# Bank Financing of Global Supply Chains

Alfaro, Brussevich, Minoiu, and Presbitero

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# This Paper

## Question

- After the 2018–19 U.S. tariffs on Chinese inputs, do Asia-specialized banks help U.S. importers replace Chinese suppliers **faster** and at **lower financing/search cost**?

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- Supply-chain resilience & friend-shoring; inflation pass-through.
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## Contributions

- Firm$\times$product maritime shipments matched to supervisory **loan-level** data.
- Bank **geographic specialization** & **local presence**; DiD on exits/entries & shares; hazards for **time-to-new-supplier**.

# Design & Identification

**A. Trade outcomes (PPML at firm $i$ × product $p$ × year $t$)**

$$\mathbb{E}\left[y_{ipt} \mid \cdot\right] = \exp\left(\beta\, D_{ip} P_t + \gamma_{pt} + \mu_{ip} + \delta_{\text{ind}(i),t} + \theta_{\text{state}(i),t}\right).$$

- Outcomes: exit (CN), entry (Asia ex-CN), # suppliers, origin shares.
- FEs: product×year ($\gamma_{pt}$), firm×product ($\mu_{ip}$), industry×year ($\delta$), state×year ($\theta$).
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**B. Loan outcomes (OLS at loan $\ell$ for firm $i$ in quarter $q$)**

$$\text{Outcome}_{\ell iq} = \alpha + \beta\, D_i P_q + \phi_{\text{state}\times\text{ind},q} + \phi_{\text{bank}\times q} + \phi_{\text{bank}\times i} + \varepsilon_{\ell iq}.$$

- Outcomes: credit-line utilization, loan rates (new & outstanding), maturity, risk.
- Bank heterogeneity: **specialized** vs **other** banks: $D_i P_q \times \mathbf{1}\{\text{specialized}\}$.
- Clustering: firm & product (trade); firm-quarter & bank (loans).

# Main Results

- **Reallocation of sourcing:** From CN to **Asia ex-CN**
  - Exit CN: $+82\%$; Entry Asia ex-CN: $+90\%$.
  - CN share: $-85.6\%$; Asia ex-CN share: $+47.6\%$.
- **Speed of re-matching: takes time**, but less for **connected** firms.
  - Time to first new Asian supplier: $\approx 10.7$ quarters (avg.).
  - Specialized banks shorten time by $\approx 1.5$–$2.7$ months; prior Asia ties further accelerate.
- **Financing response: Higher line utilization**; rates rise modestly
  - Credit-line utilization: $+0.7$ pp; New-loan rate: $+18$ bps; Outstanding rate: $+3.6$ bps.
  - No statistically significant deterioration in NPLs/charge-offs.
- **Information channel:** Specialized banks help **restructure networks**
  - Any Asian match: probability $\uparrow$ by $\sim 4.6$–$8.5\%$ with specialized banks.
  - With local presence: same-country match odds $\uparrow$ by $\sim 10$–$15\%$; advisory-fee growth larger at specialized-bank subsidiaries ( $+2.0$–$2.4\%$ vs $+1.3\%$ at others).

# Relative Contribution to the Literature

**Benguria and Saffie (2024):**

- Retaliatory tariffs reduce U.S. exports; firms gradually reallocate.
- Adjustments occur mostly in quantities (not prices).
- Finance (industry leverage) and relationship stickiness shape both the initial drop and the reallocation; total exports roughly flat after reallocation.

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- Common mechanisms: relationship frictions and financing conditions matter; reallocation is gradual and quantity-driven.
- Finer micro data: from products and industries to firms, banks, and geography.

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## Main Novelty (besides finer data):

- Identifies banks as active intermediaries providing liquidity and country–specific information networks that speed matching to new suppliers.
- Measures reallocation speed directly and connects loan pricing/usage to reallocation outcomes.

# Comment 1: Possible triangulation via Mexico

- Chinese goods may reach the U.S. via Mexico (land/air or light assembly).
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2. Construct an upper bound on diversion by HS:
   $\text{Bound}_{\text{HS}} = \max\{0,\ \Delta(\text{China} \to \text{Mexico}) - \Delta(\text{China} \to \text{U.S.})\}$.

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3. Re-estimate core trade/hazard results excluding HS in the top decile of $\text{Bound}_{\text{HS}}$ **as a robustness check**.

# Comment 2: Replacement Accounting

**What they report:**

- Separate effects on exit/entry, supplier counts, and origin shares (CN ↓, **non-CN** ↑).
- No firm×product measure of how much CN losses are offset by gains elsewhere.

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**Suggestion:**

- Define a replacement ratio at firm $i$ and product $p$: $R_{ip} \equiv \frac{\Delta s_{ip}^{\text{Asia ex-CN}}}{-\Delta s_{ip}^{\text{CN}}}$ (post vs. pre).
- Define a replacement shortfall: $S_{ip} \equiv -\Delta s_{ip}^{\text{CN}} - \Delta s_{ip}^{\text{Asia } ex-\text{CN}}$.
- Event–time around first CN exit: trace $R_{ip}(\tau)$ for $\tau = -4, \ldots, +8$ quarters.
- Split by bank type: show whether specialized–bank clients reach high $R_{ip}$ **faster**.

# Comment 3: Information network, looking for a *Smoking Gun*

**What they do**

- Specialized-bank clients match faster; effect stronger with local presence.
- Advisory fees at Asian subs rise; Europe-specialized placebo is weak.
- No direct link from new suppliers to other clients of the same bank.

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**Suggestion:**

- Build a bank-supplier overlap indicator in Panjiva (pre-2018): the new supplier already sells to another U.S. client of firm $i$'s lead bank in country $c$.
- Test in hazards / DiD for time-to-first order:
  - **Do we see differences? For instance:**
    same bank & same country > same bank & different country > different bank.
  - Monotonicity: stronger effects when the bank has more local clients or a branch/sub in $c$.

# Comment 4: Trade credit dynamics

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- Do we see dynamic substitution between bank and trade credit?

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**Suggestion:**

- Event study around the first new Asian-supplier match at firm×product: quarters $\tau = -4, \ldots, +8$.
- Plot bank variables: credit-line utilization, new-loan rate, outstanding rate, maturity.
- Plot trade-credit proxies like AP/Revenue.
- Specialized vs. other banks; any differences?

# Comment 5: Separating price of credit vs. information

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**Why it matters**

- Identifies the relative strength of the channels.

**Suggestion**

- Two-spec comparison for time-to-first match (hazards or DiD):
  - Baseline: specialized-bank and local-presence indicators.
  - Augmented: add contemporaneous loan-price/quantity controls (utilization, rates, maturity).
- Interpretation: attenuation of specialized/presence coefficients $\Rightarrow$ price-of-credit share; residual $\Rightarrow$ information/matchmaking.

# Conclusion

**What this paper delivers**

- Banks with geography-specific expertise accelerate post-tariff reallocation: faster matching, smaller rate pass-through, longer maturities.
- Evidence links liquidity and information provision to firm$\times$product import adjustments; advisory activity at Asian subs rises; no clear risk deterioration.

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**Key Suggestions:**

1. **Triangulation bound:** China→Mexico vs. China→U.S. (Panjiva maritime); drop HS with highest bound and show robustness.
2. **Network "overlap":** indicator that new supplier already serves another client of the same bank in that country; test effect on match hazards.
3. **TC dynamics:** Around first new match for utilization, rates, maturity, AP/Revenue.