Comments on Andrew Filardo and Marco Lombardi's paper

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This is a thought-provoking paper on a timely topic. The past decade has witnessed large swings in world commodity prices as global economic growth waxed and waned. While commodity prices have been better behaved over the past two years as global growth limped along, this state of affairs may not endure. As the global recovery strengthens, we may soon have to revisit the vexing issue of how national monetary policies should respond to imported commodity inflation – particularly, if food prices should again become the villain of the piece.

A long-standing dictum is that monetary policy should respond to commodity price fluctuations only if second-round inflationary effects should emerge. Reiterated time and time again in policy circles, this advice is often taken to imply that national monetary policy should focus on "core" consumer price index (CPI) inflation – even though the overwhelming majority of inflation targeting central banks have a clear mandate to target headline CPI inflation (see de Gregorio, 2012).

Filardo and Lombardi dispute this received wisdom. Their main contention is that inflationary and growth risks are non-trivial when commodity price pressures build up and when they stem from global demand shocks. In support of this contention, four pieces of evidence are presented. The first is a qualitative discussion of ongoing structural changes in global commodity markets, which suggests that the elasticity of commodity prices to global growth has risen significantly over the past decade. This is because of the higher weight of "commodity-hungry" emerging markets in global aggregates, and also because emerging markets are "high-beta" economies; the financialisation of commodity markets, prompting more immediate price reactions to demand-supply imbalances in global commodity markets, helps fuel underlying volatility.

The second and third pieces of evidence provided are regression-based. Filardo and Lombardi use the Blanchard and Quah decomposition in a VAR on global output and CPI inflation to show that demand shocks have been the main driver of global output and price developments since 2007, and that global commodity prices were far more responsive to global demand shocks in 2007–09 than to supply shocks.

They then estimate pass-through coefficients from global commodity prices to headline CPI inflation in several emerging markets, distinguishing the supply from the demand component of global commodity prices. The finding is that the pass-through associated with the global demand component typically far outweighs that of the global commodity supply component. They also find that pass-throughs are generally higher in emerging Asia than elsewhere, particularly Latin America, and

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that core inflation tends to converge back to headline inflation, but not the converse.

The authors wrap up their case for less lenient policy responses to imported commodity inflation with a simulated two-country world economy model with new Keynesian features. A key aim of this exercise is to gauge the effects on output and inflation of a response by central banks to global commodity prices as if these were driven by a commodity supply shock, when they stem in fact from a global demand shock. The model consists of three main behavioural equations and closes with a Taylor rule featuring interest rate smoothing. In the IS equation, commodity price inflation enters separately and affects output negatively; the dynamic Phillips curve features a distinction between headline and core inflation; and there is a behavioural equation linking global commodity prices to outputs in the two countries – the "emerging" and the "advanced" one – with coefficients proportional to the respective weights in global output. If the emerging economy central bank correctly observes the commodity shock, it should lower its policy rate under a supply shock and raise it under a global demand shock. In this case, ***core*** CPI targeting delivers higher welfare (measured in terms of output and core inflation variability). But if a central bank fails to observe the correct source of the commodity price shock, welfare losses are smaller if the central bank targets ***headline*** inflation. As an interesting spin-off from this exercise, the authors compute the welfare gaps between the two rules as the probability of misdiagnosis changes. If that probability is 50%, headline inflation targeting reduces welfare losses by about 12%.

I have four main comments. First, it is hard to disagree with the authors' diagnostic that far-reaching structural changes in global commodity markets and the higher emerging market share in global demand should entail a higher elasticity of commodity prices to global output than that observed historically.

In that light, however, my second comment pertains to the assumption, underlying their use of the Blanchard-Quah decomposition, that demand shocks are temporary. If main changes in global commodity demand patterns are structural, as the authors themselves argue, then what we typically think as a demand shock may not be so temporary. Indeed, the rising weight of fast-growing commodity-hungry emerging markets in global output is likely to continue. Looking at Graph III.2, it seems that the authors' result of a temporary demand shock driving global commodity prices is dominated by a one-off episode – the 2008–09 financial crisis. There may well be a more persistent demand component that is filtered out with the use of this decomposition scheme. The greater persistence of such a shock has potentially far-reaching policy implications – one being that fiscal policy may have a greater role to play in helping monetary policy to cope with highly persistent shocks to relative commodity prices. Relatedly, the authors note that they performed the Blanchard-Quah decomposition with data going back to the 1970s. Yet, only post-2000 estimates are plotted. As a model check, it would be instructive to know if their VAR characterises the global relative price shocks of the 1970s and 1980s. Likewise, it would be instructive to see how robust their results are to dropping the 2007–09 boom and bust from their sample. My other suggestion would be to include global commodity prices in the VAR (as well as other known determinants of world commodity prices, such as the US short-term interest rate); one could then gauge the sensitivity of commodity prices to global supply and demand shocks more directly and more thoroughly. That would be technically more involved but may well result in somewhat distinct estimates: allowing for feedback effects of commodity supply shocks on overall global output demand and supply may change the VAR coefficients quite a bit.

My third comment focuses on the cross-country heterogeneity of pass-throughs from global commodity prices to domestic CPI inflation. One reason why pass-throughs in emerging Asia are higher seems to be related to a lesser degree of exchange rate flexibility than in other countries/regions (notably Latin America). Whether the global commodity shock stems mostly from demand versus supply arguably should not matter as much, as differences in exchange rate regimes are starker. Structural differences in production structures could also be played out more in the analysis, as they should heavily influence pass-throughs. For instance, some countries (eg China) are major net commodity *importers*; others (eg Indonesia) are major net commodity *exporters*; and others have a more balanced commodity trade. These should entail non-trivial cross-country differences in terms of trade, output, and inflation responses to any given global commodity shock. Likewise, there are wide cross-country differences in financial openness – no matter which of the existing indices one uses (eg Chinn-Ito's, Quinn's, Schindler's, or the Lane-Milesi-Ferretti data). These differences should also have a non-trivial effect on pass-throughs.

This takes me to my fourth and last comment: it seems unlikely that one-rule-fits-all is good policy advice. In Catão and Chang (2013a and 2013b), we show that the welfare superiority of distinct inflation targeting rules (such as headline CPI targeting versus producer price index targeting, versus exchange rate pegs) depends non-trivially on production structure and trade elasticities, as well as on the degree of international financial integration. This also implies that, even if all countries choose to target headline CPI, those structural differences may call for variants around the broad targeting rule. These variants can take the form of:

- wider or narrower tolerance bands around the central inflation target;
- differences in targeting horizons;
- different weights on the output gap in the Taylor rule; or
- distinct reliance on foreign exchange market intervention.

This broad point, however, does not imply that the authors' criticism of country-centric approaches to monetary policy is not well taken. Indeed, externality problems generated by a Nash-type approach to national monetary policies have been well acknowledged in the recent literature on open economy macroeconomics (see Corsetti et al, 2010, for a review). Further, and beyond strict macro considerations, leaving global CPI un-anchored on the face of large shocks to food prices, for instance, may have major effects on income distribution that are neither economically optimal nor politically palatable.

In short, this is a stimulating paper leaving us with much food for thought. I find myself in broad agreement with its appraisal of global commodity market developments; and while thinking that the econometric analysis of global supply and demand shocks could be more thorough, the findings on the cross-country diversity of pass-throughs and dynamics of headline CPI convergence to core CPI inflation are very interesting. Building more structure into the canonical new Keynesian setup so as to zoom in on the roles of country-specific production structures, trade elasticities, and forms of financial imperfections on optimal policy rules, under both Nash and cooperative solutions, should have high priority in this research agenda.

References

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