China‘s Overseas Lending

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China’s role in the international financial system: A big unknown

• Large literature on the “trade shock“ from China (e.g. Autor et al. 2013, Acemoglu et al. 2016)

• **China‘s role in international finance is poorly understood**
  
  • Chinese government is the world‘s largest official creditor (surpassing IMF, World Bank, all Paris Club members)
  • Chinese state-owned banks provide one fourth of bank lending to emerging markets (Cerutti et al. 2018)
  • Many developing countries heavily indebted to China
China’s overseas lending boom

Aggregate Data:
PBOC Balance of Payments Statistics

Loans: $590 bn
Trade credits: $750 bn
China’s overseas lending boom

The problem: lack of transparency

China's overseas lending is opaque – no data on destination, amounts, terms
Contributions of this project

We build a consensus database on the size, destination and characteristics of China’s global lending and capital flows

Main insights:

• Chinese lending is not fully captured by the “gold standard” data sources (World Bank/IMF) on debt and intl’ finance. We estimate these capture ½ of Chinese lending to developing world

• This “hidden debt” has significant consequences for: (i) int’l surveillance, (ii) sovereign risk pricing, (iii) payment seniority

• China’s lending is official, and does not fit the “textbook theory” of international capital flows. Literature of the past three decades primarily focuses on private flows
We created a consensus dataset of Chinese lending

Existing data sources

- William & Mary AidData:
  - Chinese Official Finance Dataset
  - Chinese Diplomacy in Asia Data
- Inter-American Dialogue Database
- John Hopkins China-Africa Research Initiative
- BU China Global Energy Finance
- Lowy Institute:
  - Chinese Aid in the Pacific
  - Pacific Aid Map
- Dozens of debtor and creditor-specific resources
- Dozens of sources for pre-2000 Lending

Our merged database

- 5000 Chinese official loans and grants from 1950 to 2017
- 530 billion USD total volume
- Gathered interest rates, repayments schedules and fx denomination

Clean & Merge
The terms of China’s *official* loans are closer to those extended by global *private* creditors.
…around 50 percent of the loans are collateralized

Sources on collateral: Bräutigam (2009), Bräutigam & Gallagher (2014)
...and most loans are denominated in USD
We estimate debt stocks from loan-level data

- There is no data on outstanding debt stocks to China

- We use our information on maturities, currency and interest rates to compute loan-specific repayment schedules for >1500 loans

→ Dataset of debt to China for >100 countries, 2000-2017
Download at https://sites.google.com/site/christophtrebesch/data

→ For top 50 recipients, average debt to China rose from 1% of GDP in 2000 to more than 15% of GDP in 2017
Debt owed to China in 2017: The top 30 recipients

- We may under-/over-estimate Chinese debts in individual countries (commitment vs. disbursement)
- Yet, in aggregate, our numbers show a lower bound: we capture about 2/3 of total Chinese claims in 2017
Quantifying hidden debts from China

- How large is the under-reporting problem?

- Debtor side: Chinese lending coincides with reporting gaps in official debt statistics (loans to state-owned enterprises, disbursement through contractors & funds)

- Creditor side: China not a member of OECD, Paris Club

➤ Compare our debt data to those of World Bank Debtor Reporting System (DRS)
China’s overseas lending and World Bank statistics: *Missing loans and hidden debts*

Around 50 percent of Chinese lending is not included in WB database

**Red bars:**
Chinese commitments not reported to World Bank (by year)
Hidden debt to China in World Bank statistics: magnitudes and incidence

Hidden debt in percent of debtor GDP

- 25 - 30%: 1 country
- 20 - 25%: 2 countries
- 15 - 20%: 6 countries
- 10 - 15%: 3 countries
- 5 - 10%: 19 countries
- 0 - 5%: 19 countries

Number of Countries
“Missing” Chinese debt restructurings

Recent cases include:
Bangladesh
Cote D’Ivoire
Cuba
Ecuador
Ethiopia
Kazakhstan
Sri Lanka
Seychelles
Tanzania
Ukraine
Venezuela

Black bars
(Cruces/Trebesch): Debt restructurings with private external creditors

Red bars: Debt restructurings with China

Years:
1980
1990
2000
2010

Number of debt restructurings:
0
5
10
15
20
25
30
The curious case of the *missing defaults*: commodity and capital flow “double busts” and sov. defaults

**Solid line:** Share of sovereigns entering new default with private creditors, 3-year sum,

**“Double Busts“**
Joint declines in capital flows and commodity prices (> 1 year)

Source: Reinhart, Reinhart, and Trebesch (2017)
Some of the *missing defaults* took the form of the restructuring of official Chinese loans

Source: Reinhart, Reinhart, and Trebesch (2017)
The big picture:

(i) The geography of China’s lending and capital exports

(ii) Accounting for full menu of China’s capital exports:
    incl. asset (bond) purchases, FDI debt, PBOC swap lines
Debt owed to China from **direct loans** as of 2017
Aggregating all Chinese debt claims on the rest of the world (incl. bond purchases by PBOC & swap lines)

Reserve assets 2017: $3300 bn

External sovereign bonds held by PBOC, sovereign wealth funds and state-owned banks
Adding asset purchases, swap lines & trade credits

→ many high- and middle-income countries also heavily indebted to China
What drives Chinese capital outflows?

• Standard theory of international capital flow drivers:
  – Synchronized across countries
  – Driven by financial conditions in the US

• Chinese capital outflows are official (state-driven), so standard push and pull factors do not apply in the same way.

• Empirical evidence:
  – Results: domestic factors (esp. GDP growth) are key driver. Global factors (VIX, US interest rates) less so
Conclusion

• China has become the world’s largest official creditor

• Standard data sources do not fully capture China’s lending
  – Many country’s official debts are grossly underestimated
  – “Credit events” with China not captured by rating agencies

• Standard theories of intl’ capital flows not a good fit

Outlook:
• More research is needed on these areas, especially incorporating geopolitical considerations
• Will China's economic slowdown (ongoing and expected) result in a "sudden stop" for emerging markets?
Thank you for your attention
Appendix
Underreporting in BIS Banking Statistics

Underreporting most acute in high-risk countries

- Angola
- Zimbabwe
- Venezuela
- Equatorial Guinea

*Original series (excl. China)*

*New / revised Series (incl. China)*
China has always lent abroad
...but it was not such a large economy
…and it did not lend on such a global scale
...from loans we compute debt stocks owed to China

Existing data sources

• William & Mary AidData:
  • Chinese Official Finance Dataset
  • Chinese Diplomacy in Asia Data

• Inter-American Dialogue Database

• John Hopkins China-Africa Research Initiative

• BU China Global Energy Finance

• Lowy Institute:
  • Chinese Aid in the Pacific
  • Pacific Aid Map

• US Ex-Im Bank Competitiveness Reports

• Dozens of debtor and creditor-specific resources

• Various Sources for pre-2000 Lending

Our merged database

- 5000 Chinese official loans and grants from 1950-2017 ($580 bn)
- By government agencies, policy banks, state-owned commercial banks and SOEs

Clean & Merge

Estimating debt stocks

Total debt owed to China
...and identify hidden loans & debt stocks

**Existing Data Sources**
- William & Mary AidData:
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**Our merged database**
- Chinese loans and grants from 1950 to 2017
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**World Bank Debtor Reporting System**
- Chinese loans reported by debtor countries to the World Bank
- Forms the basis of the International Debt Statistics (IDS)

**Clean & Merge**

**Estimating Debt Stocks**

**Total debt owed to China**

**Identify hidden loans & debt**

**Hidden debt owed to China**
We estimate geographic distribution...

There are no data on detailed Chinese reserve holdings & trade credit flows, but geographic allocation can be estimated with reasonable precision from a variety of international statistics and debtor sources:

- **FDI debt:**
  IMF Coordinated Direct Investment Survey, American Enterprise Institute

- **Portfolio debt (reserve and non-reserve assets)**
  IMF COFER, IMF Coordinated Portfolio Investment Survey, Arslanalp and Tsuda (2012 & 2014), various debtor sources e.g. US TIC data

- **Trade debt:**
  OECD Working Group on Export Credits, US Ex-Im Bank Competitiveness Reports

- **PBOC swap line debt:**
  PBOC and recipient Central Bank Annual Reports; Quarterly External Debt Statistics
Is a new debt crisis brewing in countries with (hidden) debt to China?
A new debt crisis? Some parallels to the 1970/80s

World Bank data show level of external debt similar to pre-1980s debt crisis.
But the *hidden debts* to China add substantially to the precariousness of the situation.
A new debt crisis? Parallels to the 1970/80s
External debt trends revisited

Latin America

Far East Asia

Africa

Central Asia

Median ext. PPG debt (World Bank)
75th to 90th pct. hidden debt
Median to 75th pct. hidden debt
Upper decile hidden debt
External debt service revisited
What drives Chinese capital outflows?
What drives Chinese capital outflows?

- VAR with Cholesky ordering:

\[
\begin{pmatrix}
    \text{Real GDP growth} \\
    \text{China MP index} \\
    \text{Capital outflows} \\
    \text{Commodity price index} \\
    \text{VIX}
\end{pmatrix}
\]

- Quarterly data from BOP Statistics 1998 - 2018