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Research on the Impact of China's New Asset Management Regulations
on the Development of Private Equity Market System

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**Research on the Impact of China's New
Asset Management Regulations on the
Development of Private Equity Market
System**

Dissertation Submitted to
The University of Geneva
in partial fulfillment of the requirement
for the professional degree of
**Doctorate of Advanced Professional Studies in Applied
Finance, with Specialization in Wealth Management**

by

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March 2022

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Abstract

Over the past 30 years, since it introduced the concept of venture capital in 1984, China has developed into the second-largest equity investment market in the world. However, the *Guiding Opinions* promulgated in 2018, has brought about new challenges to the private equity market. This paper will first analyze the shadow banking system which had multiple channels built upon one other in the design of asset management products so as to avoid regulation before the *Guiding Opinions*. Then it studies the arbitrage modes and behaviors of the private equity fund market through concrete cases. In order to observe the impact of new policy on private equity market, this paper adopts Principal Component Analysis (PCA), regression model and regression discontinuity design (RDD) to conduct empirical research. Firstly, the PCA method is used to integrate all indicators related to private equity funds, and form five important factors (market size of private equity funds, financing activities, exit activities, fund-raising activities, and investment activities) to represent the development of private equity market. Secondly, we analyze the regression coefficients and significance of five factors through using robust regression model. Finally, the RDD method is used to study the different trends before and after publishing the *Guiding Opinions*, thus to evaluate the impact of new regulation on the development of private equity funds. The research results show that the *Guiding Opinions* has a positive effect on the private equity funds. Along with the release of policy, the government has adopted many ways, such as managing the fund pool, controlling the channels, and canceling the multi-layer nesting, to gradually clean up the market of private equity funds, so the market size, exits and financing activities are reduced significantly, both fund-raising activities and investment activities present an upward trend. We believe that the private equity funds will turn from the "arbitrage mode" to the "value investment mode", and the private equity fund market will surely be a research-driven investment and empower the development of the real economy in the future.

Key words: guiding opinions; private equity fund; case study; regression discontinuity design

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Research on the Impact of China's New Asset Management Regulations on the Development of Private Equity Fund Market System

1. Introduction

1.1. Research Background

On April 27, 2018, an important policy document is promulgated jointly by the **People's Bank of China, the China Banking and Insurance Regulatory Commission, the China Securities Regulatory Commission and the State Administration of Foreign Exchange**, that is the *Guiding Opinions on Regulating the Asset Management Business of Financial Institutions* (Yinfa [2018] No. 106 document, hereafter referred as the “*Guiding Opinions*”). The core purpose of *Guiding Opinions* is to regulate the asset management business of financial institutions, unify the regulatory standards of similar asset management products, effectively prevent and control financial risks, and better serve the real economy.

It has a profound background in the times for the promulgation of *Guiding Opinions*. In recent years, the asset management business has been developing fast, which plays a positive role in meeting the investment and financing needs of residents and enterprises and improving the social financing structure. At the end of 2018, the asset management business totaled 50.5 trillion yuan in China.

However, there have also emerged some problems. On the one hand, the asset management industry has an important role in supporting and supplementing the needs of social financing, which is a category of financial services which aims to leverage private capital to address challenges in areas of social and environmental need; on the other hand, a large number of on-balance sheet assets are issued through the asset management business, asset management business lacks a unified guiding system because of different types of asset management have different regulatory standards, which is prone to regulatory arbitrage and affects the effectiveness of policies, thereby accumulating the hidden risks. Many papers study the irregular business development, multi-layer nesting, rigid payment, circumvention of financial supervision and macro-control, etc. Among them, the problems with multi-layer nesting are particularly serious: Concerning supervision, when bank financial products are nesting layer by layer through outsourcing investment among multiple asset management schemes, such as securities firm asset management scheme, insurance asset management scheme, and fund asset management

scheme, they will break through the regulatory barriers between regulatory departments and form a regulatory blind area. For investors, they are unable to see the underlying assets clearly, which leads to asset allocation failure and increased investment risks. For enterprises, nesting layer by layer means multi-layer channel costs, which increases the financing cost of physical enterprises. The multi-layer nesting is shown in Figure 1.

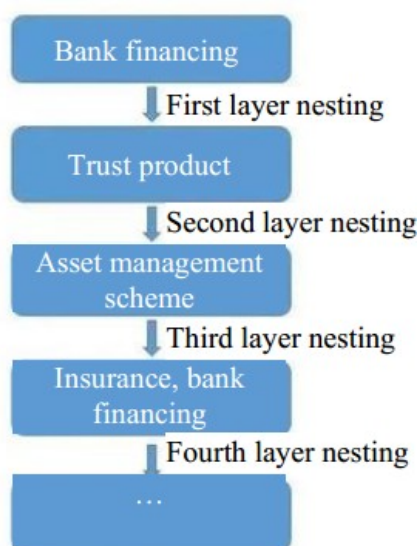


Figure 1: Multi-layer nesting diagram of asset products

Additionally, according to the data of Asset Management Association of China, the private equity and venture capital fund management scale had reached 8.6 trillion yuan, accounting for 17% of the total asset management in China by the end of 2018, It is believed that private equity funds support the development of the real economy directly. They play a great role in diversifying investment risks, supporting enterprise innovation, improving financial quality, and stimulating economic vitality. However, there are many problems in the Chinese private equity fund market. In terms of fund-raising level, private equity funds derive from a nested asset management scheme partly. For a long time, bank funds have been realized employing asset management nesting, and the resulting shadow banking system is highly correlated with the fund-raising level. In terms of investment level, there are some problems with the private equity investment institutions in China, such as institutional arbitrage and market arbitrage. Despite the fact that it is relatively weak for the ability of many investment institutions, they can make a considerable income mainly rely on the scale of management. A large number of private equity funds can profit through arbitrage price differences instead of value investment.

The release of *Guiding Opinions* marks the formal formation of a new regulatory

framework, which is of great significance for unifying the regulatory standards, regulating the asset management business of financial institutions, and effectively preventing and controlling financial risks. And it will guide the financial industry to establish a long-term mechanism to avoid short-term profit-seeking, return to the financial origin, and serve the real economy. At the same time, it also has an important impact on the development of the private equity Fund market system. However, few studies explore the changes in the private equity Fund market system under the action or influence of the *Guiding Opinions*. It is of significance to study the correlation between private equity Fund and *Guiding Opinions*.

1.2. Research Objective

To summarize, this paper focuses on the theme of "Research on the Influence of the *Guiding Opinions* on the development of the private equity Fund market system". We intend to make quantitative and qualitative analyses for the changes in raising, investment, management, and withdrawal levels in the private equity market around the promulgation of the *Guiding Opinions*.

The *Guiding Opinions* strictly stipulates the nesting issue, "Classifying unified liabilities, eliminating multi-layer nesting, and suppressing channel services", as well as "For multi-layer nesting asset management products, carrying out penetrating supervision, and identifying upward the final investors of the products, and downward the underlying assets of the products". On the one hand, the use of bank funds is becoming more and more standardized, then it reduces the circulation and nesting of funds within institutions and the derivation of the total amount of broad money. On the other hand, the *Guiding Opinions* restricts bank funds to enter the non-standard equity investment field, which means that it may collapse for the capital channel of the shadow banking system dominated by banking off-balance-sheet business, and the fund-raising pattern of private equity funds may also be reshuffled.

Due to the different forms and mechanisms of cross market trading, there will be a price difference between the net value of the fund's primary market share and the trading price of the secondary market, so arbitrage space arises at the historic moment. It is believed that private equity will shift from the "multi-layer nesting shadow banking model, and the investment model based on earning arbitrage price differentials in the primary and secondary markets" to the "investment and financing model of cutting off the channel, value investment, and industry-financed integration". The value investment will be the

development direction of the private equity fund market. Professional investors can obtain excess returns from the private equity market by studying the value of enterprises. Under the perspective of value investment, the private equity market can contribute to the integration of the real economy and the financial market, thus bringing positive effects to the overall economic development of our country.

1.3. Literature Review

We summarize the relevant research about the *Guiding Opinions*, private equity funds, shadow banking, and value investment.

1. the *Guiding Opinions*

Many studies discuss the reasons for issuing *Guiding Opinions*. The mainstream view believes that it involves the out-sync of the domestic financial cycle and the economic cycle.

Table 1: The research on Guiding Opinions

Reference	Research Content	Findings
Bu Zhenxing (2018)	Summarize the core points as: unified supervision, breaking rigid payment, lowering leverage, and preventing risks.	The regulatory highlights of the <i>Guiding Opinions</i> lie in the systematisms, directivity, and seriousness.
Li Chen (2018)	Believe the identification of rigid payment depends on whether the risk returns of the assets are reasonably allocated by the independent contributors.	Based on improving the fair valuation and reasonably allocating product duration, the country can consider setting out with the improvement of the civil and commercial laws and the institutional supply of the supervision law in the future.
Wan Ziqian (2018)	Study the impact of <i>Guiding Opinions</i>	The asset management business will return to the essence of "financial management on behalf of customers".

An Suiyi and Li Jianwei (2018)	Discuss the applicability of private equity funds within the framework of the <i>Guiding Opinions</i>	The China Securities Regulatory Commission (CSRC) will formulate and issue-specific implementation rules to achieve regulatory specifications,
Chen Biaocong and Zhai Lin (2018)	Focus on the correlation between the implementation of the <i>Guiding Opinions</i> and private equity funds	It has strengthened the supervision of private equity funds, raised the threshold for qualified investors, and thus indirectly affected the scale of fundraising. And it has strengthened the protection mechanism for investors with the method of classification.
Wang Zhen (2019)	Study the impact of <i>Guiding Opinions</i>	It has unified the reporting system of asset management products and affected the exit channel of mergers and acquisitions of unlisted projects, and the allocation factors may expand the term mismatch.
Zhu Yijun (2019)	Focus on the essence of asset management business	The competition of asset management business should focus on risk control, income generation, and R&D abilities.
Wang Lin (2019)	The institutional types of asset management institutions will continue to weaken	The key growth factors will be transformed into asset management, product design, risk control, financial science, and technology abilities.

Zhang Zhonggang (2019)	The implementation of the Guiding Opinions has affected many aspects of the product architecture design of private equity funds.	Firstly, a multi-layer nesting ban. Secondly, the grading ratio limit. Thirdly, the penetration principle. Fourthly, the entrustment transfer ban.
Zhang Fangbo (2019)	The Guiding Opinions has brought more opportunities for insurance asset management,	concentration and hierarchical leverage ratio can help insurance assets to effectively manage investment risks.

Specifically, the entries of the **Guiding Opinions** involve private equity funds, which mainly include applicability, fundraising, qualified investor standard, fund pool, investment scope, transaction structure, and trusteeship, which affect all aspects of the whole process of private equity fundraising, investment, management, and withdrawal. According to the data of the Asset Management Association of China, the size of private equity fund management shrunk for 4 consecutive months since February 2018, with a total decrease of 61.5 billion yuan. It is mainly due to the specifications of the **Guiding Opinions** on the 3 previous paths of raising funds (rigid payment, capital pool, and mismatches). According to the literature, the impacts on the investment paths of private equity funds mainly include product essence return, investment mode change, and product structure design under the implementation of the **Guiding Opinions**.

2. Private equity fund

In recent years, the research on private equity funds has grown fast, attract the attention of many scholars.

Table 2: The research on private equity funds

Reference	Research Content	Findings
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Wu Xiaoling (2007)	The promotion of enterprise values cannot be separated from private equity funds.	The country should speed up developing the RMB investment fund, and the government should play a role of support and supervision.
Zhang Ming (2008)	What it is to make an equity investment in unlisted enterprises.	The enterprises can develop new products, obtain innovative technologies, increase operating capital, make mergers and acquisitions, or strengthen the capital balance sheet.
Liu Jiping (2012)	The problem in the development of Chinese private equity funds	They include unclear main bodies of market supervision, a single-channel of the market exit, immature secondary market development, and poor capital liquidity. China should improve and speed up the development of a multi-tier capital market and standardize the management of the private equity fund
Li Guichu (2019)	The problem in the development of Chinese private equity funds	There is an urgent need to improve the legal system, strengthen support for innovative industries, and improve the quality of managerial staff to promote the healthy development of the industry.

Liu Yaxiong (2018)	The legal and policy risks in the development of Chinese private equity funds	They lead to the short-term incentive mechanism of fund companies, resulting in more space for illegal operations, such as guaranteed return commitments, and manipulation of stock prices when quitting.
Yi Yuxin (2019)	The information transparency in the Chinese private equity funds	The lack of information transparency restricts the protection of investors, and herd behavior of investment and homogenized model increase investment risks, while government investment funds face the challenge of policy problems to the interest exchange mechanism.
Tu Minghui (2019)	Review the results of previous special inspections of private equity fund managers	The main problems in the fund operation process mainly include the structured product leverage ratio exceeding the standard, failed trusteeship as required, and fund pool business.
Jiang Lianmei (2019)	The risks in the level of private equity fund operation	The main risks arise from non-standard contracts, information asymmetry and multi-level agency. So it is necessary to choose fund managers carefully and it is better to adopt a limited partnership system.
Chen Hai (2018)	The investment risks	The management team risk, market risk and R&D risk are the most dangerous risks in investment activities.

As a specialized financial intermediary platform, a private equity investment fund is mainly characterized by service, which plays a positive role in reducing the transaction costs of investors, boosting information symmetry, and dispersing investment risks. However, the managers have met new problems in solving information symmetry (Zhou Dan & Wang Enyu, 2007). Some studies discuss that it can control risks and conflicts for private equity funds to sign contracts with the selected high-quality investable enterprises (Zhang Xueyong & Liao Li, 2011). Private equity funds pay great attention to the ability of fund management companies, the directions and fields of fund investment, potential risks. It is crucial for professionals to actively participate in the management of the invested enterprises, returns and liquidity, then get high returns while controlling risks.

Additionally, as a financing channel other than banks, private equity funds have greatly promoted the development of small and medium-sized enterprises (Liu Wenli, 2006). But there are also many development problems and risks, such as unclear main bodies of market supervision, the legal system, non-standard contracts, a single channel of the market exit, immature secondary market development, and poor capital liquidity. China should improve and speed up the development of a multi-tier capital market and standardize the management of the private equity fund industry. Besides, some scholars also point out the problems of low private equity manager threshold, low law violation costs (Qiu Peng, 2019), long-term insufficient sources of funding (Liu Fang, 2019). While the country constantly improves the construction of the private equity investment market system, investors, as the main market participants, should also enhance their professionalism and strengthen the cultivation of mature investment teams. The construction of the valuation system of private equity projects is the basis to enhance the professionalism and mature investment concept of market participants.

3. Shadow banking

At present, few studies focus on the study of shadow banking through a systematic theoretical system. Most of them focus their studies on the following two aspects: the definition of shadow banking, and the risks and supervision of shadow banking.

(1) The Definition of shadow banking

There may be differences in the understanding of shadow banking in the environments of different national policies and financial markets. The research has defined shadow banking from many angles. However, we do not find a unified and systematic

definition, prior studies define shadow banking from the following three standards:

Table 3: The research on shadow banking

Definition	Reference	Research Content	Findings
Regulatory standard	The International Monetary Fund (2008)	They defined shadow banking as a "quasi-bank"	It has similar functions to commercial banks, but it is not controlled by the central bank and does not have a deposit reserve system.
	Du Chaoyun (2010)	The shadow banking is considerably elusive	It is a form active outside financial supervision and national macroeconomic regulation and control, and outside the official financing statement.
	Lu Xin et al. (2015)	The definition	The shadow banking is a medium form of financing outside the scope of regulation and all non-traditional banking system.
	the China Financial Stability Report (2013)	The definition of the People's Bank of China	The shadow banking is a credit intermediary system that has the functions of liquidity and credit conversion outside the traditional bank credit system, as well as an institution and business likely to trigger systemic risks or regulatory arbitrage. In the same size, due to the strict supervision and perfect risk control of traditional banks, the risk exposure and credit exposure in the process of

			liquidity conversion will have corresponding coverage, and the risk is relatively small. The shadow banking is not subject to the strict supervision of similar commercial banks, and there is not so perfect risk control mechanism, or even higher leverage to pursue higher profits, which will bring greater risk.
Institutional standards	Gross Bill (2007)	The definition	The shadow banking is an intermediate form of financial institutions, which operates on a variety of financial instruments and securities by leverage.
	The Financial Stability Board (FSB)	The definition	It belongs to the credit intermediary system which is separated from the traditional banks in a broad sense. In a narrow sense, shadow banking is an intermediary and business that can trigger regulatory profits and systemic risks, and it is a financial system outside the formal banking system.
	Liu Lansui and Gong Yuexin (2012)	No shadow in China	There is no shadow banking in China, but there is a shadow banking business similar to that in foreign countries, and terming it as "quasi-shadow banking".

Functional standard	Paul-Meculley (2007)	The shadow banking is a financial institution with banking functions, but it is not regulated and does not take the form of a bank.	It is summarized as "financial institutions other than all kinds of banks that are virtual banks without the characters of a bank". And it is a non-bank investment intermediary, instrument, and institution outside of regulation that absorbs uninsured short-term funds.
	Yi Xianrong (2009)	The shadow banking is a capital fusion system	It is a credit relationship in securitization, securitization of loans, and a financing mode to obtain credit funds through the securities market and realize credit expansion.
	Hui Wangjianli and Li Jianjun (2013)	Define shadow banking from a functional perspective.	They believe that shadow banking is a credit intermediary with credit conversion, term transformation, and liquidity transformation.

(2) Risks and supervision of shadow banking

Concerning the risks of shadow banking, some papers generally believe that shadow banking can amplify financial risks. BIS (2008) points out that the leverage business, excessive trading, and the characteristics of being able to circumvent regulations of shadow banking can create risks. These risks will be transferred to the entire financial market to trigger financial risks.

Table 4: The research on risks and supervision of shadow banking

Reference	Research Content	Findings
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Tobias and Adria (2010)	Study the characteristics of shadow banking	It leads to high leverage and term mismatch, magnifies the liquidity risk of the market, and brings great risks to the financial system.
Du Yabin and Gu Haining (2010)	Study the 2008 financial crisis	For the United States, the leveraged loans from shadow banks and the vulnerability of shadow banks are important factors leading to the 2008 financial crisis.
Lin Lin et al. (2016)	Study the correlation between shadow banking and financial system	They believe that it will be more closely related to commercial banks with the rapid expansion of shadow banking, which will form a financial system with high leverage, high maturity mismatch, and complex relationship, speeding up financial risk diffusion.
Wang Qing'an and Li Ya (2014)	Study the supervision system	China should set up a special shadow banking supervision system and carry out classified supervision of all kinds of shadow banking organizations.
Zheng Jianming et al. (2017)	Study the development of shadow banking	It will aggravate the adverse risks of financing constraints on corporate R&D investment.

As for the supervision of shadow banking, some studies believe that it is necessary to relax the supervision of shadow banking, while most scholars advocate that the supervision should be strengthened. Wallison (2009) stresses that shadow banking will exist in different forms in different countries and at different stages of financial development. If we blindly strengthen the supervision of shadow banking, it will only take the form of shadow banking more hidden and complex. Prior studies argue that operating performances of the institutions have gradually improved with the reform of financial institutions, and the regulatory policy of the government has gradually deviated from institutional prudential supervision to stress on the development of the industry (Xu Zhong, 2018).

4. Value investment

Many studies pay more attention to the value investment. Merton Miller and Franco Modigliani (1961) establish a specific value evaluation method. Malkiel (1978) compares two investment theories, the “Firm-foundation Theory” and the “Castle-in-the-air Theory”, the former is the prototype of value investment. The firm-foundation theory holds that every investment instrument, whether it is a common stock or real estate, has a solid foundation of intrinsic value. This intrinsic value can be determined by careful analysis of the current situation and prospects. When the market price falls below the intrinsic value or rises higher than the intrinsic value, there is an opportunity to buy or sell. On the basis of this theory, the deviation between price and intrinsic value in the market will eventually be corrected by the market. While the Castle-in-the-air theory focuses on psychological value. Professional investors are not willing to use their energy to estimate their intrinsic value, but rather to analyze how the investing public will act in the future and how they will build their hopes into castles in the air in an optimistic period.

Table 5: The research on value investment

Reference	Research Content	Findings
Martin J. Whitman (2001)	The importance of value investment	The goal of value investing is the factor determining the value and potential change of a company.
Tim Koller et al. (1990)	The importance of value investment	The companies will flourish as long as they can create real economic values for shareholders. Companies create values by investing in capital and achieving returns that exceed the costs of capital."
Chen Junhua and Tao Yamin (2005)	The future income level of an enterprise determines the value of the enterprise	The complete market environment and mature market composition are the basis for ensuring that prices can return to value effectively after deviating from value.

Bian Liang (2014)	The empirical analysis of value investing	Although many institutional factors are restricting the use of value investment in China's securities market, value investing has certain applicability in the securities market to a certain extent.
Liu Yuehong (2010)	The correlation between stock prices and the net price ratios	The stock price is contrary to the traditional value investment concept.
He Yan (2010)	Sorting out the theoretical development of the value investment strategy, and exploring the applicability of value investment strategy in China's securities market	The applicability of the value investment theory is low in the Chinese stock market.
Wang Lei and Mao Xia (2017)	Study the medium value investment	It emphasizes the intrinsic value and safety margin of listed enterprise or the target companies based on the basic analysis of enterprises from the perspective of the owners of the enterprise assets. It realizes the unity of qualitative and quantitative analysis, the unity of investment returns and risk control, and the unity of the relationship between value and price.
Liu Yun (2018)	It is necessary to set up a correct concept of the value idle funds.	The judgment of the success or failure of an investment should be based on the principle of the operation results of the subjects of the investment, not the changes in stock prices in the short term. So long as the

		enterprise runs well and the intrinsic value grows steadily, the market will return it a stock price that can truly reflect its value.
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Domestically, because it is only 30 years since China's stock market started in 1990 (the landmark event is the establishment of Shanghai Stock Exchange), the system construction, supervision and investment strategy of the stock market are not mature enough to achieve value investment. Additionally, the domestic speculative atmosphere and volatility are both strong, hence there are a lot of debates about the application of value investing in the domestic market. Prior studies argue that the concept of value investing has encountered a list of difficulties in China presently, such as weak foundation, difficult realization, and alienated speculation (He Xiannan, 2004). It is necessary to strengthen institutional construction, solve the split share structure, speed up the listing of blue-chip stocks, promote financial innovation, steadily develop the QFTI system, then attract more investment funds, and improve supervision to deepen the concept of value investing.

5. Integration of industry and finance

Compared with domestic scholars, some foreign studies are very concerned about the research of Integration of industry and finance. Kummer and Arshadi (1989) compare the popular integration mechanism of banking and enterprises in their country with Germany and France, and conclude that mutual shareholding between banks and companies can significantly reduce the costs of trade and risks, and make operations more efficient. Parker and others (2008) regard the relationship between enterprises and finance as one of the capital loans related to the contracts of creditor's rights and liabilities. When the cost of such a loan transaction is higher than the internal management cost, the two parts would change from external credit relationship to internal capital combination, which not only reduces the transaction cost but also internalizes the financial market for more convenience. Khanna and Arora (2009) confirm that firms can reduce transaction costs in capital operations through research into conglomerates in several emerging market countries, such as acquisitions, mergers, and reorganizations. Rioja and Valev (2004) believe that the integration of industry and finance has a significant positive effect on the productivity growth of developed countries, while developing countries mainly rely on the integration of industry and finance to accumulate capital, which affects the output growth.

1.4. Framework

Chapter One, Introduction and Literature. It will brief the background and significance of the topic. And it will comprehensively expound domestic and foreign literature, which based on the theme of the *Guiding Opinions*, private equity fund market, shadow banking, and value investment.

Chapter Two, Methodology. It will brief the findings, data sources and research method. It will construct a systematic research framework.

Chapter Three, Case Study. It sets forth the arbitrage behavior of the private equity fund market through the actual investment cases of 1-2 private equity funds, thus further to understand the "Regulatory Arbitrage, Institutional Arbitrage".

Chapter Four, Empirical Research. It will apply the Principal Component Analysis (PCA), Regression Discontinuity Design (RDD) to verify that the private equity fund is influenced by the *Guiding Opinions*, and this market is moving towards value investing.

Chapter Five, Conclusion. Through the analysis of the above, it summarizes the impacts of the *Guiding Opinions* on private equity and puts forward opinions and suggestions on the development directions of the value investment and the integration of industry and finance of private equity funds.

2. Methodology

2.1. Our Findings

In our study, we used an empirical method to analyze the impact of China's New Asset Management Regulations on the development of the private equity fund market system. In the short term, since the release of *Guiding Opinions*, the high-growth momentum of private equity investment funds has begun to converge, and the growth rate of raised funds has dropped significantly. The *Guiding Opinions* focuses on some issues, such as multiple levels of nesting, unclear leverage, severe arbitrage, and frequent speculation in asset management business. Financial institutions shall not set up unified standard regulations. Financial institutions shall not provide circumvention investments for asset management products of other financial institutions Channel services such as scope, leverage constraints, and other regulatory requirements. The New Asset Management Regulations emphasize that investors are not allowed to use non-own funds, raised by

loans or bond issuance, to invest in asset management products.

According to the *Guiding Opinions*, private fund managers need to pay attention to the confirmation of the source of investors' funds. Especially for newly established entities with low paid-in capital, the managers need to ensure that they are not the main body of investment and establishment with loan funds. The main purpose of the *Guiding Opinions* is to guide the non-standard asset management products to the direction of standardization. The logic of its impact on the asset management industry is to restrict the non-standard business in the short term, then control the incremental scale; regulate the development of the industry in the long term and clarify the financial system structure. The new regulations have a greater impact on the fund side. First of all, it will have an impact on the source of funds, such as managing the capital pool, controlling the channel, eliminating multiple layers of nesting, etc. Before the introduction of *Guiding Opinions*, it was huge for the scale of asset management products with capital pool business attributes, which are investment in non-public market, and have the characteristics of rolling raising, mixed operation, maturity mismatch, separate pricing, no separate account or independent accounting. After issuing the new regulations, these asset management products will face a situation of being gradually cleared. For those asset management products that have committed to invest in equity investment funds, their subsequent capital contribution may not be completed, and the fund's investment operation is greatly affected, which further exacerbates the difficulty of private equity fundraising.

Additionally, the new rules on asset management will have some impact on the overall size of private equity funds, because many private equity funds come from banks. In the short term, it will affect fundraising and increase the cost of management. From a long-term point of view, it will be conducive to the development of the entire private equity industry, because the main point of the entire new asset management regulations is to break the rigid payment and break the capital pool. The increase in the threshold of private equity investment caused by the new rules of asset management has stricter requirements for the standardized operation of private equity. This will promote the sustainable and healthy orderly operation of the industry and break the rigid situation. And it will achieve a reasonable match between investment risks and returns.

We construct a regression discontinuity model to illustrate the practical relevance of our findings. The release of *Guiding Opinions* can regulate the market order of private equity funds, improve regulatory transparency.

2.2. Data Sources

This paper will collect and select a list of quarterly data from 2008 to 2020, including China's private equity market investment returns amount, internal rate of returns, investment amount, fundraising amount, investment times, fund-raising times, and commercial bank non-capital preservation financial scale. The main data sources are: <https://www.pedata.cn>, and Wind database.

2.3. Research Method

The *Guiding Opinions* has strictly stipulated the nesting of asset management products layer by layer. *Guiding Opinions* has affected fund-raising in the private equity market through the shadow banking system. As shown in the figure 2, the funding amount are close to the investment amount before 2014. This illustrates that the private equity market as a whole is relatively stable. However, the growth of funding amount far exceeds the growth of investment amount from 2014 to 2018. This unstable change shows the savage growth of private equity funds, and the reason for the significant increase in the funding amount is likely to be due to the irregular business development, multi-layer nesting, rigid payment, circumvention of financial supervision and macro-control, etc. Then after the release of the *Guiding Opinions* in 2018, the amount of funding and investment in the private equity market has dropped significantly, and are close to each other.

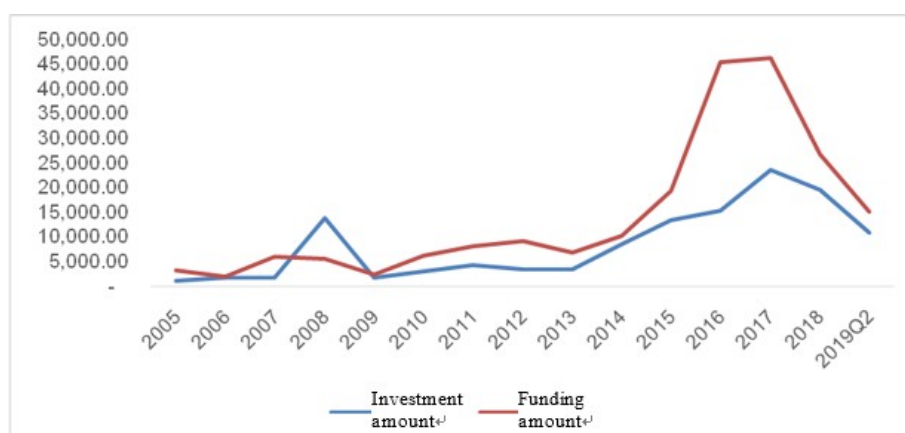


Figure 2: Changes in investment amount and funding amount between 2005 and 2019

Therefore, in the aspect of empirical research, we have chosen the Internal rate of return of private equity funds as the explained variable and taken the number of funds, total amount of funds raised, number of financing activities, number of companies financing as the explanatory variable. The *Guiding Opinions* breaks the rigid payment, and

Commercial Banks no longer take risks of payment. As a result, the scale of capital preservation financial products gradually shrinks, while the scale of non-capital preservation financial products gradually increases, which increases the difficulty of raising funds in the primary market.

This paper firstly adopts the Principal Component Analysis (PCA) to identify some key factors in many indicators of private equity market, thus to construct a reasonable model to describe the development of private equity market.

Secondly, we use a model to understand the relations between different factors, then analyze the changes of regression coefficient and significance for each factor.

This paper thirdly adopts the Regression Discontinuity Design (RDD) to conduct empirical analysis. Regression discontinuity analysis is a key method in the toolkit of any applied researcher interested in unveiling the causal effects of policies. The method was first used in 1960 by Thistlethwaite and Campbell, who were interested in identifying the causal impacts of merit awards, assigned based on observed test scores, on future academic outcomes. Over the last two decades, the RD approach has been used to evaluate, among other things, the impact of unionization, anti-discrimination laws, social assistance programs, limits on unemployment insurance, and the effect of financial aid offers on college enrollment. In RD, the assignment of treatment and control is not random but rather based on some clear-cut threshold (or cutoff point) of an observed variable such as age, income, and score. Causal inference is then made comparing individuals on both sides of the cutoff point.

3. Case Study

In this section, we use two examples to understand the characteristics and changes in China's private equity fund market.

3.1 The road of value investing in Hillhouse Capital

3.1.1 About Hillhouse Capital

Founded in 2005 by Zhang Lei, Hillhouse Capital has grown into one of the largest investment funds in Asia by asset management, investing in both primary and secondary markets. Hillhouse Capital mainly invests in Chinese domestic enterprises, and its well-known cases include Tencent, JD, Ctrip, Mobike, Nextev, Didi, Qunar, and dozens of other

enterprises. Its famous overseas cases include Airbnb in the United States, Grab Taxi in Southeast Asia, and Ginnar Software in India. Hillhouse's investment strategy is to integrate the industrial chain and match the companies it has invested in. For example, Bluemoon and JD, JD and Tencent. Offline sales are Bluemoon's advantage, while JD focuses on e-commerce, matching and learning from each other, which makes Bluemoon change its e-commerce and social media strategy and become the largest brand of liquid laundry detergent. Matchmaking between JD and Tencent is to transform competition into cooperation. Although Hillhouse Capital's shares are diluted, the two companies are strengthened and the corporate value is improved.

3.1.2 The strategy of value investing

Hillhouse Capital has been positioned from its inception as a long-term investor with an independent investment perspective. It adheres to the concept of long-term structural value investment, independent thinking and steady operation. Rather than following market hot spots blindly, it is committed to investing in good companies at critical moments in industries that are or will produce profound structural changes. Low-key but pragmatic, reward-seeking but not in a hurry for short-term gains, and sticking to their own pace without being distracted by the external disturbance, Hillhouse capital is among the few companies in the Chinese investment community that can truly pursue value investing.

In 2014, Belle International, a Hong Kong-listed company that reached its peak, began to decline, with negative revenue growth for the first time and overall signs of sluggish growth. The reasons are as follows: First, e-commerce has caused a huge impact on the traditional retail industry; Second, the management is so old and conservative that is slow for them to accept new things such as e-commerce and fashion design, and the transformation is difficult.

After three years of unsuccessful attempts at transformation, Deng decided to privatize Belle in 2017 in an attempt to minimize the losses. However, the process of taking Belle private has not been smooth, and many investment institutions regard Belle as a hot hand. After all, the weak revenue and profit show that Belle may not recover. Hillhouse Capital partners with Belle in this crisis.

For Belle, Hillhouse Capital is not only involved in Tencent and JD, but also has a physical case to help Bluemoon transform. Its comprehensive strength both online and offline is obvious to all. Meanwhile, Hillhouse Capital found after repeated research that while Belle's footwear business declined, its sportswear business maintained steady growth

-- in the 2017 fiscal year, Belle's revenue grew 2.2% to 41.7 billion yuan, its traditional footwear revenue declined 10.0% to 18.96 billion yuan, and its sports and apparel revenue increased 15.4% to 22.746.5 billion yuan. In fact, the rapid growth in sports and apparel revenues is largely due to The bailiwick unit. Togo has been in the sportswear business since 1990 and was already the country's leading sneaker retailer before it was privatized. But its valuation potential has been masked by the drag of the women's shoe business, and its power could be unleashed by a break-up. At that time, Belle had good cash flow performance, no interest-bearing debt, and an annual net profit of more than 2.4 billion yuan, making it a potential investment target. Hillhouse Capital had started a premeditated and prepared battle before the acquisition of Belle.

In April 2017, a Hillhouse Capital led consortium completed its private purchase of Belle for HK \$53.1 billion. After the privatization, Hillhouse Capital became the controlling shareholder with a 56.81% stake. Subsequently, Hillhouse Capital, based on the high-quality asset value of TopSports, carried out radical technology enabling, with its goal to introduce TopSports to the capital market.

First of all, Hillhouse Capital carried out the business re-integration of TopSports, thus to pave the way for the business innovation and listing of TopSports. In September 2018, under the guidance of Hillhouse Capital, Belle Sports was established in BVI as Belle Sports, and subsequently concentrated its sportswear business into the company. At this point, TopSports from Belle separation formally completed, list structure was born.

Second, Hillhouse has used digital technology to revolutionize its business. In a typical example, in 2018, TopSports installed a smart storage system in one of its stores, and during the observation period, the manager found that women made up 50 percent of the customers but only contributed 33 percent of the store's revenue. Comparing the data, the store manager found that 70% of consumers never visited the shopping area at the back of the store. The store manager quickly rearranged the layout to increase visibility in the back of the shopping area and change the flow of customers. As a result, a month later, monthly sales in the back-shopping area of the store were up 80 percent, and overall sales were up 17 percent over the same period, giving Togo's asset-heavy operation wings.

In addition to the business refinements, Hillhouse is also trying to make TopSports "lighter". In the blueprint of TopSports, it sets itself as three roles: sports service provider, sports event organizer and sports social sharing platform. Whether it's a service provider, an event organizer, or a sports social network, or whether overboard sports are trying to move toward the "lighter" direction, Hillhouse Capital excels at it. For example, TopFans

membership plan was launched as early as 2016. In May 2018, TopFans re-launched after adjustment, adding additional services such as cross-city express and training courses, and strengthening cooperation with other platforms. Since then, members have played an increasingly important role in TopSports's sales. At present, TopSports has about 20 million registered members. In the four quarters from June 2018 to May 2019, its members contributed 36.6%, 41.5%, 52.3% and 70.8% respectively of total retail sales in the store, which shows that the role of members in sales is gradually becoming effective.

Besides, for attracting potential sports consumers, TopSports is trying to interact with them through e-sports. In 2017, TopSports esports club was founded and has been awarded a permanent seat in LoL and GoK Professional League. Esports and sports apparel users have a high degree of integration. TopSports, with the help of the influential online esports in young people to support the offline sports apparel business, can be regarded as an excellent tactical method of "light helps heavy".

It can be found that after Hillhouse Capital took over, TopSports tried to use digital technology to tease out potential pitfalls in its business, while also using digital community operations to build a direct interaction with consumers. With the enabling effect of Hillhouse Capital, the growth of TopSports began to accelerate. According to the prospectus data, the revenue of TopSports increased from 21.69 billion yuan at the end of February 28, 2017, to 32.56 billion yuan at the end of February 28, 2019. The net profit increased from 1.32 billion yuan to 2.2 billion yuan, and the gross margin and net interest rate also improved significantly.

As a result, the commercial potential of TopSports began to be unleashed, and exert the powerful strength covered. On October 10, 2019, TopSports officially listed on the Hong Kong Stock Exchange, with a market value of HK \$58.2 billion, higher than Belle's privatization price of HK \$53.1 billion. From TopSport's spin-off, to the process of technology empowerment and listing, it carries Belle's desire to return to the capital market in a sense, and Hillhouse Capital is the powerful driving force behind it.

3.1.3 Inspiration

Private equity funds to truly serve the real economy, we must adhere to the concept of value investing, instead of the "quick money" speculative psychology. Through deep research, insight into the actual demand for different industry-specific enterprise, and on this basis, a targeted to support its most valuable innovation practice, the most urgent, help the enterprise to increase efficiency and create long-term value for our enterprise. Stick to "long-

term structured value investing". This is relative to cyclical thinking and opportunism, the core is anti-arbitrage, anti-speculation, anti-zero-sum game, anti-game thinking. To serve the real economy, the key for value investment to play its role is to find a feasible path for enterprise transformation and upgrading based on sharp insight into technology and industrial transformation trend. Value investment helps enterprises form a sustainable and hard to imitate "dynamic moat" by integrating resources with capital, talents and technology, and completes the optimization and iteration of core production, management and supply chain system.

3.2 The CSC Group

3.2.1 Background

China Science & Merchants Investment Management Group (hereinafter called the CSC Group) is the first venture capital fund management institution in China. Since its establishment in 2000, the business has entrusted the management of venture capital and industrial capital. CSC Group has a strong government background and abundant social resources. Once named as Shenzhen Beida Business Investment Management Co., LTD, the company name officially changes into CSC Group after many shareholding reforms. Xiangshuang Shan, as a Chairman, is also the first big shareholder.

CSC Group had once over 120 private equity funds under management, and more than 80 billion RMB under asset management. Over 80 of invested companies succeeded in IPO in domestic and international capital markets. CSC Group has also accumulated more than 6,000 limited partners who are mainly private business owners in different industries, and hundreds of thousand invention and innovation products. The main businesses of CSC Group include private equity fund management and direct investment. The private equity fund management business operates primarily by raising funds to qualified investors rather than public investors, then initiating funds and accepting investor mandates to manage the funds. After screening promising companies and investing in the equity of the company with private equity funds, the invested capital is recovered employing initial public offering, mergers, reorganization, or management buybacks. In this process, the company needs to ensure the capital appreciation of the fund, thus to obtain certain income sharing and charge fund management fees. The difference between direct investment business and private fund management business is that the company invests its capital through the company or its subsidiaries, and finally acquires the company assets rather than fund assets. CSC Group focuses on a wide range of investment opportunities in TMT (Telecommunication, Media and Technology), healthcare, medicine, and medical equipment, consumption, culture, and

entertainment, environmental protection, energy-saving, energy and resources, modern agriculture, advanced manufacturing, transportation, and logistics, etc.

CSC Group is known as "shell company hoarder". From June 2015 to December 2016, it purchased more than 10 small market capitalization companies with 4 billion yuan, many of which were regarded as basically shell companies because of lack of main business.

3.2.2 CSC Group's failure in New OTC Market

On March 20, 2015, CSC Group landed on New OTC Market, and publish an announcement which referred to issue 279, 576, 000 shares at 18 yuan per share to raise about 5 billion yuan. Specifically, it is used to set up a new fund to increase the capital contribution of general partners, implement projects investment, and supplement working capital. On April 10, 2015, CSC Group issued 195 million shares at 18 yuan per share to raise about 3.5 billion yuan once again.

On August 11, 2015, CSC Group issued 45, 733, 333 shares at the price of 18 yuan per share for purchasing assets.

On the evening of September 9, 2015, CSC Group announced that it would raise 30 billion yuan at the price of 27 yuan per share once more. However, it was not implemented due to the warning letter issued by the Shenzhen Securities Regulatory Bureau. Later, the CSRC suspended private fundraising at the end of 2015. Since then, CSC Group has come to an end on the road of a private placement.

The deleveraging crisis broke out in A-shares on June 15, 2015. However, CSC Group invested 1.19 billion yuan to raise 12 listed companies in the 14 trading days between July 8 and July 29. Additionally, CSC Group indicated that this was only the beginning, they would plan to hold 30 to 50 listed companies through the capital market to form an industrial cluster, then make a layout centering on strategic emerging industries in the capital market.

Soon afterward, the National Financial Supervision Institution warned about the huge sums raised by private-equity funds. In December 2015, the China Securities Regulatory Commission (CSRC) suspended the listing and financing of PE/VC institutions in New OTC Market. In May 2016, eight new rules for private placements were proposed (Article 36). In addition to blocking smaller PE institutions with a shorter life, it also required that the "sum of management fee income and performance remuneration" of the listed private placement should account for more than 80% of the income source, which blocked most private equity

institutions including CSC Group.

On October 27, 2017, the National Equities Exchange and Quotations (NEEQ) suddenly issued the notice on problems related to the Self-inspection and Rectification of Listed Private Equity Institutions (Document No. 1394). The rectification object is only limited to some companies whose listed subjects are registered as private equity fund managers. And November 10 was the deadline for the self-inspection and rectification period. On December 15, 2017, the NEEQ announced its conclusion: CSC Group failed to meet the rectification requirements for listed private placement, and the listing should be terminated on December 26, 2017. Since the announcement of the forced delisting of CSC Group, its share price has started to fall off a cliff. Compared with the highest price in December 2017, CSC Group's share price once fell by more than 70%, and the majority of minority shareholders suffered heavy losses.

3.2.3 Cause Analysis

On the surface, CSC Group was delisted due to the low proportion of the private fund management business income and the failure of the rectification to meet the regulatory requirements, but the fundamental problems are as follows:

First, the blind spots of the supervision. The main business of CSC Group includes both private fund management business and direct investment business. The company can use the funds raised from the private placement to directly make an equity investment, including the purchase of shares in the secondary market. This set the stage for the crackdown on CSC Group caused by its buying and selling a large number of shares in the A-share market. It is a classic example of regulatory arbitrage. For regulators, this behavior is a ticking time bomb in the market.

Second, before the listing on the New OTC Market, CSC Group changed its fund LP shares into shares of the listed company, which destroyed the normal operation rules of the private equity investment industry. Before the listing, the whole private equity investment industry was facing the problem of difficult withdrawal of investment projects, so the LP income of private equity funds could not be realized. However, after the fund LP shares are changed into fund management company shares, fund investors can withdraw from the fund because the shares of fund management company have liquidity after the listing. Whether the investment items are realized or not, fund investors would exit. This is one of the incentive factors for numerous private equity investment institutions to get listed on the New OTC Market. When CSC Group was listed for financing, it was based on the management

fees and investment income of the funds under its management. On the one hand, the funds raised belongs to the fund management company, and the investment income generated by such financing could not correspond to the partnership shares of the funds under its management. On the other hand, it seems to solve the problem of difficult withdrawal of private investment for the conversion of LP shares into the equity of fund management companies, but the risk of withdrawal will not disappear and will be transferred to the shareholders of fund management companies with the conversion of fund shares into equity. Therefore, the whole listing private equity transaction will turn into a Ponzi scheme. The unlucky shareholders will always be the ones who buy the listed company's equity at a high price, and the realization risk will finally be owned by them.

Third, over-financing and massive investment in A-share "shell companies". Since its listing on the New Third Board in 2015, CSC Group has raised a total of 10.884 billion yuan, accounting for 9% of the entire market. CSC Group's inflated valuation is a prerequisite for its ability to raise huge sums of money. The huge financing of CSC Group is excessive financing, which is not necessary for normal business operations. The huge amount of money raised is poured into the direct investment business of the company, which is used to buy the shares of companies listed in Shanghai and Shenzhen. That falls far short of the requirement that private-equity firms combine management fees and performance compensation to account for more than 80% of their revenue. By listing on the New OTC Market, CSC Group raised and absorbed investment funds on a large scale, and realized the rapid expansion of its own business, business scope and platform. At the same time, however, it's deployed funds to enter the secondary market. Since July 2015, CSC Group has carried out a series of capital layout in the secondary market, including more than a dozen listed companies such as Baocheng Stock, Lunke Technology, Guonong Technology, Shahe Stock, and Fengle Seed, and it plans to list 30-50 listed companies within five years. CSC Group bought large amounts of equity in listed companies which have obvious characteristics of "shell companies". Such a large amount of investment in the "shell value" of listed companies will disturb the normal order of the stock market: a change in policy will trigger selling behavior, causing short-term volatility in the stock market; private equity investment institutions to invest in "shell stock" and as a private equity investment exit way will greatly increase the occurrence of abnormal asset restructuring.

3.2.4 Inspiration

In China, unreasonable private investment and financing activities, such as outsourcing, multi-level nesting, and capital pool, aggravate the tendency of capital to flow out of the real

industry, finally it flows into virtual economy. The consequence of this situation is that currency does not play its value in the real economy, but only as an interest-bearing role in the virtual economy. Massive speculative inflows into the property, stock, and currency markets led to a dramatic rise in house prices and a boom in the stock and currency markets. However, equity companies, especially private enterprises, are faced with the difficult and expensive problem of financing.

The reorganization of the private equity market is a necessary measure to prevent and defuse financial risks. The tendency of capital to flow out of the real industry and the idling of funds in the financial system is the two major manifestations of financial risk. The withdrawal of funds to the virtual will make the real economy unable to obtain financing or the cost of financing high, and even make the real economy invest a lot of its funds in the financial market to obtain higher returns. In the long run, this will inevitably lead to the collapse of the real economy. The process of money idling in the financial system is the process of rising asset prices as well as the process of increasing leverage. Once leverage reaches its limit, it starts to shrink, and the prices of financial market assets start to fall off a cliff. In severe cases, there may even be a financial crisis.

3.3 The direction of the private equity fund market

The real economy is an important part of a country's economy, the fundamental source of wealth creation, and an important pillar of national prosperity. When the real economy is stagnant in China, the capital market is water without a source and a tree without roots. Such as the Hillhouse Capital focuses on primary innovative enterprises, actively invests in the new generation of core technologies, and innovation-driven industrial upgrading. As the fusion medium of real economy and science and technology enterprises, it continuously creates value through the "dumbbell theory". This is consistent with the direction of the *Guiding Opinion*. By standardizing the market system of private equity funds, plugging loopholes and preventing financial risks at the national level, the private equity funds can be guided to develop in a healthy and upward direction and build a private equity fund market with a reasonable system, standardized system, and high transparency. Proceeding from the real needs of the real economy, we should give full play to the flexible role of capital and optimize the allocation of resources, become an important force for promoting the common prosperity of the domestic capital market and the real economy, and provide continuous support for the revitalization of the real economy.

4. Empirical research

4.1. Data Sample Description

We select a list of quarterly data from 2008 to 2020 from the PEdata and Wind database. The data include Internal rate of return, number of funds, number of funds raised, number of financing, number of financing companies, etc. (shown in Table 6).

Additionally, datahoop2.0, an online data analysis platform, is used to conduct the data preprocessing. Stata12.0 is used to complete the regression discontinuity design.

Table 6. Indicator explanation

Indicator Name	Indicator explanation	Variable abbreviation
Internal rate of return	A metric used in capital budgeting to estimate the return of potential private equity investments.	IRR
Number of funds	The number of funds released in this quarter	NF
Total amount of funds raised	The total amount of funds that have been raised in this quarter	TMF
Number of financing activities	The number of financing activities in this quarter	NFC
Number of companies financing	The number of companies of financing in this quarter	NCF
Total financing amount	The total financing amount of companies in this quarter	FM
Number of limited partnerships	The number of limited partnerships of private equity investment market in this quarter	NLP
Number of funds invested by LP	The number of funds invested by limited partnerships in this quarter	NFLP
Number of financial agents	The number of financial agents of the private equity investment market in this quarter	NFA
Number of M&A	The number of mergers and acquisitions activities in this quarter	NMA
Number of management institutions	The number of private equity fund management agencies in this quarter	NMI
Number of funds managed by the institution	The number of funds managed by the management institutions in this quarter	NFMI

Number of fundraising	The number of all fund-raising activities in this quarter	NFR
Total amount of funds raised	The total amount of fund-raising activities in this quarter	TMFR
Number of investment cases	The number of investment cases of private equity funds in this quarter	NV
Number of invested companies	The number of companies invested by private equity funds in this quarter	NC
Number of investing activities	The number of investing activities of private equity funds in this quarter	NVA
Number of exits	The number of exits of private equity funds in this quarter	NE
Number of institutions withdrawn	The number of management institutions withdrawn in this quarter	NIW
Number of exited companies	The number of exited companies in this quarter	NEC

To evaluate this dataset, we use descriptive statistics method to observe these indicators. Table 7 illustrates the mean value, standard deviation, and quartile values for each indicator. Among, the maximum of Internal rate of return IRR achieves 1998.87%, the minimum of it as 9.26%. While the maximum number of financial agents (NFA) achieves 55, the minimum of it as 2. It is noticed that there are dimensional differences between various indicators. Thus, we use data standardization to unify the dimensions in follow-up research.

Table 7. Descriptive statistics

Indicators	Mean	Std.	Min	25%	50%	75%	Max
IRR(%)	839.17	374.55	9.26	46.61	80.01	140.32	1998.87
NF	3108.02	3006.06	73.00	677.00	1484.00	5507.00	9593.00
TMF(/M)	456232.73	434312.08	36393.75	132978.28	244412.15	687646.40	1672774.94
NF	1222.86	788.26	1.00	781.50	1116.00	1634.00	3033.00
NCF	669.75	418.23	1.00	422.50	616.00	835.50	1732.00
FM(/M)	110687.15	76758.87	40.00	48990.16	96761.27	163667.01	284995.57
NLP	379.49	206.20	3.00	256.00	327.00	476.50	833.00
NFLP	514.27	281.86	0.00	332.50	452.00	612.50	1170.00
NFA	17.37	12.50	2.00	6.50	17.00	24.00	55.00
NMA	483.25	287.34	54.00	254.00	502.00	712.00	1109.00

NMI	2864.71	2734.57	12.00	809.00	2236.00	3978.50	11623.00
NFMI	1083.61	1035.03	13.00	383.00	736.00	1241.00	4867.00
NFR	765.06	481.16	19.00	516.50	687.00	988.50	2281.00
TMFR(/M)	453548.78	407414.43	20706.50	179175.12	238934.68	690225.51	1504076.65
NV	3636.63	2929.59	357.00	1305.50	2687.00	5851.50	11419.00
NC	1816.57	1282.13	242.00	827.50	1156.00	3086.50	4306.00
NVA	1993.92	1618.90	0.00	882.00	1812.00	2638.00	8400.00
NE	360.61	246.87	35.00	167.50	303.00	564.00	864.00
NIW	253.29	177.17	27.00	122.50	212.00	383.50	724.00
NEC	172.10	114.33	25.00	90.00	136.00	254.50	509.00

In this research, the IRR is selected as a dependent variable since it presents the overall profitability of private equity funds in a quarter. For the other indicators (independent variable), we discuss that these indicators are numerous, and have an intersection among them. This will affect the effect of the regression model. Therefore, it is possible to observe the correlation between indicators through the correlation coefficient matrix. From Fig.2, it is valuable to solve the problem of high correlations between two indicators so as to avoid collinearity. This paper adopts the principal component analysis to reduce the dimensions.

4.2. Hypothesis

In the process of data analysis, it is noticed that many indicators in Table 6 show different trends after the promulgation of *Guiding Opinions*. To observe the changes of trends in the private equity market, we select eight indicators to present their trends, such as the number of private equity funds, the number of management institutions, the number of investment cases, etc. (shown in Fig.3, Fig.4, Fig.5, Fig.6).

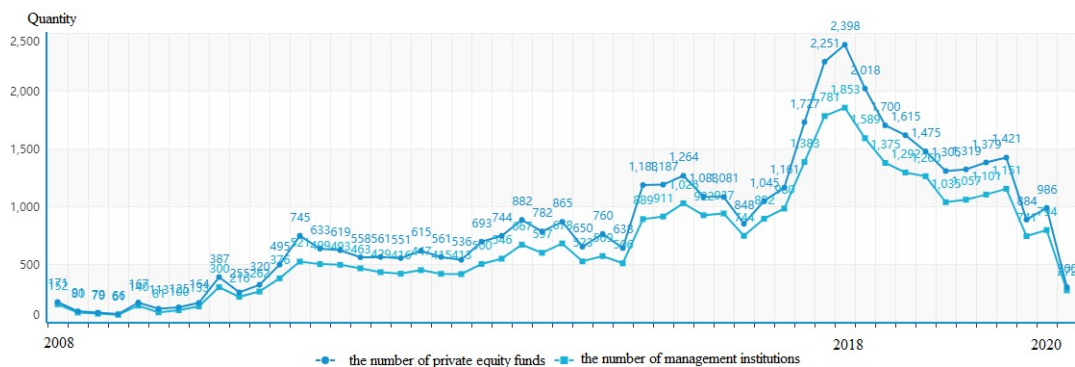


Figure 3: Changes in the number of private equity funds and management institutions (Source: Pedata database)

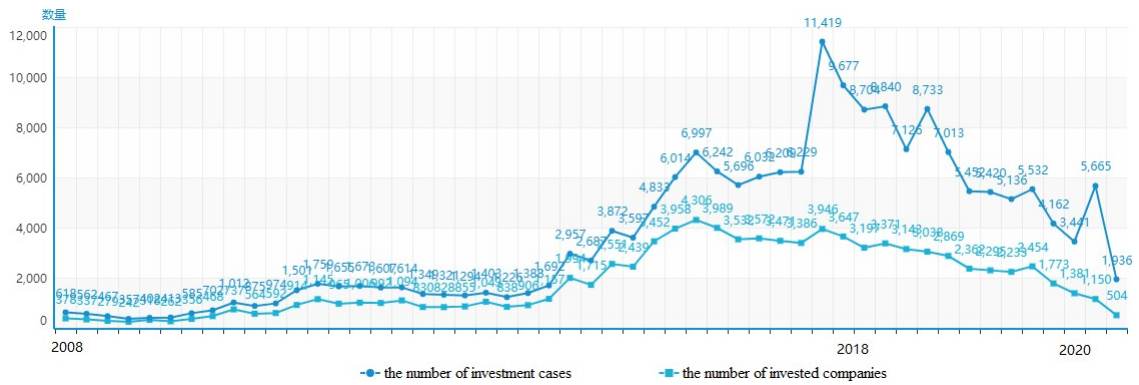


Figure 4: Changes in the number of investment and invested companies
(Source: Pedata database)

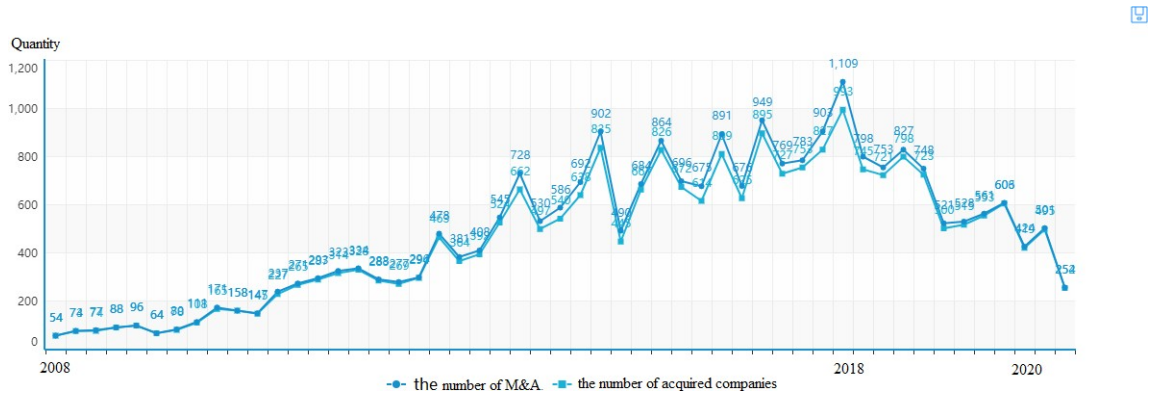


Figure 5: Changes in the number of M&A and acquired companies
(Source: Pedata database)

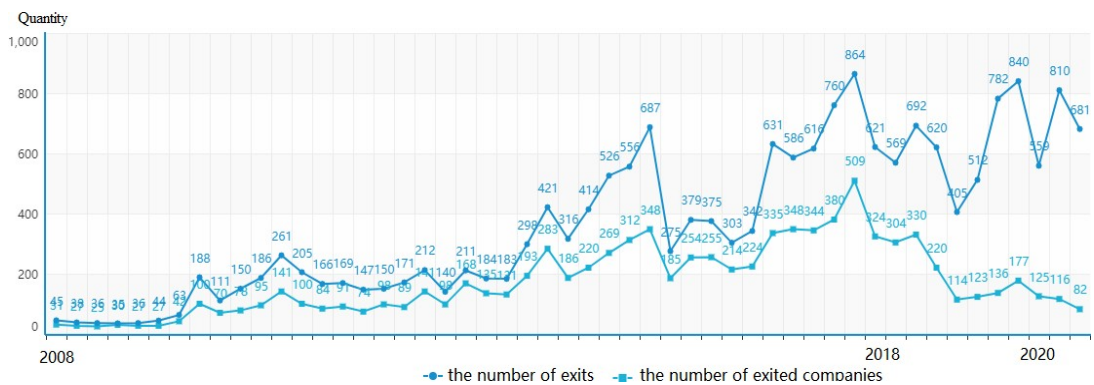


Figure 6: Changes in the number of exits and exited companies

Firstly, the whole private equity market shows a continuous upward trend from 2008 to 2018. This period can be divided into two parts. On the one hand, the growth trend is relatively flat between 2008 and 2015, which is consistent with the overall development of the Chinese economy. In particular, since the official launch of the Growth Enterprise Market has enabled a large number of investment projects to find an exit mechanism, thus that the private equity investment market is becoming more active. On the other hand, the private equity market has entered a period of rapid development from the end of 2015 to the beginning of 2018. It benefits from the government's encouragement and support for the private equity market, and the flourishing development of the information technology industry. The release of the *Measures on Private Investment Fund Manager Registration and Fund Filing (Trial Implementation)* by the Asset Association marked the official launch of the registration and filing of private funds. This encourages more companies, institutions, private funds, and investors to participate in various activities related to the private equity market, such as financing, M&A, investing, etc.

Secondly, we argue that the growth trend has changed significantly since the third quarter of 2018. Most indicators show sharp downward trends, including the number of funds, the number of management institutions, the number of investments, etc. We find that the inflection point of the trend is mainly concentrated in the second quarter of 2018. We carefully analyze the changes in the private equity market before and after the turning point. After this point, although the whole market is thriving, it is dangerous. The CSC Group is in crisis under this situation. There are many problems in the Chinese private equity fund market. In terms of fund-raising level, private equity funds derive from a nested asset management scheme partly. For a long time, bank funds have been realized employing asset management nesting, and the resulting shadow banking system is highly correlated with the fund-raising level. In terms of investment level, there are some problems with the private equity investment institutions in China, such as institutional arbitrage and market arbitrage. Despite the fact that it is relatively weak for the ability of many investment institutions, they can make a considerable income mainly rely on the scale of management. A large number of private equity funds can profit through arbitrage price differences instead of value investment. The Chinese government is also aware of these problems and begin to regulate the private market. Thus, the *Guiding Opinions* is published at this key point. After that, whether it is the number of private equity funds, or private equity institutions or investment events, or financing events, all of them are decreasing rapidly. We believe the *Guiding*

Opinions plays an important impact in the private equity market. One of the most obvious effects is the reduction of market size. Therefore, we propose the first hypothesis:

H1: the market size of the private equity funds is influenced by the *Guiding Opinions*, and returns to a rational size by decreasing the number of private equity funds, management institutions, M&A, financing activities, etc.

The private equity market provides a bridge to connect investors and financiers. Some investors and financiers argue that the high leverage ratio does not affect financial stability, and the regulation of shadow banking makes it difficult and expensive for private enterprises and small and micro enterprises to raise funds. In fact, this is a wrong understanding. There have deep-seated institutional and mechanism reasons to demonstrate the difficulty and high cost of financing for private and small and micro-enterprises. The reasons mainly include two aspects: first, since it is insufficient for the effectiveness of financial resource allocation, thus result in that many loans are mostly invested in large enterprises, government financing platforms, and real estate enterprises; secondly, there have relatively high financing risks for private and small enterprises due to their opaque information and lack of guarantees, and the loan pricing without covering risks. Therefore, although the financing activities are increasing in the past, there are many problems with asset management. A large number of private equity funds are invested in infrastructure, real estate industry, and local government financing platforms through outsourcing, multi-level nesting, and capital pools. Low-cost financing is not obtained through asset management products. So the release of *Guiding Opinions* is conducive to optimizing the allocation of resources, avoiding financing risks, and then helping small and micro enterprises to finance. Thus, we propose the second hypothesis:

H2: the *Guiding Opinions* has an impact on financing activities of the private equity market, which reduces the financing activities by regulating the dislocation of shadow banking.

It can be said that the exit is an important link in the private equity investment process. Enterprises can sell their equity through the market to complete their exit, and obtain the legal rights and benefits from investments. This is inseparable from the support of the government. The government must support the construction of a multi-level and diversified financial investment system, thus to provide enterprises with better exit channels and exit mechanisms, and to diversify the risks of enterprises' equity investment development. Only with a good exit mechanism, enterprises can successfully recover the initial capital

investment. Such a virtuous circle can enable enterprises to realize better development. So a smooth and effective exit mechanism needs to be established to ensure the long-term development environment of the private equity market. Therefore, we propose the third hypothesis:

H3: the *Guiding Opinions* has an impact on the exit of the private equity market, which regulates the exit activities.

Besides, the *Guiding Opinions* prohibits the mismatch and nesting of bank wealth management funds, which directly cut off traditional bank fundraising channels. It provides new requests for many private equity funds to raise. Firstly, investment managers must deepen the industry to raise by integrating the industry, taking a professional development path, and combining the advantages of various industries. Second, the development of private equity needs policy protection and deepening reforms, especially financial system reforms and interest rate marketization. It is believed that the implementation of the *Guiding Opinions* will affect the management costs of fundraising in the short term, but in the long run, it will gradually reform the investment philosophy and behavior habits of high net worth clients, and promote the continued, healthy and orderly progress of the industry. Thus, we propose the fourth hypothesis:

H4: the *Guiding Opinions* influences the fund-raising activities, which regulates the private equity market regulating funds-raising activities.

For a long time, management institutions of private equity funds have been attracting investors to invest in the name of capital preservation, ignoring the existence of risks. While breaking the rigid is one of the main purposes of publishing *Guiding Opinions*. It is believed that banks, fund companies, and other asset management institutions must attach great importance to investment research capabilities to avoid stepping on thunder and affecting reputation. Additionally, the new regulations will give birth to a more complete market, such as requiring display in terms of product net value or real income. This is a manifestation of market maturity, which also reflects the maturity of investors. The value investment is encouraged, and the awareness of financial investment is strengthened. Thus, we propose the fifth hypothesis:

H5: the *Guiding Opinions* has an impact on investing activities of the private equity market, which guides the direction value investment through reducing the investment with high risks.

In summary, we construct the conceptual model to study the relation between *Guiding Opinions* and the private equity market, as shown in Figure 7.

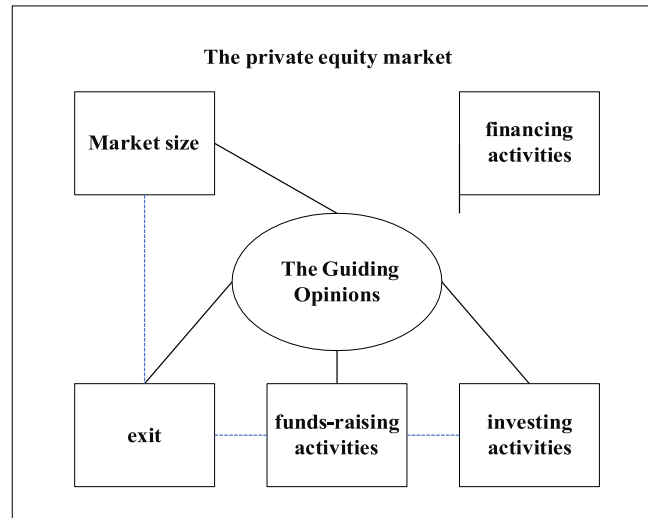


Figure 7: The conceptual model

4.3. Principal Component Analysis

Principal component analysis (PCA) is a technique for reducing the dimensionality of such datasets, increasing interpretability but at the same time minimizing information loss. It does so by creating new uncorrelated variables that successively maximize variance. Through the correlation coefficient in Table 8, we observe that many variables have high correlation, so we need to use principal component analysis to reduce the dimension. First of all, this study standardizes the indicators using the zero-mean method (shown in Equation 1). Table 9 presents the standardized data.

Table 8: The correlation coefficient matrix of indicators above

	NF	TMF	NFC	NCF	FM	...	NVA	NE	NIW	NEC
NF	1	0.90	-0.04	0.08	-0.23	...	-0.24	0.73	0.656991	0.78
TMF	0.90	1	-0.05	-0.04	-0.23	...	-0.24	0.73	0.66	0.78
NFC	-0.04	-0.05	1	0.99	0.74	...	0.66	-0.16	-0.29157	0.27
NCF	0.08	-0.27	0.99	1	0.72	...	0.63	-0.07	-0.20819	0.37
FM	-0.23	0.64	0.74	0.72	1	...	0.57	-0.41	-0.48961	-0.02
NLP	0.72	0.57	0.47	0.54	0.22	...	0.23	0.33	0.164059	0.76
NFLP	0.64	-0.47	0.51	0.57	0.30	...	0.29	0.22	0.048177	0.68
NFA	-0.50	0.77	0.22	0.16	0.39	...	0.52	-0.70	-0.70807	-0.46
NMA	0.83	-0.03	0.21	0.31	-0.12	...	-0.14	0.75	0.652062	0.88
NMI	0.15	0.05	0.91	0.93	0.63	...	0.60	-0.01	-0.12352	0.34
NFMI	0.17	-0.17	0.51	0.54	0.32	...	0.34	0.03	0.000299	0.14
TMFR	0.90	0.82	-0.17	-0.05	-0.27	...	-0.30	0.67	0.608233	0.72
NV	0.90	0.77	-0.04	0.09	-0.27	...	-0.25	0.79	0.690253	0.84

NCF	0.90	-0.30	0.29	0.41	0.01	...	-0.01	0.67	0.545754	0.85
NVA	-0.24	0.67	0.66	0.63	0.57	...	1	-0.39	-0.46659	-0.08
NE	0.73	0.61	-0.16	-0.07	-0.41	...	-0.39	1	0.972372	0.75
NIW	0.66	0.72	-0.29	-0.21	-0.49	...	-0.47	0.97	1	0.59
NEC	0.78	0.90	0.27	0.37	-0.02	...	-0.08	0.75	0.594804	1

$$x' = (x - \mu)/\sigma \quad (1)$$

Table 9. The standardized data

TMF	NFC	NCF	FM	NLP	NFLP	.....	NVA	NE	NIW	NEC
-0.23	-0.54	-0.61	-0.18	-0.88	-0.80	.....	4.00	-1.29	-1.22	-1.25
-0.91	-0.53	-0.70	-0.09	-0.90	-0.67	.....	-0.44	-1.32	-1.24	-1.28
-0.92	-0.56	-0.70	-0.31	-0.95	-0.71	.....	-0.47	-1.33	-1.28	-1.30
-0.98	-0.66	-0.80	-0.81	-0.98	-0.83	.....	0.09	-1.33	-1.29	-1.26
-0.79	-0.44	-0.53	0.84	-1.13	-0.88	.....	-0.53	-1.33	-1.27	-1.28
-0.95	-0.57	-0.58	-0.58	-0.83	-0.69	.....	-0.61	-1.30	-1.24	-1.29
-0.94	-0.29	-0.45	-0.46	-0.60	-0.29	.....	0.42	-1.22	-1.18	-1.15
-0.96	-0.34	-0.53	-0.33	-0.37	-0.24	.....	-0.20	-0.71	-0.71	-0.65
-0.64	-0.14	-0.13	2.17	-0.58	-0.53	.....	0.70	-1.02	-0.92	-0.90
-0.93	-0.12	-0.36	-0.51	-0.25	-0.35	.....	-0.04	-0.86	-0.79	-0.83
-0.83	-0.15	-0.29	0.71	-0.42	-0.32	.....	0.08	-0.71	-0.69	-0.68
-0.77	-0.20	-0.38	-0.58	-0.11	-0.04	.....	0.23	-0.41	-0.37	-0.27
-0.32	0.16	0.23	0.43	-0.26	-0.21	.....	1.25	-0.64	-0.58	-0.64
-0.62	0.08	-0.05	0.25	0.09	-0.08	.....	1.01	-0.80	-0.69	-0.78
-0.60	0.36	0.00	1.32	0.02	0.17	.....	0.03	-0.78	-0.70	-0.72
-0.62	0.05	-0.12	0.31	-0.33	-0.40	.....	-0.28	-0.87	-0.77	-0.87

The datahoop2.0 is used to conduct principal component analysis. After many trials, we believe that five factors can represent original indicators due to the cumulative contribution rate of five factors exceeds 90%. The screen plot is shown in Figure 8, the cumulative contribution rate is shown in Table 10. Furthermore, we compute the rotation matrix of five factors, shown in Table 11. According to the value in the rotation matrix, each factor can be explained. The factor1 is the market size of private equity fund, which accounts for a large proportion in the number of funds, total amount of funds raised, the number of LPs, number of M&A, etc. Factor2 represents financing activities and institutions, which account for a large proportion of the number of financing activities, the number of companies financing, total financing amount, number of management institutions, etc. Factor3 represents the exiting activities, which account for a large proportion of the number of exits, number of institutions withdrawn, the number of financial agents, etc. Factor4 represents funds-raising activities, which account for a large proportion of the number of fundraisings. It is worth noting that factor1 includes information on total amounts of funds raised, but factor4 refers to the funds raising in progress, which may be raised successfully or fail. Thus, factor4 indicates the current market's enthusiasm for private equity fund-raising. Factor5 represents

investing activities, which account for a large proportion of the total investment amount and number of investing activities. Besides, the correlation coefficients between the five factors are below 0.5, such as the value of Factor1 and Factor4 is only -0.15. Thus, this study regards the five factors above as the independent variables since they can be illustrated the development of private equity market.

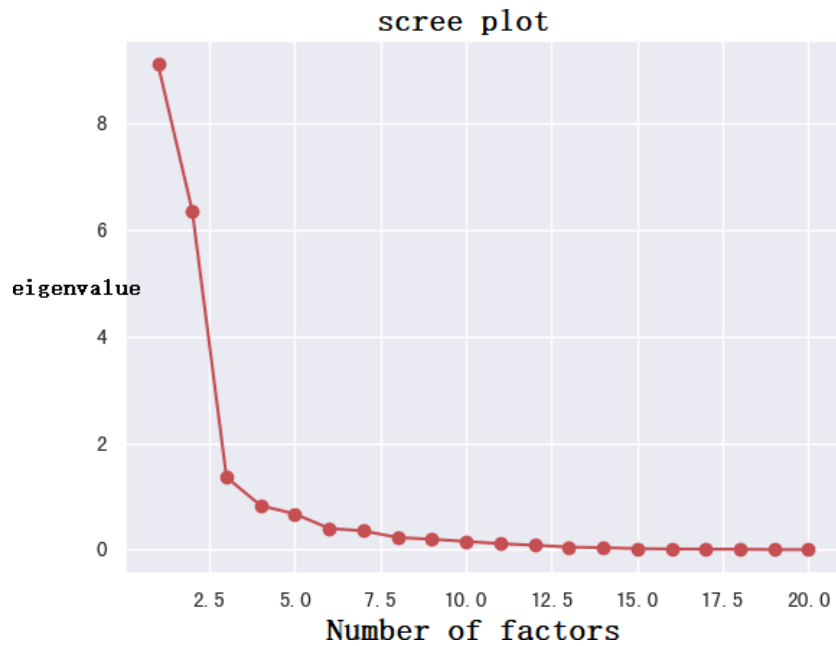


Figure 8: The scree plot of different factors

Table 10. The cumulative contribution rate of factors

	factor1	factor2	factor3	factor4	factor5	factor6
contribution rate of factor	0.46	0.32	0.07	0.04	0.03	0.02
cumulative contribution rate	0.46	0.77	0.84	0.88	0.92	0.94

Table 11. Rotation matrix of components

	factor1	factor2	factor3	factor4	factor5
NF	0.89	-0.05	-0.36	-0.11	-0.08
TMF	0.92	-0.09	-0.17	-0.05	-0.01
NFC	0.04	0.95	0.05	-0.08	0.22
NCF	0.14	0.94	0.00	-0.10	0.21
FM	-0.10	0.78	0.34	0.09	0.16
NLP	0.85	0.46	0.02	-0.08	0.03
NFLP	0.81	0.50	0.12	-0.07	0.06
NFA	-0.27	0.07	0.65	-0.02	0.50
NMA	0.74	0.23	-0.52	-0.07	-0.12
NMI	0.17	0.89	-0.03	-0.34	0.17
NFMI	0.39	0.78	-0.09	-0.40	0.15
NFR	0.12	0.46	-0.02	-0.84	0.01
TMFR	0.90	-0.20	-0.26	-0.01	-0.07
NV	0.82	0.00	-0.48	-0.02	-0.11
NC	0.83	0.29	-0.37	-0.19	-0.02
TVM	-0.01	0.41	0.21	0.07	0.84
NVA	-0.08	0.51	0.22	-0.14	0.76

NE	0.46	-0.10	-0.85	0.00	-0.13
NIW	0.34	-0.24	-0.87	-0.07	-0.16
NEC	0.73	0.31	-0.50	0.17	-0.04

4.4. Regression Discontinuity Design

The Regression Discontinuity Design can be divided into precise discontinuity regression and fuzzy discontinuity regression. The characteristic of precise discontinuity regression is that the probability of individual processing jumps from 0 to 1 at the breakpoint $X = C$. Generally, it is assumed that there is a linear relationship between Y_i and X_i

$$Y_i = \alpha + \beta D_i + G(X_i) + \varepsilon_i \quad (2)$$

Suppose that the breakpoint is a constant C , that is, $X = C$, and the grouping rule is as follows:

$$D_i = \begin{cases} 0, & \text{if } i < C \\ 1, & \text{if } i \geq C \end{cases} \quad (3)$$

That is, there is a breakpoint in the piecewise function D_i at $X = C$, which provides an opportunity to estimate the causal effect of D_i on Y_i .

Because there is no systematic difference between individuals near $X = C$, the only reason for the jump of conditional expectation function $E(y_i|x)$ is the processing effect of D_i .

In order to estimate the jump, the equation is rewritten as follows:

$$y_i = \alpha + \beta(x_i - c) + \delta D_i + \gamma(x_i - c) + \varepsilon_i \quad (i=1, \dots, n) \quad (4)$$

Among, $(x_i - c)$ as the standardization of x_i , making the breakpoint of $(x_i - c)$ as 0.

According to the results of the PCA method, we construct a regression model to evaluate the private equity market. The Internal rate of return is the dependent variable. The five factors above are the independent variables. The Internal rate of return represents the average return of private equity investments each quarter, reflecting the profitability of the private equity market. The RDD model is assumed to be as follows:

$$Y_i = \alpha + \beta D_i + Gx_i + \varepsilon_i \quad (5)$$

Among them, the subscript i represents the i sample, Y_i is the Internal rate of return, x_i represent the five factors, ε_i as a random interference term. The D_i is the processing variable (the value is 0 or 1), indicating whether it is affected by the **Guiding Opinions**. And the D_i

is a discontinuous function affected by the n *Guiding Opinions*. RDD model is used to estimate the effect of processing variable D_i on result variable Y_i . In this paper, the data from the 2008 to the end of 2017 are used as the control group, and the data from 2018 to 2020 as the experimental group. In the observation samples, 0 is taken as the dividing point ($D_i = 1$, indicating that the result variable is affected; $D_i = 0$, indicating that the result variable is not affected). The Stata12.0 is used to process these data.

4.5. Hypothesis Testing

Firstly, for testing the stationarity of our data, we introduce the Augmented Dickey Fuller test (ADF Test). ADF Test is a common statistical test used to test whether a given Time series is stationary or not. It is one of the most commonly used statistical test when it comes to analyzing the stationary of a series. As show in Table 12, the test statistic of each variable is less than the 1% critical value, so the original hypothesis can be rejected, that is, these variables are considered stable. Thus, we can construct the VAR model directly, then the Granger causality test also can be carried out. In Table 13, F_1 , F_2 , F_3 , F_4 and F_5 are all Granger reasons for the change of Y variable. Therefore, we can conduct regression analysis.

Table 12 The results of ADF Test

	Variable	Test Statistic	1% Critical Value	5% Critical Value	10% Critical Value	MacKinnon approximate p-value for Z(t)
Z(t)	Y	-3.93	-3.66	-2.96	-2.61	0.00
	F_1	-7.05	-3.66	-2.96	-2.61	0.00
	F_2	-7.28	-3.66	-2.96	-2.61	0.00
	F_3	-7.20	-3.66	-2.96	-2.61	0.00
	F_4	-5.52	-3.66	-2.96	-2.61	0.00
	F_5	-7.10	-3.66	-2.96	-2.61	0.00

Table 13 The results of Granger causality test

Equation	Excluded	chi2	df	Prob
Y	F1	6.97	2	0.03
Y	F2	10.29	2	0.03
Y	F3	6.88	2	0.04
Y	F4	8.80	2	0.01
Y	F5	13.23	2	0.05
Y	ALL	18.66	10	0.05
F1	Y	.76	2	0.68
F1	F2	4.29	2	0.12
F1	F3	3.21	2	0.20
F1	F4	.38	2	0.83
F1	F5	.99	2	0.61
F1	ALL	10.73	10	0.38

F2	Y	.92	2	0.63
F2	F1	4.43	2	0.11
F2	F3	3.42	2	0.19
F2	F4	.66	2	0.72
F2	F5	1.90	2	0.39
F2	ALL	9.27	10	0.51
F3	Y	.85	2	0.65
F3	F1	4.87	2	0.09
F3	F2	2.97	2	0.22
F3	F4	.65	2	0.72
F3	F5	1.49	2	0.48
F3	ALL	8.83	10	0.55
F4	Y	2.03	2	0.36
F4	F1	7.70	2	0.06
F4	F2	5.62	2	0.06
F4	F3	4.46	2	0.11
F4	F5	1.91	2	0.39
F4	ALL	25.41	10	0.06
F5	Y	.78	2	0.70
F5	F1	5.01	2	0.08
F5	F2	3.21	2	0.20
F5	F3	2.96	2	0.23
F5	F4	.53	2	0.77
F5	ALL	8.89	10	0.54

According to the release time of the *Guiding Opinions*, our data is classified into two parts. We firstly check the robust regression to observe the variables of impact on IRR. The results of the regression model from 2008 to 2020 are shown in Table 14. The five factors have a significant impact on IRR. Factor₁ is the most important element with high regression coefficients, which has a positive effect on IRR. Factor₅ has negative effects on IRR significantly, which indicates that the investing activities are not conducive to increase the IRR. While the Factor₂, Factor₃ and Factor₄ can influence the IRR significantly.

Table 14 The regression results from 2008 to 2020

NF	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf. Interval]	
Factor ₁	0.38	0.13	2.11	0.00(***)	0.01	0.54
Factor ₂	0.18	0.11	1.57	0.00(***)	-0.05	0.41
Factor ₃	0.20	0.11	1.80	0.00(***)	-0.02	0.42
Factor ₄	0.34	0.21	1.63	0.00(***)	-0.08	0.76
Factor ₅	-0.04	0.11	-0.34	0.00(***)	-0.27	0.19

*P<0.05, **P<0.01, ***P<0.001

R – sward = 0.96(Prob> F = 0.00)

When using the RDD method to test, we need to determine that the result variable has a jumping phenomenon at the distribution point, that is, there is a breakpoint effect. It can be observed by using a scatter plot. As shown in Figure 9, the result variable Y in the figure on the right has a relatively obvious jump at the distribution point 1 (the second quarter of 2018), indicating that there may be a breakpoint effect.

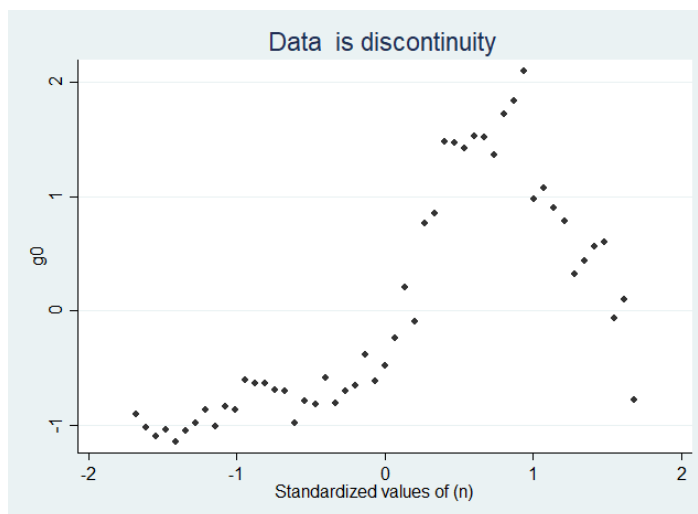


Figure 9: The scatter diagram of y indicators

Then we analyze the results of regression discontinuity of five factors through, which are shown in Table 15. It can be seen that there are breakpoints in all five factors. We further analyze each factor.

Table 15 The regression discontinuity estimation results

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
Factor ₁	0.13	0.62	5.21	0.00(***)	-1.08 1.34
Factor ₂	-0.33	0.73	-7.15	0.00(***)	-1.76 1.10
Factor ₃	0.14	0.92	2.78	0.00(***)	-1.95 1.67
Factor ₄	0.85	0.68	4.60	0.00(***)	-2.17 0.49
Factor ₅	0.88	0.75	2.17	0.00(***)	-0.60 2.35

*P<0.05, **P<0.01, ***P<0.001

(1) For Factor₁

We firstly check the density distribution map (shown in Figure 10). The data of market size of private equity funds shows continuous distribution on the whole, which meets the RDD condition.

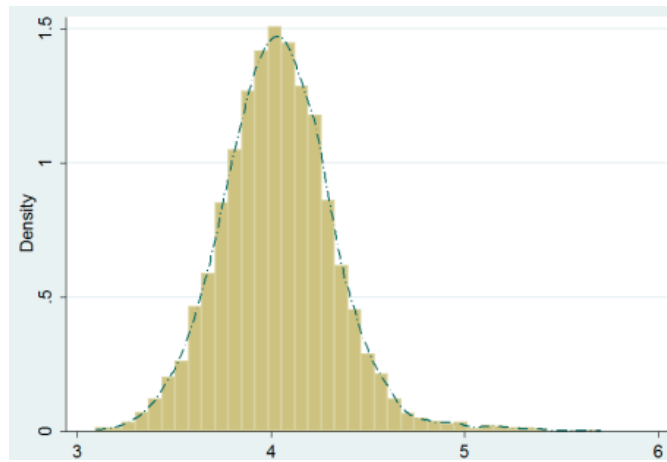


Figure 10: The density distribution map of Factor₁

Secondly, the regression discontinuity estimation is conducted. We assume $XHH=0$ as the breakpoint, the $XHH<0$ indicates the situation of Factor₁ before 2018 (reference group), while the $XHH>0$ represents that the Factor₁ is influenced by the release of **Guiding Opinions** (control group). The results are shown in Table 16. After bandwidth 20, the p-value is less than 0.05, which indicates that the RDD model is stable, and the data jumps around $XHH = 0$. The **Guiding Opinions** has a significant impact on Factor₁, with a coefficient of 0.13 at 52 bandwidth, indicating a 0.13 degree effect.

Table 16 The regression discontinuity estimation scale of Factor₁

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
lwald	1.11	0.92	1.21	0.23	-0.70 2.92
lwald20	1.52	1.30	1.18	0.24	-1.01 4.07
lwald50	0.15	0.66	3.21	0.00(***)	-1.08 1.31
Lwald52	0.13	0.62	3.76	0.00(***)	-1.08 1.34

*P<0.05, **P<0.01, ***P<0.001

Thirdly, we have plotted the changes of Factor₁ before and after the issuance of the **Guiding Opinions**. The fitting method can be used to fit the left and right distribution points separately. By observing the difference between the fitted lines on both sides, it is easier to guess whether the jumping phenomenon occurs. RDD analysis provides the rdplot command to handle this work. The following figures list the rdplot command + linear fitting graph, rdplot command + Quadratic curve-fitting graph. The results are shown in Figure 11. In Figure 11, the market size of private equity funds is influenced by the **Guiding Opinions**. It presents a downward trend for many indicators after issuing this policy, such as the number of funds, total amount of funds raised, the total amount of funds

raised, the number of LPs, number of M&A, etc. Therefore, we believe the **Guiding Opinions** play an important impact in the private equity market. One of the most obvious effects is the reduction of market size.

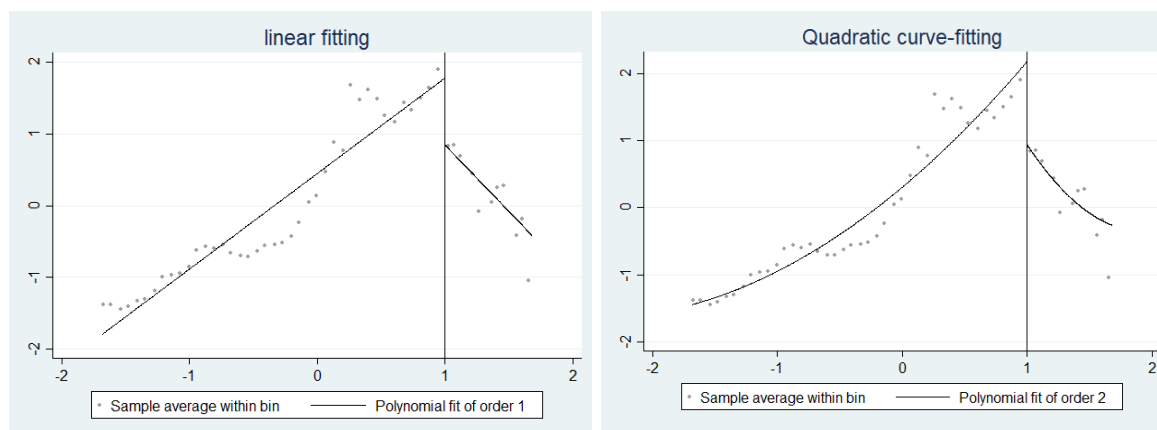


Figure 11: The changes of Factor₁ before and after the issuance of the **Guiding Opinions**

Fourthly, covariates, the total amount of return(TAR) and average financing times(AFT), are added into RDD model, so as to improve the accuracy of this model. The total amount of return indicates the earnings of private equity funds in each quarter. We use this covariate to measure the overall profitability of the private equity market. The average financing times reflect the overall financing difficulty of private equity funds, and presents the attitude of investors in the market. We use this covariate to measure the changes in the private equity market. In order to verify the improvement effect of covariates on the model, we test the continuity of covariates. The results are shown in the table 17. For covariate TAR, the adjoint probability of continuity test is 0.63 and 0.13 respectively (all above 0.05). This indicates that there is no jump in the conditional density function of this covariate at the breakpoint, and adding the model can effectively improve the accuracy. While the adjoint probability of the covariate AFT is less than 0.05, and the conditional density function at the breakpoint jumps, so it is not suitable to join the model. Thereby, we conduct RDD model with variate TAR, showing the results in table 18. When the bandwidth is 52, and the adjoint probability of Z-statistic is 0.00 (less than 0.05), it indicates that Factor₁ jumps at XHH = 0. So the coefficient 0.23 illustrates that **Guiding Opinions** has a significant impact on the Factor₁, with an impact degree of 0.23.

Table 17 The covariate continuity test

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
TAR	1.32	0.33	0.89	0.63	-0.96	1.02

AFT	0.06	0.34	1.35	0.18	-0.05	0.18
lwald	1.11	0.92	1.21	0.23	-0.70	2.92
TAR52	1.02	0.05	1.58	0.13	-0.02	0.19
AFT52	0.12	0.02	6.79	0.00(***)	-0.09	0.22
lwald52	0.13	0.62	3.76	0.00(***)	-1.08	1.34

*P<0.05, **P<0.01, ***P<0.001

Table 18 The regression discontinuity estimation with covariate AIR

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
lwald	0.29	0.21	1.31	0.23	-0.62 0.86
lwald52	0.23	0.05	5.65	0.00(***)	-1.07 1.31

*P<0.05, **P<0.01, ***P<0.001

Thus, the hypothesis H1 is accepted. By comparing the model without covariates with the model with covariates, it is found that adding covariates satisfying breakpoint regression condition can effectively reduce the variance of disturbance term, and the detection indexes are more accurate.

(2) For Factor₂

We firstly check the density distribution map (shown in Figure 12). The data of financing activities shows continuous distribution on the whole, which meets the RDD condition.

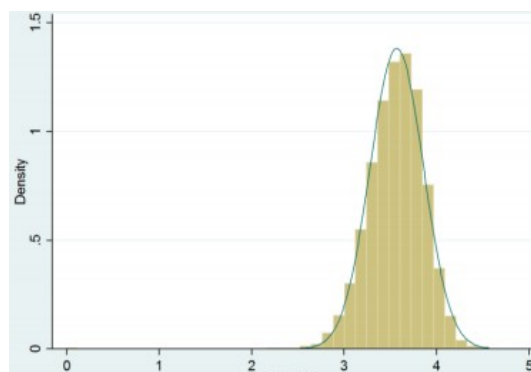


Figure 12: The density distribution map of Factor₂

Secondly, the regression discontinuity estimation is conducted. We assume $X_{HH}=0$ as the breakpoint, the $X_{HH}<0$ indicates the situation of Factor₁ before 2018 (reference

group), while the $XHH > 0$ represents that the $Factor_2$ is influenced by the release of **Guiding Opinions** (control group). The results are shown in Table 19. After bandwidth 50, the p-value is less than 0.05, which indicates that the RDD model is stable, and the data jumps around $XHH = 0$. The **Guiding Opinions** has a significant impact on $Factor_2$, with a coefficient of 0.33 at 52 bandwidth, indicating a 0.33 degree effect.

Table 19 The regression discontinuity estimation scale of $Factor_2$

	Coef.	Std. Err.	z	$P > |z|$	[95% Conf. Interval]
lwald	0.97	0.94	1.03	0.30	-2.80 0.87
lwald20	0.91	0.92	0.52	0.48	-2.02 0.91
lwald50	0.64	0.91	5.87	0.02(*)	-1.15 2.43
lwald52	0.33	0.73	6.05	0.00(***)	-1.76 1.10

* $P < 0.05$, ** $P < 0.01$, *** $P < 0.001$

Thirdly, we have plotted the changes of $Factor_2$ before and after the issuance of the **Guiding Opinions** (shown in Figure 13). In Figure 13, we believe this policy also have a significant impact on the financing activities. The financing activities are relative stable before 2018, but they are sharply reduced after 2018. From 2008 to 2017, a large number of private equity funds are invested in infrastructure, real estate industry, and local government financing platforms through outsourcing, multi-level nesting, and capital pools. Low-cost financing is not obtained through asset management products. So the release of **Guiding Opinions** aims at regulating these problems and constructing the healthy financing activities. Thus, this policy prevents the financing market size of private equity funds from excessive financing behavior. Thus, the hypothesis H2 is accepted.

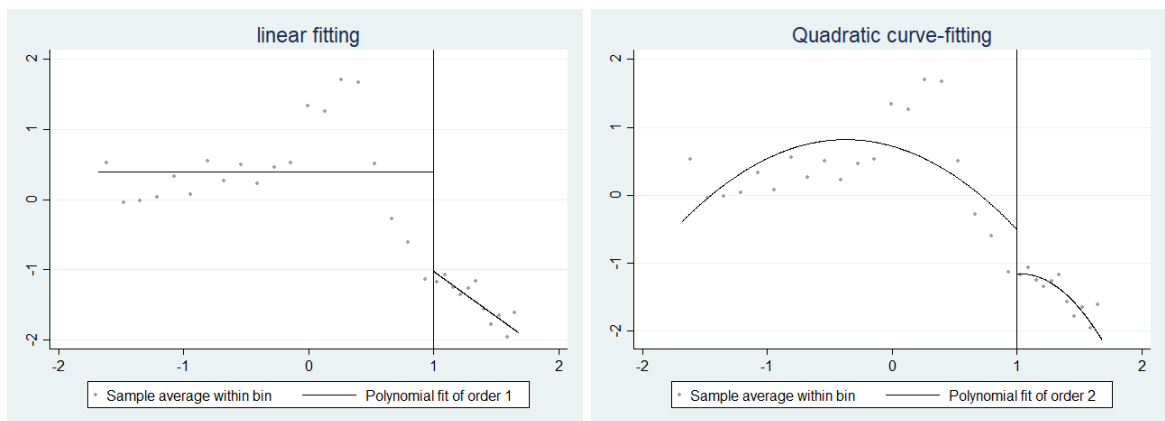


Figure 13: The results of $factor_2$ with using RDD method

Fourthly, in order to verify the improvement effect of covariates TAR and AFT on the model, we test the continuity of covariates. The results are shown in the Table 20. For

covariate TAR and AFT, the adjoint probability of continuity test are 0.00 and 0.00 respectively. This indicates that there is jump in the conditional density function of each covariate at the breakpoint, and adding the model cannot effectively improve the accuracy.

Table 20 The regression discontinuity estimation with covariates

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
TAR	-0.15	0.53	0.69	0.89	-0.55 0.70
AFT	0.12	0.08	0.54	0.45	-0.05 0.18
lwald	0.97	0.94	1.03	0.30	-2.80 0.87
TAR52	0.08	0.23	2.08	0.04(*)	0.01 0.34
AFT52	0.12	0.02	5.68	0.00(***)	0.08 0.16
lwald52	0.33	0.73	6.05	0.00(***)	-1.76 1.10

*P<0.05, **P<0.01, ***P<0.001

(3) For Factor₃

We firstly check the density distribution map (shown in Figure 14). The data of exiting activities shows continuous distribution on the whole, which meets the RDD condition.

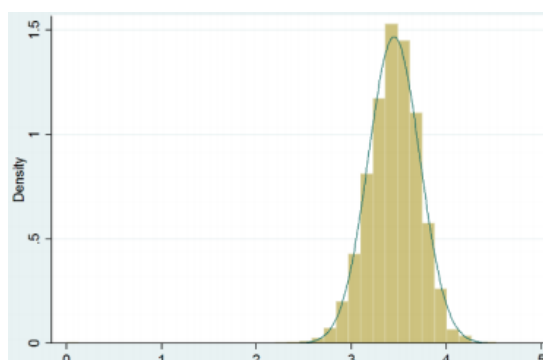


Figure 14: The density distribution map pf Factor₃

Secondly, the regression discontinuity estimation is conducted. We assume $XHH=0$ as the breakpoint, the $XHH<0$ indicates the situation of Factor₃ before 2018 (reference group), while the $XHH>0$ represents that the Factor₂ is influenced by the release of **Guiding Opinions** (control group). The results are shown in Table 21. After bandwidth 50, the p-value is less than 0.05, which indicates that the RDD model is stable, and the data jumps around $XHH = 0$. The **Guiding Opinions** has a significant impact on Factor₃, with a coefficient of 0.14 at 52 bandwidth, indicating a 0.14 degree effect.

Table 21 The regression discontinuity estimation scale of Factor₃

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
lwald	0.97	1.11	0.87	0.39	-1.15 1.21
lwald20	1.50	1.38	1.08	0.28	-1.21 1.27
lwald50	0.16	1.02	2.63	0.05(*)	-1.08 1.37
lwald52	0.14	0.92	3.11	0.00(***)	-1.25 1.67

*P<0.05, **P<0.01, ***P<0.001

Thirdly, we have plotted the changes of Factor₃ before and after the issuance of the **Guiding Opinions** (shown in Figure15). In Figure 15, the exit is an important step in the investment process, the enterprises want to sell their equity through the market to complete their exit, and obtain the legal rights and benefits from investments. Since the management institution and investors overly care for the gains and losses of the interests loss in the short-term, few of them pay attention to the value investment, which adds the consideration of enterprise growth to the investment strategy. The **Guiding Opinions** guides enterprises to attach importance to value investment, and provides enterprises with better exit channels and exit mechanisms so as to diversify the risks of enterprises' equity investment development. Thus, previous frequent exit activities have cooled down, the private equity market creates a healthy environment for exit activities. Therefore, the **Guiding Opinions** has an impact on the exit of the private equity market, which regulates the exit activities.

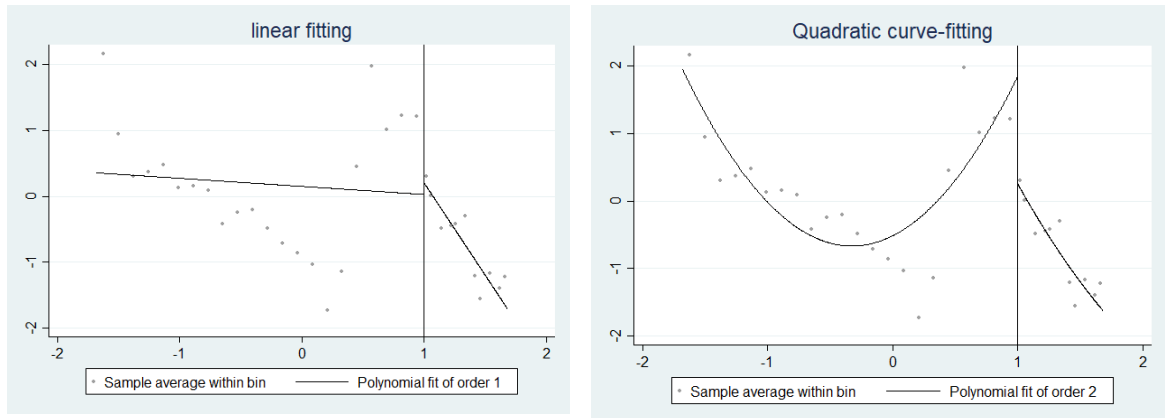


Figure 15: The results of factor3 with using RDD method

Fourthly, in order to verify the improvement effect of covariates TAR and AFT on the model, we test the continuity of covariates. We observe that there is jump in the conditional density function of each covariate at the breakpoint, and adding the model cannot effectively improve the accuracy.

(4) For Factor₄

We check the density distribution and argue that the data of funds-raising activities shows continuous distribution on the whole. Then, the regression discontinuity estimation is conducted. We assume $XHH=0$ as the breakpoint, the $XHH<0$ indicates the situation of Factor₃ before 2018 (reference group), while the $XHH>0$ represents that the Factor₄ is influenced by the release of *Guiding Opinions* (control group). The results are shown in Table 22. After bandwidth 50, the p-value is less than 0.05, which indicates that the RDD model is stable, and the data jumps around $XHH = 0$. The *Guiding Opinions* has a significant impact on Factor₄, with a coefficient of 0.85 at 52 bandwidth, indicating a 0.85 degree effect.

Table 22 The regression discontinuity estimation scale of Factor₄

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
lwald	-0.61	0.84	-0.73	0.46	-2.25	1.03
lwald20	0.59	1.72	0.34	0.73	-2.77	3.95
lwald50	0.86	0.74	2.25	0.03(*)	-1.68	1.90
lwald52	0.85	0.68	3.15	0.00(***)	-1.15	1.50

*P<0.05, **P<0.01, ***P<0.001

Thirdly, we have plotted the changes of Factor₄ before and after the issuance of the *Guiding Opinions* (shown in Figure 16). In the Figure 16, the trend of fund-raising activities presents a steady rise. However, since the Guiding Opinions prohibits the mismatch and nesting of bank wealth management funds, this directly cut off traditional bank fundraising channels, resulting in a sudden drop of the fund-raising activities. We argue that the implementation of the Guiding Opinions will affect the management costs of fundraising in the short term, but in the long run, it will gradually reform the investment philosophy and behavior habits of high-net-worth clients, and promote the continued, healthy and orderly progress of the industry. This is consistent with the changes in the figure. Thus, the hypothesis H4 is accepted.

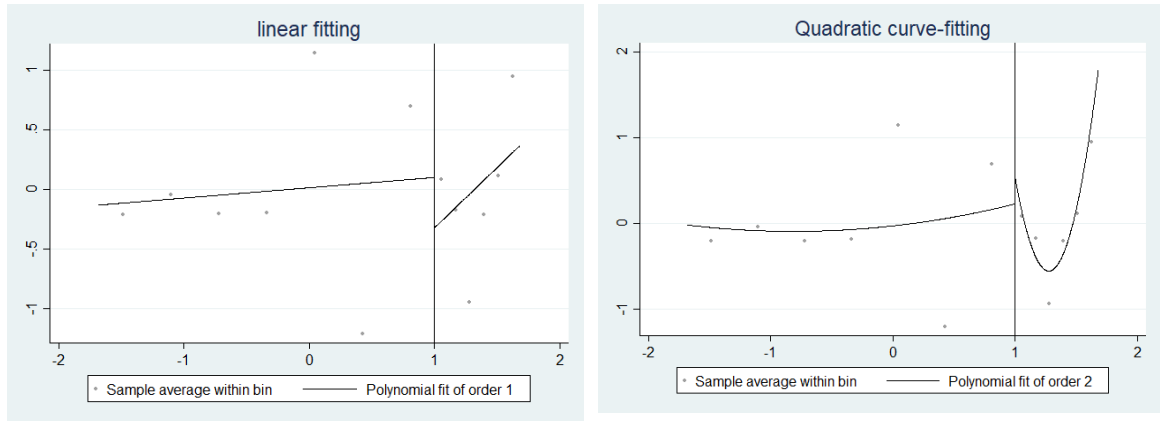


Figure 16: The results of factor₄ with using RDD method

Fourthly, in order to verify the improvement effect of covariates TAR and AFT on the model, we test the continuity of covariates. We observe that there is jump in the conditional density function of each covariate at the breakpoint.

(5) For Factor₅

We check the density distribution and argue that the data of investing activities shows continuous distribution on the whole. Then, the regression discontinuity estimation is conducted. We assume $XHH=0$ as the breakpoint, the $XHH<0$ indicates the situation of Factor₃ before 2018 (reference group), while the $XHH>0$ represents that the Factor₄ is influenced by the release of **Guiding Opinions** (control group). The results are shown in Table 23. After bandwidth 52, the p-value is less than 0.05, which indicates that the RDD model is stable, and the data jumps around $XHH = 0$. The **Guiding Opinions** has a significant impact on Factor₅, with a coefficient of 0.88 at 52 bandwidth, indicating a 0.88 degree effect.

Table 23 The regression discontinuity estimation scale of Factor₅

	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]
lwald	1.85	0.87	1.17	0.24	-0.60 2.35
lwald20	1.22	0.41	1.99	0.11	0.34 2.34
lwald50	1.05	0.65	2.12	0.03(*)	0.42 2.38
lwald52	0.88	0.75	2.99	0.00(**)	0.14 3.56

*P<0.05, **P<0.01, ***P<0.001

Thirdly, we have plotted the changes of Factor₅ before and after the issuance of the Guiding Opinions (shown in Figure17). In the Figure 17, the Guiding Opinions has an impact

on investing activities of the private equity funds. For a long time, management institutions of private equity funds have been attracting investors to invest in the name of capital preservation, ignoring the existence of risks. This has caused a lot of problems, such as influencing the investors' confidence, affecting the institutions' reputation, etc. The Guiding Opinions encourages more mature investors to join in the team of value investment, carry out the investing activities through balancing risks and returns, thus to form a better ecological environment. Therefore, the investing activities present a clear upward trend after issuing this new regulation. So the hypothesis H5 is accepted.

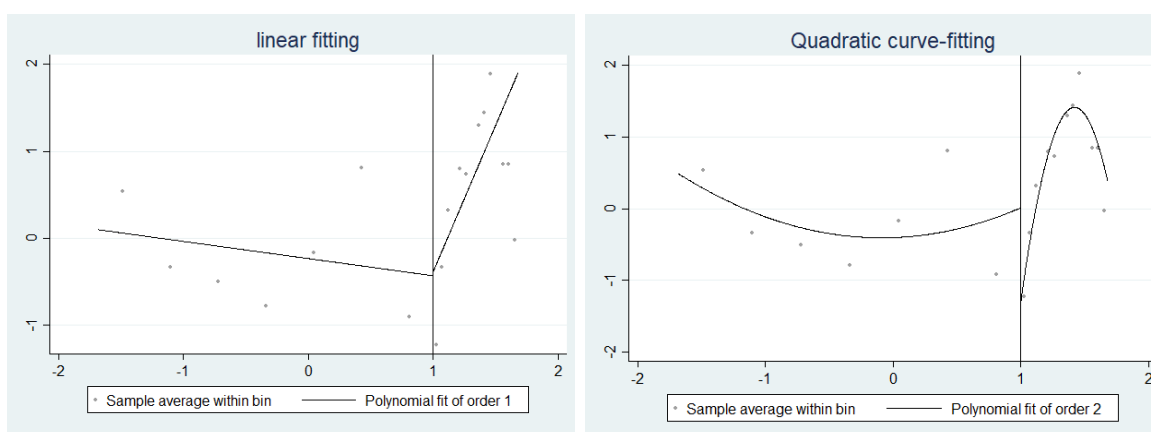


Figure 17: The results of factor5 with using RDD method

Fourthly, in order to verify the improvement effect of covariates TAR and AFT on the model, we test the continuity of covariates. We observe that there is jump in the conditional density function of each covariate at the breakpoint.

In summary, we conclude the results of hypothesis testing, which are shown in Table 24.

Table 24 The results of hypothesis testing

Factors	Hypothesis	Results
Factor1 (market size)	Policy→Factor1 ↓	Accept
Factor2 (financing activities)	Policy→Factor2 ↓	Accept
Factor3 (exits)	Policy→Factor3 ↓	Accept
Factor4 (fund-raising activities)	Policy→Factor4 ↑	Accept

Factor5 (investing activities)	Policy→Factor5 ↑	Accept
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4.6. Research Results

The *Guiding Opinions* has a positive effect on the private equity funds, the primary effects are as follows:

Firstly, the market size of private equity funds is reduced, removing those non-compliant or unidentified funds. Before the introduction of *Guiding Opinions*, it is huge for the scale of asset management products with capital pool business attributes. After issuing the new regulations, these asset management products will face a situation of being gradually cleared through managing the capital pool, controlling the channel, eliminating multiple layers of nesting, etc.

Secondly, financing activities decline significantly after issuing the *Guiding Opinions*, especially for the off-balance sheet financing and bond financing. This policy promotes the return of off-balance sheet financing to on-balance sheet by dismantling the capital chain and nesting, blocking unreasonable financing needs, and making corporate financing behavior more standardized. However, in the short term, because the rapid contraction of the capital chain, it is limited for the capacity of on-balance sheet loans to undertake off-balance sheet financing needs. Since 2017, non-standard financing has continued to grow negatively. It dropped by 691.57 billion yuan in 2018 a record low. The speed of social financing increased dropped significantly to a low of 9.8%. In July 2018, the People's Bank of China made it clear in the supporting rules of the *Guiding Opinions* that indicating products can invest in non-standardized debt assets, and previous products issued by financial institutions can be invested in new products without increasing the total scale. This will be helpful to ease the tightening of non-standard financing channels, and make up for the financing gap caused by the short-term failure of off-balance sheet assets to return to the balance sheet. Although the supporting rules have relaxed the pace of non-standard investment and compression, the market's risk awareness of private equity products has changed, making the issuance of long-term wealth management products difficult, and maturity matching is still a major constraint.

Thirdly, it is intensified for the homogeneity of bank wealth management products based on the previous rigid payment mechanism. And the level of income has become the

main or even the only concern of investors. The *Guiding Opinions* requires that asset management products must break the "rigid payment" and implement net value management. Once these products are largely withdrawn from the market, investors who choose bank wealth management are likely to transfer to other management institutions with better investment and research capabilities. In the context of intensified competition in the asset management industry, the private equity market will have to pay attention to investors' demand analysis and develop different types of wealth management products that match the needs of investors based on their different preferences.

Fourthly, the enterprises can sell their equity through the market to complete their exit, and obtain the legal rights and benefits from investments. This is inseparable from the support of the government. The government must support the construction of a multi-level and diversified financial investment system, thus to provide enterprises with better exit channels and exit mechanisms, and to diversify the risks of enterprises' equity investment development. Only with a good exit mechanism, enterprises can successfully recover the initial capital investment. Such a virtuous circle can enable enterprises to realize better development.

Fifthly, the *Guiding Opinions* prohibits the mismatch and nesting of bank wealth management funds, which directly cut off traditional bank fundraising channels. It provides new requests for many private equity funds to raise. **Firstly**, it is impossible for the financial institutions to provide other institutions' asset management products with channel services that circumvent investment scope, leverage constraints and other regulatory requirements. **Secondly**, investment managers must deepen the industry to raise by integrating the industry, taking a professional development path, and combining the advantages of various industries. **Thirdly**, the development of private equity needs policy protection and deepening reforms, especially financial system reforms and interest rate marketization. It is believed that the implementation of the *Guiding Opinions* will affect the management costs of fundraising in the short term, but in the long run, it will gradually reform the investment philosophy and behavior habits of high net worth clients. It will also promote the continued, healthy and orderly progress of the industry.

Sixthly, the *Guiding Opinions* classifies asset management products from two dimensions of fundraising and investment in accordance with the unified regulatory standards for product types, and unify requirements for investment scope, leverage constraints, and information disclosure. It determines the principle of matching products and

investors, strengthens investor suitability management, and strengthens the financial institutions' due diligence and information disclosure obligations. It is clarified that the asset management business must not promise to realize guaranteed return, breaking the rigid payment. And the *Guiding Opinions* strictly enforces non-standard debt asset investment requirements, prohibits fund pooling, and prevents shadow banking risks and liquidity risks. It is valuable for the measures above to eliminate multiple levels of nesting, inhibit channel business, strengthen supervision and coordination, strengthen macro-prudential management and functional supervision.

5. Conclusion

5.1. Our Discussion

The *Guiding Opinions* has a significant impact on the market of private equity funds, and guides the direction of development of asset management industry.

Firstly, it clarifies the investment period of private equity funds, which is written in the Article 15 "In order to reduce the risk of maturity mismatch, financial institutions should strengthen the duration management of asset management products, and the minimum period of closed asset management products should not be less than 90 days". If an asset management product invests directly or indirectly in the equity of an unlisted enterprise and its beneficiary rights, it shall be a closed-end asset management product, and specifies the exit arrangements for the equity and beneficiary rights. And the withdrawal date shall not be later than the expiration date of the closed asset management product. These measures make it clear that private equity funds can only conduct closed-end asset management operations from the aspects of the investment term and exit mechanism of funds, which avoids the generation of capital pool business.

Secondly, it clarifies the requirements for qualified investors of private equity funds. Compared with the "*Interim Measures for the Supervision and Management of Private Equity Investment Funds*", the *Guiding Opinions* have significantly improved the investor standards for private equity funds. On the one hand, this new policy stipulates that "private equity products are issued to qualified investors through non-public means", which regards the qualified investors as the audience of private equity funds products. On the other hand, Article 5 of the *Guiding Opinions* immediately provides the criteria for qualified investors, "Qualified investors refer to natural and legal persons who have the corresponding risk identification and risk-taking capabilities, invest in a single asset management product of not less than a certain amount". These qualified investors need to meet the following conditions:

(1) The family financial assets shall not be less than 5 million yuan, or the investor has more than two years of investment experience, and his annual income in the past three years shall not be less than 400,000 yuan; (2) A corporate unit whose net assets are not less than 10 million yuan at the end of last year. (3) Other circumstances regarded as a qualified investor by financial supervision and administration department. Qualified investors need to invest in single fixed income products at least 300,000 yuan, in single mixed products at least RMB 400,000 yuan, and in single equity products or single commodities and financial derivative products at least one million yuan. For qualified investors who invest in multiple different products at the same time, the investment amount shall be implemented under the highest standard. Either the financial assets are increased from 3 million to 500 million, or the amount is diversified for different investment products, both of them raise the threshold of qualified investors, then directly reduce the number of qualified investors. It also means that private equity products have to comply with the same conditions of investors' qualification and subscription standards, which is conducive to promoting the regulation of private equity fundraising and intensifying the competitiveness of the private equity industry.

Thirdly, it eliminates multiple layers of nesting and strengthens agency cooperation. When an institution plans to invest in other asset management products, the invested asset management products shall not be reinvested in any other asset management products other than public offering funds. If an asset management product invests in a private equity fund and the private equity fund is regarded as a layered structure, then the private equity fund must directly invest in the final underlying asset and cannot nest other products.

Although the bank's asset management products cannot directly invest in private equity products, they are still feasible for the trust products or private equity asset management plans of private equity fund managers as investment advisers. At present, more and more managers are applying for public fund licenses to directly issue public fund products. The core purpose of the *Guiding Opinions* is to break the multi-layer nesting and prohibit the fund pool model. Now the private equity institutions can only cooperate with Banks' wealth management products in the mode of investment and consulting.

For the sake of compliance and risk control, the former cases, that banks invest in private funds, mostly adopt the multi-layer nested mode, and the nested structure often reaches more than three layers with its capital pool structure. At present, according to the new regulations on asset management, the total nested structure cannot exceed two layers. In the future, the banks' investments in private equity funds must also be adjusted to two

levels, with the investment advisory model or the fundraising layer directly investing in contract-type private equity structures.

Besides, the private equity institutions are strengthening cooperation with the banks. And those well-known private equity institutions occupy the mainstream resources, while some small institutions cannot find resources and will be more difficult to survive in the future. We argue that consignment sales should be the core way for private equity to raise funds, and financial institutions and tripartite institutions have strong sales ability. Each private equity fund still needs to build a good team, which studies the investment, risk control, and strengthens their influence to prepare for connecting sales resources.

Fourthly, it clarifies to prohibit the fund pool business. The *Guiding Opinions* clearly states, "Financial institutions should ensure that each fund is managed, and accounted individually, and cannot carry out or participate in capital pool business which has the features of rolling issuance, collective operation, and separate pricing." The fund pool wealth management products usually adopt the operating mode of rolling sales, collective operation, maturity mismatch, and separation pricing. It will lead to multiple financial products of different types and periods corresponding to multiple assets at the same time, and it is impossible to make separate accounting and standardized management for each financial product. The capital pool of the private fund produces a series of problems such as payment risk, default liability, and so on. The *Guiding Opinions* provides the measures such as the prohibition provisions of the capital pool business, the limitation of maturity mismatches, and the provisions of investment duration to reduce those unnecessary financial risks.

Fifthly, it clarifies the custody requirements for private equity funds. The *Guiding Opinions* clearly states, "After publishing policy, the assets of products issued by financial institutions should be independently managed by a third-party institution with custody qualification".

Sixthly, it clarifies the **leverage requirements of private equity funds**. The *Guiding Opinions* clearly states, "the total assets of each private equity product shall not exceed 200% of the product's net assets, the value of the total assets of a single product shall be based on the principle of penetration to calculate the total assets of the invested asset management products". Once private equity and venture capital funds are included in the debt ratio (leverage ratio) regulation, it means that the leverage ratio limit of private equity funds will be 1 in the future. In other words, the maximum of total assets is "liabilities is equal to net assets".

5.2. Practical Implications

Our results have the following three notable practical implications.

First, we think the amount of bank financing will increase, and the number of asset management of stockbroker will be reduced. According to the Annual Report on Wealth Management Services of Commercial Banks in Shanghai (2019) released by the Shanghai Banking and Insurance Regulatory Commission, the size of the capital management market in 2019 remained at 92 trillion yuan. Among them, the special accounts of fund subsidiaries and the capital management of stockbrokers decreased by 20.19% and 18.94% respectively in the whole year. While the public offering funds and fund company accounts invested in standardized assets grew rapidly, with annual growth of 13.35% and 11.92% respectively. The bank wealth management services grew 6.17% to 23.4 trillion yuan, accounting for a quarter of all types of asset management services. Under the restrictive requirements of new policy on investment in non-standardized creditor's rights assets, the banks will continuously increase the proportion of investment in standardized assets such as bonds and stocks, and strengthen the construction of standardized asset investment and research system.

Second, we believe that capital-guaranteed wealth management products are significantly reduced, the risk management concept needs to be changed. Following the requirements of the *Guiding Opinions*, capital-guaranteed wealth management products will gradually withdraw from the market by the end of 2020. Net wealth management products become the future development direction of bank finance. The bank financing market faces multiple challenges: it is getting stricter to identify standardized debt assets; the cash management products will be in line with money funds; the wealth management subsidiaries will gradually enter the market. After breaking rigid payment, there have more challenges to be faced: the adjustment of the positioning, management model, and management system of risk management; wealth management subsidiaries separated from the parent bank need to establish independent comprehensive risk management systems covering pre-investment, mid-investment, and post-investment. Therefore, in order to adapt to the new regulatory situation, the risk management concept must be changed under the background of breaking rigid payment, standardizing the mismatch of the deadline, abolishing multi-layer nesting, and strengthening single product management.

Third, it is difficult for private equity funds to raise money in the short term. Actually, since the release of the draft of the *Guiding Opinions* in November 2017, the high growth momentum of private equity funds has begun to converge, and the growth rate of raised

funds has dropped significantly. Financial institutions cannot provide help for other financial institutions' asset management products with channel services to evade regulatory requirements such as investment scope and leverage constraints. The new regulation stresses that investors are not allowed to invest in asset-management products with non-self-owned funds raised, such as loans or bonds.

According to the above regulations, private equity fund managers need to pay attention to the confirmation of the source of investors' funds, especially for newly established entities with low paid-in capital, to ensure that they are not the main body of investment and establishment with loan funds. The above new rules have a greater impact on the capital side than the asset side, such as de-pooling, de-channeling, eliminating multi-layer nesting, etc., which will have an impact on the source of funds. Before the introduction of the ***Guiding Opinions***, private equity funds have a large market size with capital pool business. After the release of this policy, these asset management products will be gradually cleaned up. Thus, the asset management products that have promised to invest in equity investment funds may not be able to complete subsequent capital contributions. And the fund's investment operations have been greatly affected. These situations have also increased the difficulty of private equity fundraising.

However, in the long run, the new regulation for asset management will benefit the private equity industry. The management institutions of private equity funds are regarded as non-licensed financial institutions in the past, but the new policy provides private equity with legal status. It is that private equity funds can be used as non-licensed institutions to accept investments from banks, securities companies, and other financial institutions, which brings greater opportunities for private equity funds. The ***Guiding Opinions*** has also brought other impacts on the private equity industry, such as net worth, breaking the exchange rate, etc. At the same time, it has also increased the requirements for appropriateness, suppressed high leverage, and prevented multiple nesting. These measures allow the asset management industry, especially private equity funds, to engage in source-based investment rather than channel work.

Fourth, the new regulation will have a profound impact on the product design and transaction structure of private equity funds. The ***Guiding Opinions*** stipulates that it is necessary to set a unified standard regulation for solving some issues such as multiple nesting of asset management business, unclear leverage, serious arbitrage, frequent speculation, etc. While adhering to financial innovation to seek advantages and avoid harm, the financial market will be divided into two "Leave room for development. And the

Financial institutions cannot provide access services for asset management products of other financial institutions to circumvent the regulatory requirements such as investment scope and leverage constraints, etc. This means that some classical models that are common in the market will be banned, including the "bank wealth management + private equity funds", "insurance asset management + private equity funds", "non-financial institutions + private equity funds", etc. It is conceivable that future mergers and acquisitions funds will be stagnant for a large number of listed companies conducting leveraged buyouts due to the elimination of multiple layers of nesting. And along with this new policy, the original transaction structure of the private equity industry will face major adjustments.

Fifth, the new regulation has penetrated the underlying assets downwards to prohibit the operation of private equity fund pools. The *Guiding Opinions* clearly states that "for multi-layered nested asset management products, we can identify the product's final investor and the product's underlying assets (except for public equity investment funds) through penetration supervision". Financial institutions should strengthen the duration management of asset management products, and the period of closed asset management products should not be less than 90 days, thus to allocate risks. If asset management products directly or indirectly invest in non-standardized debt assets, the termination date of non-standardized debt assets should later than the expiration date of closed asset management products or the last open day of open asset management products.

Sixth, the new policy brings development opportunities for relevant industry funds. The *Guiding Opinions* states that financial institutions are encouraged to raise funds through the issuance of asset management products to the areas that meet the requirements of national strategies and industrial policies and support the requirements of national supply-side structural reform policies. Financial institutions are also encouraged to raise funds by issuing asset management products to support economic structural transformation, support market-oriented and rule-of-law debt-to-equity swaps, and reduce corporate leverage.

We believe that private equity will shift from the "multi-layer nesting shadow banking model, and the investment model based on earning arbitrage price differentials in the primary and secondary markets" to the "investment and financing model of cutting off the channel, value investment, and industry-financed integration" (Chen & Zhai, 2018; Wu, 2018; Yu, 2019). The arbitrage model will gradually die out, and value investment will be the development direction of the private equity fund market. By studying the value of enterprises, professional investors can obtain excess returns from the private equity market. The private

equity market based on value investment can realize better integration of the real economy and the financial market, thus bringing positive effects to the overall economic development of our country.

5.3. Some Advice

Firstly, the private equity market needs to pursue sustainable development in an uncertain environment through deepening reforms. In recent two years, in order to hedge against the impact of the epidemic on the economy, countries all over the world are taking positive measures to stimulate economic development. In China, it is believed that the monetary environment will maintain low interest rates and low yields for a long period, and asset quality will further deteriorate. The low-yield environment is the biggest challenge faced by investors, which has brought great pressure to the transformation and reconstruction of the asset management industry, such as the low yields for bond assets, increased volatility for stock assets, fall below the net value for products, etc. In this regard, We should adhere to the basic concept of "risk return" matching of all kinds of assets, continue to implement active management, resolutely break the rigid stock exchange, strengthen the suitability management of capital investors, further improve the asset allocation ability of investment, and ensure the professional service level.

The second is to promote structural reforms of the financial system. Currently, our financial system is facing several structural imbalances. Among them, the imbalance of the financing structure is mainly manifested in the high proportion of indirect financing and low proportion of direct financing. Indirect finance is where borrowers borrow funds from the financial market through indirect means, such as through a financial intermediary. This is different from direct financing where there is a direct connection to the financial markets as indicated by the borrower issuing securities directly on the market. In China, direct financing accounted for less than one-third of the stock of social financing at the end of 2019, In direct financing, bond financing accounted for a high proportion. While the equity financing had a low proportion, and the balance of stock financing of non-financial companies only accounts for about 3% of the stock of social financing. Additionally, the term structure of funds is also seriously unbalanced. And more household savings are transformed into short-term funds in the financial system. The capital flows from residents to the financial market (long to short) and then from the financial market to enterprises (short to long), resulting in two maturity mismatches. To change the structural imbalance, it is necessary to play the central role of the capital market and promote more efficient capital formation and resource

allocation. Various asset management institutions will act as institutional investors similar with insurance companies and social security funds in the capital market. They can focus on raising and managing stable funds to carry out equity investment, long-term investment and value investment, and promote fundamental changes in the financing structure.

The third is to integrate into the higher-level financial industry to open to the outside world. In the past three years, the financial industry has continuously opened up to the outside world. Foreign institutions have already controlled several domestic securities companies and insurance companies. And many global asset management institutions intend to establish wholly-owned public fund companies in China or participate in the establishment of wealth management subsidiaries of commercial banks. Since last year, some asset management institutions have decided to settle in Shanghai first due to the Shanghai International Financial Center is the global asset management center. However, the entry of foreign-funded asset management institutions into China not only faces the adaptation to China's policies and market environment, but also brings cooperation and competition. This will force the reform and transformation of domestic asset management institutions and promote the integration of industry rules with mature international standards, thus to improve the global competitiveness of state-owned assets management institutions.

The fourth is to improve the regulatory adaptability of the asset management industry. In the past, the centralized management of chaos in the industry is a crucial need to prevent and resolve major financial risks. While the supervision should be normalized in the future. It follows the industry characteristics and market laws through improving the consistency of supervision, and concentrating in information disclosure and fraud prevention, promoting the separate supervision system to provide public products that meet the needs of asset management industry functional supervision and behavior supervision.

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Mr. Song has been engaged in equity investment for more than 20 years. He has successively served in China Everbright Securities, Guosen Securities, as director and chief financial officer of Huatai Securities, and as General Manager, Vice President, Chief Financial Officer of Century Securities Investment Bank. Mr. Song has rich investment experience and successfully invests in many large private enterprises, including Taikang Insurance Group, Qiaqia Food, Jiajia Food, Juranzhijia, Laiyifen, Meituan Dianping, Meitu, Didi Travel, Origen, Dongpeng Beverage, Aimer underwear, fellow chicken, Babi Foods, New Pearl Ceramics, Tiny Tea, Wenheyong Catering, Xiangcha Group, Carpoli, Boloni, and Yezhifeng Decoration, etc. He leads and coordinates the financing of these projects, and the cumulative asset management scale of his career has exceeded 200 billion yuan.

Besides, the size of cumulative asset management of Harvest Capital (originally Jiahua Weiye Capital), which he founded in 2007, has exceeded 18 billion yuan. As an investor and 'lifestyle Guru' who has kept to the consumer sector for 12 years at Harvest Capital, Song has set down firm roots in China's consumer industry. He has a 'slow and steady wins the race' mentality, and consistent focus on 'big consumption' and the modern services industry. Mr. Song is successively rated as "Investment Industry List—Top 5 Best Industry Investors" and "Forbes China 2019 Best Venture Capital Investors List" by China Investment Corporation.

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