

Loan model for military-civilian integration small and medium-sized enterprises

Zhengxuan Zhu, Yongchao Tian*

School of Economics and Management, Nanjing University of Science and Technology, Nanjing, Jiangsu 210018, China

Introduction

The national strategy of military-civilian integration is the CPC 's new exploration of economic and national defense construction.

SMEs' financing has become one of the obstacles to the deep integration of military and civilian.

The current financial system in China is based on banks, How commercial banks can meet the capital needs of military-civilian integration SMEs through loan business is a problem that needs to be explored and solved urgently.

Exploration

• Online supply chain model

It uses the current assets generated by commercial credit among enterprises as the first repayment guarantee

• Intellectual property pledge model

SMEs can use the legally owned patent rights, trademark rights, and copyright rights as the pledge after appraisal and applies to the bank for financing.

• Investment and loan linkage model

Investment and loan linkage is a kind of "equity + debt" financing method.

Analysis

• Mortgage model

		Enterprise			
		Repayment y		Default $1-y$	
bank	loan x	r	$R-r-(mn+a)$	$m-1$	$1+R-m-nm-a$
	nonloan $1-x$	r_f	0	r_f	0

• New loan model

		enterprise			
		repayment y		default $1-y$	
bank	loan x	r	$R-r-a$	$(1-p)(m-1)+pr$	$1+R-m-a-b$
	nonloan $1-x$	r_f	0	r_f	0

According to the Malthusian dynamic equation, the growth rate of a strategy is equal to its relative fitness, as long as the individual income of the strategy is higher than the average income of the group, the strategy will grow.

Theoretical background

• Information asymmetry

Enterprises have general characteristics that make loan activity difficult.

Banks present loan challenges due to their lack of talents and experience in the field of military-civilian integration

Military-civilian integration involves many industries and subjects

• Mismatch between risk and return

China 's banks are low-risk and low-yield investors.

Military-civilian SMEs are high-growth and high-risk,

Under the traditional loan model, the characteristics of commercial banks' loans to SMEs are: 1)high emphasis on collateral;2) strict approval and long cycle;3) high financing costs.

Tools

This section carries out game analysis.

Hypothesis 1: Gamer has two strategies, with probability x and y .

Hypothesis 2: the enterprise' s capital demand is 1, investment return is R , the loan interest is r , the collateral is m , the evaluation fee is nm , and other expenses are a .

Hypothesis 3: the bank can invest the funds in a risk-free investment with a return rate r_f .

Hypothesis 4: the enterprise breaching the contract will be punished by an external breach of contract with the amount of b .

Hypothesis 5: in the event of a corporate default, the third party etc. bears a certain proportion of the insufficient portion of the collateral, the ratio is p , $m < 1+r$.

Results

- The value of the mortgage is an important factor that affects the decision-making of both banks and enterprises.
- Due to high non-performing, the actual benefit r of SMEs' loans may less than r_f . At this time, $y < (1+rf-m)/(1+r-m)$, and the bank' s "non-loan" is a stable strategy for long-term evolution.
- Under the new loan model, enterprises are subject to obvious external constraints. banks can tolerate higher non-performing loan rates, third-party compensation also covers certain risk exposures of the bank and meets the bank' s risk control needs.

Recommendations

- Strengthen the dedicated attitude and professional ability of the bank' s franchised institutions.
- Strengthen the construction of the SME credit system.
- Improve military and civilian technology support services

REFERENCES

- [1]Chen Liping. Building a military-civilian integrated financial service system [J]. China Finance, 2018(19): 95-96.
- [2]Zhan Yong, Zhao Chunkai. Capital market development, military-civilian integration and industrial structure optimization and upgrading [J].Nankai Economic Research, 2016, (5): 36-54.
- [3]Zhao Yiran, Chen Li. Several suggestions for accelerating the construction of a national military-civilian financial support system [J]. National Defense, 2017, (3): 36-39

.....