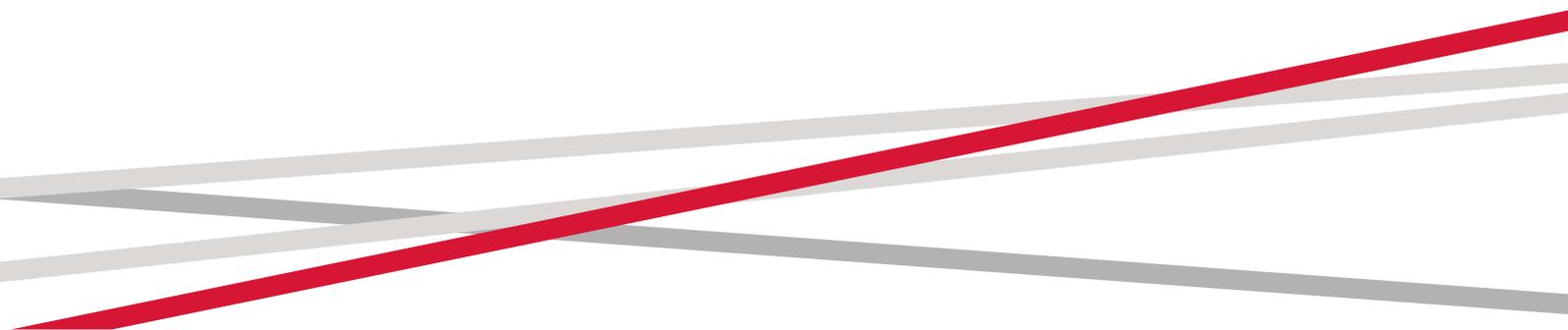




Bill B. Francis, Rensselaer Polytechnic Institute
Delroy M. Hunter, University of South Florida
Patrick J. Kelley, New Economic School
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Is Local Monetary Policy Less Effective When Firms Have Access to Foreign Capital?

Central banks affect growth in part by raising or lowering the cost of investment through their influence over local interest rates. We examine whether the ability of local firms to raise money abroad reduces the influence of local monetary policy authorities. Surprisingly, it does not. In fact, we find that firms that are able to raise equity capital from foreign investors are more responsive, not less, to local monetary policy shocks than those that raise capital only in the domestic market. These findings suggest that foreign investors confer an efficiency effect, improving the sensitivity of stock prices to local monetary policy shocks.



One means by which central banks affect economic growth is by influencing interest rates that impact the cost of financing for firms. For example, when a central bank lowers interest rates, those lower rates make new investment cheaper and more profitable. That encourages companies to invest more. Profits rise, firms hire more and we see growth in the economy as a whole.

When firms are able to raise money abroad, they are no longer as dependent on the local economy for financing. This potentially causes problems for central banks and other local monetary policy authorities who wish to influence the local economy by controlling interest rates.

This brief summarizes the results of Francis, Hunter and Kelly (2016), where we examine the extent to which monetary policy authorities' influence differs across firms that are able to access foreign capital (also called "investable stocks") and those that are largely dependent on the local market (also called "non-investable stocks"). Contrary to expectations, the evidence shows that firms that are able to raise foreign capital by being open to foreign equity investment are actually more sensitive to local monetary policy shocks than those that are not.

The perks and perils of financial liberalization

Over the last 30 years, the authorities in several less developed countries liberalized their domestic financial markets by allowing foreign ownership of local stocks. There are tremendous benefits for the local firms that became 'investable' as these countries liberalized, relative to firms that remained dependent solely on domestic stock markets. These include, inter alia, (1) being able to

raise large tranches of foreign capital at lower rates than available in the domestic market, which reduces their financing constraints and increases their ability to invest, (2) substantial improvement in the liquidity of their stocks, (3) improvements in corporate governance and reporting (see Reese and Weisbach, 2002), and (4) greater efficiency with which their stocks incorporate value-relevant information.

Despite these benefits, there is widespread concern that liberalization comes with several problems. First, foreign capital flow ("hot money") can cause excess volatility in local stock markets and exchange rates when foreign investors rapidly repatriate their funds. Second, local firms may become sensitive to foreign monetary policy shocks, and those foreign monetary shocks may be contrary to what is needed in the local economy. Third, and perhaps chief among the problems, is that if a large segment of domestic firms is able to raise capital abroad, then local monetary authorities may lose their ability to influence the domestic economy through their control of local policy interest rates. We examine this last concern in this policy brief below.

What does the research tell us?

One of the big challenges when measuring the impact of changes in monetary policy on an economy is the fact that the effects of investment started or stalled by changes in monetary policy may take months, or even years, to play out. The long time frame makes it very difficult to tell whether changes in monetary policy affect the macro economy. To solve this problem we follow in the footsteps of the former Chair of the U.S. Federal Reserve, Ben Bernanke (see Bernanke and



Blinder, 1992, and Bernanke and Kuttner, 2005) and examine the impact of monetary policy shocks on stock returns. We do this because stock prices reflect anticipated changes in the economy and they are one of several channels through which monetary policy actions are transmitted to the real economy. That is, if local stock prices respond to monetary policy changes, it is likely the local economy will respond as well.

Because stock prices move in anticipation of future improvements in the economy, it is very important that we measure monetary policy surprises (also referred to as shocks) and not merely observed changes in monetary policy. To do this we model expectations about local monetary policy as a function of changes in oil price, changes in the U.S. Fed-funds rate (a proxy for changes in U.S. monetary policy), local industrial production growth, inflation rate and exchange rate changes. Details are described in the companion paper to this brief, Francis, Hunter and Kelly (2016).

We examine the impact of local monetary policy shocks on local stock returns. We find that for 17 of the 24 developing markets in our sample a one-standard-deviation surprise increase in local monetary policy interest rates results in an immediate and statistically significant 1.06% decline in the country's overall stock market index. Interestingly, the unresponsiveness of the remaining seven stock markets to local monetary policy is not entirely due to the dominance of foreign (U.S.) monetary policy. In only four of the seven markets is foreign monetary policy simultaneously significant.

As noted above, one possible concern is that local monetary policy influences the investment and financing decisions of only non-investable firms. However, we find that firms that have access to foreign equity capital are at least as sensitive to

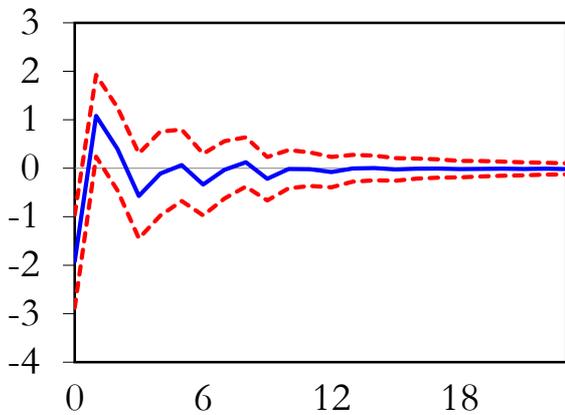
local monetary policy shocks as are firms that are closed to foreign equity investment. In about 30 percent of our sample, Chile, Mexico, Venezuela, Jordan and Russia, firms that are open to foreign investment are even more sensitive than the ones that are closed. This evidence is consistent with the hypothesis that foreign investor participation in investable stocks improves the informational efficiency of investable firms' stock prices, making them more sensitive to local monetary policy shocks. We call this an "efficiency" effect. This is counter to the predictions of the "integration" effect, whereby local stocks that are accessible to foreign investors are more responsive to foreign, not local, monetary policy shocks.

As an example, consider the impact of local monetary policy shocks on the returns of Brazilian stocks that are open and closed to foreigners, as depicted in Figure 1. In both panels the stock market is subjected to a one-standard-deviation surprise tightening of monetary policy, which is equivalent to 0.52% higher policy interest rates. In the top panel, the response is a statistically significant decline of 1.9% in the stock prices of firms that are open to foreign investment. In the bottom panel, the same monetary policy surprise translates into a statistically insignificant 0.9% lower prices for stocks that are closed to foreign investment. These findings are typical of the other countries in our companion study.

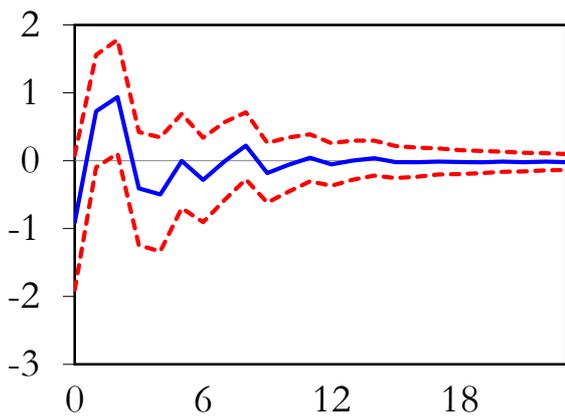


Figure 1. Impulse Responses of Brazilian Stock Returns to a One-Standard-Deviation Structural Shock in Local Monetary Policy

Investable stocks – open to foreign investment



Non-investable stocks – closed to foreign investment



Source: This figure reports impulse responses (center line) of investable and non-investable stock returns over 24 months in response to a one-standard-deviation structural shock in local Brazilian monetary policy. The impulse responses are obtained from a structural VAR model with eight endogenous variables: oil prices, the U.S. Fed-Funds rate, local industrial production growth, inflation, exchange rates and investable and non-investable Brazilian stocks. The left axis is in percent and the horizontal axis is months after a policy shock. The outer bands are probability bands used to determine statistical significance. The impulse response in a given period is significant, if both outer bands are on the same (lower or upper) side of the horizontal line at zero.

Ruling out alternate interpretations

One concern with the above results is that they might be driven by the simultaneous response of stock prices and monetary policy to emerging market crises that occurred during our sample period. However, the results when controlling for the Mexican and Asian currency crises are materially the same. The Russian default in 1998 is prior to the start of our data for Russia.

Additionally, one might be concerned that when we separate stocks into investable and non-investable, what we are really doing is separating firms on the sensitivity of their product markets to changes in the local economy. To examine this, we determine whether our results hold for stocks that operate in traded-goods markets and for those that operate in non-traded goods markets. We continue to find that investable stocks are more sensitive than non-investable stocks to local monetary policy in both markets.

Summary and policy implications

Our research suggests that firms that are open to foreign investment are at least as sensitive to local monetary policy as are firms that remain closed to foreign investment. These findings assuage a non-trivial concern among monetary policy authorities that while access to foreign capital has many benefits, it may come at the cost of a loss of ability to influence one's own local economy. The primary policy implication of our work is that foreign investment in local stocks does not result in a loss of monetary policy control. In fact, our results suggest that foreign investment makes local firms more responsive to monetary policy shocks.





Bill B. Francis

Lally School of Management, Rensselaer Polytechnic Institute

Francb@rpi.edu

<http://lallyschool.rpi.edu/faculty/bill-b-francis>

Professor Francis holds a Ph.D. degree in Financial Economics from the University of Toronto. He has been at the Lally School since 2005 where he is currently the Bruggeman Professor of Finance.

He is a finance scholar that is an internationally known expert on international and corporate finance. He is the author of more than 70 articles and book chapters relating to financial markets, exchange rates and managerial decision making. His work has been published in the top finance journals such as the Journal of Financial Economics, Review of Financial Studies, Journal of Financial and Quantitative Analysis, Journal of Business, and Journal of Money Credit and Banking. He is on the editorial board of several journals including The Journal of Financial Stability, Economic Analysis and Law Review, International Journal of Banking, Accounting and Finance. He has won several best papers and teaching awards. He has presented numerous papers and has participated in numerous colloquiums both nationally and internationally. Prior to joining The Lally School of Management at Rensselaer Polytechnic Institute, he held appointments at the University of South Florida and at the University of North Carolina at Charlotte. At the University of South Florida he held the Bank of America Professorship.



Delroy M. Hunter

Muma College of Business, University of South Florida

Dhunter2@usf.edu

www.usf.edu/business/contacts/hunter-delroy.aspx

Professor Hunter is the Serge Bonanni Professor of International Finance at the University of South Florida (USF). He holds a Ph.D. from the University of Warwick (UK), where he was a Commonwealth Scholar, an MA from the University of Florida, and a BSc from the University of the West Indies, Jamaica. Prior to joining USF in 2001, he was employed at Bentley University and the University of the West Indies. In addition, he has taught courses for different institutions in England and Singapore.

His research, which focuses on international finance, investments, and empirical asset pricing, has been published in several top academic journals, such as the Journal of Financial Economics, Journal of Business, and Financial Management. In addition, his research has won the Goldman Sachs Quant Award for research in Investments at the Western Finance Association conference, has been a semi-finalist for best paper awards at several academic conferences, and has been among the top 10 most frequently downloaded papers in different subfields at the Social Sciences Research Network. He has made presentations at various national and international meetings, central bank workshop, and university seminars, has reviewed articles for several peer-reviewed journals and applications to international grant funding agencies, assessed applications for tenure and promotion at different U.S. universities, and is an Associate Editor for the Quarterly Journal of Finance & Accounting. He is also actively community engaged, providing consultancy and advisory services to several entities in the United States and the Caribbean.





Patrick J. Kelly

New Economic School

Pkelly@nes.ru

www.patrickjkelly.us

Patrick J. Kelly is an Associate Professor and the Chair of the Finance Department at the New Economic School in Moscow and a Research Fellow at the International Laboratory of Financial Economics, hosted by the International College of Economics Finance and the London School of Economics. Professor Kelly earned his Ph.D. in Finance and Master Degree in Economics from the W.P. Carey School of Business at Arizona State University. He has been a visiting scholar at the University of Texas at Austin, a visiting lecturer in the Ph.D. program at the University of Melbourne and an assistant professor at the University of South Florida where he won awards for both his teaching and research. His research focuses on the impact of the media on asset prices and corporate governance, market efficiency, empirical asset pricing and behavioral finance, and he has published articles on these topics in top academic journals including the Review of Financial Studies and the Journal of Banking and Finance and the Quarterly Journal of Finance.

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