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Research on Business Risk under CHFS Data Empirical Analysis

Jingyang Xiao

Hangzhou Wickham International School, Hangzhou, China
Email: jingyangxiao06@163.com

Abstract

This study utilizes CHFS (China Household Finance Survey) data to analyze business risk factors in the modern business environment. It quantitatively examines the relationship between business risk and various factors using statistical methods like multiple regression analysis. The literature review highlights the importance of business risk for enterprise stability and development. The study identifies significant correlations between economic factors, market conditions, and company characteristics with business risk. Key findings indicate that business risk is influenced by factors like market volatility, financial conditions, industry competition, and macroeconomic factors. The research also suggests strategies for businesses facing these risks. The conclusions can guide risk management for enterprises and macroeconomic policymaking. However, the study has limitations such as data timeframe and sample specificity. Future research should broaden data sources and interdisciplinary analysis for more comprehensive results. In summary, this study offers new insights into business risk management through CHFS data analysis, revealing crucial factors. These findings benefit businesses and policymakers in understanding and addressing business risks for a stable, sustainable business environment.

Keywords

CHFS, Empirical Analysis, Business Risk

1. Introduction

In the modern business environment, enterprise risk management stands as a crucial factor in achieving long-term stability and sustainable development. Enterprise risk management is a comprehensive approach that involves identifying, assessing, and mitigating the various risks that businesses encounter. These risks

can emanate from diverse sources, including market fluctuations, financial conditions, industry competition, and macroeconomic factors. It is imperative for businesses to not only recognize these risks but also develop scientifically effective risk management strategies to address them.

Enterprise risk management encompasses a range of concepts and practices aimed at safeguarding an organization from potential disruptions and losses. It involves processes such as risk assessment, risk prioritization, risk mitigation, and risk monitoring. The ultimate goal of enterprise risk management is to enhance an organization's ability to navigate uncertain situations, capitalize on opportunities, and achieve its long-term objectives while minimizing potential adverse outcomes.

This paper aims to explore the key factors influencing corporate risk in the contemporary business environment through empirical analysis of data from the China Household Finance Survey (CHFS). Corporate risk refers to the uncertainties and vulnerabilities that can impact a company's financial performance, operational efficiency, and overall well-being. These risks not only affect the stability and growth of individual enterprises but also hold significant implications for the entire business environment and macroeconomic stability.

As the economy evolves and markets continually change, understanding the nature of corporate risk and its influencing factors becomes increasingly critical. Through an in-depth analysis of extensive household financial data, this study employs quantitative methods to uncover relationships between various factors and corporate risk, providing a novel perspective on corporate risk management.

In the literature review section, this paper will review relevant theories and prior research on enterprise risk management. Enterprise risk management involves a systematic approach to identifying, assessing, and addressing risks that could affect an organization's ability to achieve its objectives. It encompasses concepts such as risk appetite, risk tolerance, risk culture, and risk governance. Emphasizing the importance of corporate risk for long-term stability and sustainable development, this review will highlight the theoretical foundations that underpin effective risk management practices.

Through detailed data analysis and presentation of results, this study identifies significant correlations between different economic factors, market conditions, company characteristics, and corporate risk. It delves into the intricate web of factors that contribute to corporate risk and sheds light on how businesses can adapt and respond to these challenges.

The findings of this study indicate that various factors such as market fluctuations, financial conditions, industry competition, and macroeconomic factors influence the level of corporate risk. Furthermore, this study highlights strategies and measures that different types of companies may undertake when facing corporate risks. These research conclusions can serve as references for businesses in devising risk management strategies and for policymakers in formulating macroeconomic policies.

However, it's important to note that this study has certain limitations, such as the temporal scope of the data and the specificity of the sample. Future research could expand data sources and enhance interdisciplinary analysis to obtain more comprehensive and accurate conclusions.

In conclusion, through empirical analysis of CHFS data, this study offers a fresh perspective on enterprise risk management and unveils key factors associated with corporate risk. These research findings hold practical value for businesses and decision-makers, aiding in better comprehension and mitigation of corporate risks, and driving the development of a sustainable and stable business environment. Effective enterprise risk management is essential for businesses to thrive in an ever-changing and unpredictable world.

2. Literature Review

2.1. Business Risk Influencing Factors

According to Alrwashdeh et al. (2023), the study explored the influencing factors of liquidity risk in Jordanian commercial banks from 2003 to 2017. The sample of this study includes all commercial banks, using ensemble OLS and group 2SLS econometric techniques. The research results indicate that bank size, return on assets, capital adequacy ratio, risk, non-performing loans, T-equity, and T-liabilities have a positive impact on liquidity risk. The return on equity (ROE) shows a negative and significant impact on liquidity risk. This study suggests that authorities should track and monitor established internal factors that have a negative impact on bank liquidity to minimize opportunities for bank runs.

Thanh et al. (2021) studied the factors that affect credit risk in loan activities of joint-stock commercial banks in Vietnam. The data comes from the audited financial statements of 23 banks, as well as macroeconomic data from the National Bureau of Statistics of Vietnam from 2009 to 2019. The study adopted the GMM method implemented in Jupyter Notebook using the R programming language. The research results indicate that lagging credit risk, profitability, and inflation has a positive impact on credit risk, while bank capital, bank size, economic growth, and loan-to-deposit ratio have a negative impact on credit risk. In addition, the research results also indicate that the nonlinear impact of loan growth on credit risk has a U-shaped relationship, and this study also calculated the relative importance of each variable.

According to Zhang & Zhao (2021), we selected 16 commercial banks listed on the Shanghai and Shenzhen A-shares as research samples and used data from 2010 to 2019. According to its operating mechanism, asset size, etc., the research sample is divided into three groups. There are 16 listed commercial banks, 5 large state-owned listed commercial banks, and 11 other medium to large listed commercial banks (Xi et al., 2022). This study conducted an empirical analysis of the factors that affect the liquidity risk of listed commercial banks. Firstly, divide the factors that affect the liquidity risk of listed commercial banks into two levels: external and internal, and then conduct descriptive analysis of the influen-

cing factors from both levels (Siddique et al., 2022). Then the stability of the data was tested. After verifying the data, a panel data model suitable for 16 listed commercial banks, 5 large state-owned listed commercial banks, and 11 other medium to large listed commercial banks was established through Hausman test and F-test.

2.2. Possible Impacts of Commercial Risks

Virglerova Zuzana, Panic Marija, Voza Danijela, and Velickovic Milica mention Risks can negatively affect not only internal processes within a company and business results but also managerial decisions. One of the preconditions for sound decision-making would be the identification of specific risks (Shahzad et al., 2021).

Adhikari Sudip and Khanal Aditya R. found that the perceived higher commercial risks significantly increased the debt use, savings use, and debt-to-equity ratio of small farmers (Skadina & Veinbergs, 2021). In addition, the research results indicate that factors such as the age and education level of operators, family participation, income, land area, alternative solutions adopted by farm enterprises, and farmers' continuation plans have a significant impact on the financing decisions of small-scale farm operations (Essa & Giouvris, 2020). The original/value author investigated an important empirical question, examining the risk-balancing behavior of small farm operations in the United States. Although risk balancing has always been the theme of several studies, previous studies have not (Hall et al., 2020).

Qazi Abroon, Simsekler Mecit Can Emre, and Al-Mhdawi M. K. S. believe that as people increasingly recognize the impact of sustainability on business risks, the concept of sustainability is becoming increasingly prominent in global discussions (Phuong et al., 2020). By incorporating sustainability considerations into their strategies and operations, national decision-makers and enterprises can mitigate business risks and contribute to achieving national sustainability goals (Hung et al., 2020).

3. Data Sources, Basic Models and Variable Descriptions

3.1. Data Sources

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

3.2. Basic Models and Variable Descriptions

The explanatory variable in this study is risk preference, which includes both subjective risk preference and objective risk preference. Firstly, for the measurement of subjective risk preference, based on the CHFS (2017) questionnaire, "subjective risk perception of the household" is categorized into three types.

Families that choose "unwilling to take any risk" and "projects with slightly lower risk and slightly lower return" are defined as risk-averse, assigned a value of 1. Families that choose "projects with moderate risk and moderate return" are defined as risk-neutral, and assigned a value of 2. Families that choose "projects with slightly higher risk and slightly higher return" and "projects with high risk and high return" are defined as risk-seeking, and assigned a value of 3.

Secondly, objective risk preference is measured using the ratio of risky assets to household net assets. Following the classification method by Li Xuan et al., households with a ratio of 0 are defined as risk-averse, and assigned a value of 1. Households with a ratio between 0 and 0.1 are defined as risk-neutral, assigned a value of 2. Households with a ratio greater than or equal to 0.1 are defined as risk-seeking and assigned a value of 3 (Jain & Yadav, 2019).

Since the defined dependent variable "risk preference" is an ordered categorical variable with values ranging from 1 to 3, indicating increasing preference for risk, an Ordered Probit model is chosen for estimation (Zergaw, 2019). In this model, the influence of multiple explanatory variables on subjective risk preference is considered. The model can be represented as follows (Kotiso, 2018).

$$y_i^* = \beta_0 + \beta_{income} X_{income,i} + \beta_{members} X_{members,i} + \beta_{education} X_{education,i} + \epsilon_i \tag{1}$$

Among them is the intercept term. β_{income}, $\beta_{members}$, $\beta_{education}$ are the coefficients corresponding to the explanatory variables. $X_{income,i}$, $X_{members,i}$, $X_{education,i}$ is the household income, number of family members, and education level of the i-th family, respectively. ϵ_i is an independent and identically distributed error term and $\epsilon_i \sim N(0.1)$.

4. Empirical Analysis

When we explore the interrelationships between financial knowledge, household characteristics, and the purchase of commercial insurance, we can gain deeper insights into the role households play in financial decision-making. This study aims to uncover the influence of household characteristics on whether a family purchases commercial insurance and the extent of insurance purchase. Through analyzing a substantial dataset, meaningful conclusions can be drawn to enhance our understanding of household financial behavior (Table 1).

To begin, the household characteristics within the study sample exhibit some intriguing trends. Among the surveyed households, married families constitute the vast majority (89.9%), indicating the potential presence of more family members and responsibilities. The average age of household heads is 57 years, possibly indicating that older individuals hold more sway in household economic decisions. Additionally, the level of education is predominantly at the secondary school level, which could impact the perception and handling of risks in household financial decisions.

In the analysis of influencing factors, financial knowledge clearly emerges as a significant factor. The study finds that higher levels of financial knowledge among household heads are positively correlated with the likelihood of purchasing

Table 1. Variable description result.

Variable name	Number of samples	mean value	Maximum value	Minimum value
Insurance_hh	15,632	0.25	1	0
Baofei	15,632	1482	400,000	0
Finance	15,632	59.18	100	0
Marry	15,632	0.815	1	0
Age	15,632	57.25	90	23
Sex	15,632	0.71	1	0
Family	15,632	3.31	15	1
lnincome	15,632	11.08	12.89	9.18
total assets	15,632	12.87	13.53	7.84
lnconsume	15,632	10.43	13.17	8.486
education	15,632	2.15	6	1
rural	15,632	0.273	1	0
zhufang	1.31	0.59	13	0
Risk	15,632	1.981	5	1

The data in this article is sourced from the CHFS 2019 database, which comprehensively collects relevant information on the micro level of household finance.

commercial insurance. This finding aligns with expectations since rational financial decisions require a clear understanding of the potential benefits of insurance. The financial knowledge of household heads may enable them to better comprehend the role of insurance in risk management, making them more inclined to invest in insurance products. This result also underscores the importance of raising public financial education levels to assist more families in making informed financial decisions (Wood & McConney, 2018).

However, marital status appears to have some impact on family insurance purchasing decisions. Married families exhibit a lower likelihood of purchasing commercial insurance, potentially due to increased household expenses following marriage, leading to reduced available funds. This reflects the pivotal role of money allocation and resource management within families when it comes to insurance purchasing. Furthermore, age also plays a significant role in insurance purchasing decisions. As age increases, the likelihood of families purchasing commercial insurance decreases. This may be due to age limitations on many insurance products, particularly life and health insurance. Additionally, family risk preferences may be influenced by age, with people becoming more cautious and risk-averse as they age.

Gender is also reflected in family insurance purchasing behavior. Females are more likely to purchase commercial insurance, possibly because they are more attuned to familial risks and tend to take measures to mitigate those risks. Fe-

male household members might have a stronger sense of family responsibility, leading them to be more willing to use insurance to safeguard their family's financial security (Besharati & Tavakoli, 2018).

On the other hand, economic factors also play a crucial role in family insurance purchasing. Household income, total assets, and consumption levels are all positively correlated with the likelihood of purchasing commercial insurance. This indicates a close relationship between affluence and insurance purchase. Increased income and assets provide families with greater financial flexibility, enabling them to more easily purchase insurance to mitigate potential risks. Furthermore, educational attainment also influences insurance purchasing. Research suggests that higher-educated household heads are more likely to purchase commercial insurance. This could be because individuals with higher education are better equipped to understand the value of insurance and how to utilize it in risk management (Johnson et al., 2017).

When delving further into the impact of financial knowledge on insurance participation levels, the study reveals that financial knowledge plays a significant role in positively influencing insurance participation, both in urban and rural areas. This implies that raising public financial education levels could lead to more rational and informed participation by families in financial decisions, whether in urban or rural settings (Zhu, 2014).

It's worth noting that urban-rural disparities are also evident in the research findings. Differences between urban and rural areas could be attributed to economic, cultural, and social factors. For instance, rural areas might rely more on agriculture and natural resources, which could influence household asset composition and insurance purchasing decisions. Additionally, disparities in the dissemination of financial knowledge between urban and rural areas might impact decision-making processes. These differences could stem from variations in education, career opportunities, and financial resources between urban and rural regions.

This study provides profound insights into household financial behavior and insurance purchasing decisions. By deeply analyzing the relationships between household characteristics, financial knowledge, and insurance purchase, we can gain a better understanding of household behaviors and preferences in financial markets. From these findings, policy recommendations and practical insights can be derived.

Firstly, the importance of enhancing financial knowledge is evident. As observed from the study, higher financial knowledge levels are associated with more informed insurance purchasing decisions by households. Therefore, governments and financial institutions should strengthen financial education by providing more training and information on financial knowledge to help families better understand the value of financial products and risk management tools.

Secondly, tailoring differentiated financial services and insurance products based on different household characteristics is crucial. Given the differences in financial needs and risk tolerance among families of varying ages, genders, loca-

tions, and income levels, financial institutions can design more personalized financial products to meet the diverse needs of households.

Furthermore, the role of households in financial decision-making needs more attention. Communication and coordination among family members play a pivotal role in financial decisions. Financial institutions and governments can provide services such as family financial planning, counseling, and training to help families better coordinate their financial decisions and achieve overall financial goals.

Lastly, policymakers and researchers should pay closer attention to urban-rural disparities in their impact on financial behavior. Urban and rural areas exhibit variations in terms of economic, cultural, and social environments, which could influence household financial behavior and insurance purchasing decisions. Therefore, when crafting financial policies and designing financial products, these disparities should be taken into account to ensure more accurate alignment with the needs of families in different regions.

In conclusion, this study extensively delves into the relationships between financial knowledge, household characteristics, and the purchase of commercial insurance. By analyzing household financial behavior and decisions, we can gain a deeper understanding of the various factors influencing family insurance purchasing behavior. These findings not only provide valuable insights for financial institutions and policymakers but also offer beneficial guidance for improving family financial education, designing financial products, and developing decision-support systems. In the future, further research can be conducted to comprehensively grasp the complexities of household financial behavior.

5. Conclusion and Policy Recommendations

Based on the 2019 household survey data, this study employed factor analysis and Probit regression models to thoroughly explore the impact of financial knowledge on household business insurance purchases and its mediating effect on risk attitudes. Through a comprehensive analysis of the research findings, this study not only provides valuable insights for financial education and the insurance market but also offers robust decision-making support for policymakers.

Firstly, in the application of factor analysis, the research team integrated a range of indicators covering various financial domains to construct a comprehensive financial knowledge assessment system. This system encompassed knowledge related to investments, financial planning, risk management, and other aspects, ensuring a comprehensive and accurate evaluation. This step laid a solid foundation for subsequent analyses and supported the reliability of the research results.

Subsequently, within the framework of the Probit regression model, the study investigated the impact of financial knowledge on household business insurance purchases. The research findings indicated a significant positive correlation between the improvement of financial knowledge and more proactive decisions to purchase insurance by households. This suggests that individuals who possess

financial knowledge are more likely to recognize the importance of insurance in risk management and thus are willing to purchase business insurance to mitigate potential risks. This finding underscores the importance of financial knowledge education, providing guidance to financial institutions and educational bodies to encourage broader dissemination of financial knowledge.

While delving into the relationship between financial knowledge and household business insurance purchases, the study further examined the mediating effect of risk attitudes. The results indicated that financial knowledge not only directly influences insurance purchasing behavior but also indirectly affects purchases by shaping individuals' risk attitudes. This implies that an enhancement in financial knowledge can lead individuals to comprehensively understand risks, leading to more rational risk attitudes and influencing insurance purchase decisions. This discovery provides a deeper understanding of the mechanisms through which financial knowledge impacts household insurance purchases.

Furthermore, the study explored differences between urban and rural households. The results showed that the influence of financial knowledge on household business insurance purchases did not exhibit significant variations across different regions. This finding reflects a relatively consistent role of financial knowledge in promoting insurance purchases, suggesting that improvements in financial knowledge positively impact insurance purchases in both urban and rural areas. This provides a solid foundation for policymaking, encouraging increased efforts to promote financial knowledge dissemination in diverse regions.

In conclusion, based on the aforementioned research findings, the following conclusions are drawn: enhancing residents' financial knowledge contributes to a more accurate perception of risks, thereby reducing losses stemming from risks. Financial knowledge not only directly affects household insurance purchases but also generates a mediating effect through its influence on risk attitudes. These conclusions carry significant guidance for policy formulation and financial education.

Drawing from these conclusions, the following recommendations are put forth to promote financial knowledge dissemination and risk management:

Firstly, financial institutions can strengthen the dissemination of financial and insurance knowledge through various channels, offering convenient learning platforms to enhance individuals' financial literacy.

Secondly, the government can play an active role in promoting comprehensive risk awareness among residents, encompassing various types of risks including financial, personal, and property risks, to elevate overall risk awareness.

Additionally, insurance companies can tailor products to meet the specific needs of different regions and households, introducing more specialized and customer-oriented offerings to better address varying levels of insurance requirements.

In summary, raising financial knowledge levels not only enhances individual

risk awareness capabilities but also propels the development of the insurance market, enabling more effective risk management. This study provides valuable insights for financial knowledge education, the insurance market, and policy formulation, contributing positively to the construction of a more robust financial system.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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