

## Inflation Monthly

May 2008

### Singapore's Consumer Price Index

	2008	
	April	May
y-o-y (%)	7.5	7.5
m-o-m (%)	1.2	0.2
Index	109.8	110.0

- **Singapore's headline CPI inflation held steady at 7.5% y-o-y in May**

However, the MAS underlying inflation measure, which excludes accommodation and private road transport costs, increased slightly to 6.5% in May from 6.4% in April.

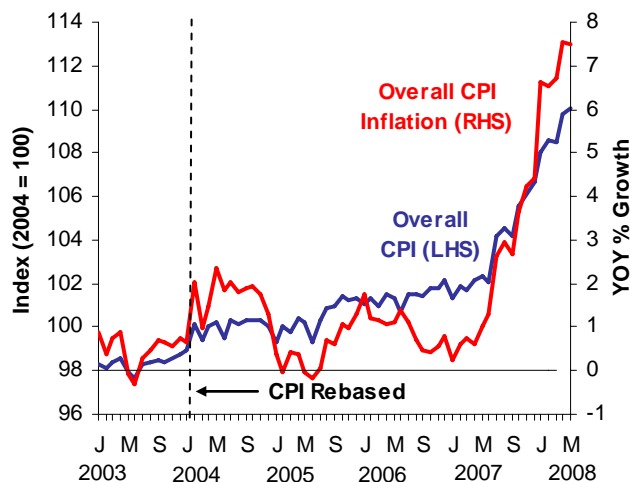
- **On a m-o-m basis, despite substantial price declines in the clothing and recreation categories, the CPI was higher by 0.2% due to rising costs of food, transport and accommodation**

Retail prices of clothing and footwear were lower with the advent of the Great Singapore Sale. Costs of holiday travel and education also fell. However, food prices rose again in May at a pace similar to that recorded in April, while more expensive cars and petrol lifted the transport and communication CPI. Accommodation costs also continued to climb.

- **Outlook: Cost of public transport expected to rise by 1.8% or less in Q4 2008**

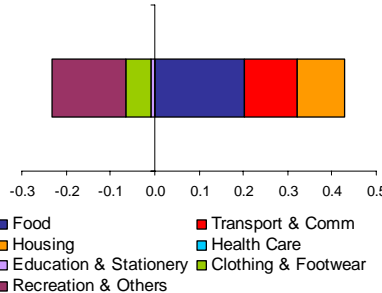
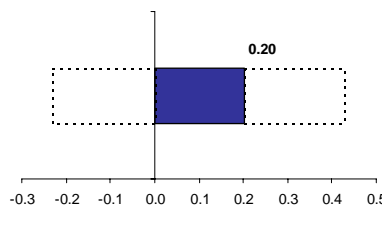
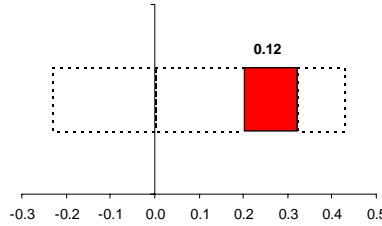
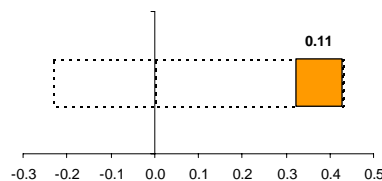
Despite a higher fare adjustment ceiling of 3% and more expensive diesel, public transport fares are expected to rise by no more than last year's cap of 1.8%.

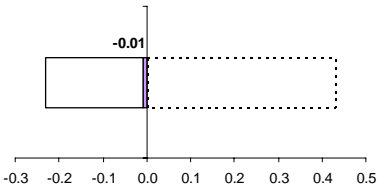
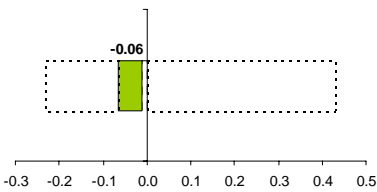
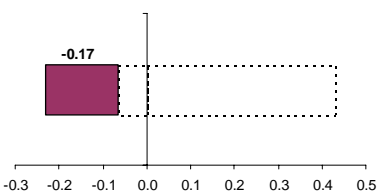
### Singapore: CPI and CPI Inflation



## Recent Developments in Domestic CPI Inflation

Domestic headline CPI inflation came in at 7.5% year-on-year (y-o-y) in May, similar to that in April. This brought average inflation to 7.0% in the first five months of 2008. However, the MAS underlying inflation measure – which excludes accommodation and private road transport costs – increased slightly to 6.5% in May from 6.4% in April, and averaged 5.7% in Jan-May 2008.

% Point Contribution (m-o-m), May 2008	Group	
 <p>Waterfall chart showing the contribution of various groups to the overall m-o-m CPI increase of 0.20% in May 2008. The groups and their contributions are: Recreation &amp; Others (-0.05), Education &amp; Stationery (-0.02), Clothing &amp; Footwear (0.01), Food (0.08), Transport &amp; Comm (0.06), and Housing (0.05).</p>	<b>Overall (m-o-m)</b>	The CPI rose by 0.2% on a month-on-month (m-o-m) basis in May, much lower than the 1.2% increase in April. The moderation was due primarily to lower prices of clothing, footwear and holiday travel, which helped to mitigate the rise in the costs of food, petrol and accommodation.
 <p>Waterfall chart showing the contribution of the Food group to the overall m-o-m CPI increase of 0.20% in May 2008. The Food group contributed 0.20%.</p>	<b>Food</b>	Food prices were up by 0.8% m-o-m in May, maintaining the same pace of increase in April. Prices of non-cooked food spiked up by 1.5% in May, after a 0.6% rise in April. Prices of cooked food, however, rose at a more measured pace of 0.3% compared to the previous month. Aside from sugar and confectionary, all other non-cooked food items registered price increases in May. In particular, prices of rice and cooking oil rose significantly in the month.
 <p>Waterfall chart showing the contribution of the Transport &amp; Communication group to the overall m-o-m CPI increase of 0.20% in May 2008. The Transport &amp; Communication group contributed 0.12%.</p>	<b>Transport &amp; Communication</b>	Costs of transport and communication rose by 0.6% in May over April due to more expensive cars and petrol. COE prices for small to medium sized cars (below 1,600cc) increased by 9.0% m-o-m during the bidding exercises conducted in April and fed through to higher prices of cars in May. Meanwhile, higher global oil prices continued to drive up the cost of petrol. In May, petrol pump prices were raised twice, by a total of seven cents. Other transport costs such as air fares and sea fares were also higher.
 <p>Waterfall chart showing the contribution of the Housing group to the overall m-o-m CPI increase of 0.20% in May 2008. The Housing group contributed 0.11%.</p>	<b>Housing</b>	Housing costs edged up by 0.5% m-o-m in May, reflecting the upward revision in the Annual Values (AVs) of owner-occupied accommodation as well as costlier rented accommodation.

	<b>Education</b>	The education CPI dipped slightly by 0.1% in May over April due mainly to cheaper personal computers.
	<b>Clothing and Footwear</b>	With the start of the Great Singapore Sale, prices of clothing and footwear fell by 1.2% and 3.5% respectively in May from April.
	<b>Recreation &amp; Others</b>	The CPI for holiday travel fell significantly by 3.2% m-o-m as cost of overseas hotels dropped sharply. Cost of personal goods and services (such as cosmetics, leather goods, watches and jewelry) were also lower due to the Great Singapore Sale.

## Outlook

### PUBLIC TRANSPORT FARE HIKE EXPECTED TO BE KEPT WELL BELOW 3% CAP

On 10 July, the Public Transport Council (PTC) announced that this year's public transport fare increase will be capped at 3%, higher than the 1.8% ceiling set for 2007<sup>1</sup>. Despite a change in the fare adjustment formula which saw a bigger "productivity extraction component" subtracted from the weighted increase in the CPI and wage, the fare adjustment ceiling rose as inflation and wage gains in 2007 were higher than the preceding year<sup>2</sup>. Nonetheless, any fare adjustment is subject to the approval of the PTC.

<sup>1</sup> Public transport fares are regulated by the PTC. A fare adjustment formula is used to determine the maximum quantum of fare adjustment that will be granted by the PTC to the transport operators.

<sup>2</sup> The formula used to calculate the ceiling has been changed this year. The formula used in 2005-2007 was:

$$\text{Maximum Fare Adjustment for year } X = 0.5 \times \text{Average CPI inflation rate in year } (X-1) + 0.5 \times \text{Average wage growth in year } (X-1) - 0.3\%$$

where 0.3% corresponds with the productivity extraction, which is determined by taking half of the average productivity gains achieved by the public transport operators in the period 2000-2004.

The new formula to be applied from 2008 to 2012 is:

$$\text{Maximum Fare Adjustment for year } X = 0.5 \times \text{Average CPI inflation rate in year } (X-1) + 0.5 \times \text{Average wage growth in year } (X-1) - 1.5\%$$

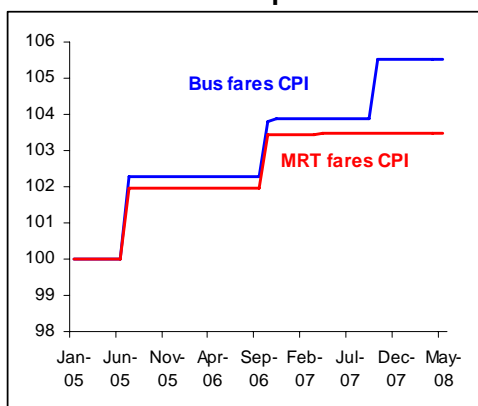
where 1.5% corresponds with the productivity extraction, which is determined by taking half of the average productivity gains achieved by the public transport operators in the period 2003-2007.

There were no changes to the weights for the inflation and wage growth components because the cost structure of the public transport operators in 2007 has not changed significantly since 2003. (Changes in cost components other than wages are accounted for in the change in the CPI) Manpower costs still comprise the largest portion of total costs at above 40%. While the share of fuel costs has risen from 11% to 19%, the share of other costs such as depreciation, maintenance and miscellaneous business services remained largely unchanged.

Without the revision to the productivity extraction component from 0.3% to 1.5%, the fare adjustment ceiling for 2008 would have been higher at 4.2% instead.

Since the advent of the fare review mechanism in 2005, public transport fares have been revised every year by a magnitude lower than the ceiling. This year will be no exception despite escalating fuel costs. According to the PTC, fares are expected to rise by no more than last year's cap of 1.8%<sup>3</sup>. In 2007, bus fares were adjusted upwards by two cents, or 1.6%, while MRT fares were unchanged. (Chart 1 and Table A) Given that bus and MRT transport costs constitute 2.8% of the CPI basket, an average price hike of 1.8% would add about 0.05% point to CPI inflation in the month it was implemented.

**Chart 1**  
**Public Transport CPI**



**Table A**  
**Public Transport Fare Adjustments**

	2005	2006	2007
Fare Adjustment Ceiling (%)	2.4	1.7	1.8
Actual Fare Adjustment (%) in Bus Fares	2.3	1.5	1.6
Actual Fare Adjustment (%) in MRT Fares	2.0	1.5	0.0

### HEADLINE CPI INFLATION EXPECTED TO MODERATE IN H2 2008

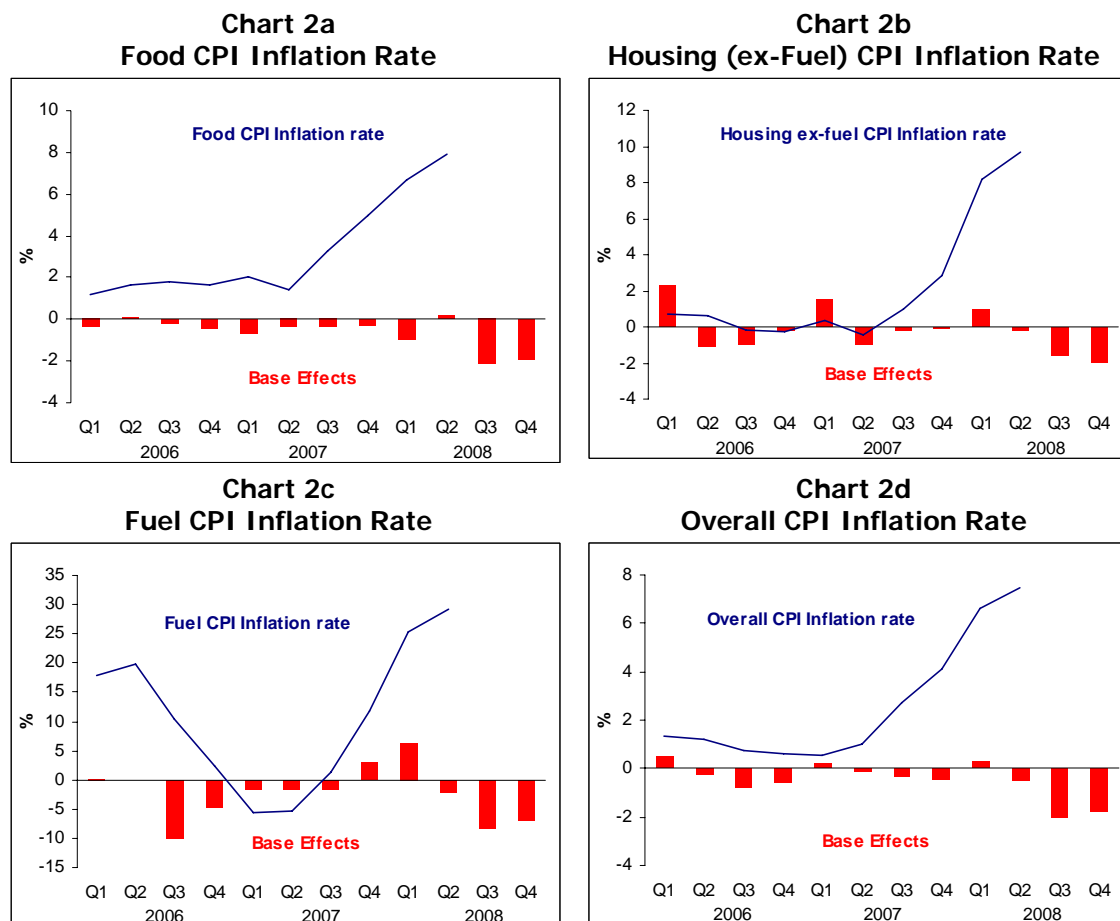
The inflation outlook for the rest of the year will depend largely on global food and oil price developments. Although global food prices are expected to remain high, the pace of increase could moderate in the latter part of the year. Indeed, the overall IMF Food and Beverage price index and the FAO Food price index appeared to have stabilised since March 2008. Furthermore, global output of food crops - wheat, corn, soybeans, sugar, maize, etc. - is forecast by the FAO to increase by 2.6% to a record of over 2.1 billion tonnes in 2008, which, if realised, could stabilise agriculture commodity prices. Nevertheless, domestic food prices may continue to rise as retailers pass on previous increases in global food prices to consumers.

Meanwhile, global oil prices have risen more sharply in the last two months as compared to the start of the year, and uncertainty surrounding future prices has also heightened considerably. WTI crude oil prices surged more than US\$20 in June and early July to reach a new record high of US\$147 on 12 July, amid significant volatility. The most recent average oil price projections by the Energy Information Administration (forecasting arm of the US Department of Energy) stood at US\$127 in 2008 and US\$133 in 2009, about \$19 and \$30 higher than its forecasts in May. These projections imply that oil prices are expected to stay above US\$130 for the rest of the year.

Nonetheless, CPI inflation (y-o-y) is expected to have peaked in Q2 2008 and moderate slightly in Q3 and further in Q4, due to several factors. First, the GST hike in July 2007 will cease to have an impact on CPI inflation in H2 2008. The GST hike is estimated to have added up to 1.4% points to headline inflation rates every month in H2 2007 and H1 2008. Second, domestic business cost pressures, arising notably from wages and rentals, are expected to ease in tandem with the slowing economy.

<sup>3</sup> "Just one cent - that's the likely average fare hike. Transport Council chief gives assurance that increase will be kept well below 3% cap" The Straits Times, 15 July 2008.

Third, “base effects” will exert stronger downward pressure on CPI inflation rate in H2 2008 as compared to H1. Base effects refer to the contribution from price changes in the base period (i.e. one year earlier) to changes in y-o-y inflation rates<sup>4</sup>. The charts below show significant negative base effects for overall CPI inflation in Q3 and Q4 2008 compared to previous quarters, as well as for the key contributors to CPI this year – food, housing (ex-fuel) and fuel – due to the run up in the prices of these items in the second half of last year.



Hence, barring sudden and unexpected external shocks, the inflation rate going forward should be more moderate.

<sup>4</sup> To calculate base effects, we adapt the methodology from the box titled “Base Effects and their impact on HICP inflation in early 2005” in the January 2005 issue of the ECB Monthly Bulletin. Essentially, the difference between the annual inflation rates in subsequent quarters is approximately the same as the difference between the quarter-on-quarter rate in the current quarter and the quarter-on-quarter rate four quarters before:

$$\pi - \pi_{t-1} = [(\ln(p_t) - \ln(p_{t-1})) - (\ln(p_{t-4}) - \ln(p_{t-5}))]*100.$$

This illustrates the fact that the change in the year-on-year inflation rate from one quarter to the next reflects the impact of both recent price changes and price movements in the base quarter, i.e. four quarters earlier. For example, if the price index jumps in the period from  $t-5$  to  $t-4$ , this will reduce the change in annual inflation between  $t-1$  and  $t$ . The contribution to the change in the annual inflation rate from the quarter-on-quarter rate of change one year earlier is referred to as a base effect.

**Table A.1**  
**Consumer Price Index**

	All Items	Food	Clothing & Footwear	Housing	Tpt & Comm	Educational & Stationery	Health Care	Recreation & Others
Weights	10000	2338	357	2126	2176	819	525	1659
	INDEX (2004 = 100)							
2007 Jun	102.0	104.6	97.3	99.9	98.5	103.8	104.9	105.0
Jul	104.1	106.0	101.1	104.8	99.4	106.0	107.2	105.6
Aug	104.5	106.4	102.5	105.1	99.9	105.9	107.4	105.9
Sep	104.2	106.9	101.6	103.9	98.7	106.3	107.4	106.3
Oct	105.5	107.5	101.1	106.6	101.0	106.3	107.8	107.2
Nov	106.1	108.6	102.9	107.3	101.1	106.3	108.0	107.8
Dec	106.6	109.3	102.3	107.3	102.3	106.2	108.1	108.3
2008 Jan	108.0	110.5	103.0	111.7	102.2	108.9	109.5	107.7
Feb	108.6	111.9	102.5	112.3	102.2	108.9	110.1	108.1
Mar	108.5	111.7	104.0	111.6	101.9	108.8	110.1	108.9
Apr	109.8	112.6	103.7	114.8	103.0	109.0	110.7	109.9
May	110.0	113.5	102.0	115.3	103.6	108.9	110.7	108.9

Source: Singapore Department of Statistics

**Table A.2**  
**Selected Inflation Indicators**

	CPI	MAS Underlying Index	Import Price Index	Non-fuel Primary Commodities	OPEC Oil Price
	YOY% GROWTH				
2007 Jun	1.3	1.5	-3.4	14.5	3.1
Jul	2.6	2.7	-3.5	12.3	4.0
Aug	2.9	2.8	-3.1	8.5	-0.6
Sep	2.7	3.0	-0.2	12.8	24.3
Oct	3.6	3.2	1.0	11.5	43.6
Nov	4.2	3.5	3.8	9.5	60.6
Dec	4.4	3.7	4.0	7.9	50.4
2008 Jan	6.6	5.0	5.1	15.4	74.8
Feb	6.5	5.3	4.1	20.4	66.6
Mar	6.7	5.6	3.9	22.8	69.4
Apr	7.5	6.4	3.7	17.7	65.8
May	7.5	6.5	5.9	15.5	85.0

Source: Singapore Department of Statistics, IMF and Bloomberg