.00764 (0.00897)
growth	0.0175*** (0.000909)	0.00151 (0.00151)
age	-0.000542*** (4.16e-05)	-0.000176** (6.96e-05)
first	-2.23e-05 (1.90e-05)	-0.000186*** (3.18e-05)
Constant	0.123*** (0.00692)	0.444*** (0.0116)
Observations	26,462	26,641
R-squared	0.100	0.050

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

4.4. Heterogeneity analysis

4.4.1. Subgroup test of whether firms are asset-intensive

The regression results in first and second columns of Table 5 demonstrate the difference in the impact of credit availability on the value of asset-intensive and non-asset-intensive firms. It is found that the regression coefficients of credit availability in both types of firms are negative (-2.306 and -3.191) and significant at the 1% level. This result indicates that credit availability has a significant negative impact on firm value regardless of whether the firm is asset intensive or not.

4.4.2. Subgroup test of whether firms are technology-intensive

The regression results in third and fourth columns of Table 5 reports a significant difference in the effect of credit availability on the value of technology-intensive and non-technology-intensive firms. The data shows that the regression coefficients for credit availability are negative for both types of firms (-5.743 and -1.472) and hold at the 1% significance level, suggesting that credit availability constitutes a disincentive to firm value enhancement irrespective of whether the firms are in the technology-intensive sector or not.

Table 5: Subgroup testing results of asset-intensive

Variables	Asset-intensive		Technology-intensive	
	Yes	No	Yes	No
Credit	-2.306*** (0.619)	-3.191*** (0.373)	-5.743*** (0.580)	-1.472*** (0.370)
cash	0.936*** (0.188)	0.369*** (0.0909)	0.538*** (0.127)	0.427*** (0.104)
size	-0.433*** (0.0167)	-0.462*** (0.0103)	-0.466*** (0.0146)	-0.446*** (0.0109)
lev	1.914*** (0.623)	2.629*** (0.374)	5.105*** (0.581)	1.038*** (0.372)
roa	3.986*** (0.360)	6.390*** (0.194)	6.754*** (0.264)	5.123*** (0.221)
growth	0.376*** (0.0578)	0.573*** (0.0329)	0.679*** (0.0456)	0.391*** (0.0361)
age	-0.0144*** (0.00254)	-0.0104*** (0.00154)	-0.0152*** (0.00225)	-0.00739*** (0.00161)
first	-0.00211* (0.00119)	-0.000846 (0.000699)	-3.59e-05 (0.000974)	-0.00199*** (0.000756)
Constant	12.84*** (0.386)	12.79*** (0.249)	12.86*** (0.339)	13.16*** (0.301)
Observations	5,076	21,466	12,368	14,174
R-squared	0.400	0.394	0.384	0.404

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

5. Conclusions and implications of the study

Based on the data of Chinese A-share listed companies, this paper empirically examines the impact of credit availability on enterprise value. It is found that the increase in credit availability significantly suppresses firm value, indicating that "ease of financing" does not necessarily translate into "value enhancement", but may induce blind expansion and inefficient decision-making under certain conditions. Further mechanism tests show that executives are prone to self-confidence bias in the face of an easy credit environment, which promotes irrational investment and ultimately erodes corporate value; and inefficient investment, as a consequential path, reflects the deeper risk of misaligned interactions between easy credit and corporate governance.

This finding not only supplements the single interpretation of the positive effects of credit availability in the existing literature, but also suggests that we should pay more attention to the synergies between internal governance mechanisms and the external institutional environment in understanding the relationship between the allocation of financial resources and corporate behavior. At the policy level, it is necessary to be vigilant against the excessive financing behavior of enterprises that may be triggered by "structural easing". Financial regulation should gradually shift from focusing on "financing volume" to emphasizing "financing efficiency", guiding credit resources to be precisely allocated to enterprises with genuine long-term development potential and sound governance. This will prevent systemic risks such as resource mismatch and value erosion. Meanwhile, enterprises themselves should also attach importance to internal governance construction, strengthen high-level decision-making capabilities and investment restraint mechanisms, and enhance the management level of financing resources to achieve a dynamic

balance between financing availability and value creation. This will promote the real economy to move towards a higher-quality and more efficient development path.

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