Cross-Border M&A and the Exchange Rate: Evidence from Switzerland

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Summary

- I exploit the natural experiment induced by the Swiss National Bank in January 2015.
- I find evidence that a sudden, sizeable, and persistent appreciation of the local currency is associated with reduced cross-border M&A activity targeting domestic firms, relative to comparable countries.
- Further, I find a larger effect for high-technology firms.

Research question

Does a link exist between the cross-border merger and acquisition (M&A) activity and the exchange rate?

The Swiss natural experiment

January 15, 2015, the Swiss National Bank (SNB) communicated the repeal of the minimum exchange rate of 1.20 Swiss Francs (CHF) per Euro inducing an almost instantaneous 18.5% appreciation of the CHF.

The exchange rate shock is sizeable and persistent, market participants did not anticipate it (exogenous).

Anecdotal evidence

- As per the Case MARC MRFA Attractiveness Index, Switzerland drops from 9th place in 2014 to 18th in 2015.
- The 2015 Clarity on Mergers & Acquisitions report published by KPMG states that, despite global records, 2015 was a bumpy M&A year for Switzerland.

Empirical literature

- There is mixed evidence in the literature regarding the link between cross-border M&A and the exchange rate.

Blonigen’s (1997) model

- A link exists when firms are endowed with firm-specific assets (e.g., process technology, product innovation) that are not location specific and can therefore generate returns in foreign currencies (vs. “bond-like” assets).

Novelty

Unique framework to test Blonigen’s (1997) model:
- Short time vs. long-term exchange rate movement: it reduces the incidence of potential confounding factors.
- Local currency appreciation vs. depreciation.
- Extremely innovative country: Switzerland ranks first in both The Global Innovation Index 2014 and 2015. Moreover, it exhibits the highest number of patent applications and R&D personnel per million inhabitants, relative to comparable countries.

Hypotheses

- H1: The appreciation of the domestic currency leads to reduced cross-border M&A activity targeting local firms.
- H2: The shock affects the cross-border acquisitions of domestic high-technology companies more substantially.

Data

- M&A transactions involving firms registered in Switzerland (CHE) and in the following control countries. Observation dropped if target country = acquirer country (cross-border deals) and if acquirer country = CHE (simultanenity bias).
- Control countries: neighbouring countries (based on the literature on cross-border M&A’s determinants) and continental Europe G-10 members (based on criteria of regional proximity and economic comparability).

Summary statistics

Fig. 3: Announced cross-border M&A transactions

Consistently with KPMG’s statement about 2015 global records, the chart shows that the number of cross-border M&As targeting domestic firms significantly increases in all the selected countries but Switzerland.

Methodology - Difference-in-differences

\[ n_{it} = \beta_0 + \beta_1 A \text{fter}_t + \beta_2 Treated_i + \beta_3 Treated \times A \text{fter}_t + \epsilon_{it} \]

- Dependent variable: monthly number of announced cross-border transactions targeting local firms.
- Time window: 1 year before and after the shock.
- After: dummy equal to 1 after January 15, 2015.
- Treated: dummy equal to 1 if the target firm is registered in Switzerland.
- Country fixed effects to absorb time-invariant observed and unobserved heterogeneity across countries.

Methodology - Synthetic control method

- Data-driven extension of the traditional DiD framework.
- Synthetic Switzerland: weighted average of (control) countries from the donor pool that best matches, both in terms of pre-treatment (3 years) covariates and outcome variable, the characteristics of Switzerland.
- Cointegrates: macroeconomic, stock market, and firm-level variables. “Bad controls” could also be employed.

Results - Difference-in-differences

Table 1: Results - Difference-in-differences

<table>
<thead>
<tr>
<th>Country</th>
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</table>

Robustness tests

- I follow Kile and Phillips’s (2009) procedure to sample high-technology firms based on the SIC codes.
- I find evidence that the reduced cross-border M&A activity is mostly driven by high-technology firms.

High-technology firms

- The chart shows that the ratio of cross-border M&A transactions targeting high-technology firms is significantly higher in Switzerland than in the control countries. This supports the anecdotal evidence that Swiss firms are endowed with firm-specific assets.

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