

Summary for non-specialists  
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## Commodity prices, commodity currencies, and global economic developments

by Jan Groen and Paolo Pesenti

Have economists and analysts reached some pragmatic consensus on how to predict movements in commodity prices? As considered in this paper, there is no easy answer. While we are not necessarily pessimistic about the possibility of obtaining serviceable forecasts for near-term commodity price inflation, our results throw cold water on excessive hopes of accuracy and reliability.

In the paper, we do not attempt to answer questions such as "why are commodity prices so persistently high or low" or "how long before they start affecting inflation expectations". Our purpose is more modest. Our forecast variables are cross-commodity price indices (we consider 10 indices in total, taken from four distinct sources, and going as far back as 1973), and we assess the extent to which the information from a large dataset of indicators of global conditions may help predicting future movements of these indices.

To put our results in the context of the relevant literature, it may be useful to summarize briefly the approaches usually adopted to forecast commodity prices.

The first approach argues that economic modeling is not particularly helpful. The best information one can use to predict future prices is the one embedded in current and past prices. Thus, to obtain the best out-of-sample prediction one could just estimate a simple statistical autoregressive process (what goes up must come down) or a random walk specification (tomorrow's prices are today's prices). Let's call this the "atheist" approach.

At the opposite extreme is the claim that commodity prices would be easily predictable if one only used the right tools, the right theory, the right model. Let's call this the "true believer" approach. In the paper we discuss several examples of this approach. For instance, some have recently emphasized that exchange rate fluctuations of relatively small and predominantly commodity-exporting economies such as Australia, Chile or South Africa are privileged predictors of future global commodity prices. Primary commodity products represent significant components of output in the above-mentioned countries, affecting a large fraction of their export earnings. At the same time these countries are too small to have much of an impact on world markets. This implies that global commodity price changes represent

external shocks for these countries, and their exchange rates move today in anticipation of future terms of trade adjustment.

Finally, some are unwilling or unable to take a stand and choose among the glut of “true beliefs”. Let’s call this approach “agnostic” (whatever works, we’ll take it). Pragmatically, this translates into throwing into the cauldron of possible predictors disparate things like macro-economic time series across major developed and developing countries (e.g., industrial production, business and consumer confidence data, retail sales volumes, money aggregates and interest rates), data on inventories and production of industrial metals and energy commodities, and data on ocean shipping costs across many different routes. To distill the relevant information from such a brew of raw data, in our paper we use partial least squares (PLS) regressions which – heuristically – maximize the covariance between the common components extracted from the large dataset of predictors and future commodity price changes.

To make a long story short, in the paper we obtain different sets of forecasts based on different “atheist”, “true believers” or “agnostic” approaches. And the winner is...

Well, there is no obvious winner. Information from large panels of global economic variables can help, but their forecasting properties are by no means overwhelming. It all depends on the choice of the specific index and the forecasting horizon. For example, for one specific commodity price index, PLS regressions provide significantly better predictions than both autoregressive and random walk benchmarks when used to forecast one-month and one-quarter ahead commodity prices. But when the forecasting horizon is 6 months or longer, the forecast performance of PLS regressions is no better than the statistical benchmarks. PLS does perform relatively better with aggregate commodity price indices than with commodity sub-indices such as metals or energy.

If we focus on specific subsets of explanatory variables – as emphasized by the “true believers” –we do find mild but not overwhelming evidence for the notion that commodity currencies are privileged predictors. We find even less empirical support to the notion that commodity futures have strong predictive power.

Ultimately, the basic message is one of inconclusiveness. No easy generalization or pattern emerges, and the results look almost random. In fact, we are unable to generate forecasts that are, on average, structurally more accurate and robust than those based on a random walk or autoregressive specifications. If a policy lesson can be drawn from our results, is that one should be very cautious when interpreting the forecast of a forthcoming commodity price surge as an early signal of recrudescence in global headline inflation. As forecasts of commodity prices provide only highly noisy hints about their actual future trajectories and persistence, excessive confidence in such forecasts may bias policymakers' views and beliefs about future inflation risks in the direction of a premature - and unwarranted - tightening of the global policy mix.