



The Effect of U.S. Monetary Policy on Foreign Firms: Does Debt Maturity Matter?



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Abstract

We provide novel evidence that corporate debt maturity plays an important role in transmitting U.S. monetary policy to foreign firms. Using the ex-ante maturity structure of long-term debt to predict firms' financial position in a given year, we show that foreign firms with a high proportion of long-term debt maturing right after a U.S. contractionary shock experience a more pronounced decrease in investment and sales than other firms. We find that firms in emerging economies are more affected by these shocks than those in advanced economies, and the amplification effect of U.S. monetary policy shocks by financing constraints is present only in emerging economies. We confirm these results using a granular dataset that includes firms' balance sheet data and detailed bond information. Our findings suggest that refinancing constraints significantly amplify the international transmission of U.S. monetary policy.

Introduction

Does it matter for the international transmission of U.S. monetary policy whether a foreign firm has a high fraction of its debt maturing at the time of a shock? Firms' liquidity needs following negative shocks should be largely determined by their debt maturity structures, and financing constraints may be especially binding during bad economic conditions for firms with maturing debt because they must either roll over or pay down their debt during these adverse conditions (Carvalho, 2015). Our paper investigates the role that corporate debt maturity plays in the cross-country transmission of contractionary U.S. monetary policy shocks to foreign firms.

Using the ex-ante maturity structure of long-term debt to predict firms' financial exposure to monetary policy shocks in a given year, we show that after a contractionary shock, firms with higher proportions of long-term debt maturing right after the shock, significantly and differentially reduce investment and sales. We establish that firms in emerging economies are more affected by U.S. monetary policy shocks than those in advanced economies. Further, refinancing constraints amplify the effect of U.S. monetary shocks in emerging economies, but not in advanced economies. This suggests that the less developed financial markets and higher credit constraints of emerging economies make it harder for firms in these countries to successfully roll over their debt obligations relative to their counterparts in advanced economies. In particular, our paper is the first to identify the importance of refinancing constraints for the international monetary policy transmission and show that U.S. monetary policy shocks are amplified by financing constraints only in emerging economies.

Empirical Strategy

$$y_{ic,t+h} - y_{ic,t-1} = \alpha^h + \beta_1^h MP_t^{US} + \beta_2^h RFC_{ic,t-1} + \beta_3^h MP_t^{US} \times RFC_{ic,t-1} + \gamma^h Z_{ic,t-1} + \delta^h X_{c,t-4} + \epsilon_{ic}^h$$

where i denotes a firm and c the country.

$y_{ic,t+h}$ is the firm-level outcome measured in quarter $t+h$, $h = 0, 1, 2, \dots, 12$. Outcome variables consist of long-term investment, short-term investment and sales.

MP_t is the U.S. monetary policy shock from Gurkaynak et al. (2005).

$RFC_{ic,t-1}$ is our ex-ante maturity structure of long-term debt as in Almeida et al. (2012).

$Z_{ic,t-1}$ is a vector of firm controls.

$X_{c,t-4}$ is a vector of local macroeconomic controls.

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Results

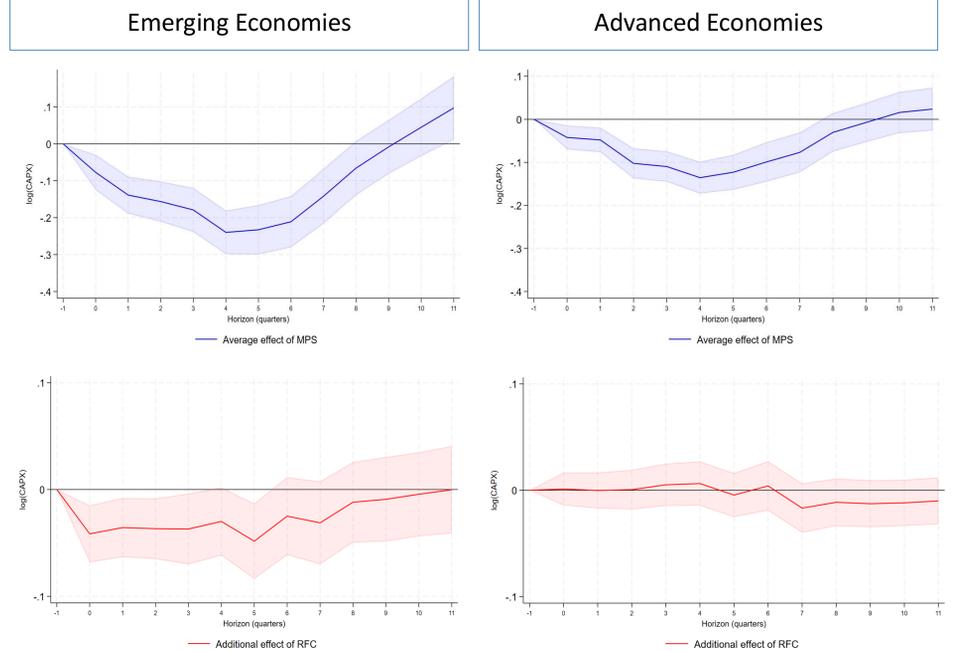


Chart 1. Blue line: β_1 . Red line: β_3 . The shaded areas represent the 90% confidence interval.

The average effect of U.S. monetary policy is much smaller for firms in advanced economies (blue line).

Firms in emerging economies with a high proportion of long-term debt maturing right after the shock significantly decrease investment (red line). The amplification effect is not observed for advanced economies.

The same pattern is observed for short-term investment and sales.

Mechanism

We test if local financial constraints tighten more in emerging economies than in advanced economies after a U.S. contractionary shocks. Our results show that the magnitude of a shock on financial conditions in emerging economies is much stronger than in advanced countries. A lower value means worst local financial conditions. This supports our previous findings that refinancing constraints amplify the effect of the shocks only for firms located in emerging economies.

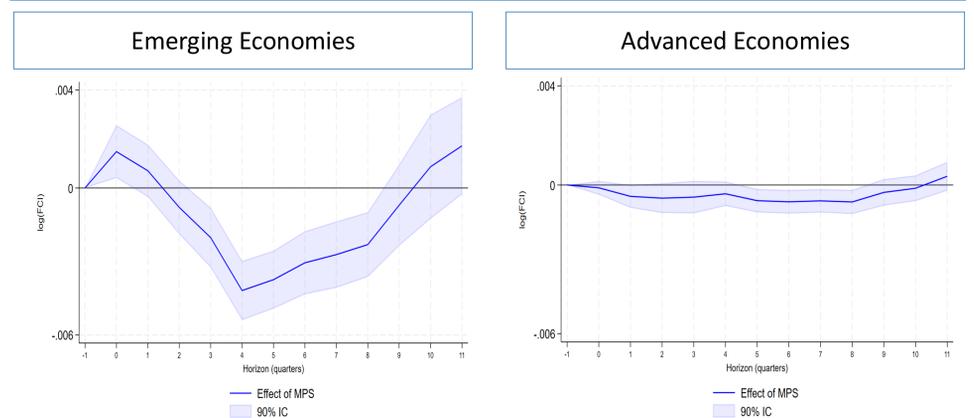


Chart 2. Average response of financial conditions to U.S. MP shock. The shaded areas represent the 90% confidence interval.

Conclusions

Corporate debt maturity plays an important role in the transmission of U.S. monetary policy to foreign firms.

Refinancing constraints amplify monetary shocks only in emerging economies firms.

The differential effect arises from worsening financial conditions in emerging markets, leading to reduced total debt for financially constrained firms.

References

- Carvalho, Daniel (2015). "Financing constraints and the amplification of aggregate downturns". In: The Review of Financial Studies 28.9, pp. 2463–2501
- Almeida, Heitor, Campello, Murillo, Laranjeira, Bruno, and Weisbenner, Scott (2012). "Corporate Debt Maturity and the Real Effects of the 2007 Credit Crisis". In: Critical Finance Review 1.1, pp. 3–58.
- Gurkaynak, Refet S, Sack, Brian, and Swanson, Eric (2005). "The sensitivity of long- term interest rates to economic news: Evidence and implications for macroeconomic models". In: American economic review 95.1, pp. 425–436