Policy brief
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Robust Monetary Policy Framework for Emerging Markets

In brief

- The primary objective of central banks is to keep inflation low and stable. Thus, the choice of price index is key in achieving this. Most models suggest targeting core inflation (which excludes volatile food and energy prices). However, in low- and middle-income countries, food expenditures account for nearly half of household expenditures and a large proportion of the population has no access to the financial system.

- This study seeks to determine the price index central banks should target in low- and middle-income countries.

- The traditional model may not apply to emerging economies due to the percentage of household expenditure that food and fuel account for - which are relatively inelastic goods. Households may factor in food price inflation while bargaining over wages, implying that food price inflation feeds into inflation expectations.

- Changes in food prices cannot be treated just as a supply shock that have no implications for monetary policy. As some households cannot borrow, their consumption is determined by wages and demand is insensitive to changes in interest rates. Thus, the relative price of food affects both aggregate supply and aggregate demand (through real wages), and thus, is no longer a pure supply shock.

- Adopting flexible headline inflation targeting - based on a headline rather than core inflation and with some weight on the output gap - may be a better choice for some countries.

- This issue is important in a global economic context given that many developing countries central banks are grappling with price surges in fuel and food prices.

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Policy Motivation

"Our analysis suggests that it may not be appropriate for central banks in developing economies to target core inflation"

The primary objective of most central banks, whether or not they explicitly target inflation, is to keep inflation low and stable. The choice of the right price index that should be the focus of the inflation objective is a central operational issue in implementing monetary policy. This question takes on a very different hue in low- and middle-income economies. In these economies, food expenditures account for nearly half of total household expenditures, and a large proportion of the population works in a cash economy with little access to the formal financial system. The main objective of this research project is to analytically determine the price index that central banks should target in economies that have these features. This can help central banks implement monetary policy in a manner that promotes macroeconomic stability and economic welfare.

Policy Impact

Our analysis suggests that it may not be appropriate for central banks in developing economies to target core inflation—which excludes volatile food and energy prices—even though classical theoretical models suggest that core inflation is the proper target for monetary policy. Adopting flexible headline inflation targeting—a target based on headline rather than core inflation and with some weight on the output gap may be a better policy choice. This issue is highly policy relevant in many developing economies that are now facing rampant food price inflation and are looking for frameworks to determine the appropriate monetary policy response.

Audience

Central banks in general, and central banks of emerging markets in particular.

Implications

In emerging markets, changes in food prices cannot be treated just as supply shocks that have no implications for monetary policy

Low levels of financial development, the high share of food in household expenditures, and the nature of food (low elasticity, and a necessary good) imply that relative food price movements affect aggregated demand. This may call for a different response to food price inflation in these economies as compared to advanced economies.

"Adopting flexible headline inflation targeting—a target based on headline rather than core inflation and with some weight on the output gap may be a better policy choice"

The widely-accepted analytical result that targeting core CPI inflation stabilizes overall inflation and the business cycle needs a careful re-examination in the case of emerging market economies

As food price changes affect aggregate demand in these economies, leaving them out of the price index that is the focus of monetary policy actions may have adverse welfare consequences in these economies.

Brief Summary of Research

In the academic literature, the choice of price index for inflation targeting central banks has been guided by the idea that inflation is a monetary phenomenon. Since fluctuations in food and energy prices are non-monetary in nature, reacting to them may not be desirable and could even prove counterproductive. In addition, if households have access to the formal financial system, they can fully insure against these transient and volatile shocks, making central bank intervention unnecessary. Thus, to deliver price stability – the key role of central banks – the optimal strategy is to target the underlying core inflation (excluding food, energy and other volatile components of headline inflation).

"Since a fraction of households cannot borrow, their consumption path is determined by their wage income, and demand of these households is insensitive to changes in interest rates– the primary instrument of monetary policy."

However, most of the assumptions that these analytical results are based on are relevant only for advanced economies. Emerging market economies differ from advanced economies in some key respects. A substantial fraction of households in emerging markets do not have access to formal finance, and they spend a major share of their household expenditures on food (and fuel). Hence, changes in food and fuel prices have a considerable bearing on the consumption decisions of these households. Since expenditure on food in total household expenditure is high and demand for food is relatively inelastic, households in these economies factor in food price inflation while bargaining over wages. Through this channel, food price inflation may feed into inflation expectations. Thus, in emerging markets even inflation expectation targeting central banks have to be concerned about food price inflation.

We develop a simple model incorporating the distinctive features of emerging market economies, although our results turn out to have broader applicability. We assume that a fraction of households in the economy do not have access to formal finance and they consume their wage income in every period. We look at the welfare implications of targeting headline inflation and core inflation under these settings to determine the optimal price index.

Our results suggest that under these settings the central bank should target headline inflation. Since a fraction of households cannot borrow, their consumption path is determined by their wage income, and demand of these households is insensitive to changes in interest rates– the primary instrument of monetary policy. Thus, the relative price of food not only affects aggregate supply, but through its effects on real wages, also influences aggregate demand (in other words, food price shocks are no longer a pure supply shock as commonly treated in the classical models). It also implies that in order to affect aggregate demand, the central bank has to respond to food price shocks. The presence of households with no access to finance also breaks the comovement of inflation and output (as inflation and output may now move in opposite directions). Thus, stabilizing core inflation is no longer sufficient to stabilize output as in these markets.

Implementation

"Our analysis suggests that in economies with low levels of financial development, the solution of neglecting food price inflation and focusing just on core inflation could have adverse welfare consequences"

Our results suggest that in emerging market economies the choice of core inflation as the inflation objective needs careful reconsideration. When the price of food has a significant influence on the consumption choices of households, there may be merit in targeting the overall price index (headline inflation). This issue is important in the present global economic context, with many developing economy central banks grappling with the issue of how to deal with the recent surges in food and fuel prices. Our analysis suggests that in economies with low levels of financial development, the solution of neglecting food price inflation and focusing just on core inflation could have adverse welfare consequences. Our research does not directly examine the precise tools through which central banks in emerging markets should target headline inflation but a combination of interest rate policy and flexible exchange rates could help cope with both domestic and imported sources of inflation.

Further Readings

Mishkin, Frederic S., 2008, "Does Stabilizing Inflation Contribute to Stabilizing Economic Activity," at East Carolina University's Beta Gamma Sigma Distinguished Lecture Series, Greenville, North Carolina. February 25, 2008.

Wynne, Mark A., 1999, "Core Inflation: A Review of Some Conceptual Issues," Research Department Working Paper no. 9903, Federal Reserve Bank of Dallas.

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Rahul Anand is Senior Economist in the Asia Pacific Department of the IMF, working on India. Prior to joining the Fund, he worked for the Government of India. His research interests and publications focus on general equilibrium modeling of monetary transmission, labor market rigidities, and financial sector reforms; inclusive growth; structural transformation; and subsidy reforms. He holds a PhD from Cornell, and a Masters from Harvard.

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