

## Inflation Monthly

December 2009

### Singapore's Consumer Price Index

	2009	
	Nov	Dec
<b>y-o-y (%)</b>	-0.8	-0.5
<b>m-o-m (%)</b>	0.1	-0.6
<b>Index (2009 = 100)</b>	100.6	100.0



Featuring a box on the 2009 Rebasing of the CPI

- Inflation picked up across the G3 and Asian economies in Q4 2009**

The rebound in global crude oil prices was the main contributor to higher inflation worldwide.

- Singapore's CPI inflation rate (y-o-y) rose to -0.5% in December**

The increase in the inflation rate from -0.8% in November was due largely to higher costs of private road transport. Excluding that and accommodation costs, the MAS underlying inflation measure remained at -1.4% in December. For the whole of 2009, the headline and MAS underlying inflation measures averaged 0.6% and 0% respectively.

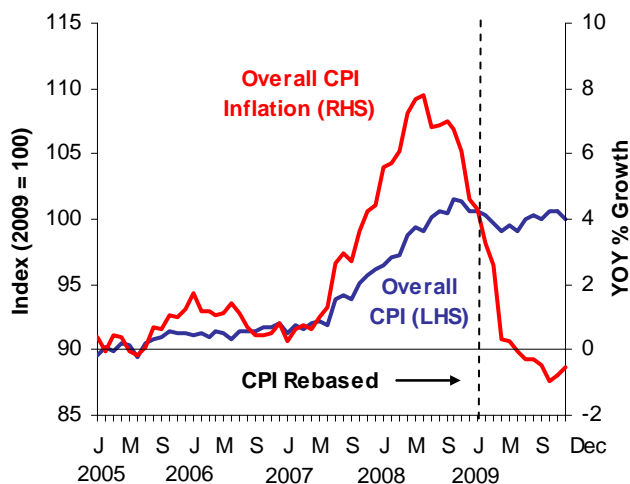
- On a month-on-month basis, the domestic CPI was lower by 0.6%**

The small decline in the CPI largely reflected lower housing costs due to the administration of S&CC rebates. Other major components in the CPI recorded only marginal changes in price.

- CPI inflation is expected to average between 2% and 3% in 2010**

The bulk of the price pressures will likely come through the import channel, driven by higher oil and food commodity prices in the global markets. Car prices are also expected to contribute to inflation as COE supply will remain tight.

### Singapore: CPI and CPI Inflation



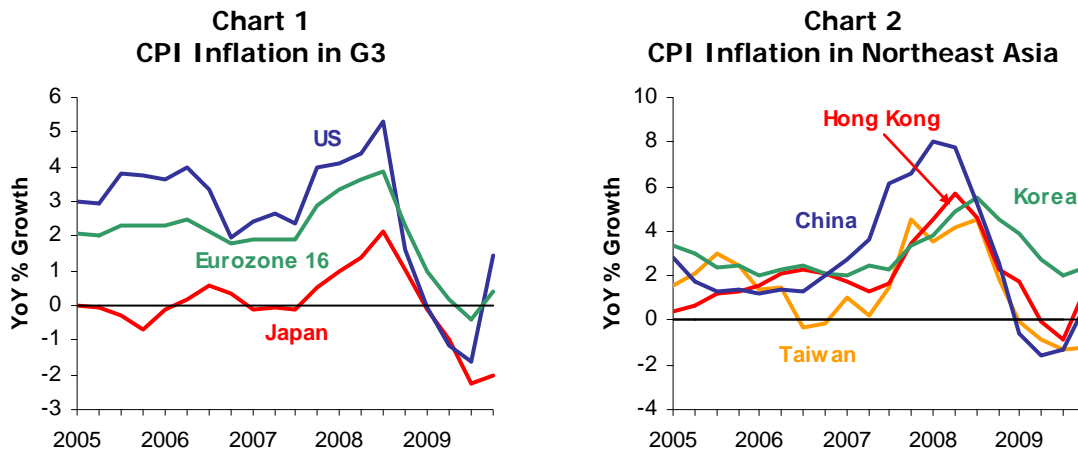
## Recent Developments in Global Inflation

Global inflation picked up in Q4 2009, reversing the trend in earlier quarters. In the G3, the headline CPI inflation rate rose to 0.5% y-o-y, from -1.2% a quarter earlier. Inflation in the US and the Eurozone turned positive whilst Japan remained in deflationary territory. (Chart 1) Meanwhile, inflation in the Asian NIE-3 and ASEAN-4 climbed to 1.4% and 2.0% respectively, from 0.8% and 0.3% in the preceding quarter. (Charts 2 and 3)

The rebound in global crude oil prices was the main contributor to higher inflation worldwide. (Chart 4) As economic recovery strengthened, global demand for oil also picked up. Accordingly, the average petroleum spot price<sup>1</sup> climbed to US\$75.5 in Q4, compared to a low of US\$44.2 in Q1 last year. The impact of higher oil prices in Asia ex-Japan was less than that in the G3, given the smaller share of fuel in the former's CPI basket as well as price controls in some Asian economies.

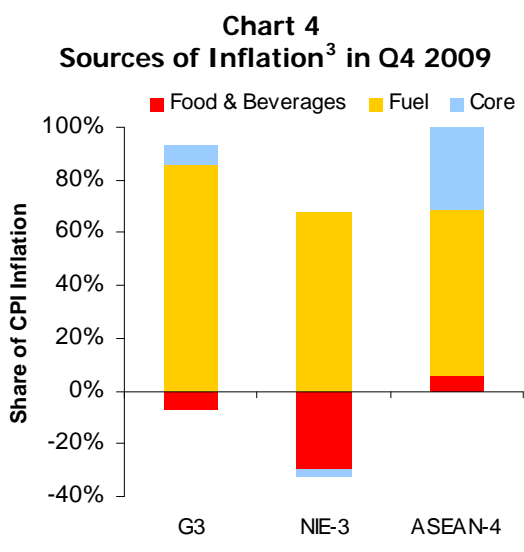
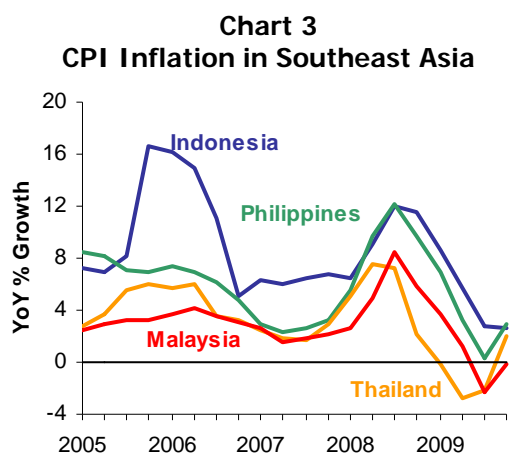
The impact of food-related items was muted in Q4, as some food commodity prices retreated from their previous levels. For instance, the benchmark price for rice<sup>2</sup> fell to US\$579.5, down 3% from a quarter earlier. Nonetheless, food prices are likely to rise further in light of continued structural demand, the possibility of drought in some producer countries and inadequate supply-side infrastructure.

Looking ahead, fuel and food prices would likely be the main source of inflation globally. Core inflation could however remain muted, particularly for the G3 economies, where high unemployment and depressed capacity utilisation continued to exert downward pressure on core prices.



<sup>1</sup> Average petroleum spot price of Brent, Dubai Fateh and West Texas Intermediate (US\$ per barrel).

<sup>2</sup> Average quoted price of 5% broken milled white rice in Thailand (US\$ per metric tonne).



**Table 1  
Inflation Tracker**

Change in inflation between Q3 and Q4 2009

	Overall Inflation	Food & Beverages	Clothing	Transport & Communication	Housing	Medical Care	Recreation	Education	Miscellaneous
USA									
EU									
Japan									
China									
Hong Kong									
Taiwan									
Korea									
Malaysia									
Thailand									
Indonesia									
Philippines									

**Interpretation of Colour Codes:**

The indicator is based on the change in inflation compared to the preceding quarter in y-o-y terms.

Inflation accelerating	No change in inflation	Inflation decelerating
------------------------	------------------------	------------------------

<sup>3</sup> This is calculated as the rate of inflation in Q4 2009 minus that of Q3 2009 and weighted by nominal GDP at market exchange rates.

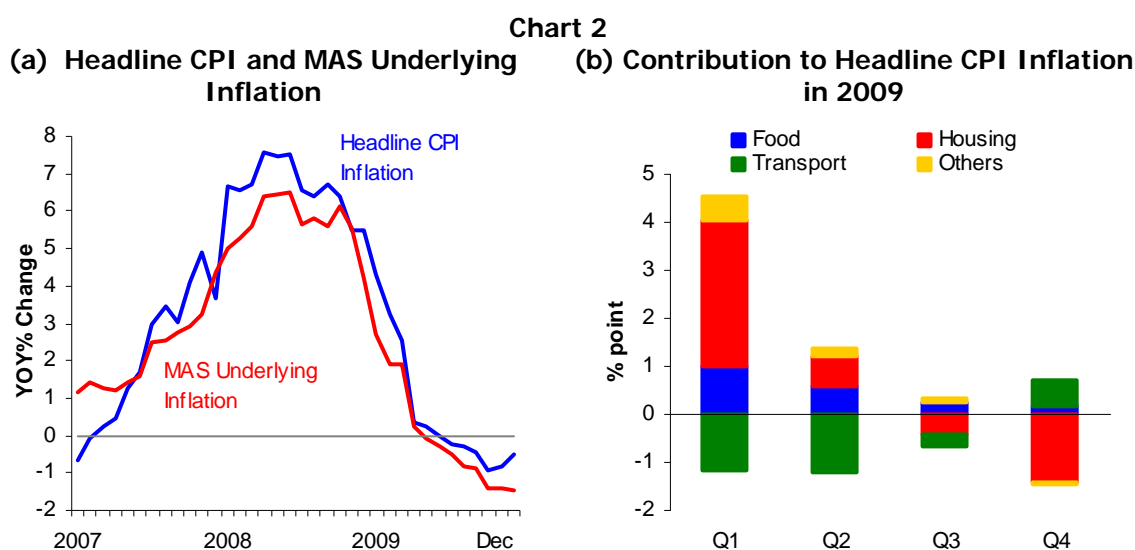
## Recent Developments in Domestic CPI Inflation

### YEAR-ON-YEAR CHANGES IN SINGAPORE'S CPI (January – December 2009)

The CPI inflation rate slowed sharply from 4.3% y-o-y in January 2009 to a trough of -0.9% in October before recovering slightly to -0.5% in December. (Chart 2a) It averaged 0.6% for the whole year. Excluding the cost of private road transport and accommodation, the MAS underlying inflation measure stood at -1.4% in December and came in flat for 2009.

Inflation moderated across most components in the CPI basket throughout 2009. (Chart 2b) Notably, housing cost inflation fell sharply by over 20% points from January to -5.9% in December, reflecting significantly lower electricity tariffs and declines in the imputed rents of HDB flats and private residential properties. In addition, food price inflation eased from 5.5% in January to a benign 0.6% in December due to lower import costs following bumper autumn harvests by major agricultural producers in 2008. Recreation costs also came down on a year-ago basis as prices of overseas holiday travel packages plunged alongside a worldwide reduction in airfares.

In comparison, the inflation rate for transport surged from a trough of -8.6% in April to 6.6% in December, driven by more expensive cars and petrol. Since hitting unprecedented lows in February, COE premiums for cars have risen sharply following significant cuts in quota in April and October. Crude oil prices have also doubled from a depressed level of US\$39 per barrel in February.



**MONTH-ON-MONTH CHANGES IN SINGAPORE'S CPI (December 2009)**

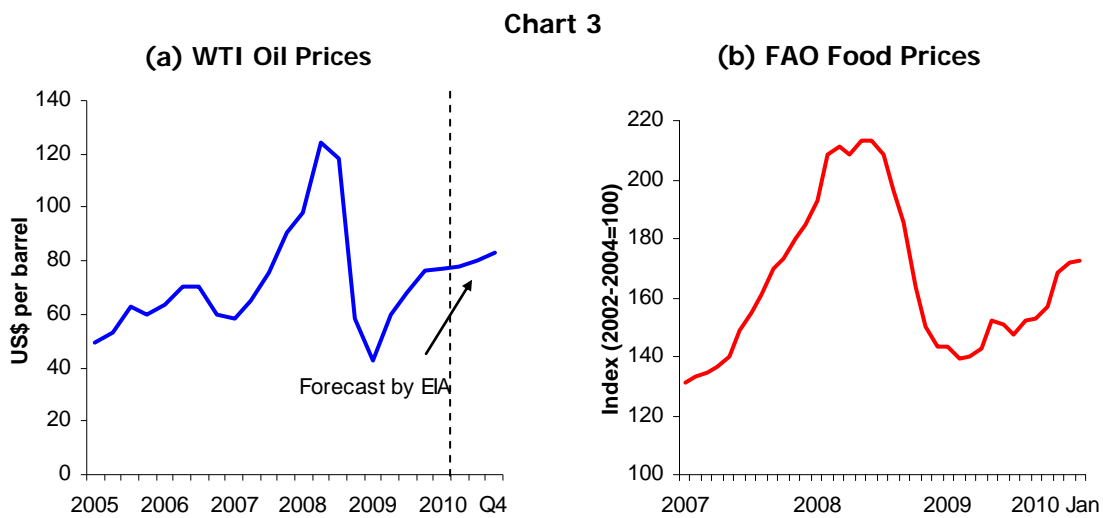
MONTH-ON-MONTH CHANGES IN KEY CPI CATEGORIES		
Per Cent Point Contribution	Category	
<p>Legend:  <span style="color:blue">■</span> Recreation &amp; Others  <span style="color:orange">■</span> Health Care  <span style="color:purple">■</span> Clothing &amp; Footwear  <span style="color:red">■</span> Housing  <span style="color:purple">■</span> Education &amp; Stationery  <span style="color:cyan">■</span> Food  <span style="color:green">■</span> Transport</p>	<b>Overall</b>	The CPI fell by 0.5% m-o-m in December, due largely to the lower cost of housing. The cost of transport and clothing also moderated. These declines more than offset the rise in the cost of recreation.
<p>-0.54</p>	<b>Housing</b>	The sharp decline in the housing index largely reflected lower maintenance cost arising from the HDB Service & Conservancy Charges (S&CC) rebates. Rentals for HDB flats also fell, due in part to the administration of rental rebates. <sup>4</sup>
<p>-0.09</p>	<b>Transport</b>	Car prices moderated following large year-end discounts offered by dealers.
<p>-0.05</p>	<b>Clothing &amp; Footwear</b>	Prices of clothing & footwear fell amidst the festive holiday sale.
<p>0.10</p>	<b>Recreation &amp; Others</b>	The cost of holiday travel packages climbed for the fourth consecutive month.

<sup>4</sup> As rebates for S&CC and rentals for selected HDB flats are given out only in certain months of the year, they can cause variations in the monthly accommodation cost component of the CPI. For 2009, these rebates were administered in March, June, September and December.

## Inflation Outlook

### CPI INFLATION IS EXPECTED TO AVERAGE BETWEEN 2% AND 3% IN 2010

Inflation is expected to rise in 2010, although this is due in part to the low base last year. The bulk of the price pressures will likely come through the import channel, driven by structural demand-supply imbalances in the global oil and food commodity markets. For example, the Energy Information Agency expects global oil prices to average around US\$80 per barrel in 2010, which is 30% higher than the average price in 2009. (Chart 3a) Consequently, domestic petrol pump prices and electricity tariffs are expected to increase going forward. Meanwhile, weather-induced supply side disruptions including recent freezing winter conditions in major agricultural producing countries in the northern hemisphere as well as higher costs of oil-related inputs are likely to push up food prices this year. Already, the FAO food price index has risen by some 17% since mid-2009 and these external cost pressures are likely to be reflected in domestic prices in the coming months. (Chart 3b)



Domestically, car prices are expected to contribute to CPI inflation as COE supply will remain tight. However, other domestic sources of inflation will be restrained by subdued factor costs until at least the first half of the year before the phasing out of the government measures contained in the Resilience Package. Accommodation costs are also likely to pick up in the latter half, especially if the economic growth turns out stronger than currently expected.

Inflation is expected to average between 2% and 3% for the whole year. The MAS underlying inflation rate, which excludes the cost of accommodation and private road transport, is forecast to remain at 1% to 2% for 2010.

## Box: The Rebasing of Consumer Price Index, 2009

### Introduction

The Consumer Price Index (CPI) is rebased every five years to take into account the changes in the consumption pattern of households. The latest review was based on data from the Household Expenditure Survey (HES) conducted between October 2007 and September 2008. The review also introduced methodological improvements to the treatment of owner-occupied housing. As a consequence of the various changes in the CPI series, the inflation rates for 2009 have been revised.

### Changes in Weighting Pattern

The CPI weights reflect the relative importance of each item in the basket of goods and services, that is, the share of each item in total household expenditure. Over the five years between 2004 and 2009, the weights for nearly all the major components of the CPI fell as expenditure on accommodation, health care and prepared meals increased. (Table 2) In particular, the weight of household durables, public transport, non-cooked food and education recorded double-digit declines. Also notable was the fall in the share of oil-related items such as electricity, LPG, gas and petrol. In contrast, the share of accommodation rose by nearly 50%<sup>5</sup> to take up one-fifth of the CPI basket.

**Table 2**  
**Weighting Pattern of CPI, 2004 vs 2009**

	2004- based	2009- based	% Change
<b>ALL ITEMS</b>	<b>10000</b>	<b>10000</b>	<b>0</b>
Food	2338	2205	-5.7
Food excl Prepared Meals	1029	851	-17
Prepared Meals	1309	1354	3.4
Clothing & Footwear	357	341	-4.5
Housing	2126	2548	20
Accommodation	1360	2002	47
Fuel & Utilities	448	357	-20
Household Durables	318	189	-41
Transport	1672	1553	-7.1
Private Road Transport	1180	1166	-1.2
Public Road Transport	462	366	-21
Other Travel & Transport	30	21	-30
Communication	504	475	-5.8
Education & Stationery	819	735	-10
Health Care	525	586	12
Recreation & Others	1659	1557	-6.1
Oil-related Items	527	487	-7.6
All Items excl Accommodation and Private Road Transport	7460	6832	-8.4

<sup>5</sup> The higher weighting largely is due to significant increases in the Annual Values (AVs) of both public and private residential properties as assessed by IRAS, used in the valuation of owner-occupied housing services. There was also a near tripling of weights on rented accommodation as more households spend on rents, which have seen sharp increases over the years.

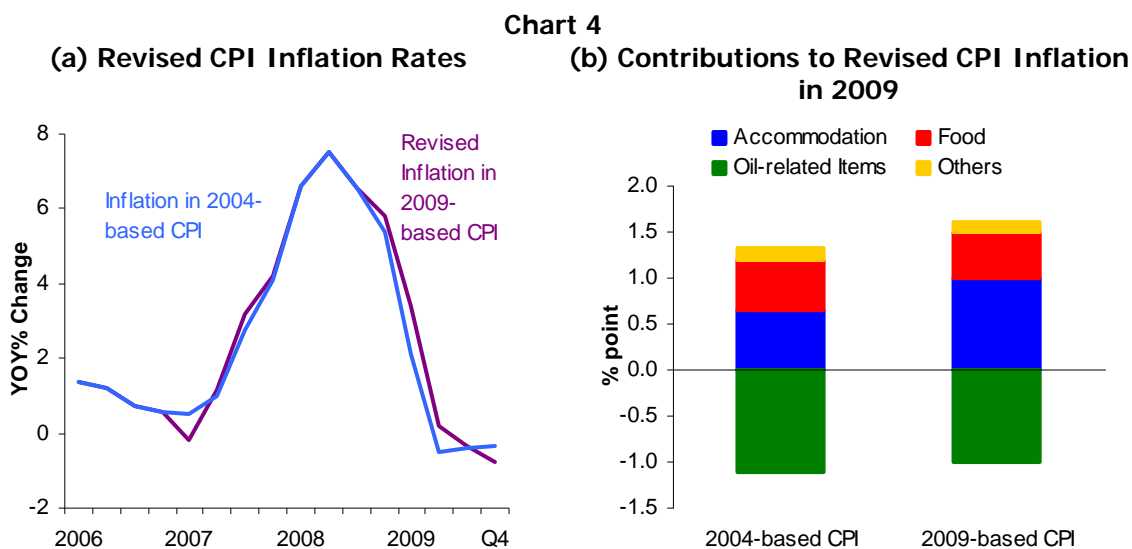
### *A Different Pricing Indicator for the Cost of Owner-occupied Housing*

Since 1977/8, the cost of owner-occupied housing in the CPI has been computed using the rental equivalence method. Imputed rents are proxies for rents that consumers would have to pay if they had to lease the property rather than own it. For the 2009-based CPI, the pricing indicator used to track changes in imputed rents has been changed from the Annual Values (AVs) of residential properties assessed annually by the Inland Revenue Authority of Singapore (IRAS) for tax purposes to rental data collected on a monthly basis. This methodological improvement will allow changes in the cost of owner-occupied housing or imputed rents to be reflected in the CPI in a timelier manner.

### *Revised Inflation Rates for 2009*

With changes in the weights and composition of goods and services in the CPI, as well as the use of a different pricing indicator for the computation of owner-occupied housing, the average inflation rate for 2009 was revised up from 0.2% to 0.6%. In addition, the quarterly inflation rate fell more steeply over the year, from 3.4% (2.1% under the old series) in Q1 to -0.8% (-0.3%) in Q4. (Chart 4a) However, the MAS underlying inflation rate, which excludes the cost of accommodation and private road transport, remained unchanged at 0% in 2009 after rebasing.

The higher inflation rate in 2009 mostly reflected a more significant contribution from the accommodation cost component, due in part to its larger weight in the 2009-based CPI. (Chart 4b) Using more timely market rental data instead of lagged AVs that would have been reflected in the CPI only in 2010, imputed rents of both HDB and private residential housing rose by a steeper 6.5% in 2009, compared to 5.6% before the rebasing. The inflation rates for other categories in the CPI were also revised slightly. Upward revisions in the inflation rates for transport and education were largely offset by downward revisions in the inflation rates of communication and health care.



### *Implications*

While the larger weight of accommodation and the use of monthly rentals to compute owner-occupied housing cost suggest that developments in the property market could have a greater impact on inflation, it will also result in less volatility in inflation compared to previously when AVs were used to derive owner-occupied housing cost. AVs are revised infrequently and so the adjustments tend to be lumpy. Nevertheless, global commodity prices will continue to be a key driver of domestic inflation given that the weight of food and oil-related items remain large, at more than a quarter of the CPI basket.

## Appendix Tables

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

	All Items	Food	Clothing & Footwear	Housing	Trpt & Comm	Comms	Educa-tion & Stationery	Health Care	Recreation & Others
Weights	10000	2205	341	2548	1553	475	735	586	1557
	INDEX (2009 = 100)								
2009 Jan	100.56	100.15	98.26	103.17	97.16	100.57	99.95	99.78	101.35
Feb	100.24	99.84	99.48	102.80	97.06	100.41	99.70	99.94	100.29
Mar	99.67	99.92	100.51	100.87	95.84	100.60	99.71	99.85	100.64
Apr	99.03	99.81	100.37	98.42	96.13	100.66	99.86	99.74	100.39
May	99.56	99.78	99.18	99.94	97.94	100.56	99.91	99.71	99.81
Jun	99.12	99.83	96.84	97.71	99.40	100.54	99.87	99.78	99.62
Jul	99.97	99.89	100.34	99.85	100.74	100.40	99.96	100.16	99.21
Aug	100.33	99.85	101.62	99.70	103.06	100.30	100.42	99.92	99.13
Sep	99.98	99.99	100.20	98.66	102.66	100.32	100.08	100.18	99.15
Oct	100.58	100.14	101.09	100.32	103.14	99.97	100.14	100.25	99.47
Nov	100.63	100.16	100.95	100.34	103.66	97.55	100.19	100.29	99.97
Dec	100.02	100.11	99.56	98.20	103.08	97.39	100.18	100.20	100.61

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				
2009 Jan	4.3	2.7	-9.5	-26.4	-53.3
Feb	3.3	1.9	-8.7	-32.9	-54.4
Mar	2.6	1.9	-8.7	-35.4	-53.7
Apr	0.3	0.3	-9.3	-31.7	-52.2
May	0.2	-0.1	-11.6	-27.0	-52.2
Jun	0.0	-0.3	-11.6	-25.8	-46.7
Jul	-0.3	-0.5	-13.5	-26.3	-50.8
Aug	-0.3	-0.8	-11.0	-18.0	-36.5
Sep	-0.5	-0.9	-10.2	-14.6	-30.7
Oct	-0.9	-1.4	-5.3	2.3	5.1
Nov	-0.8	-1.4	1.4	14.9	53.3
Dec	-0.5	-1.4	5.4	27.2	94.1

Source: Singapore Department of Statistics, IMF and Bloomberg