PHBS 北京大学汇丰商学院 商界军校

Applied Microeconomics Proposal

China Economic Policy Uncertainty And Credit Spread
-- From "SDLU" Perspective

June 19, 2025

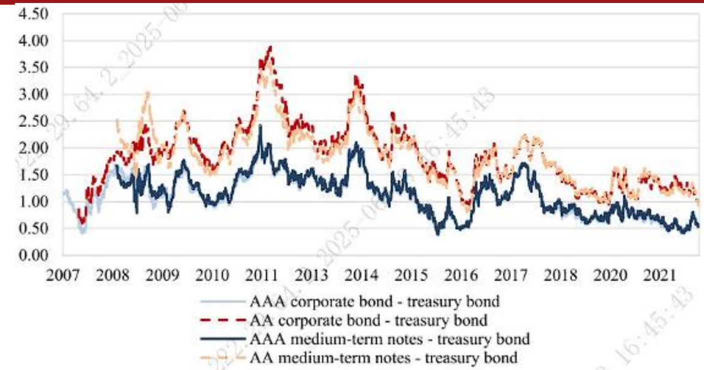
张之豪

Contents

Background & Contribution

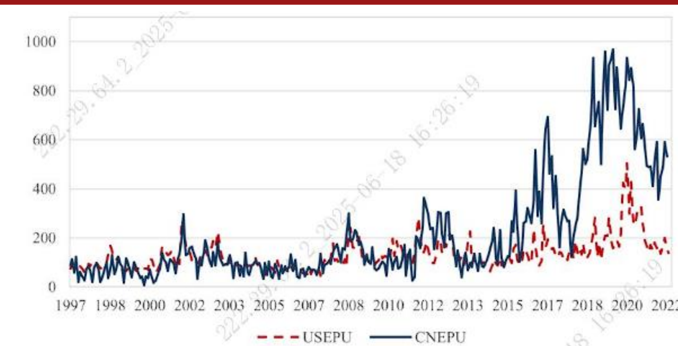
1 High Volatility of China Bond Market

- Strong fluctuation of credit spread
- Default of AAA corporate bond
- 11超日债，17华汽05，20永煤SCP003···
- With tightening financing constraints, Short Debt Long Use (SDLU) as a common phenomenon



2 Constant Turbulence of World Economy

- Process of economic integration
- Enhanced influence from geopolitics and trade frictions
- Impact from events like pandemic and trade war
- Domestic reform in finance field



Our Contribution

- Theoretical improvement of mechanism
- Practical reference for government policy maker
- Practical guidance for corporate manager

Lit Review

PHBS 北京大学汇丰商学院

1 Economic Policy Uncertainty (EPU)

- Policy changes are objective, and the impact of these changes on different entities varies from person to person (Bloom, 2014).
- Uncertainty is interpreted as the **subjective perception** of different decision-making subjects rather than an objective probability distribution (Nie et al. 2020).
- Baker et al (2013): "Those government policies that significantly affect the overall economic trend and business operations, especially the uncertainties that economic entities face regarding future directions and implementation intensity caused by the relevant policies"
- How to measure econometrically? **Economic volatility (Bloom, 2018) , Case study (Kelly et al. 2016), Frequency of certain terms in media (Baker et al. 2016)**

2 Credit Spread of Corporate Bond (BCS)

- Generally defined as **the difference between YTM and RFR**
- The risk-return in pricing refers to the compensation for expected losses and the premium return on risk assumed by bond investors when holding bonds (Chen & Li, 2014).
- Factors influencing credit spreads: Macro (interest rates, GDP); Micro (governance structure, ROE, size)(Longstaff & Schwartz, 1995; Yu, 2005)

3 Relationship between EPU & BCS

- **Consensus: The increase in EPU will raise BCS** (Baker, 2016).
- **Mechanism: Leverage, Management, Financing Constraints…**
- **Real option theory:** When enterprises are confronted with an uncertain market environment, the dynamic adjustment of the company's strategic decisions will bring value to real options, thereby transforming uncertainty into advantages.

Our Innovation Points

- Perspective Innovation： Measuring uncertainty **from a micro perspective (of firms)** rather than a macro one
- Mechanism Innovation： Starting **from a real phenomenon (SDLU)** to explore the micro mechanism

Methodology

1 Variable Definition: How to Measure Uncertainty?

- Explained Variable（BCS）
- Explaining Variable（FEPU): Draw from Nie et al. (2020)
  - Grab financial reports as the source text from Wind
  - Establish a term list (Uncertainty, economic policies etc.)
  - Establish an index
- Control Variables: Bond scale, Bond rating, Corporate size, ROE, etc
- Mediating Variable (SDLU): (Total short-term financing - Occupation of short-term operating assets)/(Net assets + Total long-term debt + Long-term equity financing)

$$BCS_{i,t} = Yield_{i,t} - Yield_{r,t}$$

$$FEPU_{j,t} = \sum_{s=1}^{S_{it}} \frac{n_s \times I_p(s)}{N}$$

2 Mechanism

- M refers to Mediating Variable
- Check the sign and significance level of FEPU coefficients
- Plug M into original regression

$$BCS_{i,t} = \beta_0 + \beta_1 FEPU_{j,t} + \beta_2 Controls + Firm + Year + \varepsilon_{i,t}$$

$$M_{j,t} = \varphi_0 + \varphi_1 FEPU_{j,t} + \varphi_2 Controls + Firm + Year + \varepsilon_{i,t}$$

$$BCS_{i,t} = \mu_0 + \mu_1 FEPU_{j,t} + \mu_2 M_{j,t} + \mu_3 Controls + Firm + Year + \varepsilon_{i,t}$$

3 Heterogeneity and Robustness Analysis

- Heterogeneity: Regional marketization level, bond liquidity
- Robustness: Substitution of explained and explaining variables, one-period lagging test, IV
- The average FEPU of other firms in the same province, the same year and the same industry is taken as IV

Expected Conclusion

1 Positive Correlation between EPU and BCS

- Policy changes → Increased degree of information asymmetry → Intensified agent problems → Increased default risk → Widened credit spreads

2 Mediating Effect of SDLU

- Policy uncertainty increases → (To prevent the intensification of financing constraints, such as banks adding financing restriction clauses) Corporates raise the level of long-term use of short-term bonds → The risk of liquidity crisis increases → The spread increases

References

- 陈超,李镕伊.债券融资成本与债券契约条款设计[J].金融研究,2014(01):44-57.
- 方明月,聂辉华. 企业数字化转型与经济政策不确定性感知[J].金融研究,2023(2):21-39.
- 聂辉华,阮睿,沈吉.企业不确定性感知、投资决策和金融资产配置[J].世界经济, 2020, 43(6): 77-98.
- 王朝阳,张雪兰,包慧娜.经济政策不确定性与企业资本结构动态调整及稳杠杆[J].中国工业经济,2018,(12):134-151.

- Baker S., Bloom N., Davis S. J. Measuring economic policy uncertainty[J]. Quarterly Journal of Economics, 2016, 131(4): 1593-1636.
- Baker, S., Bloom, N., & Davis, S.J., A measure of economic policy uncertainty for China. Work-in-Progress, University of Chicago, Chicago, 2013.
- Baker, Scott R., Bloom, Nicholas, Davis, Steven J.. Measuring economic policy uncertainty[J]. The Quarterly Journal of Economics,2016,131(4)
- Bloom N. Fluctuations in uncertainty[J]. Journal of Economic Perspectives, 2014, 28(2): 153-176.
- Bloom N, Floetotto M, Jaimovich N, et al. Really uncertain business cycles[J]. Econometrica, 2018, 86(3): 1031-1065.
- Kelly B. T., Pastor L., Veronesi P. The price of political uncertainty: theory and evidence from the option market[J]. Journal of Finance, 2016, 71(5): 2417-2480.
- Longstaff Francis A. Schwartz Eduardo S. A simple approach to valuing risky fixed and floating rate debt[J]. The Journal of Finance,1995,50(3)
- Yu J, Zhang B, Wu F, et al. Political uncertainty and dividend policy: evidence from international political crises [J].Social Science Electronic Publishing,2021

Applied Microeconomics Proposal

Thanks for Listening