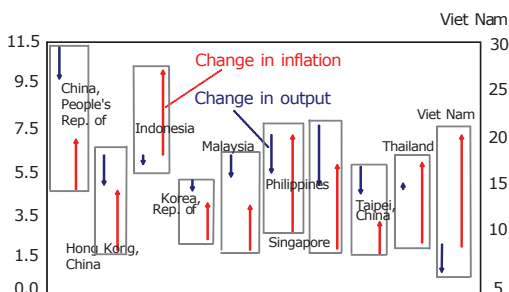


## Dealing with Inflation: Policy Options for Emerging East Asia

**Figure 52: Change in Inflation and Output Growth<sup>1</sup> (y-o-y, %)**



<sup>1</sup> Arrows indicate the direction and magnitude of estimated changes in inflation and GDP growth from 2007. Inflation change is shown by plotting actual 2007 inflation with ADB 2008 inflation forecasts. Change in GDP growth is shown by plotting actual 2007 GDP growth with ADB 2008 GDP growth forecasts.

Sources: OREI staff calculations based on data from national sources.

***Rising inflation amid slowing economic growth is placing the region's policymakers in a quandary.***

For many years, most of emerging East Asia<sup>1</sup> has enjoyed strong growth and low inflation—aided by rising productivity, conducive global demand, and improved monetary and fiscal discipline. But this once benign inflationary environment has faded rapidly—even as growth prospects dim (**Figure 52**). The emergence of the People's Republic of China (PRC) and others in the global production chain has increased the supply of goods worldwide over the past decade or so, providing sufficiently brisk tailwinds to growth while keeping a lid on excessive inflationary pressure. Today, these tailwinds have reversed, giving way to headwinds blowing out of strong global demand for oil and other commodities, particularly food.

***Price stability—and assuring the public that prices will remain stable—is key to sustained high economic growth.***

There is a growing international consensus, both in academia and among central banks, that maintaining medium- to long-term price stability is the overriding goal of monetary policy. Research provides strong support that maintaining low and stable inflation ultimately is beneficial for overall economic outcome.<sup>2</sup> Similarly, recent findings show that, compared with the 1970s, a greater commitment to maintaining low and stable prices in industrialized countries since 2000 has been key to explaining the improved policy trade-off in terms of reduced impact of an oil price shock on both inflation and output.<sup>3</sup> Central banks also recognize now how important this is—just witness the wave of inflation targeting that has swept around the globe since the Reserve Bank of New Zealand pioneered it in 1990.<sup>4</sup>

<sup>1</sup> Emerging East Asia includes the 10 Association of Southeast Asian Nations (Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam); People's Republic of China; Hong Kong, China; Republic of Korea; and Taipei, China.

<sup>2</sup> Mishikin, F. 2008. Does Stabilizing Inflation Contribute to Stabilizing Economic Activity? NBER Working paper No. 13970.

<sup>3</sup> Blanchard, O. and J. Gali. 2007. The Macroeconomic Effects of Oil Shocks: Why are the 2000s So Different from the 1970s? NBER Working Paper No. 13368.

<sup>4</sup> Svensson, L. 2007. *Inflation Targeting*. Princeton University. May.

***Amid heightened inflation risks, questions arise as to (i) whether or not monetary policy should respond; and (ii) if it should, how and by how much?***

Despite rising inflation, many regional monetary authorities, government officials, and some economists have argued that monetary tightening is unwarranted because the current inflationary pressure derives largely from temporary supply problems—either weather-related, political, or cyclical. Also, the sources of inflation appear to be largely imported. They argue that raising interest rates are unlikely to have much impact on the international price of food and energy. Instead it will only reduce aggregate demand and growth. The average price level could fall as prices of other goods and services, especially non-tradables, decline. However, it is implicit in these arguments that policymakers can clearly identify both the nature of the shock and its impact. In practice, an assessment of inflationary pressures, together with identification of their exact sources, is very difficult. The problems associated with measuring potential output, and hence the output gap, are well known. Aside from these identification and measurement problems, it is uncertain whether shocks are temporary or permanent. Clearly, the monetary policy environment is likely to be surrounded by considerable uncertainty at any particular point in time. Given the uncertainty, monetary responses tend to be very gradual; taking the risk that inflation becomes entrenched with higher future inflation expectations.

***In an inflationary environment driven by supply-side pressures, any monetary policy action—at least in the short term—will involve costs; but avoiding short-term trade-offs may lead to more painful long-term consequences.***

There is no consensus on how monetary policy should respond to a permanent supply shock in an individual economy. Policymakers must balance the competing objectives of low inflation and sustained growth in the face of a shock that normally implies higher inflation and lower growth. Whatever the ultimate choice, it will involve costs in the form of higher inflation, lower growth, or a combination of both. An important question, then, is to ask whether the cost of monetary tightening (from a reduction in aggregate demand) can be justified by the benefit of achieving low and stable prices. This involves a critical assessment of the nature of a shock and individual economic conditions when

the shock occurs, as each economy faces different trade-offs, challenges, and constraints.

***This section argues that for many emerging East Asian economies—despite lower economic growth prospects—failure to respond decisively to rising prices risks repeating the mistakes industrialized countries made prior to the Great Inflation of the 1970s.***

As John Maynard Keynes once said “If we wait until a price movement is actually afoot before applying remedial measures, we may be too late.”<sup>5</sup> A policy of benign neglect could fuel inflation expectations and trigger a price and wage spiral. True, monetary authorities may be wise not to respond to temporary supply shocks such as weather disruptions or unanticipated supply hiccups. Similarly, there may be little leverage for the region’s central bankers in easing external supply constraints. Events today, however, are far more complex and cannot be easily ascribed to domestic or global supply constraints alone. Evidence points to a confluence of cyclical and structural factors; domestic and global trends; and supply and demand shocks mutually reinforcing each other.

This section attempts to answer four questions:

- (a) Are recent price levels in energy and food here to stay?
- (b) What are the implications of the current rise in inflation for emerging East Asia?
- (c) How have authorities responded?
- (d) What tools are available to keep inflation under control?

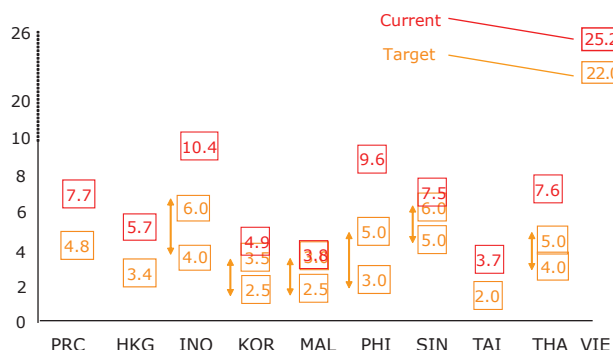
## **The Nature of Recent Price Hikes**

***Since the second half of 2007, emerging East Asia has seen a rapid acceleration in prices—with the underlying inflationary pressures rooted in the past 5-year upward trend in oil and other commodity prices.***

By the end of 2007, headline inflation in emerging East Asia had reached 5.3%, double the rate at the start of the year, and 6.9% by May 2008. Further escalation is expected. These developments

<sup>5</sup> Keynes, J.M. 1923. *A Tract on Monetary Reform*, Macmillan, London.

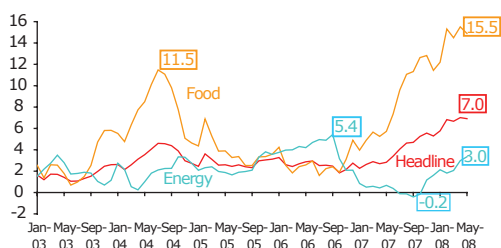
**Figure 53: Current Inflation and Inflation Target (%) (y-o-y)<sup>1</sup>**



<sup>1</sup> Current inflation and official inflation target refer to headline inflation. Current inflation rates are for May 2008. Official inflation targets are as of May 2008. Some economies (for example, Indonesia) set a range of targets as illustrated by the arrows.

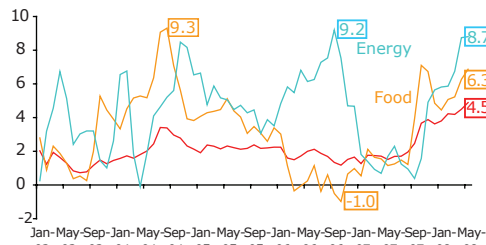
Sources: CEIC and various national sources.

**Figure 54a: CPI and Its Components —Emerging East Asia<sup>1</sup> (y-o-y, %)**



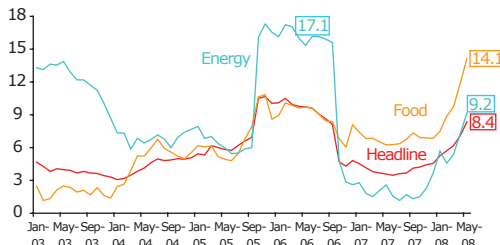
<sup>1</sup> Weighted by gross national income (atlas method, current \$). Source: OREI staff calculations based on data from national sources.

**Figure 54b: CPI and Its Components —NIEs<sup>1</sup> (y-o-y, %)**



<sup>1</sup> Weighted by gross national income (atlas method, current \$). Source: OREI staff calculations based on data from national sources.

**Figure 54c: CPI and Its Components —ASEAN-4<sup>1</sup> (y-o-y, %)**

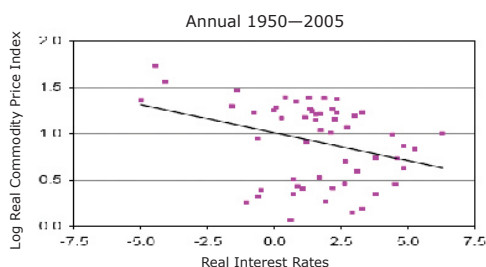


<sup>1</sup> Weighted by gross national income (atlas method, current \$). Source: OREI staff calculations based on data from national sources.

are unsettling policymakers as current inflation has mostly surpassed target rates (**Figure 53**). Crude oil prices<sup>6</sup> have risen steadily since 2003, recently surpassing \$140 per barrel after breaching \$40 per barrel in 2004 for the first time in more than a decade. Since the beginning of 2007, prices for food grains have vigorously accelerated: maize is up (47%) and wheat (68%). Most notably, however, rice has spiked sharply (222%), nearly tripling the region's staple in the first 5 months of 2008. This has caused major headaches for policymakers. For the region as a whole, food prices have more than doubled from January 2007 to May this year, and have become the primary driver of the current high inflation (**Figures 54a, 54b, 54c**).<sup>7</sup> Rising global oil and food prices have directly translated into higher headline inflation in most regional economies, as relatively heavy weights of these items in the region's CPI basket (**Table 13**).

<sup>6</sup> Throughout the section, crude oil prices refer to the price of the benchmark Brent crude.

<sup>7</sup> For the NIEs, both food and energy prices are key drivers, growing at 3.6% and 3.5% (respectively) on average since January 2007. In ASEAN-4 countries, food prices dominate (7.8%; energy, 3.3%). To highlight specific economies, in the PRC, the rise in food prices was most notable, averaging 18% (2.3% in 2006), when the effects of the blue-ear disease reduced much of the country's livestock production. Unexpected cold snaps in major farming areas, poor distribution systems, and loose monetary policy have also added to these woes. Taipei, China also suffered from bad weather (typhoons and a severe winter), which saw negative food prices for most of 2006 reversed to record strong increases in the latter part of 2007. Viet Nam also suffered from animal disease, and overall food price inflation recorded double digit rates throughout 2007, reaching 68% in May 2008. Similarly, Cambodia and the Lao People's Democratic Republic (Lao PDR) suffered from avian flu, where chicken prices helped drive inflation rates up.

**Figure 55: Commodity Price Index and Real Interest Rate<sup>1</sup>**

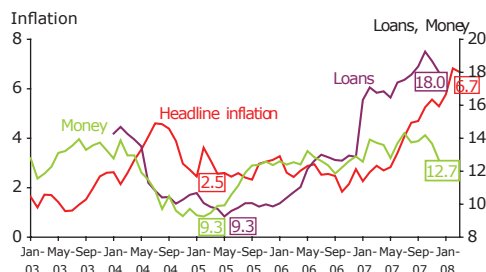
<sup>1</sup> The relationship between commodity price index and real interest rate is shown by plotting the log of real commodity price index (shown on the y-axis) and real interest rate (shown on the x-axis). The Commodity Resources Board (CRB) Commodity Price Index, a measure of price movements of 22 sensitive basic commodities, is used. Log real commodity price index is calculated by subtracting the log of the CPI from the log of the CRB commodity price index. Real interest rate is computed by taking the one-year US interest rate and subtracting off the annual inflation rate of the previous year.

Source: Frankel, Jeffrey (2006). "The Effect of Monetary Policy on Real Commodity Prices" in John Campbell (editor) Asset Prices and Monetary Policy, University of Chicago Press.

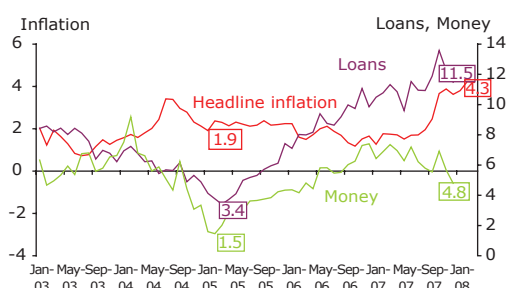
**Table 13: Food and Energy Weights in CPI Basket**

	Food	Energy	Total
Brunei Darussalam	28.8	22.5	51.3
Cambodia	42.7	8.7	51.4
China, People's Rep. of	33.6	13.0	46.6
Hong Kong, China	26.9	3.6	30.5
Indonesia	43.4	25.6	69.0
Korea, Rep. of	14.0	17.0	31.0
Lao PDR	55.0	12.0	67.0
Malaysia	33.8	22.4	56.2
Myanmar	64.9	8.8	73.7
Philippines	46.6	2.4	49.0
Singapore	23.0	22.0	45.0
Taipei, China	26.1	7.0	33.1
Thailand	36.1	9.1	45.2
Viet Nam	42.7	10.1	52.8
<b>Emerging East Asia</b>	<b>37.0</b>	<b>13.2</b>	<b>50.1</b>
<b>NIEs</b>	<b>22.5</b>	<b>12.4</b>	<b>34.9</b>
<b>ASEAN-4</b>	<b>40.0</b>	<b>14.9</b>	<b>54.9</b>
Memo:			
US	14.9	5.1	20
EU	15.5	4.7	20.2

Source: National statistics offices and central banks.

**Figure 56a: Headline Inflation, Money and Loan Growth—Emerging East Asia<sup>1</sup> (y-o-y, %)**

<sup>1</sup> Weighted by gross national income (atlas method, current \$). Source: OREI staff calculations based on data from national sources.

**Figure 56b: Headline Inflation, Money and Loan Growth—NIEs<sup>1</sup> (y-o-y, %)**

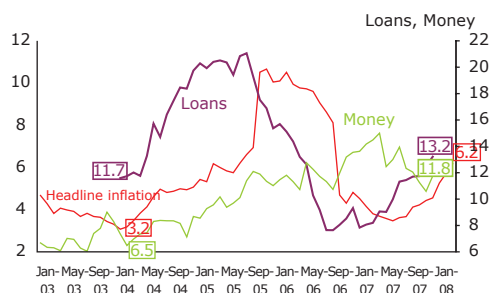
<sup>1</sup> Weighted by gross national income (atlas method, current \$). Source: OREI staff calculations based on data from national sources.

***Demand-side pressures on rising commodity prices have been facilitated by largely expansionary or at least accommodative monetary policy in both developed and developing countries.***

Some argue that a reduction in real interest rates due to US Fed's monetary easing is behind recently rising global commodity prices (**Figure 55**). But so too is the strong demand from emerging East Asian economies such as the PRC. And this upward pressure has been largely accommodated by generous money supply growth over the past few years, reflecting a significant increase in capital flows to the region. This is evident from the fact that upward trends in headline inflation have been largely fuelled by growth in loans and money supply<sup>8</sup> in many regional economies since 2007 (**Figure 56a, 56b, 56c**). In the same vein, tightening by the region's central banks will not only stabilize demand and inflation domestically, but also relieve pressures on global commodity prices and ease the monetary policy dilemma for both regional and global policymakers.

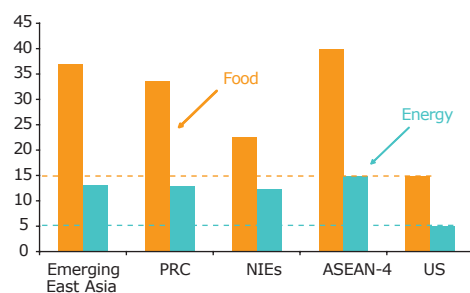
<sup>8</sup> Broad money is used. The fall in its growth during 2007 was very likely caused by the flight to quality (capital outflows) due to reassessment of risk from the ongoing subprime/financial turmoil.

**Figure 56c: Headline Inflation, Money and Loan Growth—ASEAN-4<sup>1</sup> (y-o-y, %)**



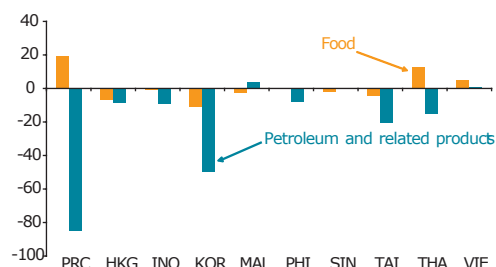
<sup>1</sup> Weighted by gross national income (atlas method, current \$).  
Source: OREI staff calculations based on data from national sources.

**Figure 57: Food and Energy Weights (in % of total CPI basket)<sup>1</sup>**



<sup>1</sup> Simple average of individual countries' food and energy weights in their respective CPI baskets.  
Source: OREI staff calculations based on CEIC data.

**Figure 58: Net Food and Petroleum Exports (2007, \$ billion)**



Source: OREI staff calculations based on CEIC data.

**Price pressures are unlikely to dissipate soon—judging by the growing global demand-supply imbalance for oil, food, and other commodities.**

Global oil production has been operating at near capacity. And with oil consumption rising rapidly, there are few signs that the tight market conditions will improve any time soon (see Box 2). In addition, there is growing evidence that increasingly tight global markets for food and other commodities are due to a structural shift in global demand and a decline in productivity rather than anything temporary or cyclical (**Box 3**). Improving agricultural productivity requires more than just new investment in agricultural machinery. It also requires the right high-yielding and pest-resistant seed varieties, the availability of cost-effective fertilizers, more efficient distribution systems, and effective domestic pricing schemes. Tackling politically-sensitive issues such as the increasing scarcity of arable land amid suburban and commercial sprawl can take decades of often acrimonious social and political debate.

## High Inflation: Implications for Emerging East Asia

**Emerging East Asia is extremely vulnerable to higher food and energy prices, as over half of average household expenditure goes to these two segments.**

The share of food and energy in the consumption basket of the average emerging East Asian household is about two and a half times more than that of US household consumption.<sup>9</sup> Food and energy comprise an average 37.0% and 13.2% respectively of an average households' monthly expenditure (**Figure 57**). Food prices are of particular concern, more so for people in the lower-income economies—Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, and Viet Nam—where it consumes about 50% of family expenditures. Net importers are hurt more (**Figure 58**). With the exception of Malaysia and Viet Nam, most regional economies are net oil importers. Except for PRC, Viet Nam, and Thailand, the rest of the region also relies on imports to supplement and support domestic food consumption. The Philippines carries the greatest burden as the world's largest rice importer.

<sup>9</sup> Estimates for the share of food and energy in total consumption are based on the weights of food and energy in CPI baskets of individual countries.



**Box 3: Food and Commodity Price Inflation**

Global commodity prices continue to rise, several to record levels. History shows that price hikes are generally driven by business cycles in major industrial countries, which tend to be cyclical and temporary in nature. But this time the impetus appears to come from persistently rising demand—primarily from rapidly-growing emerging market economies, suggesting that there a structural and permanent trend at work.<sup>1</sup> For instance, developing Asia's gross domestic product grew by an average 7.4% since 2000 (compared with 6.7% in the 1990s). This has created a structural shift in demand, particularly for food. The rise in per capita income translates into increased food consumption in general, and a change in dietary habits toward higher protein intake. Greater meat consumption again bolsters grain and feed stock demand.<sup>2</sup>

Aside from increased demand, supply deficiencies have also exacerbated the tight market. Agricultural productivity is low or stagnant, unable to boost yields to meet the surging demand. Annual growth in rice yields is now 1.1%, down from an average 2.3% since the early 1960s.<sup>3</sup> Productivity growth has also been severely limited by the low rate of capital accumulation and underinvestment in research and development. According to the International Rice Research Institute (IRRI), the IR8 "miracle" rice—introduced in 1966—brought yields of about 10 tons per hectare then. Today

it produces only seven.<sup>4</sup> Competing uses of lands and water for residential and commercial purposes—due to rapid urbanization and industrialization in emerging market economies—both reduces availability and deteriorates the quality of agricultural resources. Meanwhile, agricultural supply has been curtailed with higher costs passed on to consumers—as rising energy prices feed into increased input costs in fertilizer, fuel, and power. In Asia, fertilizer, irrigation and transport costs have risen 30–50% during the past year or so.<sup>5</sup>

Meanwhile, the production of biofuel—ethanol in the United States (US) and biodiesel in the European Union—shifts agricultural production away from food to energy, frequently supported by government subsidies. Estimates show that 20–50% of feedstock, especially corn and rapeseed are being diverted into biofuel production.<sup>6</sup> Corn prices have more than doubled over the last 3 years as biofuel production in the US rose from 6% to 23% of the total crop. This added to the price pressure on commodities that are close-substitutes of corn (soyabean and palm oil) and, to those that use corn as an input to production (meat, poultry, and dairy).

And in some cases, public hoarding (through export bans and restrictions such as those in PRC, Thailand, Viet Nam, and Cambodia) and panic buying (in the Philippines) further contributed to the sustained price pressure. For rice, the problem is most acute as less than 10% of total rice production is traded internationally. Hence, any news about supply disruptions amid

dwindling stocks—especially in the large producing countries like Thailand and Viet Nam, are quick to trigger price spikes.

Strong global demand is unlikely to wane soon, while the supply constraints will take time to ease. Biofuel production is set to continue to expand given the strong government mandates and lobby support. Rising demand from emerging market economies with strong economic growth—which is highly commodity-intensive—will likely persist as government administrative controls continue to muffle price signals. Speculative demand for commodities is also building on the tight supply-demand balance, as investors are seeking safer and alternative assets to hedge against inflation, given the current global financial uncertainty.

Forecasts by the World Bank shows high food prices will persist at least into the medium term.<sup>7</sup> For 2008 and 2009, prices are expected to stay high for major crops, beginning to decline somewhat afterwards when both supply and demand adjust. But for most crops, prices out to 2015 will not fall below 2004 levels. In fact, long-term forecasts by the International Food Policy Research Institute show the era of cheap food is well and truly over—with prices for major grains continuing above their 2000 levels as far as 2050.

<sup>1</sup> See Park and Zhai (2006), *Asia's Imprint on Global Commodity Markets*, ADB ERD Working Paper Series No. 90, December.

<sup>2</sup> "In order to produce a single kilogram of beef, it may take as much as 7 kilograms of grain." See ADB Special Report (2008), *Food Prices and Inflation in Developing Asia: Is Poverty Reduction Coming to an End?* page 6.

<sup>3</sup> Page 8, ADB (2008), "Soaring Food Prices: Response to the Crisis", Manila, ADB.

<sup>4</sup> See *The Economist*, "Briefing: Food and The Poor", April 19, 2008.

<sup>5</sup> Ibid, page 7, ADB (2008).

<sup>6</sup> Page 12, IMF (2008), "Commodities Boom: Riding a Wave", *Finance and Development*, March.

<sup>7</sup> See World Bank (2008), "Rising Food Prices: Policy Options and World Bank Response", Policy Note on Rising Food Prices; downloadable from: <http://www.worldbank.org/html/extdr/foodprices/>.

***The persistent rise in oil and food prices is also adding to concern that the supply shock may be permanent, amid signs that inflation expectations are starting to drift higher.***

Inflation forecasts for 2008 are rising, highlighting the growing risk that previously-anchored inflation expectations in emerging East Asia may break their moorings and begin to drift. The comparison between the Consensus Forecast obtained in June, as opposed to ADB's Asian Development Outlook forecast released in April, suggests inflation is likely to be higher than initially expected across the region (**Table 14**). That said, inflation expectations in Republic of Korea (Korea), Singapore, and Taipei, China are relatively better anchored than other emerging East Asian economies.<sup>10</sup>

***Moreover, a nagging rise in core inflation across the region suggests that second-round price effects may be already underway, risking an upward spiral of wages and prices; today's headline inflation may translate into tomorrow's core inflation.***

Core inflation has steadily risen since the second half of 2007, to 2.7% in May, indicating a broad-based second-round inflationary

<sup>10</sup> The change in the Consensus Forecast versus that of ADO forecast is much smaller for these countries.

**Table 14: Inflation Expectations**

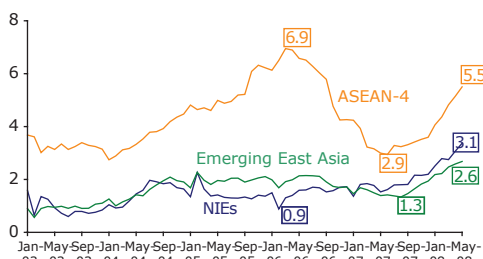
Inflation Expectations: Forecast for 2008 <sup>1</sup>			
	ADO	Consensus	Change from ADO (basis points)
Brunei Darussalam	...	...	...
Cambodia	5.5 [↑0.4]	...	...
China, People's Rep. of	5.5 [↑0.7]	7.0 [↑2.2]	1.5
Hong Kong, China	3.4 [↑1.4]	4.7 [↑2.7]	1.3
Indonesia	6.8 [↑0.4]	10.2 [↑3.8]	3.4
Korea, Rep. of	3.4 [↑0.9]	4.1 [↑1.6]	0.7
Lao, PDR	5.0 [↑0.5]	...	...
Malaysia	2.7 [↑0.7]	4.1 [↑2.1]	1.4
Philippines	4.0 [↑1.2]	7.3 [↑4.5]	3.3
Singapore	5.0 [↑2.9]	5.9 [↑3.8]	0.9
Taipei, China	2.3 [↑0.5]	3.3 [↑1.5]	1.0
Thailand	4.0 [↑1.7]	6.1 [↑3.8]	2.1
Viet Nam	18.3 [↑10]	20.4 [↑12.1]	2.1

<sup>1</sup> Square bracket refers to percentage point change from 2007's inflation rate. Consensus forecasts are as of 9 June.

Sources: Asian Development Bank Asian Development Outlook 2008 and Consensus Economics Inc., Consensus Forecasts June 2008.

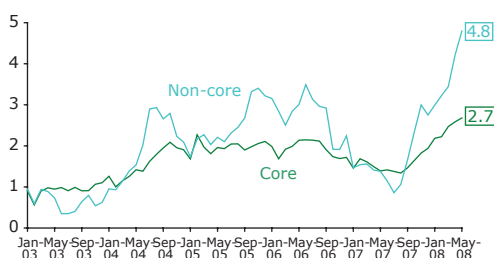


**Figure 59: Regional Core Inflation<sup>1</sup>**  
(y-o-y, %)



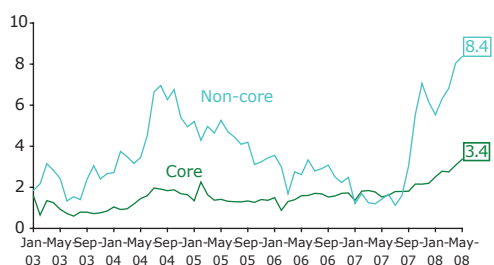
<sup>1</sup> Weighted by gross national income (atlas method, current \$).  
Source: OREI staff calculations based on CEIC data.

**Figure 60a: Regional Core and Non-Core Inflation—Emerging East Asia<sup>1</sup>**  
(y-o-y, %)



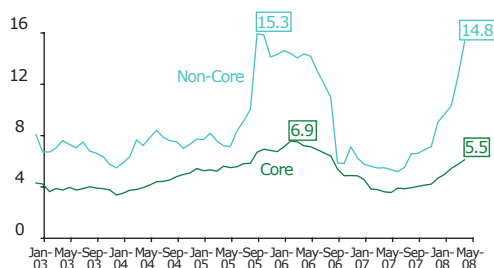
<sup>1</sup> Weighted by gross national income (atlas method, current \$).  
Source: OREI staff calculations based on CEIC data.

**Figure 60b: Regional Core and Non-Core Inflation—NIEs<sup>1</sup>**  
(y-o-y, %)



<sup>1</sup> Weighted by gross national income (atlas method, current \$).  
Source: OREI staff calculations based on CEIC data.

**Figure 60c: Regional Core and Non-Core Inflation (y-o-y, %)—ASEAN4<sup>1</sup>**



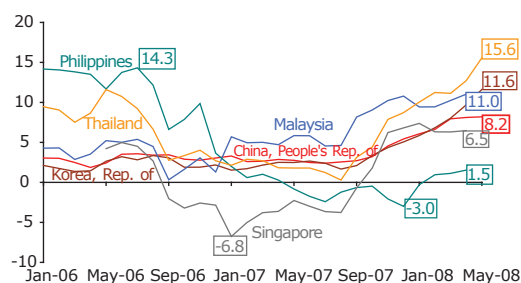
<sup>1</sup> Weighted by gross national income (atlas method, current \$).  
Source: OREI staff calculations based on CEIC data.

effect may be already underway (**Figure 59**). Across the region, core inflation has begun to follow the upward trend of non-core inflation (**Figures 60a, 60b, 60c**). In several economies, producer price indexes have also climbed higher in recent months, suggesting that substantially higher consumer price inflation may be just around the corner (**Figure 61**). And there are signs that inflation is already feeding demands for higher wages in some economies. In the PRC, for example, the average urban wage has picked up noticeably since the middle of 2007. In Shanghai, the minimum wage was raised 14% in March—the second time in 5 months. Guangdong province plans to boost its minimum wage by 12% or more.<sup>11</sup> In Viet Nam, industrial disputes and strikes over wages and working conditions have risen markedly over the past year. In 2007, the minimum wage for the region's industrial workers was increased by about 25%.<sup>12</sup> Even in Malaysia, where headline and core inflation remains relatively low, trade unions have demanded higher wages, following civil service salary increases last year, with more expected following the recent removal of fuel subsidies.

<sup>11</sup> Bloomberg, "Shanghai Government Raises Minimum Wage", 26 March 2008; and Straits Times, Singapore, "China Official Hike Wages, Threatening to Boost Inflation", 7 May 2008.

<sup>12</sup> *Asia Times Online*, "Inflation Tests Vietnam's Growth", 18 March 2008.

**Figure 61: Producer Price Index (y-o-y, %)**



Source: CEIC.

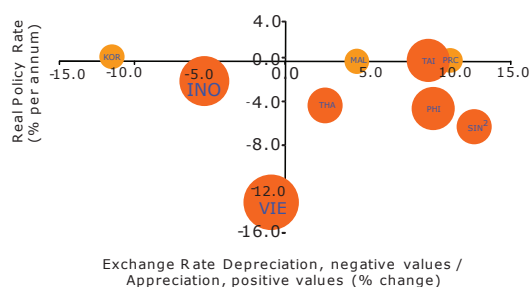
## Recent Responses to Rising Inflation

***A negative supply shock—or “cost-push” shock—poses a dilemma for policymakers as controlling inflation depresses economic activity—forcing authorities to weigh the benefits of stabilizing prices against the costs of slowing growth.***

The short-run trade-off—given the well-known Philips curve relationship between inflation and unemployment—does not necessarily pose a policy dilemma when inflationary pressure arises from the usual business cycle disturbance or a demand-side shock. Inflation targeting is appropriate most of the time for stabilizing both prices and output, as a positive demand shock has a unidirectional effect on both growth and inflation. For example, in the case of a rise in consumer confidence that pushes output above potential, leading to higher inflation, monetary policy that targets price stability (a tightening in this case) will also act to stabilize output. Unlike demand-side shocks, however, supply shocks affect inflation and economic growth in opposite directions. A surge in oil prices will raise inflation (at least in the short term) while dampening economic activity. In this case, inflation targeting may not be the optimal solution as monetary policy that aims at restoring price stability will depress real economic activity even more, thus creating a clear dilemma for policymakers.

***Given the difficulty in determining whether today’s supply-side cost-push shock is temporary or permanent, the monetary policy response from many of the region’s economies has been somewhat cautious.***

**Figure 62: Current Monetary Conditions<sup>1</sup>**



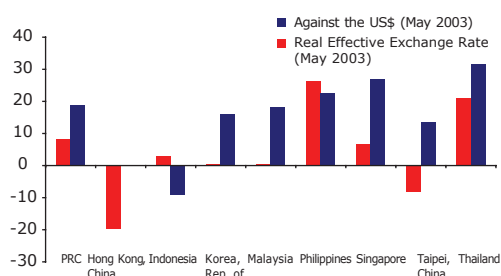
<sup>1</sup> Current monetary conditions (that is, real policy rate and exchange rate movements) are illustrated by the location of countries on the x-y quadrant. Real policy rate (shown on the y-axis) is calculated by subtracting May 2008 headline inflation from the policy rate as of the same month. Exchange rate movement (shown on the x-axis) is calculated by getting the percentage change of the average monthly exchange rate in May 2008 compared to May 2007 values. A positive (negative) value is an appreciation (depreciation). For example, the Philippines’ real policy rate is negative at -4.6% and the peso has appreciated by 9.1%. Bubbles indicate which countries have increased policy rates since start-2008: the biggest bubble indicates the country which has raised its policy rate the most (Viet Nam). Smallest bubbles (that is, People’s Republic of China, Republic of Korea, and Malaysia) indicate countries which have kept rates on hold.

<sup>2</sup> 3-month interbank rate is used as substitute for policy rate. The upward shift of the Singapore dollar nominal effective exchange rate policy band on 10 April 2008 is used as a substitute for a policy rate increase.

Source: OREI staff calculations based on Bloomberg data.

Based on recent monetary policy decisions, a tightening bias has been adopted by most regional economies, with PRC, Indonesia, Singapore, Taipei, China, Viet Nam, Philippines and most recently, Thailand raising policy rates (**Figure 62**).<sup>13</sup> Korea and Malaysia have kept interest rates steady. Most economies have allowed US dollar exchange rates to appreciate in an attempt to deal with imported inflation. PRC; Malaysia; Philippines; Singapore; and Taipei, China made strong gains against the US dollar since

<sup>13</sup> Some economies in the region have little or no influence over their monetary policy. Brunei Darussalam has a currency board system with Singapore, and Hong Kong, China has one with the US. Both Cambodia and Lao PDR are highly dollarized economies and are currently working on building a monetary policy framework.

**Figure 63: Exchange Rate Movement<sup>1</sup> (%)**

<sup>1</sup> Refers to movement of exchange rate relative to the average for May 2008. Negative(positive) values indicate depreciation (appreciation) of local currency.

PRC = People's Republic of China.

Source: OREI staff calculations based on Bloomberg data.

June 2007, although some of them have depreciated in recent months as the negative terms-of-trade effect due to higher food and oil import bills takes hold. Currencies depreciated against the US dollar in Indonesia, Korea, Thailand, and Viet Nam. But most central bankers have remained extremely cautious in raising interest rates, many of them maintaining negative real interest rates as a result.

***For most emerging East Asian central banks, attempting an "impossible trinity" exacerbates the policy dilemma.***

The "impossible trinity" dates back to Robert Mundell in the 1960s, who showed that achieving the "holy trinity" of monetary policy autonomy, stable exchange rates, and free capital flows is impossible. No country can simultaneously control interest rates and exchange rates when capital flows freely. For many emerging East Asian central banks, pursuing monetary autonomy means giving up exchange rate control, which often bears significant costs in terms of export and income growth. In response to today's bout of inflation, many central banks have allowed currencies to appreciate, but the pace of exchange rate appreciation has been carefully measured, reflecting efforts to preserve export competitiveness (**Figure 63**). While Asian currencies have appreciated 15–30% against the US dollar over the past 5 years, in real effective terms, many remain at about the same level or below.

***The problem is made more difficult for fixed exchange rate economies (such as Hong Kong, China), where current business cycles are moving out of synch with the US or other host economy.***

Some economies in the region have little or no control over monetary policy given institutional or fixed exchange-rate constraints. Cambodia; Hong Kong, China; and Lao PDR are examples.<sup>14</sup> In the PRC and Viet Nam, which have relaxed their previous exchange rate rigidity somewhat, exchange rates remain fundamentally under government control and monetary independence is limited. For most of those economies that have maintained stable US dollar exchange rates, the recent loosening

<sup>14</sup> Singapore also maintains a managed-float system, but the Monetary Authority of Singapore proactively uses the exchange rate as its primary monetary policy tool instead of interest rates. As a small open economy, this strategy of targeting stable nominal effective exchange rates has served Singapore very well. And Brunei Darussalam uses a currency board system aligned with Singapore.

of US monetary policy has created problems. These economies had no choice except to import expansionary US monetary policy, lowering interest rates in Hong Kong, China for example, despite the signs of an overheating economy.

***Institutional weaknesses facing some of the region's central banks, especially those with relatively low public credibility, also hamper monetary policy effectiveness.***

Some emerging East Asian central banks are less experienced than others—they need to gain independence and build the public confidence in their policies. Many regional central banks face structural weaknesses associated with insufficient market and institutional infrastructure and economic rigidities also often hinder monetary policy effectiveness. The trade-off between inflation and unemployment in the face of macroeconomic shocks is also influenced by wage rigidities. Lack of public credibility remains the most significant problem, while these structural weaknesses reinforce the difficulties of building a credible inflation track record (**Table 15**).

**Table 15: Inflation Track Record**

	Inflation Targeter	Inflation Record (%) <sup>1</sup>
Brunei Darussalam	x	1.3
Cambodia	x	4.6
China, People's Rep. of	x	6.4
Hong Kong, China	x	4.0
Indonesia	✓	11.5[9.8]
Korea, Rep. of	✓	4.7 [2.7]
Lao, PDR	x	26.4
Malaysia	x	2.9
Philippines	✓	7.5 [5.2]
Singapore	x	1.5
Taipei, China	x	2.1
Thailand	✓	3.9 [2.6]
Viet Nam	x	4.7
Memo:		
US	x	3.1
UK	✓	3.6 [2.8]

<sup>1</sup> Refers to average annual inflation rate in the last 20 years (that is, 1998–2007), except for Cambodia and Viet Nam which start 1996 due to data availability. For inflation targeters, the number in square bracket refers to average annual inflation rate since inflation targeting framework was adopted (Indonesia, 2005; Republic of Korea, 1998; Philippines, 2002; and Thailand, 2000) and 1997 for UK (the year the Bank of England formally gained its monetary independence).

Sources: International Monetary Fund *International Financial Statistics* (IFS) and World Economic Outlook databases.

*Given the various constraints on monetary policy, authorities have frequently resorted to administrative controls to reduce inflationary pressures.*

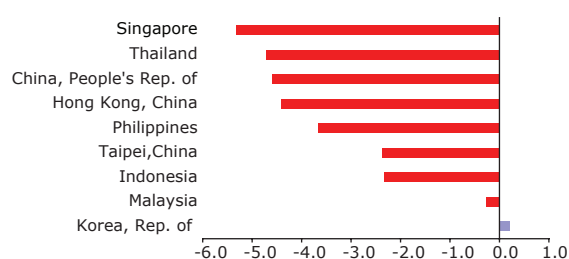
Governments in the region have introduced a flurry of administrative controls to contain the current inflationary problems. One of the most popular measures has been price controls or subsidies on food and oil. For example, during the recent bout of rising food prices, many of the region's economies resorted to domestic price regulation and consumer subsidies (**Table 16**). Some economies have also tried to improve domestic demand/supply conditions, by (i) reducing import duties and restrictions; (ii) increasing domestic supply by tapping into reserves or limiting exports; and (iii) boosting agricultural production by offering cash incentives. Overall, the PRC and the Philippines have done the most, while Singapore and Taipei, China, the least.

**Table 16: Recent Administrative and Fiscal Measures to Address Rising Inflation**

Measures	CAM	PRC	INO	KOR	MAL	PHI	SIN	TAI	THA	VIE	Total
Reduce import duties		•	•	•		•		•			5
Increase supply using reserves	•	•	•	•					•		5
Build reserves/stockpiles	•				•	•	•		•	•	6
Increase imports/relax restrictions	•		•		•	•			•	•	6
Raise export duties		•	•						•		2
Export restrictions	•	•								•	3
Price controls/consumer subsidies	•	•	•	•	•	•		•	•	•	9
Minimum support prices		•				•					2
Minimum export prices										•	1
Assistance/subsidy to farmers		•				•					2
Promote self-sufficiency		•		•	•	•					4
Actions against/appeals to profiteers	•	•				•			•		4
Cash transfer		•					•				2
Food ration/stamp			•			•					2
<b>Total</b>	<b>6</b>	<b>10</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>9</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>5</b>	

Sources: ADB, Food Prices and Inflation in Developing Asia: Is Poverty Reduction Coming to an End? (April 2008) and various news articles.

**Figure 64a: Real Interest Rate<sup>1</sup>**  
(adjusted for headline inflation)



<sup>1</sup> Calculated by subtracting estimates of the expected inflation rate from one-month inter-bank offered (IBOR) rates. The estimate of expected inflation is calculated by getting the 12-month average of annualized m-o-m change of headline inflation.  
Sources: OREI staff calculations based on Bloomberg and CEIC data.

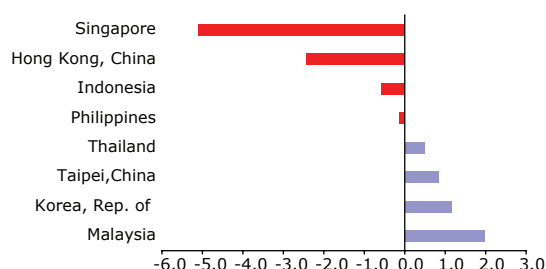
## Policy Options

*With monetary policy in many emerging East Asian economies behind the curve—there are growing signs that inflation expectations are beginning to drift.*

Despite recent tightening in many regional economies, real interest rates are positive only in Korea and even then only barely (**Figures 64a, 64b**).<sup>15</sup> If core inflation is used as a gauge,

<sup>15</sup> Singapore's monetary stance may be also considered as generally tight, although not in terms of the interest rate, as its main policy tool is the exchange rate, which has strengthened markedly in recent months.

**Figure 64b: Real Interest Rate<sup>1</sup>**  
(adjusted for core inflation)



<sup>1</sup> Calculated by subtracting estimates of the expected inflation rate from one-month inter-bank offered (IBOR) rates. The estimate of expected inflation is calculated by getting the 12-month average of annualized m-o-m change of core inflation.  
Sources: OREI staff calculations based on Bloomberg and CEIC data.

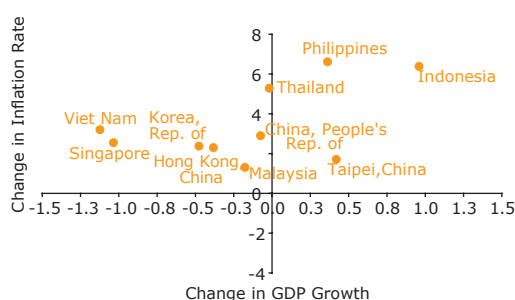
Malaysia; Taipei, China; and Thailand's rates are also positive.<sup>16</sup> In fact, most regional central banks maintained largely expansionary or accommodative stances before prices took off in the second-half of 2007 (the exceptions are PRC; Korea; and Taipei, China, where strong liquidity growth and signs of overheating led to monetary tightening much earlier). The relatively loose monetary stance, thus far, also reflects the traditionally more pro-growth—rather than anti-inflation—bias in the region's monetary policy. But there is now wider evidence of second-round price effects taking hold with inflation expectations beginning to drift in many regional economies.

***The key to anchoring future inflation expectations is to prevent second-round price effects from burrowing through the economy.***

History is witness to the economic costs and enduring harmful effects of allowing inflation to infect an economy through nominal second-round effects. Short-circuiting these effects will also provide more leeway for policymakers to stabilize output. If inflation expectations are well-anchored at low levels, firms are unlikely to raise prices by as much as an inflationary surge would imply otherwise. Similarly, workers may also demand a lower pay rise and be more prepared to enter into long nominal contracts so long as inflation is anticipated to remain low.

***With the balance of risks tilted toward inflation, many of the region's central banks need to be more decisive in tightening monetary conditions.***

**Figure 65: Change in Inflation and Output Growth<sup>1</sup>** (in basis points)



<sup>1</sup> The change in 2008 forecasts for inflation and GDP growth is illustrated on the x-y quadrant. Change in inflation (shown on the y-axis) is calculated by subtracting the 2008 official inflation target (as of May 2008) from actual inflation for May 2008. Change in GDP growth (shown on the x-axis) is calculated by subtracting the GDP growth trend (that is, average GDP growth from 2000 to 2007) from ADB 2008 GDP growth forecast.  
Sources: OREI staff calculations based on data from national sources.

**Figure 65** illustrates the trade-offs between more inflation and less output across the region's economies. In Indonesia; Philippines; and Taipei, China, the 2008 ADB growth forecast for GDP remains higher than the long-term average trend growth in the last 8 years. However, all of these economies now have higher inflation forecasts for 2008 compared with the latest target/official forecasts, suggesting that inflation risks have been elevated together with heightened inflation expectations. A central bank's credibility is key to ensuring that inflation expectations remain anchored. There are signs that continued loose monetary policy in the region has allowed inflation expectations to break their moorings while bolstering global demand for commodities. When

<sup>16</sup> Bank of Thailand targets the core inflation rate; others in the region use headline inflation.

inflation expectations begin to drift, clear and immediate policy actions are required to re-establish price stability. And given the current global liquidity situation, more regionally- and globally-coordinated tightening actions may be necessary.

***Without clear signals from monetary authorities to combat inflation, previously-anchored inflation expectations may drift upward, increasing risks to macroeconomic stability and long-term growth sustainability.***

Greater openness and transparency helps central banks to be more accountable, autonomous and it improves monetary policy effectiveness – it provides the means to enhance credibility. The public must have good understanding about the policy objectives and strategies of the central bank. The more clearly it is spelt out and acted upon, the better understanding and confident the public has in the workings of the central bank and hence the better it is for inflation expectations to be well-anchored. And what is more important is that credibility has to be earned. Given the persistence of today's oil and food price shocks, maintaining price stability is crucial. A temporary supply-side shock may not warrant a policy response provided that consumers and firms recognize that the shock will be short-lived. The lagged nature of the effects of monetary policy also makes it often inappropriate—as the impact of the shock may well have dissipated by the time the impact of the monetary policy action is felt. But as many “new Keynesian” economists have suggested, “current inflation depends on the expectations of future inflation.” Given the signs of heightened inflation expectations, it is paramount that authorities give clear signals of monetary actions aimed at short-circuiting possible second-round effects.

***After all, monetary policy works with long and variable lags and thus it is important to ask whether the current inflation environment can lead to persistent deviations in price stability later on. And if the answer is yes, monetary policy should respond regardless of the duration of a shock.***

Given the large uncertainty surrounding the inflation environment, there is always a risk that a rise in inflation will build inflation expectations among the public, particularly business strategists and investors. An assessment of whether inflationary pressures



are temporary or permanent is a good start, bearing in mind the existing amount of spare capacity in the economy and potential second-round effects. But even temporary price increases, if left uncontrolled could lead to a drift in inflation expectations, further tying the hands of monetary authorities. So if the current inflation does pose a threat to long-term price stability, monetary policy should be used now and, given the policy constraints facing many regional central banks, other macroeconomic tools should also be considered in battling the inflationary scourge.

***Along with monetary tightening, selective use of fiscal measures can relieve the regressive tax effect of rising food and energy prices on the poor without necessarily undermining price stability.***

The role of fiscal policy in balancing demand-side pressures in highly inflationary environment is critical. As the course of tightening often incurs undesirable costs of slowing growth, it is critical to closely monitor the progress of tightening and ensure essential fiscal support to cushion the weaker segments of society from slowing growth and to avoid disruptions in long-term development agendas. In particular, an increase in imported food and energy prices is effectively a tax on consumption, which falls disproportionately more on the poor. In economies with healthier fiscal positions and available fiscal resources, specifically-targeted cash transfers to the poor can be considered to provide necessary and essential safety nets. Extreme care must be exercised, however, to ensure that fiscal support does not feed back into upward demand-side pressures just as monetary policy works to control inflation. This can be done by careful design and prioritization in the allocation of national resources between different social and economic segments of the economy.

***Price controls or consumer subsidies tend to exacerbate inflationary conditions and their impact on the poorest of the poor—not to mention the failure to address fundamental supply/demand problems.***

With the disproportionately larger effects on the poor potentially leading to social unrest, many authorities have resorted to administrative controls on food and energy prices. The real effects of these remain highly uncertain. Although these are popular measures, they do not work over time, even if there are very temporary gains. Controls are difficult to enforce and easy to

circumvent. In the PRC, where price controls on pork and other staples were implemented early this year, prices continue to rise. In Malaysia, which had price controls on many essential food items well before global food prices skyrocketed, food prices continue to rise and are in fact the main driver of headline inflation. Consumer subsidies at petrol stations benefit the affluent by encouraging them to use more fuel (pushing prices even higher), buy bigger cars and pollute the environment even more. It also encourages smuggling to neighboring countries with higher fuel costs. But in countries like Malaysia—and Indonesia—it is mostly the ballooning fiscal costs as global oil prices continue to rise that handcuff the economy. And when the inevitable happens—sudden large price adjustments<sup>17</sup>—both economic and political effects can be difficult to manage. In the Philippines, traders have been caught repackaging subsidized rice and selling it at commercial prices.

***Allowing currencies to rise faster will help contain imported inflationary pressures, while increasing space for monetary policy autonomy.***

Relatively rigid exchange rate regimes (despite more flexibility in recent years) complicate monetary policy decisions in many regional economies. Maintaining an exchange rate and monetary policy stance through sterilization is extremely costly in light of increased private capital flows, given its effect on rapid currency appreciation, excessive liquidity growth, and asset price bubbles—and particularly given the wide interest rate gap with the US. Some economies in the region have introduced capital controls to avoid escalating these problems and compounding dilemmas facing policymakers. However, these types of regulatory and administrative measures are potentially disruptive and should be used with utmost care and restraint. Greater currency flexibility will also give more room for monetary policy to control the speed and magnitude of tightening. And, to this end, greater intraregional exchange rate policy cooperation could help to increase the degree of freedom of regional currency movements against the dollar.

***Enhancing credibility is an important challenge for many regional central banks.***

Many of the region's central banks need to address institutional weaknesses in providing support for effective monetary policy

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<sup>17</sup> Despite being a net petroleum exporter, on 5 June, Malaysia raised its petrol price a massive 40%. Diesel and electricity also went up.

operations (**Box 4**). Maintaining policy credibility is very difficult—it takes a long time to earn, but can easily be lost. Some of the region’s central banks are relatively new institutions and remain subject to political interference. A lack of monetary autonomy often leads a central bank to pursue goals that differ from medium- to long-term price stability. Yet it is critical that central banks and finance ministries maintain smooth communications to ensure policies do not work at cross-purposes. There are also issues of inadequate human capital, weak monetary policy frameworks, underdeveloped financial sectors and markets, and often non-existing money market microstructures.

***Food and energy price inflation is a global phenomenon; strong cooperation at both regional and global levels is particularly important to ensure food and energy security.***

There is a good case for more open policy dialogue at both regional and global levels to promote greater transparency, flexibility, and stability of global food and oil markets. The World Bank, for example, is urging the UN General Assembly to vote in September for a resolution to make World Food Program purchases exempt from export restrictions and taxes. Short-term measures to alleviate domestic supply shortages may exacerbate regional and global supply conditions. Export bans to shore up domestic supply are equally problematic.<sup>18</sup> Farmers feel the pinch particularly hard, having to forego improved earnings that could be reinvested to boost productivity, for example. In remote areas where there is no demand for the surplus, poor storage facilities can lead to supplies rotting away, even as the world is clamoring for supply.<sup>19</sup> It is estimated that export bans in Asia increased the cost of rice in the world markets by 75%.<sup>20</sup> There is a scope for more efficient distribution of the limited resources by sending the right price signals around the world, while encouraging more R&D investment and increasing productivity in the long term.

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<sup>18</sup> See *The Economist*, “Cereal Offenders”, 29 March 2008. It is said that export bans in Asia have increased the cost of rice in the world markets by 75%.

<sup>19</sup> Cambodia lifted the ban on rice exports for three provinces due to difficulty in processing and storing newly-harvested supply.

<sup>20</sup> *The Economist*, “Cereal Offenders”, 29 March 2008.

**Box 4: Effective Monetary Policy Depends on Credibility**

A key responsibility of central banks is to maintain credibility in the eyes of the public and business community. It is an indispensable attribute that keeps inflation expectations well-anchored.<sup>1</sup> Credibility simply means that central banks do what they say they will do, and that the public—whether businesses, households, or individual consumers—has the confidence to plan expenditures and savings accordingly. Within emerging East Asia, there is a wide variance in credibility among monetary authorities. Some are relatively new institutions, others have varying degrees of autonomy from political influence, others have limited policy tools, and a few can boast by some measures credibility comparable to central banks in advanced economies.

To enhance credibility, many central banks are now using inflation targeting as a basis for monetary policy. But for inflation targeting to build credibility, announced targets need to be met. Among emerging East Asia's monetary authorities, those in Malaysia; and Singapore, have maintained a good inflation track record. Indonesia, Republic of Korea, Philippines, and Thailand have also shown better outcomes since adopting inflation targeting. Yet despite the generally benign price environment in recent years, inflation targeting has not readily produced low inflation records. For example, Indonesia, an inflation targeter, continues to record double-digit inflation rates, while monetary policy actions by Singapore and Taipei, China, economies without explicit targets, have far more stable inflation and look credible by comparison.

Credibility is earned. And it can be a very difficult and drawn-out process. When the US fell into the stagflation of the 1970s, Paul Volcker, then chairman of the US Federal Reserve (US Fed), had

to raise interest rates to close to 20% amid the highest unemployment since the Great Depression, which resulted in two back-to-back recessions in the early 1980s. As Frederic Mishkin, a board member of the US Fed explained, "Volcker's triumph over inflation was achieved because he obtained credibility the hard way—he earned it." It is important to remember that the inflation legacy that Volcker battled occurred in large part by the US Fed's accommodative stance of economic stimulus, instead of addressing the spiking inflation triggered by the first oil price shock in the early 1970s. The US Fed's mistake was that it ignored rising inflation expectations, which eventually led to a runaway wage-price spiral. The United Kingdom, Australia, and New Zealand, to name a few, also had a similar experience, where eventually recessions had to be engineered to bring high inflation under control.

Central bank autonomy, fiscal discipline, openness, and transparency are prerequisites for greater credibility. Without autonomy from political interference, a central bank can be held ransom by a politically-tinged agenda that could essentially renders monetary policy impotent and threaten financial stability. Several of emerging East Asia's central banks are not truly independent from government influence, even with legal autonomy written into their charters. On the other hand, several may have close ties to government, but maintain high credibility.

Credibility can be lost far more easily than it is gained. Hence, mechanisms need to be in place to ensure that credibility can be nurtured and improved. Greater openness and transparency helps central banks to be more committed, accountable, and autonomous—aside from improving monetary policy effectiveness, and underlying determinant of credibility.

The public must possess a good understanding about central bank policy objectives and strategies. The more clearly they are spelt out and acted upon, the better understanding and confidence the public has, and the better-anchored inflation expectations will be. Inflation targeters, in principle, are more open and transparent with the support of an explicit targeting framework, although regional examples of non-inflation targeters like Hong Kong, China; Singapore; and Malaysia provide useful examples for transparency and credibility.

Close co-ordination between monetary and fiscal policies is a must for sound macroeconomic management. Central banks in developing economies are often the key financial advisor to the government. Developing quality human capital is critically important, especially for smaller developing economies, to ensure that central banks can help guide the direction and goals of macroeconomic management. A key success factor behind the impressive track record of the more credible emerging East Asian economies lies in the effective co-ordination between monetary and fiscal authorities, and as a result, their policies working in sync.

<sup>1</sup> See Blinder, Alan S. 1999. Central Bank Credibility: Why Do We Care? How Do We Build It? NBER Working Paper No. W7161. June. Blinder points out that from his own experience in central banking, there is general acceptance that greater credibility improves the short-run trade-off between inflation and unemployment. In his 1999 survey, credibility is not only considered by both academics and central banks as the most important attribute central banks should possess, it is also ranked as the most important of six attributes in keeping inflation low. The aggressive interest rate cuts by the US Fed early this year were very much based on the premise that inflation expectations had remained well-anchored, and the short-run trade-off between inflation and output, if any, would be small.