

Box 7.1**How high is imported inflation in Hong Kong ?**

There has been considerable concern about the extent of imported inflation brought about by a weaker US dollar and renminbi appreciation, and its consequential impact in pushing up Hong Kong's CPI inflation. The analysis in this article suggests that while imported inflation has indeed risen in recent years, its impact on consumer price inflation is not as significant as generally perceived.

In analyzing the extent of imported inflation in Hong Kong, the following points are note-worthy:

- (1) Although the Hong Kong dollar has depreciated against the renminbi, euro and the other Asian currencies, the fall in the value of Hong Kong dollar in terms of the Import-weighted exchange rate index was only 1.3% in 2006. This was in fact much smaller than in 2003 and 2004 when the fall was 3.0% and 2.4% respectively.
- (2) The pick-up in overall import prices over the course of 2006 was mostly in the prices of raw materials and semi-manufactures and also in oil prices. The increase in import prices relevant to consumption, though also creeping up over the year, was much more modest. For food and consumer goods taken together, the increase was only 1.1% in the fourth quarter, and 0.8% for 2006 as a whole. When matched against the depreciation of the Hong Kong dollar by 3.9% and 1.3% for the same periods, it is apparent that only part of the exchange rate influence would feed through to import prices, conceivably because prices of goods worldwide are being kept down by the forces of globalization.
- (3) Import cost is just one component of total cost. As a rough indication of the extent of import content in consumption, in 2006 retained imports of food and consumer goods amounted to \$186 billion, equivalent to 22% in total consumption of goods and services in Hong Kong's domestic market. Thus, even assuming full pass-through from the increase of import prices of food and consumer goods to consumer price inflation, the rise in CPI inflation stemming from imported inflation would only be around 0.2 of a percentage point (i.e. $22\% \times 0.8\%$; including the feed-through of higher oil prices, the impact would be roughly around 0.3 of a percentage point for 2006 as a whole). In reality, full pass-through may not always occur, if part of the cost increase is absorbed by most local retailers amidst keen competition for business.

Table 1: Exchange rate influence on Hong Kong's inflation

	Annual rate of change (%)					
	Import-weighted exchange rate index of HK dollar	Import prices of foodstuffs and consumer goods ⁺	CCPI*	of which: <u>Food</u>	<u>Clothing and footwear</u>	<u>Durable goods</u>
2002	-0.4	-3.4	-3.0	-2.1	0.7	-6.3
2003	-3.0	-0.4	-2.6	-1.5	-2.7	-6.4
2004	-2.4	1.7	-0.4	1.0	6.4	-2.2
2005	-1.1	2.3	1.0	1.8	2.0	-3.2
2006	-1.3	0.8	2.0	1.7	1.0	-6.4

(+) Weighted by the respective shares of imports for local use.

(*) Figures from 2005 Q4 onwards are based on the 2004/05-based CCPI series; for earlier periods, the figures are based on the 1999/00-based series.

Box 7.1 (cont'd)

To further investigate into the extent of imported inflation in Hong Kong, a desk top exercise is undertaken to decompose consumer price inflation into its local and external components with the use of an econometric model. The structural equation takes the following form :

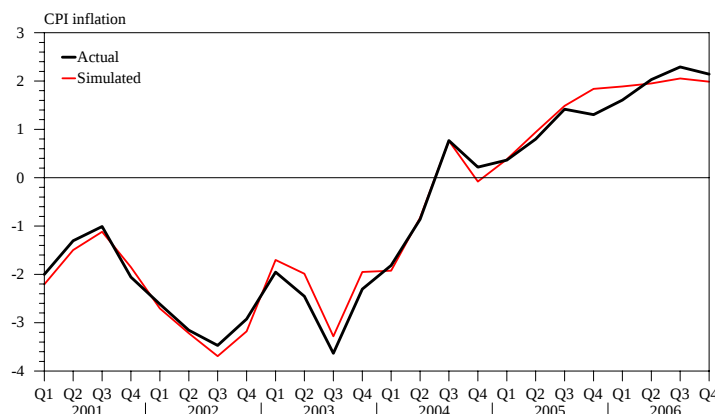
$$\dot{P}_t = f(\dot{P}_{t-1}, ULC_t, SR\dot{E}NT, YGAP, M\dot{U}VI)$$

- Where $\dot{P}$ = Year-on-year rate of change in Composite Consumer Price Index, excluding government fees and public utility charges
- ULC = Year-on-year rate of change in unit labour cost as measured by nominal wage growth net of productivity growth
- $SR\dot{E}NT$ = Year-on-year rate of change in 8-quarter moving average of shop rental costs
- $YGAP$ = Change in output gap as proxy of the change in profit margin in the local economy. Output gap is the gap between GDP and potential output expressed as a % of potential output; the latter estimated by assuming normal intensity of usage of factors of production
- $M\dot{U}VI$ = Year-on-year rate of change in the aggregate index of import prices of food, consumer goods and fuel taken together weighted by their respective shares in the consumption basket and their respective estimated import contents

The inflation series used in the model is the rate of change in the CCPI after excluding the effects of government measures and changes in public utility charges, this being a better measure of the underlying inflation. The movements of unit labour cost and shop rentals feature as the key components of domestically generated cost pressures, while the movements of import prices relevant to CPI inflation are to gauge the extent of imported inflation. The extent of these domestic and external influences that can be passed through to the local retail price level would be reflected in a change in profit margin as proxied by the change in output gap, a key measure of the aggregate demand and supply balance in the local economy. A tourism variable is added to take on board the lift to pricing power of retailers from the tourism boost after mid-2003.

The estimation is based on quarterly data from 2000 Q4 to 2006 Q4. The independent variables in the regression model all carry the expected signs, and are all statistically significant at the 5% level, and the simulated inflation series is able to track the actual series very well, as can be seen from the chart below.

Chart 1 : The simulated inflation series tracks the actual series very well



Box 7.1 (cont'd)

The coefficients from the econometric model are then used to decompose CPI inflation into the local and external cost components, as shown in the following table:

Table 2: Decomposition of CPI inflation into local and external components[^]

Year	External				Local*	Change in government fees and public utility charges	Effect of rebasing of CPI series	Total
	Import prices of food	Import prices of consumer goods	Import prices of fuel+	Sub-total				
2002	-0.44	-0.14	-0.02	-0.61	-0.99	-1.46	0.00	-3.0
2003	-0.21	-0.20	0.07	-0.34	-2.65	0.49	0.00	-2.6
2004	0.19	0.02	0.09	0.30	-0.99	0.30	0.00	-0.4
2005	0.16	0.14	0.12	0.43	0.58	0.06	-0.10	1.0
2006	0.08	0.17	0.08	0.34	1.95	0.13	-0.40	2.0

([^]) Because of the presence of a lagged endogenous variable, the decomposition analysis has back tracked all the lagged effects from the rise/decline in various cost components in the preceding 11 periods.

(+) Including the impact of higher oil prices on town gas charges; the model-based estimates here are very close to the actual impact as calculated from the energy-related components in the CCPI series.

(*) Including the lift to pricing power brought about by tourism. This is estimated to be quite insignificant over the past five years, except for 2004 when inbound tourism rebounded markedly from SARS outbreak.

If the lagged effects of the feed-through of higher import prices are also included, the model estimates are that in 2006, imported inflation contributed around 0.34 of a percentage point to the 2% CPI inflation, or roughly one-sixth of the inflationary pressures. Also, it is noteworthy that the extent of imported inflation was actually slightly lower in 2006 than in 2005, and this ties in well with the more moderate increase in import prices relevant to the consumption basket as shown in Table 1. The estimates are also close to the broad-brush estimates in Point (3), again echoing the point that the cost pressure from imported inflation is not as large as generally perceived. As the above table shows, a large part of CPI inflation in recent years was driven by local cost factors rather than external cost pressures. Further examination by cost component indicates that the bulk of the cost pressures was due to the feed-through of the rise-back in rental costs after a prolonged period of distinct decline, and also the gradual return of pricing power of retailers, and on this, the decline in unit labour cost has been rendering a useful alleviating force against the cost pressures on the local front – thanks to the rapidly rising labour productivity (for detailed analysis of productivity growth in Hong Kong, see Box 1.1).