Commodity Prices and the Financial Cycle in Developing Countries*

Luciana Juvenal[†1] and Ivan Petrella[‡2]

[1]Research Department, International Monetary Fund

[2]Warwick Business School and CEPR

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Extended Abstract

Commodity price booms have expansionary effects on macroeconomic aggregates of emerging and developing economies. However, not all commodity booms are transmitted equally and the source of the shock matters for analyzing the transmission channels. In a nutshell, two factors are the main drivers of commodity prices. First, global demand conditions. When the world economy is growing there is an increase in demand for all commodities which pushes up their prices. Second, there are commodity specific shocks, for example, driven by weather shocks, geopolitical events, which have important impact on commodity prices. We argue that the type of movement in commodity prices which has a large impact on the financial cycle of developing economies is the one driven by global demand.

When global demand conditions are favorable, commodity exporters enjoy the real gains of high commodity prices but at the same time world spreads are also low. This further leads to

*The views expressed are those of the authors and do not necessarily reflect official positions of the International Monetary Fund.

[†]Email: ljuvenal@imf.org (*corresponding author*).

[‡]Email: ivan.petrella@wbs.ac.uk.

a reduction in interest rate spreads in emerging economies which creates favorable conditions for borrowing and leads to capital inflows. By contrast, a commodity specific type of shock does not generate a reduction in spreads and therefore the effects on the financial cycle are muted. Take the example of an increase in the price of a given commodity due to a weather event which results in a large increase in the price of that commodity. This type of shock does in principle not generate substantial fluctuations in emerging economies' spread and therefore the effects on the financial cycle would be modest. In fact, if the shock is contractionary for the world economy (i.e. an increase in oil prices driven by geopolitical events), while commodity exporters benefits from the boom in commodity prices, the availability of global credit can be lower and/or the spread can become higher. The latter would attenuate the effects of the commodity price boom.

Fluctuations in commodity prices have been documented to have important implications for financial conditions and capital flows in emerging economies. Davis et al. (2021) and Miranda-Agrippino and Rey (2021) find that the second principal component of capital flows is the commodity price. At the same time Drechsel and Tenreyro (2018) argue that the spread of these countries is related to a measure of the price of exports. However, export prices can move due to a shift in global economic activity or due to a commodity specific shock. Most studies consider a measure of commodity prices which is treated as exogenous and do not distinguish the source of the shock. It turns out that the source of the shock is of the utmost importance to understand the channels of adjustment and it is essential to distinguish the extent to which is driven by the state of the global business cycle, *vis-á-vis* exogenous commodity specific shock.

Transmission of commodity booms. The real channel operates through a substitution and income effect. A positive commodity shock leads to a substitution from exportable towards importable and nontradable goods, and an income effect whereby households increase their demand for all goods, leading to an increase in consumption, investment, and output. The credit channel operates through the effect of commodity price booms on the interest rate

spread. Commodity price increases led by an expansion in global demand generate a decline in interest rate spreads which further fuels the expansionary effects in emerging economies through its effects on capital flows.

The transmission mechanism from a commodity specific shock is very different. For commodity exporters, there are positive effects from the real channel but this shock can have a negative impact on the global economy, therefore credit conditions can be tighter. For commodity importers the effects would be contractionary.

Our goal is to document the relative importance of the financial channel generated by commodity price increases led by global demand *vis-á-vis* those led by commodity specific shocks.

The source of commodity booms matters. Fluctuations in commodity prices may be driven by different types of shocks. For our purposes we will focus the role of global demand and commodity-specific shocks. Kilian (2009) and Juvenal and Petrella (2015) provide evidence that global demand shocks have been the most important driver of oil prices. Juvenal and Petrella (2015) and Di Pace et al. (2020) show that these shocks are responsible for the high correlation between commodity prices. Commodity-specific shocks refer to, for example, climate events such as weather shocks or natural disasters, geopolitical events, etc which have a significant impact on the price of a given commodity. We argue that the transmission of these two types of shocks can be very different. In particular, do capital flows and the spread respond differently to each type of shock?

Data. We construct our own dataset of export prices and import prices by using commodity prices and manufacturing prices matched with time-varying trade shares following the recommendations of the IMF Export and Import Price Manual. The dataset spans from 1975 to 2019 and covers a large sample of emerging end developing economies. Macroeconomic data are sourced from WDI while spreads are obtained from Haver Analytics.

Methodology. We rely on the local projection method with panel IV. For the estimation of

global demand we use as instrument the NBER US recessions. To instrument commodity booms either related to export or import prices we use major events in commodity markets that are exogenous to the country. To translate the event into an instrument we take into account the export and import shares of a given commodity and the extent of the movement in the commodity price during that particular episode. This also uses the LOOP as a quasi-experiment.

Findings. Since global demand is the key driver of commodity prices (Juvenal and Petrella, 2015; Kilian, 2009), this provides a rationale for the existence of a second factor driving the global financial cycle that correlates with commodity prices (Miranda-Agrippino and Rey, 2021). The financial channel is more important for commodity price booms originated in global demand shocks. For commodity specific price shocks the financial channel may be more limited.

Policy implications. Drechsel et al. (2019) highlight the importance of considering the close interaction between commodity prices and financial conditions for emerging markets' monetary policy. Similarly, Céspedes and Velasco (2014) and Kaminsky (2010) find that developments in commodity prices are very relevant for fiscal policy for developing countries. However, different shocks can potentially require different policy responses depending on the drivers of commodity prices and to what extent the impact of those are amplified by the global financial cycle.

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