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Monetary policy, global liquidity and commodity price dynamics

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ABSTRACT

This paper examines the interactions between money, interest rates, goods and commodity prices at a global level. Aggregated data for major OECD countries are therefore analysed in a cointegrated VAR framework. Our empirical results for the period ranging from the 1970s to 2008 support the view that, when controlling for interest rate changes and thus different monetary policy stances, money (defined as a global liquidity aggregate) is still a key factor to determine the long-run homogeneity of commodity and goods prices movements.

1. Introduction

Against the background of steadily increasing global liquidity in most industrial countries as well as in numerous emerging market economies with a dollar peg, since the beginning of the century particularly in China, broad money growth has exhibited comparatively stronger expansion than nominal output. Consumer price inflation has remained largely unaffected by the strong monetary dynamics

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in many regions in the world, not least, as the money-inflation nexus appears to be less pronounced with monetary policy alignment towards inflation targets. Over the same time period, however, consecutively and pronounced booming asset prices, such as commodity, real estate or share prices have been observed in many economies (Schnabl & Hoffmann, 2007).

In the period from 2001 to mid-2008, for instance, house prices increased by 40–60 percent in a number of OECD countries, the CRB commodity price index surged by 105 percent in the same period, and also stock prices more than doubled in nearly all major markets from 2003 to 2008 (Belke, Bordon, & Hendricks, 2010a). Similarly, the crude oil price was still low in 2001 but has experienced a steady increase that tripled the price by the middle of 2007. Subsequently, oil prices continued to rise sharply reaching an all-time high on July 3, 2008, only to be followed by an even more spectacular price collapse (Hamilton, 2008). Around the turn-of-year 2008-09, the oil price started to rebound and reached quotations of around $75 per barrel, amounting to twice the price at the beginning of 2009. Many observers point out that the sequential increase of asset prices might be caused by liquidity spillovers to certain asset markets (Adalid & Detken, 2007; Greiber & Setzer, 2007).

The differing price dynamics of asset and goods prices during the last years put forward the question as to whether the money-inflation nexus has been enduringly altered. The long-rung equilibrium relationship between monetary and goods prices developments is not found to be as pronounced as previous observations would confirm and thereby suggesting that effects from past policy actions are still going to unfurl their impact.[1] Understanding the price fluctuations of commodities remains a significant and timely discussion that embraces monetary conditions as a major macroeconomic determinant, in particular, when it comes to explaining why individual commodities move as closely together as in recent years (Frankel, 2013).

In order to convey the impact that easy monetary policy bears for commodity price developments, this study aims at establishing the empirical context for money, interest rates, asset prices and goods prices on a global scale. With the focus on long-run relationships, we apply a cointegrated VAR (CVAR) framework and analyse the impact of "official liquidity", i.e. liquidity created by monetary authorities through regular and emergency operations (BIS, 2011), on commodity and goods prices inflation. Literature, which has been devoted to the complex of issues on "official liquidity" and commodity as well as a broader range of asset prices, has offered findings on the overshooting of commodity prices over consumer prices (Belke, Bordon, et al., 2010) and the interactions between money, goods and asset prices (Belke, Orth, & Setzer, 2010b) focusing on and explicitly modelling different price elasticities on goods and asset markets. This study adds to and complements that literature not only by broadening the information set of Belke, Bordon, et al. (2010) and Belke, Orth, et al. (2010). It also provides empirical evidence on the hypothesized long-run equilibria of money and goods and commodity prices and offers findings for easy monetary policy that become manifest when contrasted to monetary policy reaction function in the fashion of a Taylor-rule.

The remainder of the paper proceeds as follows. Section 2 provides considerations on a global vista of the monetary transmission process. We present an overview of the literature and give a review of fundamental theoretical reasoning to illustrate the potential impacts of monetary policy on commodity prices. Section 3 turns to the empirical analysis and reports on the estimation results. The final section offers conclusions as well as policy implications of the results.

2. Literature review and theoretical considerations

With regards to global inflation and global liquidity performance, available evidence argues in favour of a global rather than a national perspective being more relevant when the monetary

[1] The main emphasis of these studies is on globally aggregated variables, which implies that they do not explicitly deal with spillovers of global liquidity to national variables. The main motivation for this way of proceeding is related to recent research according to which inflation appears to be a global phenomenon. So far, the relationship between money growth, different categories of asset and goods prices has been little studied in an international context. Only recently have a number of authors suggested specific interactions of global liquidity with global consumer price and asset price inflation (Baks & Kramer, 1999; Sousa & Zaghini, 2006; Rüffer & Stracca, 2006).