Inflation and exchange rate causality

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BANGLADESH has been experiencing a rapid growth in the general price level in recent years. The rate of inflation has crept up steadily since July 2009, rising from an average of 2.3 percent during 2008-09 to a peak of 12 percent in September 2011. The inflation rate declined to 10.1 percent in March 2012. The nominal exchange rate (defined as taka per one dollar) climbed from around Tk 70.2 in September 2010 to Tk 84.4 in January 2012. It has now stabilised around Tk 81.8 since February 2012. On the whole, the taka depreciated by 20 percent over the 16 months of September 2010 to January 2012 as compared with zero depreciation over the entire four years from July 2006 to July 2010.

The rapid rate of inflation has become a major economic and social problem for Bangladesh. Unless this is tackled forcefully and with some urgency it could become a major political debacle for the government when it seeks reelection in the next 20 months. It is also important that right policy choices are made in the effort to control inflation.

One popular debate concerns the role of nominal exchange rate in managing inflation. There are quite a few policymakers, researchers and businesspeople who believe that the depreciation of the exchange rate is the primary culprit underlying rapid inflation in Bangladesh. This group believes that the government should basically pursue a fixed nominal exchange rate policy. The underlying logic is the standard cost-push argument for inflation. Exchange rate raises the taka price of imported inputs that pushes up the cost of production and that in turn fuels inflation.

I have written quite a bit on how to manage the inflation challenge. My basic message based on quantitative research is that lax monetary policy during 2009-11 has been the primary source of the present inflationary episode. I do not wish to repeat here the detailed analysis underlying the result. The topic of this article is to comment on the simplistic view that inflation is the result of exchange rate depreciation and by having a fixed exchange rate we will avoid inflation. In doing this, I will report on the results of my research that uses modern quantitative techniques that are consistent with good international practices.

It will be useful to give a little background to the nature of the quantitative investigation. Time series data and related analysis can be very helpful in understanding macroeconomic developments, making projections for the future and developing policy responses to tackle unhappy macroeconomic outcomes. The analysis of inflation is a good example of how proper time series analysis can help the government to control inflation and stabilise the macroeconomy. I will like to stress the importance of "proper time series analysis" because in its absence we can easily reach erroneous conclusions that, if applied to policymaking, can do substantial damage to the macroeconomy.

A key requirement of this "proper" analysis is to first start with a good theory about causality. Many things tend to move together over time. Without a sound analysis of how developments are correlated and what is the cause and what is the effect there is either a risk of spurious correlation or mis-specification of the relationship. Economic theory helps avoid the problem of spurious correlation, but it sometimes does not help identify the causality. This problem of establishing causality in time series data has received a great deal of attention in quantitative economic research and considerable progress has been made in recent years to help identify proper causality, thereby facilitating better policymaking and economic forecasting.

STAR/FILE

Vegetables are on display for sale at a chain superstore in Dhaka. The rapid rate of inflation has become a major economic and social problem for Bangladesh.

Working independently in different time periods, two researchers, Clive Granger of the University of Nottingham in England and Christopher Sims of the Princeton University in the USA, pioneered the quantitative methods for establishing causality. Both received the Nobel Prize in Economics; Granger in 2003 (unfortunately he died in 2009) and Sims in 2011. The statistical technique developed to establish causality is known as the Granger-Sims test.

Good practice quantitative research using time series data first needs to ensure that the data are "stationary" (to enable meaningful predictions) and that causality is established using the Granger-Sims test before deciding which variable is the cause (also called the independent or exogenous variable) and which variable is the effect (also known as the dependent variable or endogenous variable).

Let me now move to the relationship between inflation and exchange rate in Bangladesh. The Granger-Sims test applied to Bangladesh time series data for inflation and the rate of change of the nominal exchange rate over the 30 year periods between 1981 and 2011 show that the causality is from inflation to exchange rate changes and not the other way round.

Further quantitative results show that the depreciation of the nominal exchange rate is strongly and positively correlated with the inflation differential between Bangladesh and the USA (the country issuing the reserve currency). On average, a one percent increase in inflation differential causes a 0.8 percent increase in the rate of depreciation of the nominal exchange rate.

This causality from inflation to exchange rate is a very powerful and fundamental result for policymaking. The main message is that if we want to have a stable exchange rate over the longer term, we need to keep the rate of inflation low and closely aligned to international inflation. The other policy that could help stabilise the exchange rate is foreign capital inflows. Bangladesh does not have a strategy for mobilising foreign capital and as such is missing out on one useful policy instrument for exchange rate management.

This result leads to the question what happens if the nominal exchange rate is kept unchanged? To answer this question, let us examine the recent developments. As stated earlier, the exchange rate was virtually fixed for four years during July 2006 to July 2010. The rate of inflation started climbing from July 2009 owing primarily to expansionary monetary policy (during 2009 to 2011). This increased the demand for imports, which put pressure on the balance of payments. Bangladesh was fortunate to have substantial balance of payments surpluses in 2006-2010 owing to large inflow of remittances that allowed the Bangladesh Bank to build up substantial reserves. So, when the demand for imports soared (import growth accelerated to 40 percent in 2011), the BB was able to protect the exchange rate for a while and instead take the pressure on reserves. Between April 2011 and November 2011, the central bank lost as much as $2 billion of foreign reserves.

Faced with this unsustainable pressure on the reserves, the BB let the exchange rate depreciate. Even with that rapid depreciation, the current account balance that recorded a surplus of $3.7 billion in FY2010 is now expected to become a deficit in FY2012. If the exchange rate was not allowed to bed adjusted to the demand pressure, there would have been a substantial further run on the reserves. The other adverse effect of a fixed exchange rate regime in the face of rapid inflation is a substantial appreciation of the Bangladesh currency in real terms. The continued over-valuation of the real exchange rate would hurt exports. Carried over the longer- term, the trade gap would widen rapidly and destabilise the balance of payments that could fuel a major economic crisis.

The basic message, graphically illustrated by the Bangladeshi experience and also reflected internationally in other country experiences, is that a fixed exchange rate regime is inconsistent with an expansionary monetary policy. If the exchange rate is to be used as a policy variable to anchor inflation, then it must be supported by adequate reserves and an appropriate monetary policy that limits the rate of inflation to the rate prevailing in the reserve currency country on a long-term basis (a near impossible target for Bangladesh). This will also imply that fiscal policy cannot rely on borrowings from the BB as presently. A fixed exchange rate regime imposes huge discipline on monetary and fiscal policies in the absence of which the exchange rate will become over-valued in real terms leading to balance of payments problems.

A much better policy regime for Bangladesh is to continue with the present flexible exchange rate management but support a stable (but not fixed) nominal exchange rate outcome by pursuing prudent fiscal and monetary policies. Prudent monetary and fiscal policies will keep inflation under control over the longer-term (although short-term inflationary episodes might result from international oil price or food price hikes) thereby moderating the pressure on the nominal exchange rate.

Thus, the core objective of monetary policy should be to target a relatively low rate of inflation over the longer term and not allow substantial deviations from this long-term rate. For example, a 5 percent rate of inflation would appear to be a reasonable long-term target for monetary policy. With the US inflation rate in the 2-3 percent range, this will imply a 2-3 percent annual average rate depreciation of the nominal exchange rate over the longer term.

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Premium Asian carriers hit by severe crosswinds

AFP, *Singapore*

PREMIUM airlines in Asia are rethinking their strategies and slashing costs as high fuel prices, global economic uncertainty and pressure from Middle East and budget carriers squeeze profits.

Singapore Airlines (SIA) reported Wednesday that its net profit for the financial year ended in March tumbled 69 percent to Sg$336 million ($268 million), weighed down by a rare loss in the fourth quarter.

It was only SIA's third quarterly loss in its 40-year history of uninterrupted full-year profit. The first took place during the SARS health scare in 2003 and the second during the global financial crisis in 2009.

SIA's Asian rival Cathay Pacific of Hong Kong has warned shareholders that its first-half results, due out in August, are "expected to be disappointing" on the heels of a 61-percent net profit fall in 2011.

Both carriers are looking for more opportunities in Asia, the world's fast-growing aviation market, as long-haul operations take a hit from the European debt crisis and the patchy US recovery.

Australian flag carrier Qantas is also attempting to refocus on Asia as part of its strategy to revitalise its loss-making international business.

"This is not just a Cathay Pacific problem," chief executive John Slosar said in a statement to the Hong Kong stock exchange.

"It is clearly an industry-wide issue, and continued high fuel prices in particular are hitting airlines hard across the globe," he said, calling for "concerted action" to address the volatile environment.

SIA's performance is regarded as an indicator of industry trends and its reliance on business and first-class passengers to generate high margins is now being called into question.

Premium carriers such as SIA and Cathay are among the most affected by the economic headwinds because of their heavy reliance on top-paying passengers who can account for more than 50 percent of revenues, analysts said.

AFP

A Lion Air plane takes off from Changi International airport in Singapore. Premium airlines in Asia are beset by a profit squeeze.

Some analysts say SIA has not been not been quick enough to seize opportunities at the lower end of the market.

"While SIA's current slump is more a result of tough economic conditions and external factors, they are also now paying the price for standing still," the Sydney-based Centre for Aviation consultancy said in a report.

Air travellers are more price-conscious and have a wider range of choices from budget carriers to premium airlines, Shukor Yusof, an aviation analyst in Singapore with Standard & Poor's Equities Research, told AFP.

Last year, one in four of the 46.5 million passengers who passed through Singapore's Changi Airport travelled on a low-cost airline, compared to one in five in 2010, the airport operator said.

SIA is also being challenged by Middle Eastern carriers such as Etihad, Qatar Airways and Emirates, which have expanded their fleets and improved cabin services to compete with the famous "Singapore Girl" flight attendants.

"They have closed the gap," said Shukor.

"They now offer services that are at par or better than SIA and at lower ticket prices," he said, noting that SIA fares are around 20 percent higher.

But Middle East carriers are equally under pressure, with Dubai's Emirates airline group announcing a 61-percent slump in profit in the year to March to 2.3 billion dirhams ($629 million).

Cathay said its cost-cutting measures include reducing flight frequencies on some routes to Europe and the United States while expanding its profitable Asian network through sister firm Dragonair.

It will deploy more fuel-efficient aircraft, speed up the retirement of older Boeing 747-400 planes, freeze hiring of ground staff and offer voluntary unpaid leave for cabin crew from June.

SIA said in March it had asked its pilots to volunteer for unpaid leave for up to two years during which they can work for other airlines.

It has retired the Boeing 747-400 and is pushing through with orders for new more fuel-efficient Airbus and Boeing planes.

Global airline industry group IATA in March cut back its 2012 profit forecast for the industry to $3.0 billion from $3.5 billion due to persistently high fuel prices, with Brent crude staying above $100 a barrel.

The Association of Asia Pacific Airlines (AAPA) said the aggregate net profit of members based in the region tumbled 47 percent last year to $4.8 billion due to high oil prices and soft cargo demand.

Fuel accounted for 34 percent of total costs, up from 30 percent the year before, AAPA said.

Its director general Andrew Herdman said that with revenues totalling $162 billion, the aggregate net profit represented "only a 3.0 percent profit margin and a poor return on invested capital."

But he said the region's carriers were adapting.

"Asia Pacific carriers are at the forefront of business model innovation, with changing dynamics rapidly reshaping the region's industry," he told AFP.

A number of airlines are already combining the elements of both full-service and budget models, while others are forming alliances, he noted.

"New strategies involving partnerships of full service airlines and low cost carriers are breaking new ground in Asia," he said.

And SIA is not ignoring the budget market: its wholly-owned low-cost carrier Scoot is set to start flying next month to Australia.

In addition, SIA owns nearly 33 percent of Tiger Airways, another low-cost carrier which holds more than a third of Indonesia's Mandala Airlines.

Shukor said SIA remains fundamentally strong, with up to Sg$6.0 billion in cash.

"No airline in the world has that kind of money. That war chest will put them in a position that will allow them to manoeuvre and overcome any near-term turbulence," he said.