

Investor Reactions to New Sovereign Obligations: Chinese Finance, Bond Markets & Creditor Composition

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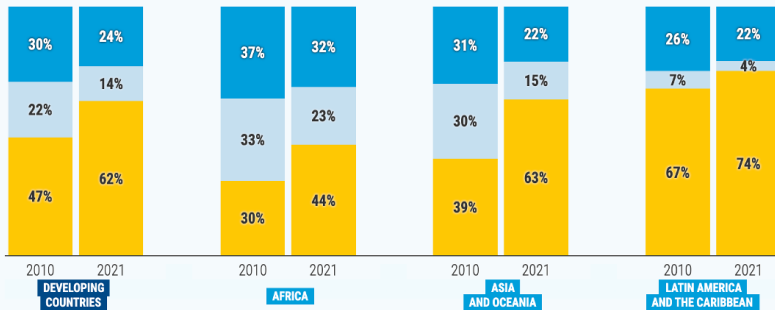
Harvard University

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Creditor Composition

Developing countries rely more on private creditors now, making credit more expensive and debt restructuring more complex

■ Private creditors ■ Bilateral creditors ■ Multilateral creditors



Note: External Public and Publicly Guaranteed (PPG) debt.

Source: UNCTAD secretariat. Calculations based on World Bank International Debt Report 2022

Creditor Composition and Sovereign Risk

- Developing country sovereigns often borrow from a range of creditors.
 - Bond markets, multilateral development banks, bilateral official creditors, commercial banks.
 - Greater access to financing and traded-offs across terms ([Bunte 2019](#), [Mosley & Rosendorff 2023](#), [Zeitz 2024](#))
 - Questions of seniority; comparability of treatment; and transparency; complicates debt restructuring.

Creditor Composition and Sovereign Risk

- Creditors consider not only the overall level of a sovereign's debt, but also its composition.
 - Creditors vary in their terms, conditions, & willingness to reschedule.
 - Our focus: responses of sovereign bond investors to (news of) finance from China (now the world's largest bilateral creditor).
- We assess these responses using credit rating agency documents as well as event study analyses of Chinese loan announcements.

Theory and Hypotheses

- How do bond market investors price sovereign risk?
 - Ability and willingness to pay.
 - Role of regime type, elections & partisanship.
 - Influence of global and regional factors
- We add another type of information: actions of other creditors.
 - Some overlap with **catalytic effect** of IMF loans (Kranke et al 2023, Shim 2022).
- What do new loans from China signal to investors?
 - Capacity to access other forms of sovereign credit

Theory and Hypotheses

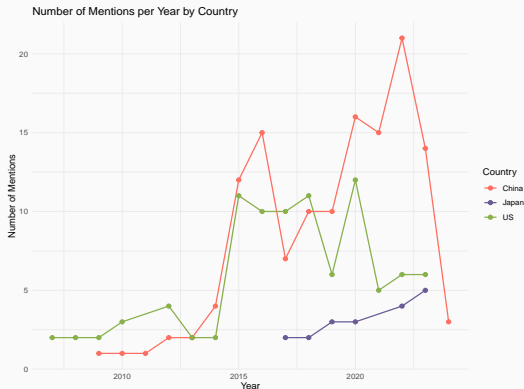
- We also expect investors to worry about loans from China
 - Often not transparent about terms and conditions ([Cormier 2023](#); [Mosley & Rosendorff 2023](#)).
 - May allow governments to avoid conditionality and good governance provisions ([Zeitz 2024](#)).
 - Could aid in political survival ([Shea et al 2024](#)), but not necessarily improve economic outcomes.
- Alternative view: Chinese policy banks are attentive to market risk ([Brautigam 2022](#), [Chen 2024](#)).

Theory and Hypotheses

- **H1:** Announcements of new loans from China will generate increases in sovereign borrowers' risk premiums.
- **H2:** Chinese loans that fund specific projects will generate smaller risk premiums than general purpose or liquidity loans from China.
- **H3:** Investors will respond more positively to Chinese loans when the borrowing country is geopolitically aligned with China, relatively to borrowing countries that are geopolitically distant.

Chinese Loans and Rating Agency Assessments

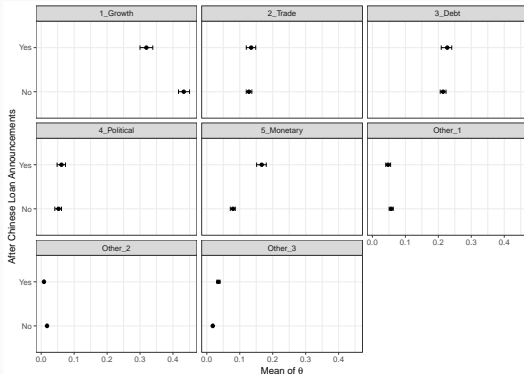
- **Data:** Standard and Poor's credit rating actions and outlooks
- 1184 reports, on 48 emerging market countries, 2007-2023.



- In the rationale sections, 11.3% explicitly mention China.

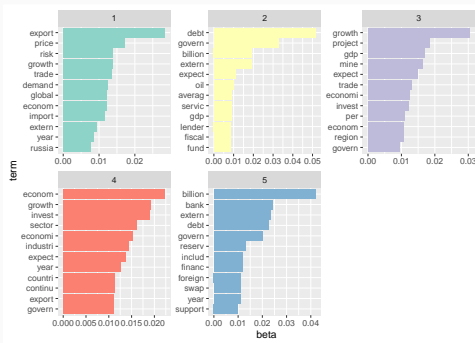
Chinese Loans and Rating Agency Assessments

- **Method:** Keyword assisted topic modeling (Eshima, Imai and Sasaki, 2023)
- Identify 5 topics with keywords: Growth, Trade, Debt, Political, Monetary
- `keywords`; 3 non-keyword topics
- After Chinese loan announcements: Debt ↑, Political ↑, Monetary ↑; Growth ↓



Chinese Loans and Rating Agency Assessments

- Zoom into paragraphs explicitly mentioning China: Use a simple Latent Dirichlet Allocation (LDA) topic model to summarize the context of mentions
- Topic 2 and 5: **Debt** quotes
 - Topic 2: Ability to service debt, economic and fiscal conditions
 - Topic 5: Debt and liquidity concerns

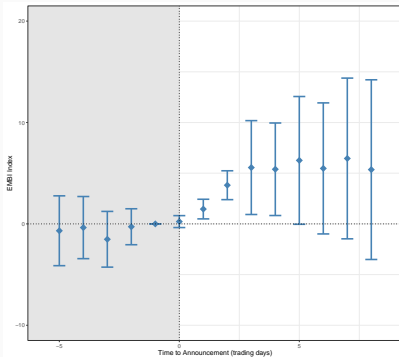


Bond Market Responses to Chinese Loans

- How do announcements of Chinese loans affect sovereign spreads in secondary markets?
 - **Treatment:** News on Chinese loans in Bloomberg and Financial Times (October 2007-February 2023)
 - 139 announcements, covering 30 of the EMBI-Global countries.
 - 70 announcements of new loans; 69 providing information on previous loans.
 - **Outcome:** Country Spread vs. EMBI Global Index, Daily Data
 - **Method:** Event history analysis
 - “Stacked” event study estimator with a window of 40 trading days ([Rexer, Kapstein, Rivera et al. \(2022\)](#))
 - Clean event windows without other shocks

Bond Market Responses to Chinese Loans

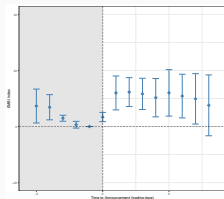
- Risk premiums are significantly greater immediately after announcements of new Chinese loans.
- A five basis point increase on average — higher than a typical country's standard deviation in a year.



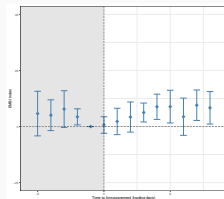
Bond Market Responses to Chinese Loans

- Larger risk premiums for liquidity/ budget loans than for project loans placebo

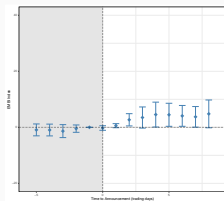
AidData



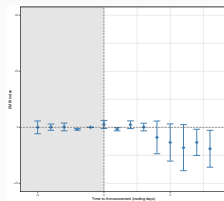
(a) Liquidity Loans



(b) Budget Loans



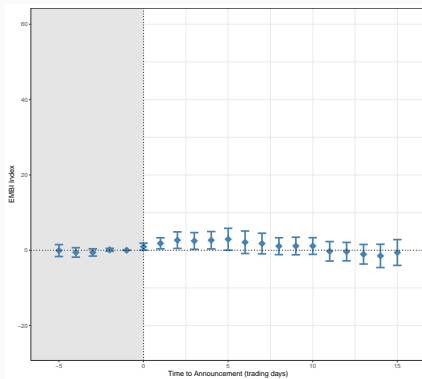
(c) Project Loans



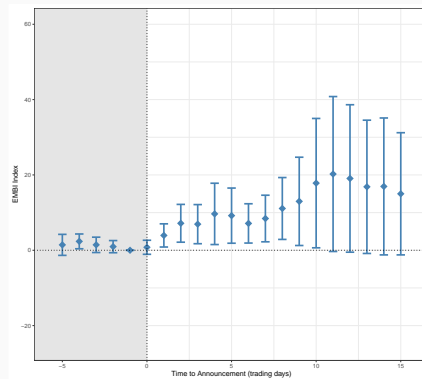
(d) Unknown Purposes

Bond Market Responses to Chinese Loans

- After BRI announced (2013): Greater risk premiums for states less geopolitically aligned with China.



(a) More Alignment with China



(b) Less Alignment with China

Summary and Next Steps

- Other results: No effect for World Bank loans **WB** or loans co-financed with non-Chinese financiers **non-Chinese**; even punish previous liquidity loans **previous**; loan size does not matter **loan size**.
- Additional placebo test: secondary market reactions to primary market issues.
- Debt issuance as a function of composition (as well as level) of outstanding debt.

Thanks!



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Appendix

Category	Keywords (Word Roots)
Growth	growth, economi, GDP
Trade	trade, export, import
Debt	debt, loan, borrow
Political	polic, elect, politic
Monetary	inflat, curren, monet

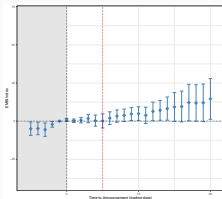
Table 1: Specified Keywords and Word Roots

Example Quotes from the Credit Rating Agency Reports quotes

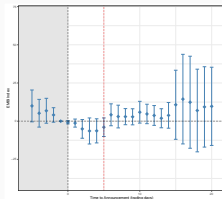
Ghana: *The Multilateral Debt Relief Initiative (MDRI) contributed to a significant reduction in Ghana's net external debt in 2006, but the public sector has been re-leveraging ever since; general government debt reached 38 % of GDP at year-end 2010. A bilateral loan from **China** may lead to a further ramp up in debt over the next few years.*

Jordan: *However, the largest contributor to growth has been an uptick in finance and insurance services activity, which can also be seen in increased credit growth. That said, much of the increase in credit has been to public sector entities and includes loans to National Electric Power Company (NEPCO). If oil prices remain low, we anticipate that this will support growth over the next few years. In addition, Jordan has recently signed agreements with **Chinese** companies worth \$7 billion (mainly based on infrastructure projects, such as the construction of new power stations and expanding the national railway network) which should also support growth. Finally, we expect domestic demand and public infrastructure investment on the back of bilateral and multilateral grants to contribute to growth.*

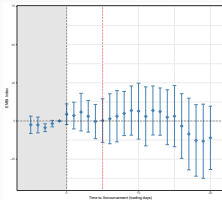
- No effect detected for a “fake” announcement date one week earlier



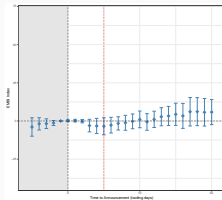
(a) All Loans



(b) Liquidity Loans

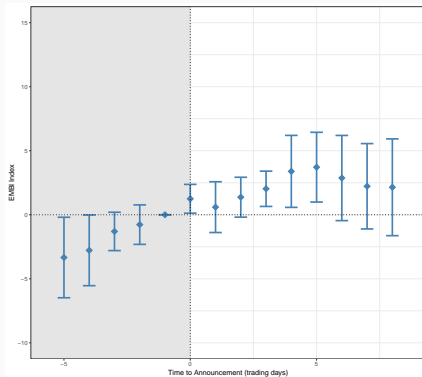


(c) Budget Loans

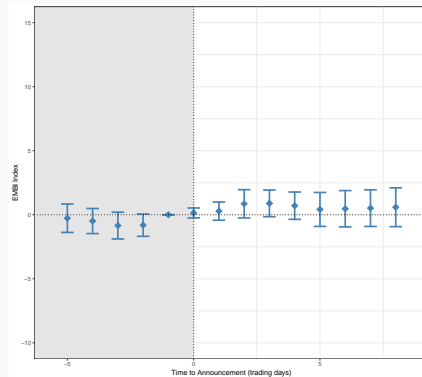


(d) Project Loans

- Findings are robust to using all Chinese loans from AidData



(a) Rescue Loans

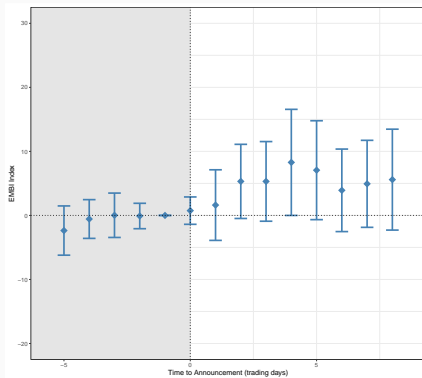


(b) Non-rescue Loans

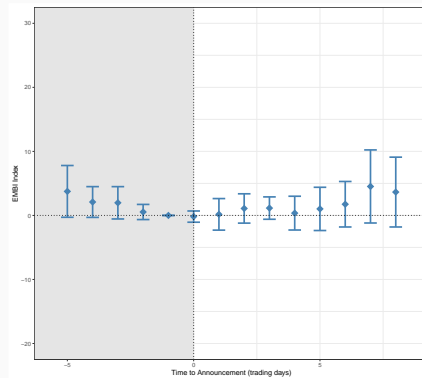
Bond Market Responses to Chinese Loans: Loan Size

loan size

- Investors do not pay much attention to loan sizes

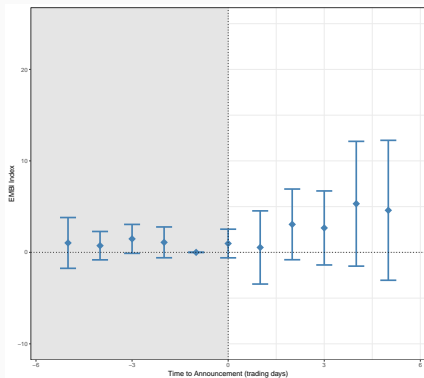


(a) Greater than five billion

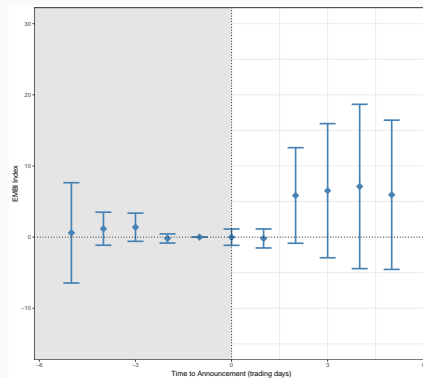


(b) Greater than 10% of the GDP

- No significant effect for World Bank loan announcements

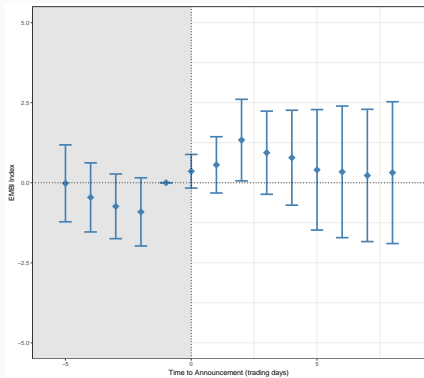


(a) All Loans

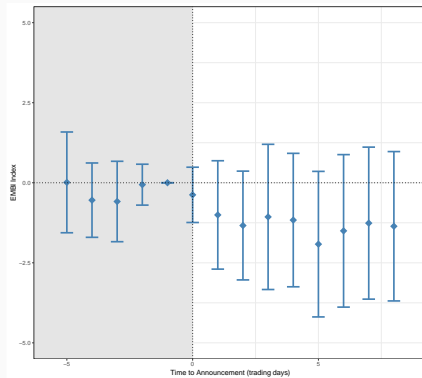


(b) Non-project Loans

- Larger risk premiums for loans financed by China alone

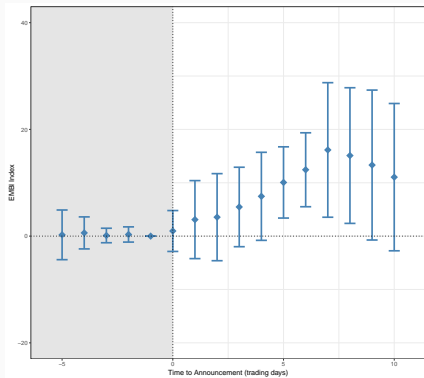


(a) China Alone

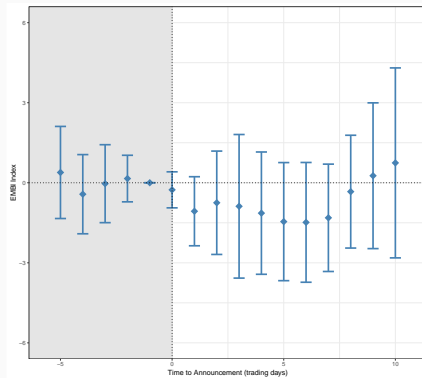


(b) With Non-Chinese Financiers

- Investors even charge larger risk premiums for previous liquidity loans



(a) Liquidity Loans



(b) Project Loans