Firms, Investors, and Global Capital Allocation

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Global Capital Allocation: Redrawing the Map

Saturday, August 29, 2020
Why Redraw the Map of Global Capital Allocations?

- Previous session demonstrated how big tax havens and cross-border issuance have become.
- Hard to see the true economic exposures using residency principle alone.
- Systematically redraw the map of global capital allocations; which basic facts change? which new facts emerge?
- We build an estimate of country-level changes inferred from the micro data.
Three Data Inputs

- Official statistics on country level portfolio investments (TIC and CPIS)

- CMNS algorithm mapping at security level reallocation to ultimate parent entity (based on commercial data, algorithm freely available)

- Micro data on securities holdings:
  - Data on mutual funds and ETFs from Morningstar
  - Data on US insurance companies from S&P
  - Data on Norway Sovereign Wealth Fund
  - Ongoing...add more holdings data
Reallocation Matrices

- Merge *mapping* with Morningstar data on mutual fund and ETF *holdings*

- Key assumption: Within each year, asset class, and bilateral country pair, fund holdings are representative of the universe of portfolio investment
  - Verified for US insurance holdings and Norwegian sovereign wealth fund

### US Corporate Bond Reallocation Matrix

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<thead>
<tr>
<th>Destination</th>
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<th>CHN</th>
<th>CYM</th>
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<th>USA</th>
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Developed Market Investment in Chinese Equity

Share of External Equity Portfolio in China

Investing Country: AUS, CAN, CHE, DNK, EMU, GBR, NOR, SWE, USA

Nationality
Residency

$541B
A Different Mapping: Sales-Based Reallocation

- Use Factset GeoRev to measure geography of firm revenue
- Assign firms to *multiple* countries according to share of sales
- Interesting measure for exposure to demand shocks

(a) Investment in Chinese Equities

(b) Domestic Share of Equity Investments
Standard vs. VIE Structure

Outside China

Standard Structure

Foreign Shareholders

Operating Company

Chinese Shareholders

Inside China
Standard vs. VIE Structure

**Standard Structure**
- **Foreign Shareholders**
  - Operating Company
    - Chinese Shareholders

**VIE Structure**
- **Foreign Shareholders**
  - Listed Company
    - SPV
      - Operating Company
        - Chinese Owners
        - Contracts with WFOE

Outside China

Inside China
Implications for China’s Net Foreign Assets (NFA)

Net Foreign Asset Position ($NFA$) captures net claims on RoW:

\[
NFA = A - L
\]

\[
\Delta NFA = CA + \text{Valuation Changes}
\]

VIE structure causes understatement of $L$

- Missing valuation changes
Implications for China’s Net Foreign Assets (NFA)

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China’s portfolio liabilities, linked to stock price

Outside China

- **Operating Company**
- **Chinese Owners**
- **WFOE**

Inside China

- **Contracts**

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**Diagram Notes**

- **Operating Company**
- **Chinese Shareholders**
- **WFOE**
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*China’s portfolio liabilities, linked to stock price*

**VIE Structure**

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*China’s liabilities, not linked to stock price*
Time Series of VIE Market Value
Valuation Effects Not Captured in China’s Liabilities

Focusing on surge in value of VIEs from 2016:Q4 to 2018:Q1:
USA Common Equity Positions in CYM


U.S. Common Equity Investment in CYM (TIC)  VIE Market Cap
Naspers has held constant \( \sim 31\% \) share in Tencent.
NFA Mismeasurement is Large

China NFA, Share of GDP

Official
NFA Mismeasurement is Large

China NFA, Share of GDP

 Official
 With VIE Adjustment, Baseline
 Double Chinese Holdings
 Assets Correctly Marked

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