WP/18/35

IMF Working Paper

Welfare Gains from Market Insurance: The Case of Mexican Oil Price Risk

by Chang Ma and Fabian Valencia

INTERNATIONAL MONETARY FUND

WP/18/35

IMF Working Paper

Welfare Gains from Market Insurance: The Case of Mexican Oil Price Risk

by Chang Ma and Fabian Valencia

INTERNATIONAL MONETARY FUND

 WP/18/35

IMF Working Paper

Western Hemisphere Department

Welfare Gains from Market Insurance: The Case of Mexican Oil Price Risk

Prepared by Chang Ma and Fabian Valencia[1]

Authorized for distribution by Costas Christou

March 2018

Abstract

Over the past two decades, Mexico has hedged oil price risk through the purchase of put options. We examine the resulting welfare gains using a standard sovereign default model calibrated to Mexican data. We show that hedging increases welfare by reducing income volatility and reducing risk spreads on sovereign debt. We find welfare gains equivalent to a permanent increase in consumption of 0.44 percent with 90 percent of these gains stemming from lower risk spreads.

JEL Classification Numbers: F3; F4; G1

Keywords: Hedging, Commodity exporters, Sovereign debt, Default

Author's E-Mail Address: cma18@jhu.edu, fvalencia@imf.org

[1] Johns Hopkins University and International Monetary Fund, respectively. The authors thank Paolo Cavallino, Costas Christou, Daniel Hardy, Dora Iakova, Olivier Jeanne, Laura Kodres, Anton Korinek, Leonardo Martinez, Hui Miao, Eugenio Rojas (discussant), Damiano Sandri, Alejandro Werner, Woo Jin Choi, and seminar participants at the IMF, the Bank of Mexico, George Washington University Student Research Conference, Spring 2017 Mid-west Macro Conference, 2017 Georgetown Center for Economic Research Biennial Conference, 2017 Asian Meeting of the Econometric Society, and China Meetings of the Econometric Society for valuable comments.

Contents

Tables

Figures