## Granger Predictability of Oil prices after the Great Recession\*

Szilard Benk<sup>†</sup>

Max Gillman<sup>‡</sup>

December 5, 2019

## Abstract

Real oil prices surged from 2009 through 2014, comparable to the 1970's oil shock period. Standard explanations based on monopoly markup fall short since inflation remained low after 2009. This paper contributes strong evidence of Granger (1969) predictability of nominal factors to oil prices, using one adjustment to monetary aggregates. This adjustment is the subtraction from the monetary aggregates of the 2008-2009 Federal Reserve borrowing of reserves from other Central Banks (Swaps), made after US reserves turned negative. This adjustment is key in that Granger predictability from standard monetary aggregates is found only with the Swaps subtracted.

**Keywords:** Oil Price Shocks, Granger Predictability, Monetary Base, M1 Divisia, Swaps, Inflation.

**JEL Code:** Q43, E510, E520

## 1 Introduction

Oil shocks have been explained by episodes of unrest (Baumeister and Kilian, 2016), supply and demand (Kilian, 2009), monopoly power (Mankiw, 2014), and by money supply growth (Alquist et al., 2013). There is a lack of consensus especially about the 2009-2014 oil price "shock". For example, unrest and monopoly power theses are countered by US oil fracking creating a tremendous oil supply increase during the 2009-2014 period.

<sup>\*</sup>We are grateful to University of Missouri, Friedrich A. Hayek Chair endowment funding, and for excellent discussion points at the AEA 2018 Winter Meetings by Jonathan Lee, East Carolina University, and for the comments at the 6th International Symposium on Environment and Energy Finance Issues (ISEFI-2018), especially by Lutz Kilian, and with special thanks to Michal Bordo and Owen F. Humpage.

<sup>&</sup>lt;sup>†</sup>International Monetary Fund, 700 19th st NW, Washington DC, 20431. benk.szilard@gmail.com <sup>‡</sup>Corresponding author. University of Missouri - St. Louis, Department of Economics, University of Missouri - St. Louis, 1 Uninversity Boulevard, St. Louis, MO 63121; gillmanm@umsl.edu