

# Economic Survey of **SINGAPORE** 2014



**MTI**

MINISTRY OF TRADE  
AND INDUSTRY  
SINGAPORE

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**Ministry of Trade and Industry  
Republic of Singapore**

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# CONTENTS

# MAIN INDICATORS OF THE SINGAPORE ECONOMY

## OVERALL ECONOMY

### GDP at Current Market Price

<b>\$378.2</b> billion 2013	<b>\$390.1</b> billion 2014
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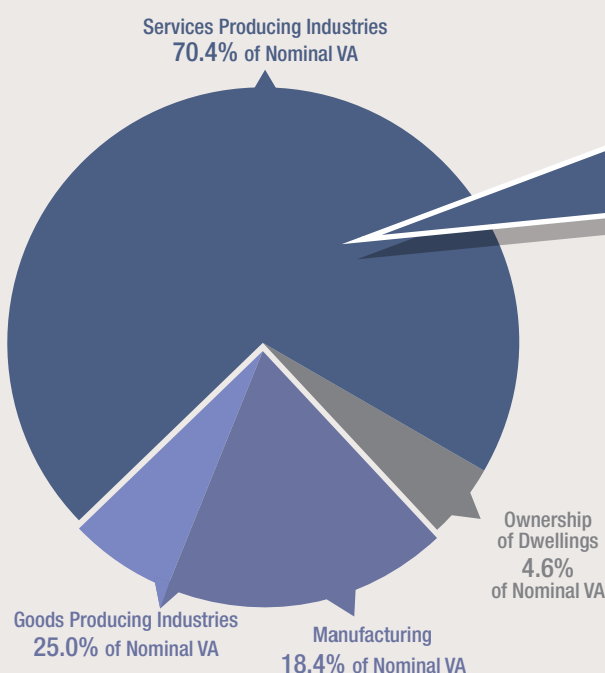
### Real GDP (Year-on-Year-Growth)

<b>+4.4%</b> 2013	<b>+2.9%</b> 2014
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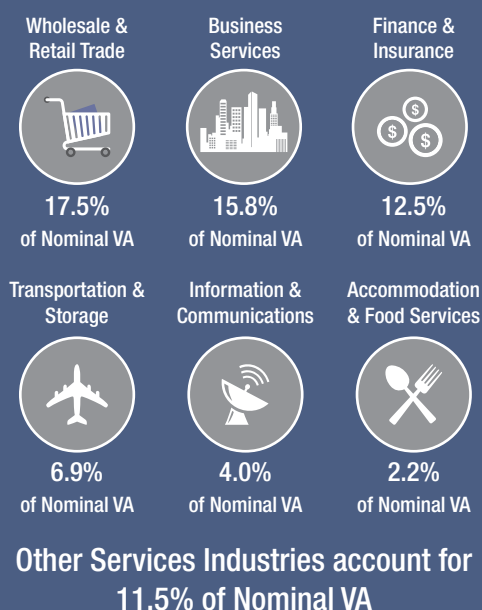
### Per Capita GNI

<b>\$67,902</b> 2013	<b>\$69,168</b> 2014
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## STRUCTURE OF THE ECONOMY IN 2014



### BREAKDOWN OF SERVICES PRODUCING INDUSTRIES



## LABOUR MARKET

### Employment (as at year end)

<b>3,493.8</b> thousand 2013	<b>3,622.8</b> thousand 2014
------------------------------------	------------------------------------

### Unemployment Rate

<b>1.9%</b> 2013	<b>2.0%</b> 2014
---------------------	---------------------

### Labour Productivity (Year-on-Year Growth)

<b>0.3%</b> 2013	<b>-0.8%</b> 2014
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## COSTS

### Unit Labour Cost Index of Overall Economy (Year-on-Year Growth)

<b>+2.4%</b> 2013	<b>+3.5%</b> 2014
----------------------	----------------------

### Unit Business Cost of Manufacturing (Year-on-Year Growth)

<b>+4.1%</b> 2013	<b>+0.7%</b> 2014
----------------------	----------------------

### Unit Labour Cost of Manufacturing (Year-on-Year Growth)

<b>+3.5%</b> 2013	<b>+1.7%</b> 2014
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## PRICES

### Consumer Price Index - All Items (Year-on-Year Growth)

<b>+2.4%</b> 2013	<b>+1.0%</b> 2014
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### Domestic Supply Price Index (Year-on-Year Growth)

<b>-2.7%</b> 2013	<b>-3.3%</b> 2014
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### Singapore Manufactured Products Price Index (Year-on-Year Growth)

<b>-3.1%</b> 2013	<b>-3.4%</b> 2014
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# MAIN INDICATORS OF THE SINGAPORE ECONOMY

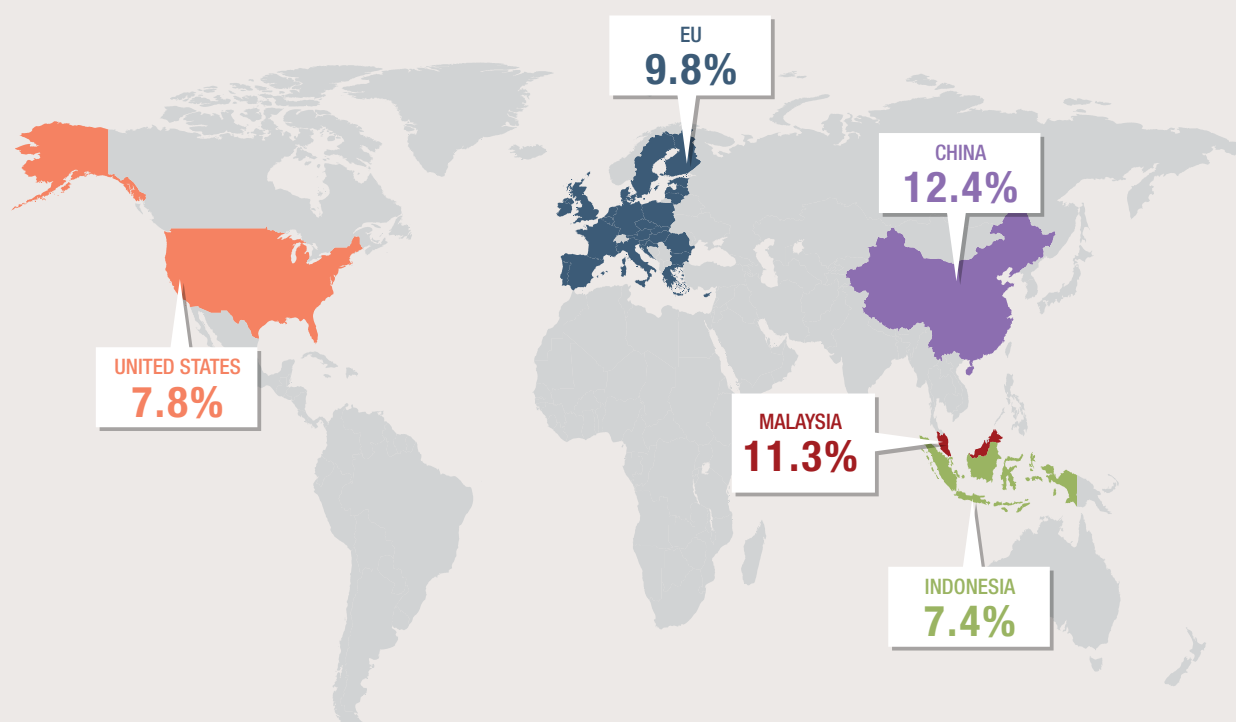
## MERCHANDISE TRADE

Merchandise Exports		Merchandise Imports		Share of Exports by Top 5 Export Destinations in 2014		
<b>\$513,391</b> million	<b>\$518,923</b> million	<b>\$466,762</b> million	<b>\$463,779</b> million	 <b>12.6%</b> China	 <b>12.0%</b> Malaysia	
<b>+0.6%</b> Year-on-Year Growth	<b>+1.1%</b> Year-on-Year Growth	<b>-1.6%</b> Year-on-Year Growth	<b>-0.6%</b> Year-on-Year Growth	 <b>11.0%</b> Hong Kong	 <b>9.4%</b> Indonesia	 <b>7.8%</b> EU
2013	2014	2013	2014			

## SERVICES TRADE

Services Exports		Services Imports		Top 5 Services Exports Categories (Share of Total Services Exports)		
<b>\$171,803</b> million	<b>\$177,936</b> million	<b>\$177,211</b> million	<b>\$179,363</b> million	<b>32%</b> Transport Services	<b>23%</b> Other Business Services	
<b>+8.0%</b> Year-on-Year Growth	<b>+3.6%</b> Year-on-Year Growth	<b>+9.8%</b> Year-on-Year Growth	<b>+1.2%</b> Year-on-Year Growth	<b>15%</b> Financial Services	<b>14%</b> Travel Services	<b>6%</b> Maintenance & Repair Services
2013	2014	2013	2014			

## TOP 5 TRADING PARTNERS AND SHARE OF TOTAL MERCHANDISE TRADE IN 2014



# CHAPTER 1

## Economic Performance







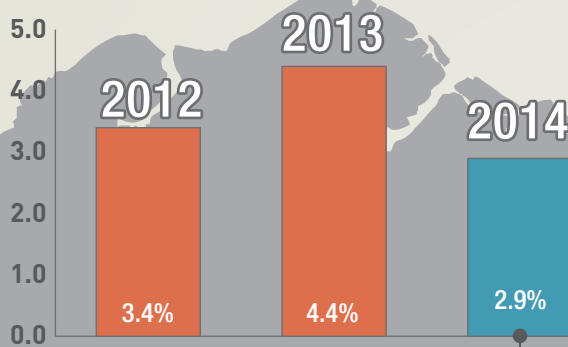
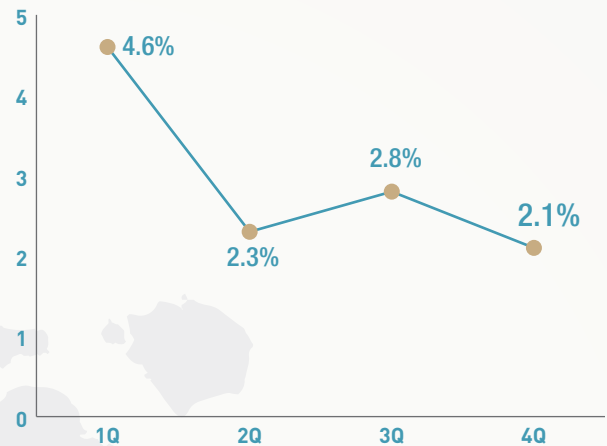
## CHAPTER 1

# ECONOMIC PERFORMANCE

Real GDP grew by

**2.9%** in 2014

QUARTERLY TREND FOR 2014



• SOURCES OF GROWTH IN 2014  
94% of growth was driven by external demand

### MAIN DRIVERS OF GROWTH IN 2014

Finance & Insurance



0.9%-point contribution

Manufacturing



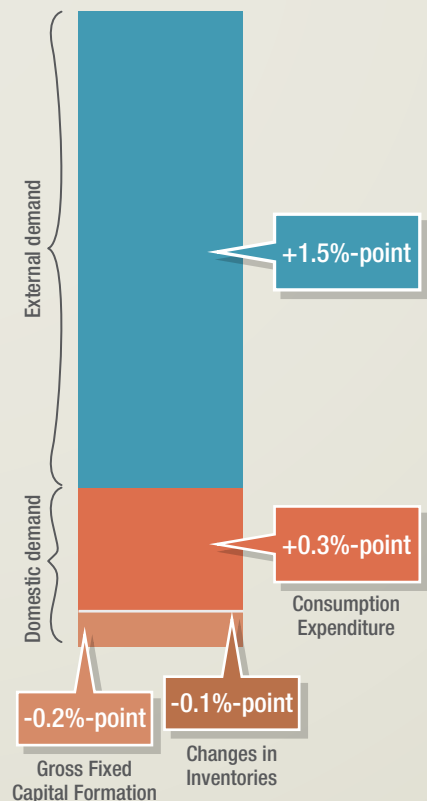
0.5%-point contribution

Business Services



0.4%-point contribution

In total, these sectors accounted for  
**61%** of GDP growth



## OVERVIEW

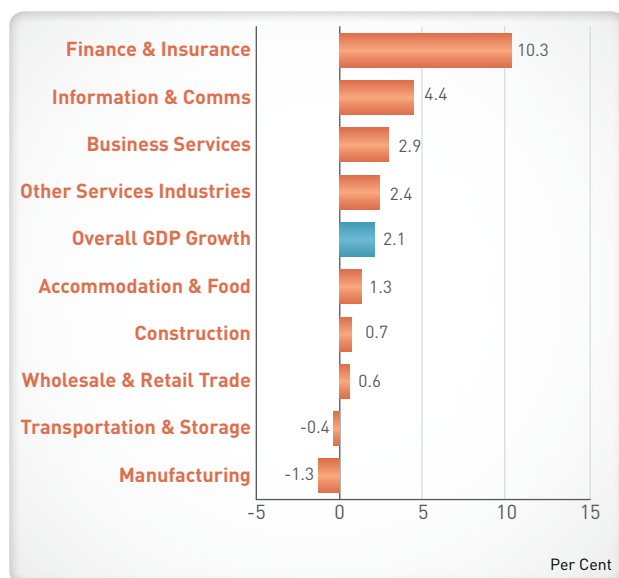
In the fourth quarter of 2014, the economy grew by 2.1 per cent, slower than the 2.8 per cent growth in the third quarter. Growth was largely supported by healthy expansions in the finance & insurance and business services sectors.

For the year as a whole, the economy expanded by 2.9 per cent, compared to 4.4 per cent in 2013. All sectors grew in 2014, with the finance & insurance, manufacturing and business services sectors being the key contributors to overall GDP growth.

## OVERALL PERFORMANCE

The economy grew by 2.1 per cent in the fourth quarter, moderating from the 2.8 per cent growth in the previous quarter (Exhibit 1.1). On a quarter-on-quarter seasonally-adjusted annualised basis, the economy expanded by 4.9 per cent, higher than the 2.6 per cent in the third quarter.

Exhibit 1.1: GDP and Sectoral Growth Rates in 4Q 2014



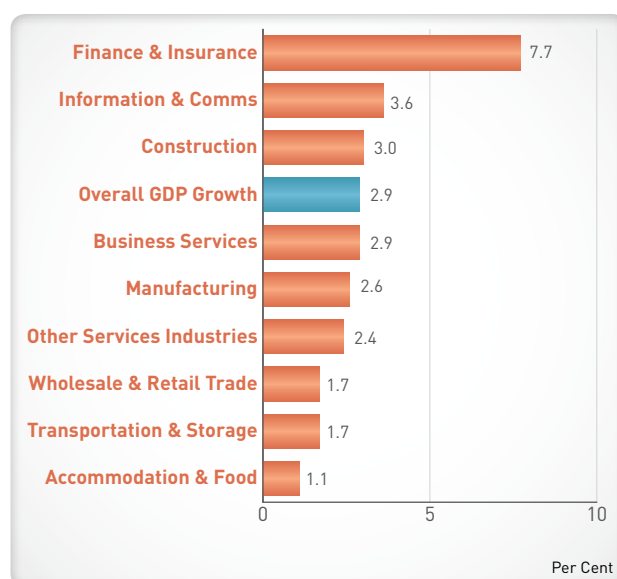
Among the sectors, the manufacturing sector recorded the weakest growth, contracting by 1.3 per cent in the fourth quarter, a reversal from the 1.7 per cent growth in the preceding quarter. This was largely due to sluggish performance in the transport engineering and electronics clusters. The construction sector's growth was also lacklustre, at 0.7 per cent, slower than the 1.1 per cent growth recorded in the previous quarter. The slowdown was on account of weaker private sector industrial and residential construction activities.

Services producing industries performed better, collectively growing by 3.1 per cent in the fourth quarter, similar to the 3.3 per cent growth in the previous quarter. All services sectors saw positive growth, with the exception of the transportation & storage sector.

Among the services industries, the finance & insurance sector registered the fastest pace of growth in the fourth quarter, at 10 per cent. This was similar to the 9.9 per cent growth achieved in the previous quarter. Growth in the sector was supported by sentiment-sensitive activities including forex trading and fund management activities.

On the other hand, the transportation & storage sector contracted by 0.4 per cent, reversing the 0.1 per cent growth in the previous quarter. This was largely the result of weaker performance in the water transport and storage & other support services segments.

Exhibit 1.2: GDP and Sectoral Growth Rates in 2014





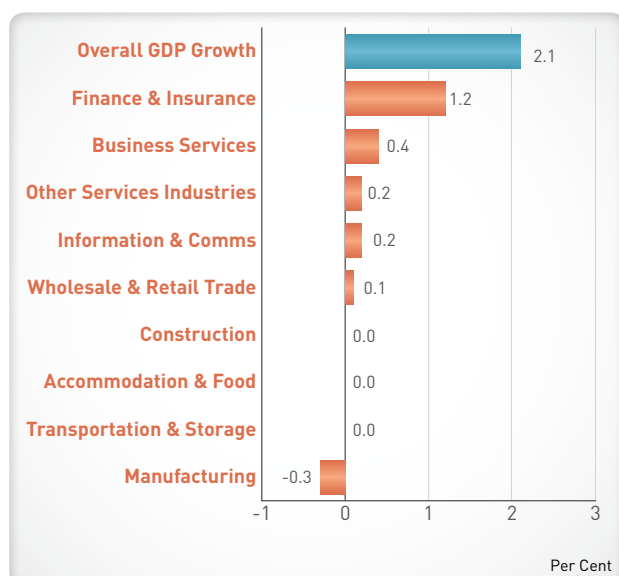
For the whole of 2014, the economy grew at a more moderate pace of 2.9 per cent, compared to 4.4 per cent in 2013 (Exhibit 1.2). Growth in the manufacturing sector improved from 1.7 per cent in 2013 to 2.6 per cent, on the back of healthy growth in the biomedical manufacturing and chemicals clusters. By contrast, growth in the construction sector slowed to 3.0 per cent, from 6.3 per cent in 2013, weighed down by weaker private commercial and industrial building activities.

Growth in the services producing industries moderated to 3.2 per cent, from 6.1 per cent in 2013. This was largely the result of slower growth in the wholesale & retail trade, finance & insurance and business services sectors. In particular, the finance & insurance sector grew by 7.7 per cent, a step-down from the 12 per cent growth in the previous year. Growth in the wholesale & retail trade sector decelerated sharply, from 6.7 per cent in 2013 to 1.7 per cent. As for the business services sector, growth came in at 2.9 per cent, lower than the 4.9 per cent in the year before.

## Contribution to Growth

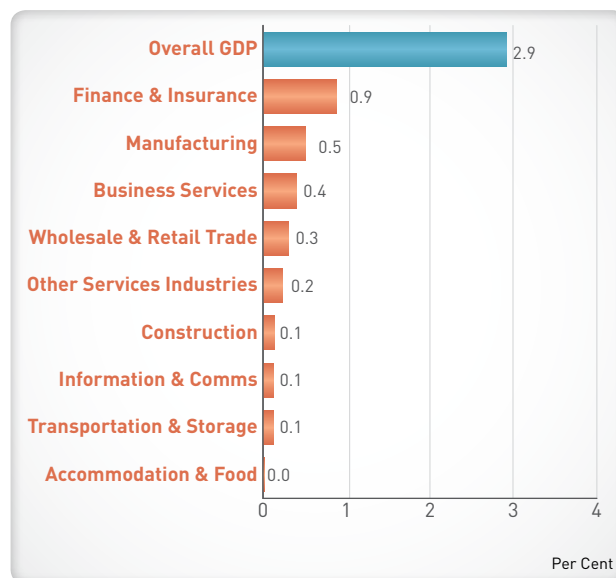
In the fourth quarter, the finance & insurance and business services sectors collectively accounted for about 75 per cent of overall GDP growth (Exhibit 1.3). The other services industries, information & communications and wholesale & retail trade sectors also contributed positively to growth in the quarter.

Exhibit 1.3: Percentage-Point Contribution to Growth in Real GDP in 4Q 2014 (By Industries)



For the whole of 2014, all sectors contributed positively to GDP growth (Exhibit 1.4). Finance & insurance was the largest contributor (0.9 percentage-points), followed by manufacturing (0.5 percentage-points) and business services (0.4 percentage-points).

Exhibit 1.4: Percentage-Point Contribution to Growth in Real GDP in 2014 (By Industries)



## SOURCES OF GROWTH

Total demand rose by 0.4 per cent in the fourth quarter, an improvement from the 0.9 per cent decline in the preceding quarter (Exhibit 1.5). The increase in total demand was supported by both domestic and external demand.

Exhibit 1.5: Percentage-Point Contribution to Total Demand Growth

	2013	2014			2014
		II	III	IV	
Total Demand	4.0	2.4	-0.9	0.4	1.6
External Demand	3.3	1.5	-0.2	0.2	1.5
Total Domestic Demand	0.8	0.9	-0.7	0.2	0.1
Consumption Expenditure	0.8	0.7	0.2	0.4	0.3
Public	0.4	0.4	0.0	0.1	0.0
Private	0.5	0.4	0.2	0.3	0.3
Gross Fixed Capital Formation	0.1	-0.2	-0.6	0.1	-0.2
Changes in Inventories	-0.2	0.4	-0.4	-0.3	-0.1

For the whole of 2014, growth in total demand moderated to 1.6 per cent, from 4.0 per cent in 2013. External demand was the key contributor to total demand growth, accounting for 1.5 percentage-points, or more than 90 per cent, of the increase.

## External Demand

External demand grew by 0.2 per cent in the fourth quarter, a reversal from the 0.3 per cent decline in the preceding quarter (Exhibit 1.6). Notably, real merchandise exports registered positive growth, which more than offset the decline in real services exports.

*Exhibit 1.6: Changes in Total Demand at 2010 Market Prices*



For the full year, external demand grew at a slower pace of 2.1 per cent, compared to 4.5 per cent in the previous year, largely due to sluggish global economic conditions. The increase in external demand was supported by both merchandise exports and services exports. Real merchandise exports registered positive growth, on the back of modest expansions in the exports of mineral fuels and machinery & transport equipment. Real services exports also expanded, albeit at a slower pace than merchandise exports. In line with the strong performance of the financial sector in 2014, growth in services exports was supported by robust expansion in the exports of financial services.

## Domestic Demand

Total domestic demand edged up by 0.8 per cent in the fourth quarter, a reversal from the 2.6 per cent contraction in the preceding quarter. Growth was supported by total consumption expenditure and gross fixed capital expenditure, which more than offset the decline in inventories.

For 2014 as a whole, total domestic demand rose by a modest 0.3 per cent, following the 2.8 per cent increase in 2013. The slower growth in total domestic demand was primarily due to slower growth in total consumption expenditure and the decline in gross fixed capital formation.

## Consumption Expenditure

Total consumption expenditure expanded at a faster pace of 2.4 per cent in the fourth quarter, compared to 1.5 per cent in the previous quarter.

For the full year, total consumption expenditure grew by 2.0 per cent, moderating from the 5.2 per cent growth in 2013. Growth was supported primarily by private consumption, which grew by 2.5 per cent. Expenditure on miscellaneous goods & services, transport and housing & utilities were the largest contributors to private consumption growth. Meanwhile, public consumption expenditure increased by 0.1 per cent, a sharp slowdown from the 11 per cent growth in 2013.

## Gross Fixed Capital Formation

Following four consecutive quarters of decline, gross fixed capital formation (GFCF) posted positive growth of 1.2 per cent in the fourth quarter. The expansion in GFCF was mainly the result of public GFCF, which increased at a robust pace of 7.3 per cent. Meanwhile, the performance of private GFCF remained weak, although the pace of contraction slowed to 0.1 per cent, from the 8.5 per cent in the previous quarter.

As global economic uncertainties continued to weigh on investors' confidence, GFCF declined by 1.9 per cent in 2014, compared to the growth of 1.1 per cent in the preceding year (Exhibit 1.7). The decline was largely due to lower investment spending on private transport equipment, construction & works and machinery & equipment (Exhibit 1.8).

*Exhibit 1.7: Annual Changes in Gross Fixed Capital Formation at 2010 Market Prices, 2014*

	Total	Public	Private
<b>TOTAL</b>	-1.9	10.4	-4.5
Construction & Works	-0.2	9.8	-4.1
Transport Equipment	-17.1	280.8	-19.9
Machinery & Equipment	-1.7	15.4	-2.3
Intellectual Property Products	0.4	1.4	0.3

*Exhibit 1.8: Percentage Distribution of Gross Fixed Capital Formation at Current Market Prices, 2014*

	Total	Public	Private
<b>TOTAL</b>	100.0	19.0	81.0
Construction & Works	57.1	16.2	40.9
Transport Equipment	6.8	0.3	6.6
Machinery & Equipment	20.9	0.8	20.1
Intellectual Property Products	15.1	1.8	13.3

## NATIONAL SAVING

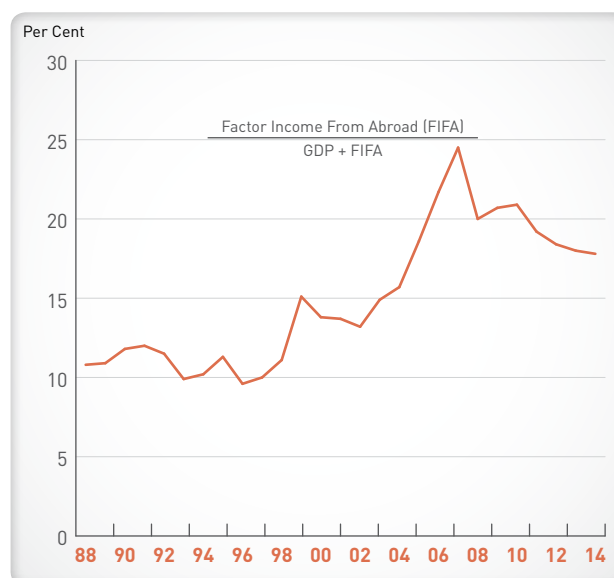
Singapore's nominal GDP amounted to \$390 billion in 2014, an increase of 3.1 per cent over 2013. With factor income outflows exceeding inflows by \$11.8 billion, Gross National Income (GNI) came in at \$378 billion, higher than the \$367 billion in 2013.

Gross National Savings (GNS) rose by 2.8 per cent to \$182 billion in 2014. This comprised a net \$74 billion that was lent or transferred abroad, and \$108 billion in Gross Capital Formation. The national savings rate was 48 per cent, similar to the year before.

## GNI AND THE EXTERNAL ECONOMY

Factor income from abroad reached \$84 billion in 2014, up slightly from \$83 billion in 2013. The contribution of overseas operations to the total economy was 18 per cent in 2014, similar to 2013 (Exhibit 1.9).

*Exhibit 1.9: Singapore's Earnings from External Economy as a Proportion of Total Income*



Based on the Survey of Singapore's Investment Abroad, the stock of direct investment abroad increased from \$485 billion in 2012 to \$504 billion in 2013.





# CHAPTER 2

## Labour Market and Productivity







## CHAPTER 2

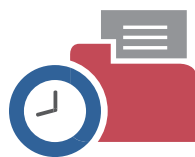
# LABOUR MARKET AND PRODUCTIVITY

Real GDP grew by **2.9%** in 2014

**+3.7%** **-0.8%**

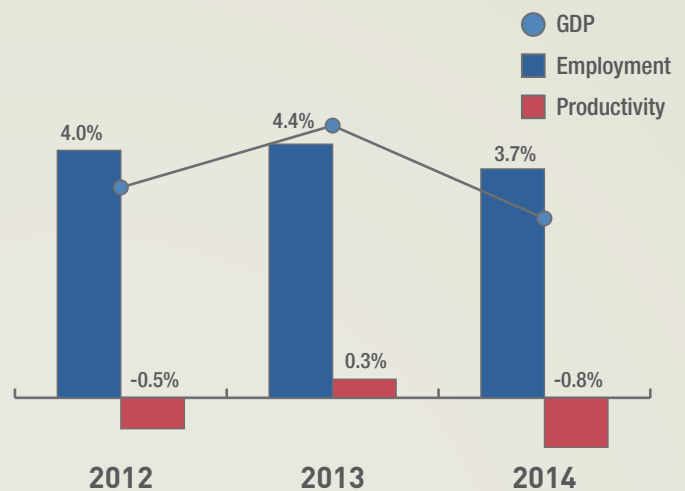


EMPLOYMENT



PRODUCTIVITY

### EMPLOYMENT AND PRODUCTIVITY GROWTH



### MAIN DRIVERS OF EMPLOYMENT GROWTH IN 2014

**+34,600**  
employed



Business  
Services

**+32,100**  
employed



Other  
Services

**+20,500**  
employed



Wholesale &  
Retail Trade

### SECTORS WITH THE HIGHEST PRODUCTIVITY GROWTH IN 2014

**+3.5%**



Finance &  
Insurance

**+2.5%**



Manufacturing

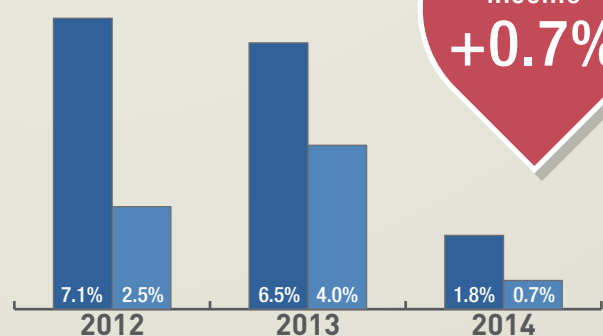
RESIDENT UNEMPLOYMENT RATE  
REMAINED LOW AT

**2.7%** in 2014



### REAL MEDIAN INCOME GROWTH

■ Nominal  
■ Real



Real median  
income  
**+0.7%**

## OVERVIEW

The labour market remained tight in 2014, with the overall unemployment rate at a low of 2.0 per cent. Employment creation was also robust, coming in at 129,000 compared to 136,200 in 2013.

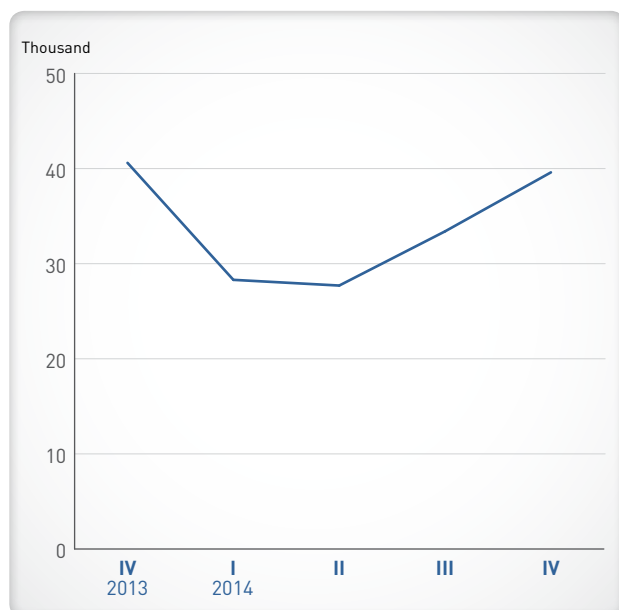
On the other hand, labour productivity remained weak, declining by 0.8 per cent for the full year after a contraction of 1.5 per cent in the fourth quarter. Real gross median income grew moderately by 0.7 per cent in 2014.

## EMPLOYMENT<sup>1</sup>

Preliminary estimates show that employment grew by 129,000 in 2014, slightly lower than the gains of 136,200 a year ago.

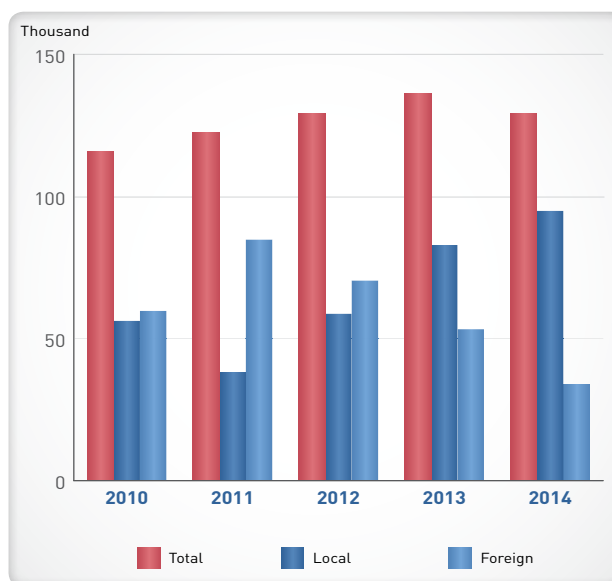
On a quarterly basis, total employment rose by 39,600 in the fourth quarter of 2014, higher than the gains of 33,400 in the preceding quarter, buoyed by hiring for the year-end festivities (Exhibit 2.1).

Exhibit 2.1: Changes in Total Employment



The key driver of overall employment growth in 2014 was local employment (Exhibit 2.2). Local employment grew by 94,900, faster than the 82,900 a year before. Meanwhile, foreign worker additions slowed to 34,000 in 2014, as compared to 53,300 in 2013. The slowdown in foreign worker growth was due to several factors, including ongoing foreign worker tightening measures, as well as a slower pace of growth in the construction sector.

Exhibit 2.2: Changes in Employment by Residential Status

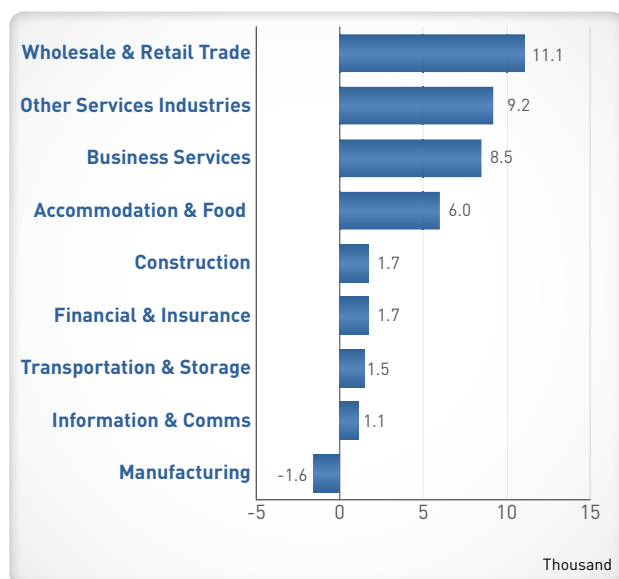


Most sectors registered employment growth in the fourth quarter of 2014. The sector that saw the largest employment gains was wholesale & retail trade (11,100), which was supported by new retail offerings such as Orchard Gateway and Kallang Wave. This was followed by the other services industries, which saw strong employment growth (9,200) owing to the expansion of childcare, preschool and healthcare facilities; and business services, which added 8,500 workers, largely due to robust growth in the professional services and administrative and support services sectors (Exhibit 2.3).

<sup>1</sup> Figures for the fourth quarter of 2014 are based on preliminary estimates.



Exhibit 2.3: Changes in Employment by Industry in 4Q2014

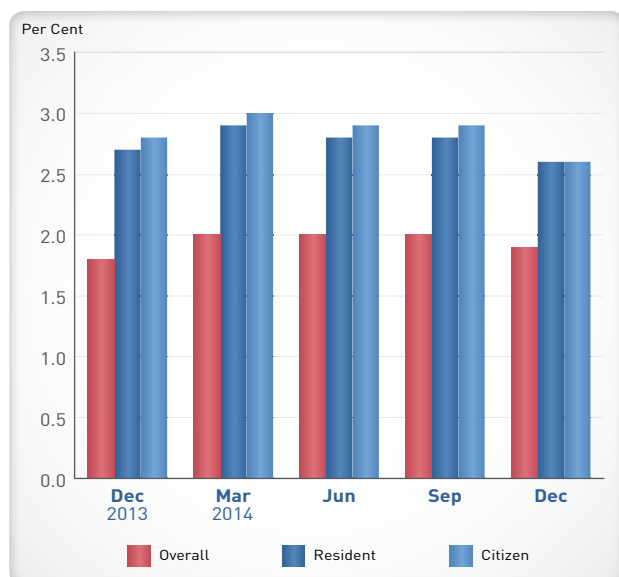


## UNEMPLOYMENT

Supported by robust employment creation, particularly in the services sector, overall unemployment rate declined by 0.1 percentage-points over the quarter to 1.9 per cent in December 2014 (Exhibit 2.4).<sup>2</sup> The unemployment rate for residents and citizens also fell, by a magnitude of 0.2 and 0.3 percentage-points respectively, to 2.6 per cent each in December 2014.

For the full year, the overall unemployment rate averaged 2.0 per cent, largely similar to the 1.9 per cent in 2013. The resident and citizen unemployment rates fell to 2.7 per cent and 2.9 per cent respectively.

Exhibit 2.4: Unemployment Rates (Seasonally-Adjusted)



## PRODUCTIVITY

Overall labour productivity contracted by 1.5 per cent in the fourth quarter, the third consecutive quarter of decline (Exhibit 2.5). All sectors saw a dip in productivity, except for finance & insurance, which registered robust productivity growth of 5.1 per cent (Exhibit 2.6).

Exhibit 2.5: Changes in Total Labour Productivity

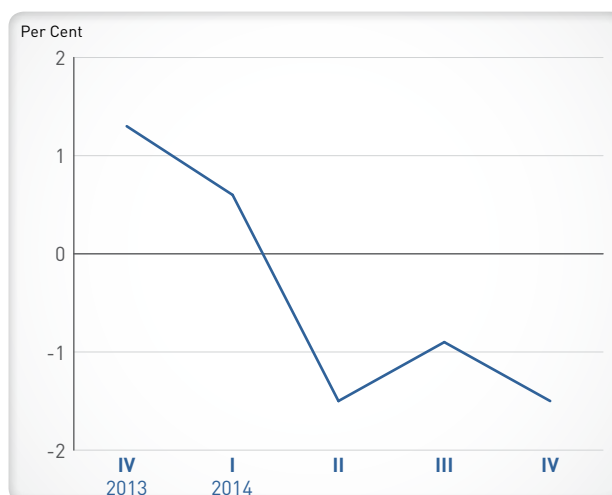
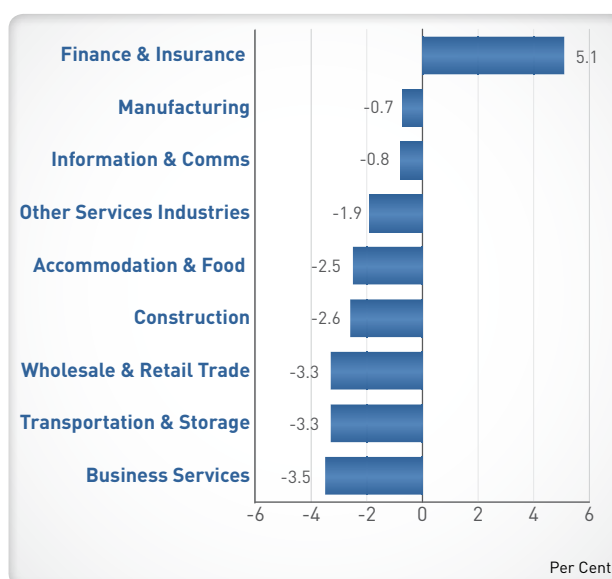


Exhibit 2.6: Changes in Labour Productivity by Industry in 4Q 2014



For 2014 as a whole, overall labour productivity declined by 0.8 per cent. This was a reversal of the productivity growth of 0.3 per cent in 2013. The decline in overall productivity can be attributed not only to productivity falling across most sectors, but also a rise in the employment share of less productive, domestically-oriented sectors.

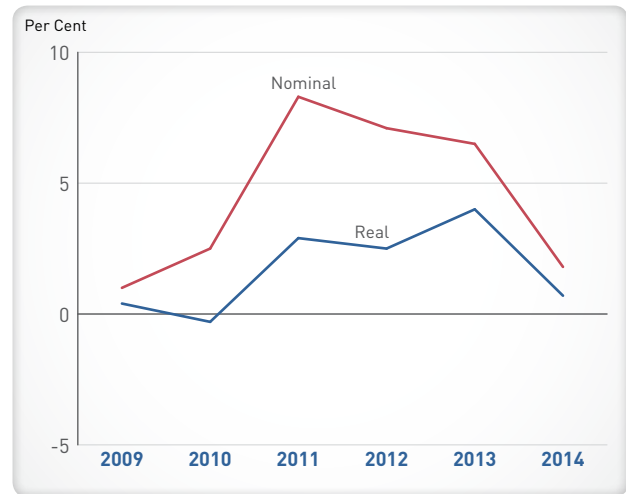
<sup>2</sup> Figures for December 2014 are based on preliminary estimates.

## INCOME FROM WORK

Both real and nominal incomes grew in 2014, although the pace of growth moderated from a year ago. The nominal median monthly income from work of full-time employed residents (including employer CPF contributions) rose over the year by 1.8 per cent to \$3,770 in June 2014, compared with the increase of 6.5 per cent in the previous year (Exhibit 2.7).

After accounting for inflation as measured by the Consumer Price Index (CPI) for all items, median income grew modestly by 0.7 per cent in real terms, a slowdown from the 4.0 per cent growth in 2013.<sup>3</sup>

Exhibit 2.7: Change in Median Gross Monthly Income from Work of Full-Time Employed Residents



<sup>3</sup> Real income growth adjusted using CPI less imputed rentals on owner-occupied accommodation, which relates more directly to the actual spending of households, was 0.6 per cent in 2014 compared with 4.5 per cent in 2013.

# CHAPTER 3

## Costs, Investments and Prices





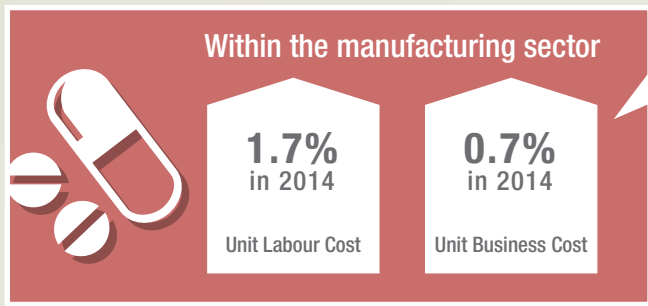


## CHAPTER 3

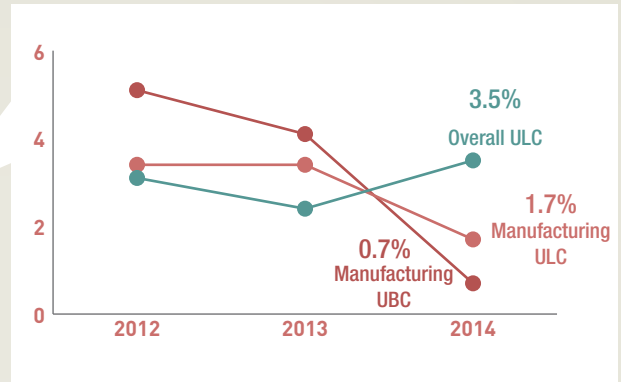
# COSTS, INVESTMENTS AND PRICES

Overall Unit Labour Cost grew by

**3.5%** in 2014

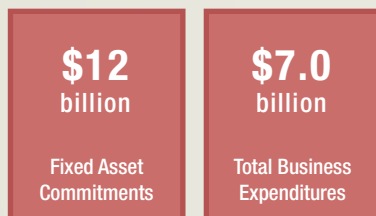


GROWTH RATES OF UNIT LABOUR COST (ULC) AND UNIT BUSINESS COST (UBC)

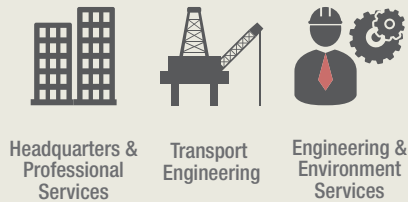


### INVESTMENT COMMITMENTS

Manufacturing and Services attracted



Clusters that attracted the highest Total Business Expenditure commitments



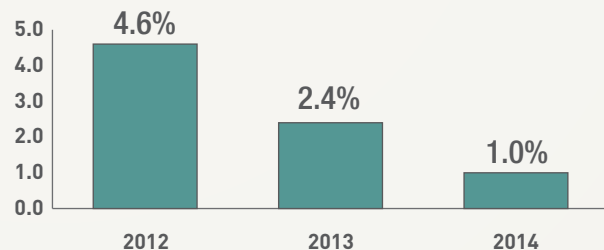
Clusters that attracted the highest Fixed Asset Investment commitments



The Consumer Price Index (CPI) increased by

**1.0%** in 2014

### CPI INFLATION RATES



The increase in CPI was mainly driven by INCREASES in prices of...

Food



0.6%-point contribution

Recreation & Others



0.3%-point contribution

Education & Stationery



0.2%-point contribution

But this was partially offset by DECLINES in prices of...

Transport



-0.2%-point contribution

Clothing & Footwear



-0.03%-point contribution

## OVERVIEW

Overall Unit Labour Cost (ULC) rose by 3.6 per cent in the fourth quarter of 2014 amidst a tight labour market. For the whole of 2014, the ULC increased by 3.5 per cent on the back of a rise in average compensation even as productivity dipped.

Investment commitments remained strong in 2014, albeit slightly lower as compared to 2013's levels. Among the manufacturing clusters, the chemicals cluster attracted the highest amount of fixed asset investments (FAI). On the other hand, the headquarters & professional services cluster was the largest contributor to total business expenditure (TBE).

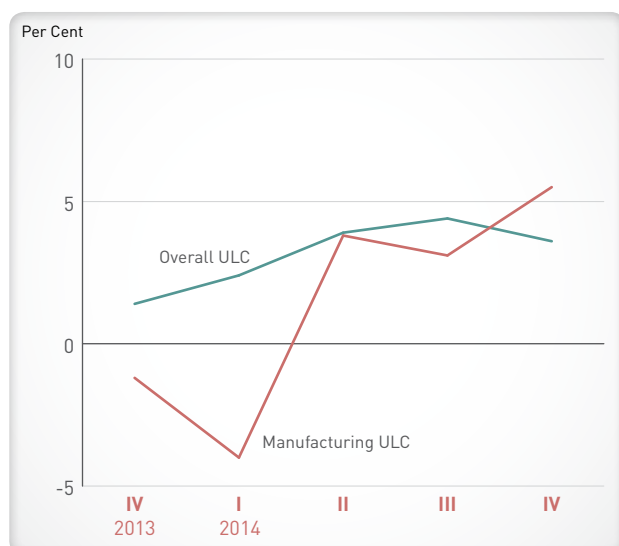
The Consumer Price Index (CPI) declined by 0.1 per cent in the fourth quarter of 2014 compared to the same period in 2013. For the full year, the CPI increased by 1.0 per cent, a slower pace of increase as compared to the 2.4 per cent in 2013.

Producer prices, as measured by the domestic supply price index (DSPI) and Singapore manufactured products price index (SMPPI), as well as import and export prices all registered declines in the fourth quarter of 2014, largely due to the fall in mineral fuel prices. For the whole of 2014, the DSPI, SMPPI, import and export price indices fell by 3.3 per cent, 3.4 per cent, 2.8 and 2.3 per cent respectively.

## COSTS

In the fourth quarter, the overall ULC rose at a slower pace of 3.6 per cent, as compared to 4.4 per cent in the preceding quarter (Exhibit 3.1). For the whole year, the overall ULC increased by 3.5 per cent, higher than the 2.4 per cent in 2013. This was due to a rise in average compensation, along with a slight drop in productivity.

Exhibit 3.1: Growth rates of Unit Labour Cost

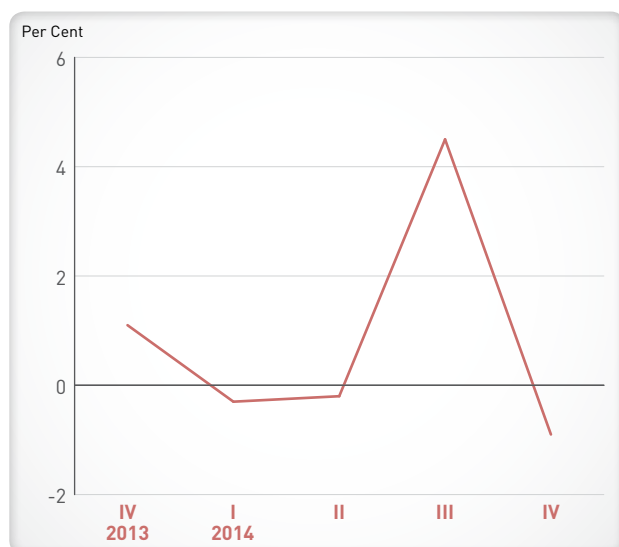


The manufacturing ULC increased by 5.5 per cent in the fourth quarter, faster than the 3.1 per cent increase in the previous quarter. It also represented the highest quarterly rate of increase since the first quarter of 2013. For the whole year, manufacturing ULC rose at a more moderate pace of 1.7 per cent, compared to the 3.4 per cent increase in the previous year. The ULC increase in the manufacturing sector was lower than that in the overall economy, due to stronger productivity gains in the manufacturing sector.

Manufacturing unit business cost (UBC) fell by 0.9 per cent in the fourth quarter, a reversal from the 4.5 per cent increase in the previous quarter (Exhibit 3.2). The decline was mainly due to a fall in services cost, which more than offset the increase in manufacturing ULC. Notably, in line with the plunge in oil prices since July 2014, utilities cost fell in the fourth quarter, extending the decline registered in the previous quarter. On top of utilities cost, other services cost components which saw declines were rentals and royalties. For the whole of 2014, the increase in manufacturing UBC moderated to 0.7 per cent, from 4.1 per cent in 2013.

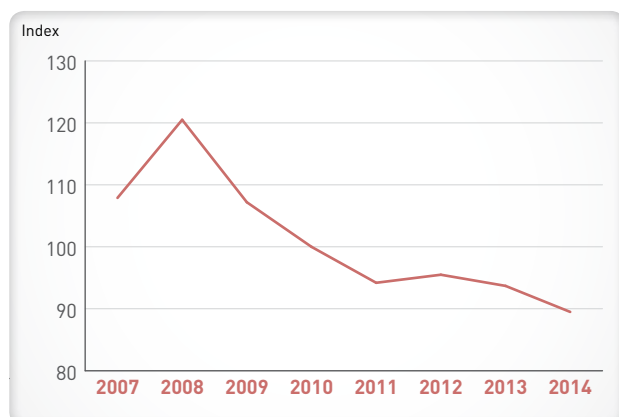


Exhibit 3.2: Changes in Unit Business Cost for Manufacturing



Singapore's relative unit labour cost (RULC) for manufacturing – a measure of Singapore's competitiveness against 16 economies<sup>1</sup> – declined further in 2014 compared to 2013 (Exhibit 3.3). The decline in RULC was due to increases in the ULC of other economies, which outpaced the rise in Singapore's ULC and the appreciation of the Singapore dollar against the trade-weighted currencies of these economies.

Exhibit 3.3: Singapore's Relative Unit Labour Cost in Manufacturing Against Selected 16 Economies

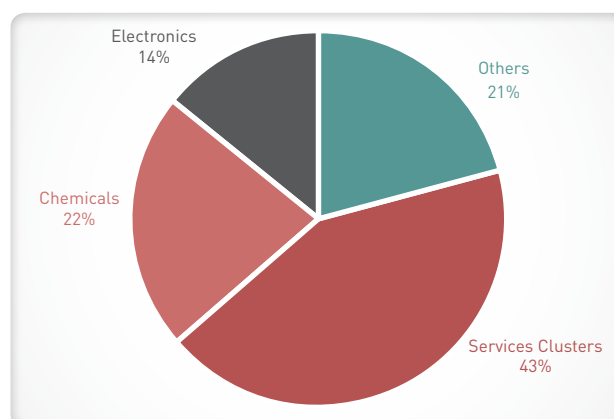


## INVESTMENT COMMITMENTS

Strong investment commitments were achieved in 2014 as investor interest and confidence in Singapore remained high. For the full year, FAI and TBE commitments came in at \$11.8 billion and \$7.0 billion respectively. These were slightly lower than the \$12.1 billion in FAI and \$7.8 billion in TBE attracted in 2013.

Services clusters as a whole attracted the most FAI commitments in 2014 (Exhibit 3.4). This was followed by the chemicals cluster, which garnered \$2.6 billion of commitments, mainly in the petroleum sector; and the electronics cluster which attracted \$1.7 billion. Collectively, Asia Pacific investors accounted for \$4.6 billion, or 39 per cent of total FAI commitments. This was followed by European investors who contributed to around 26 per cent of the FAI committed.

Exhibit 3.4: Fixed Asset Investments by Industry Clusters in 2014

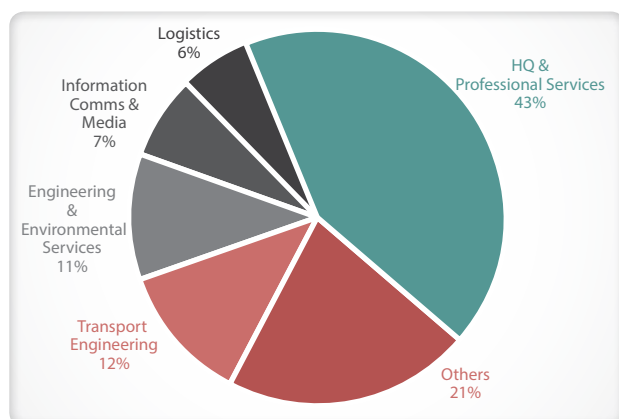


In terms of TBE, the headquarters & professional services segment attracted the largest amount of commitments in 2014, at \$3.0 billion (Exhibit 3.5). This was followed by the transport engineering cluster and the engineering & environmental services segment, with \$830 million and \$761 million of commitments respectively. European investors were the largest source of TBE commitments, accounting for \$2.3 billion (33 per cent) of the commitments. US investors came next, contributing 23 per cent of overall TBE.

When fully operational, these FAI and TBE commitments are estimated to generate \$12.5 billion of value-added per annum and create approximately 16,100 skilled jobs.

<sup>1</sup> The 16 economies are Australia, China, France, Germany, Hong Kong, India, Indonesia, Japan, Malaysia, Netherlands, South Korea, Taiwan, Thailand, the United Kingdom, the United States and Vietnam.

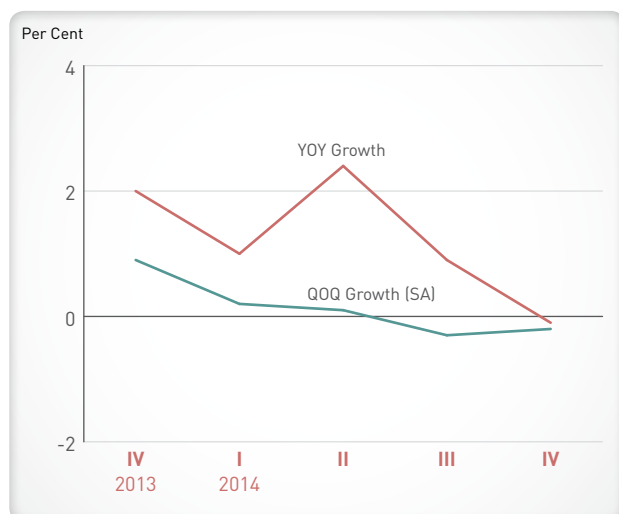
Exhibit 3.5: Total Business Expenditure by Industry Clusters in 2014



## CONSUMER PRICE INDEX

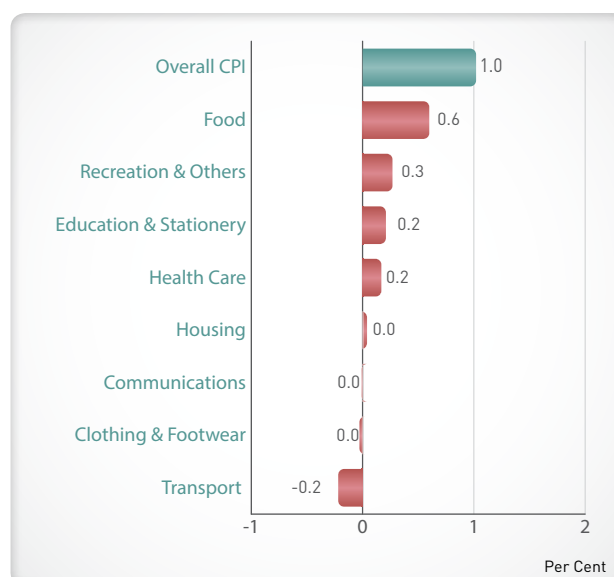
Singapore's CPI declined by 0.1 per cent on a year-on-year basis in the fourth quarter, reversing the 0.9 per cent increase in the third quarter (Exhibit 3.6). On a quarter-on-quarter seasonally-adjusted basis, the CPI declined by 0.2 per cent in the fourth quarter, extending the 0.3 per cent decline in the preceding quarter.

Exhibit 3.6: Changes in CPI



For 2014 as a whole, the CPI rose by 1.0 per cent, easing from the 2.4 per cent increase in 2013. Among the key CPI categories, food was the largest contributor to CPI inflation in 2014, with prices increasing by 2.9 per cent (Exhibit 3.7). This was on account of more expensive prepared meals and non-cooked food items, such as fruits, dairy products & eggs, seafood and vegetables. The latter was partly due to higher prices of food imported from the region, arising from supply-side disruptions.

Exhibit 3.7: Percentage-Point Contribution to Change in CPI in 2014



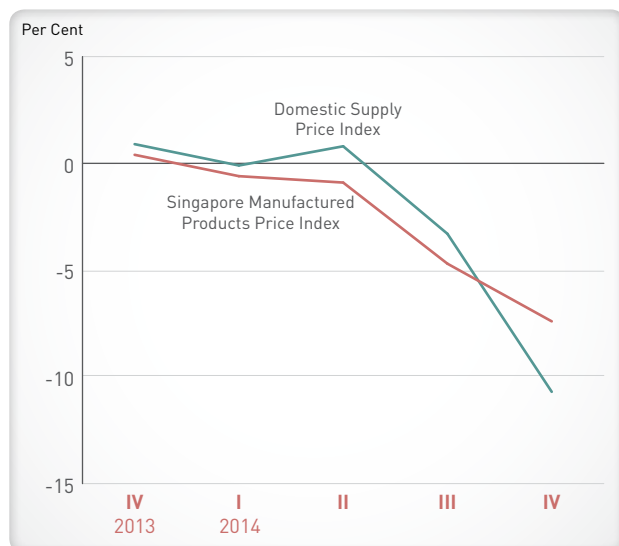
The overall cost of "recreation & others" increased by 1.9 per cent, due to increases in holiday travel cost, prices of alcoholic drinks & tobacco, salaries for foreign maids and the cost of recreation & entertainment. Education & stationery costs rose by 2.9 per cent, reflecting higher fees at commercial institutions, universities, childcare centres, kindergartens and playgroups. Healthcare costs also went up by 2.9 per cent, due to higher medical and dental fees, as well as higher premiums for medical insurance. Nonetheless, enhanced medical subsidies, including the Pioneer Generation Package which took effect from September 2014, helped to moderate the pace of healthcare inflation. Housing costs ticked up by 0.1 per cent, as higher housing maintenance charges more than offset lower electricity tariffs.

By contrast, transport costs fell by 1.2 per cent in 2014, mainly driven by lower car prices as the larger supply of car certificates of entitlement (COE) helped to dampen COE premiums. Clothing & footwear costs declined by 0.9 per cent, while communication costs fell by 0.2 per cent.

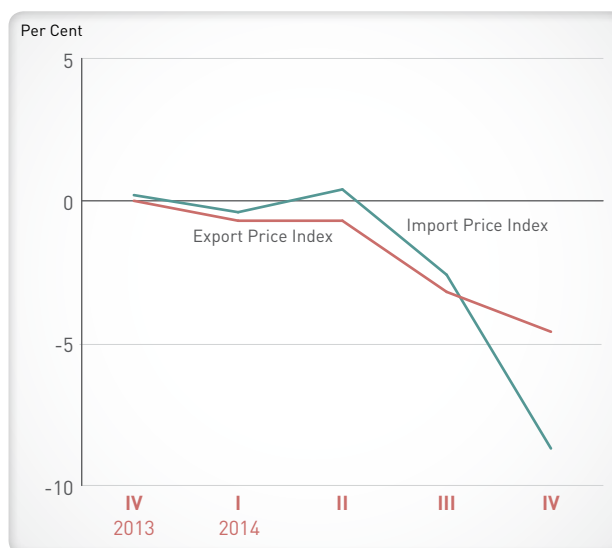
## PRODUCER PRICE INFLATION

In tandem with the correction in global oil prices, producer prices – as measured by the DSPI and the SMPPI – as well as import and export prices all registered sharp declines in the fourth quarter, due to the lower prices of mineral fuels (Exhibits 3.8 and 3.9).

**Exhibit 3.8: Changes in Domestic Supply Price and Singapore Manufactured Products Price Indices**



**Exhibit 3.9: Changes in Import and Export Price Indices**



For the whole of 2014, both the DSPI and the SMPPI fell by 3.3 per cent and 3.4 per cent respectively, mainly on account of declines in the prices of mineral fuels and machinery & transport equipment. The fall in the prices of these items, in addition to the fall in the price of crude materials, also contributed to declines in import prices (-2.8 per cent) and export prices (-2.3 per cent).





# CHAPTER 4

## External Trade





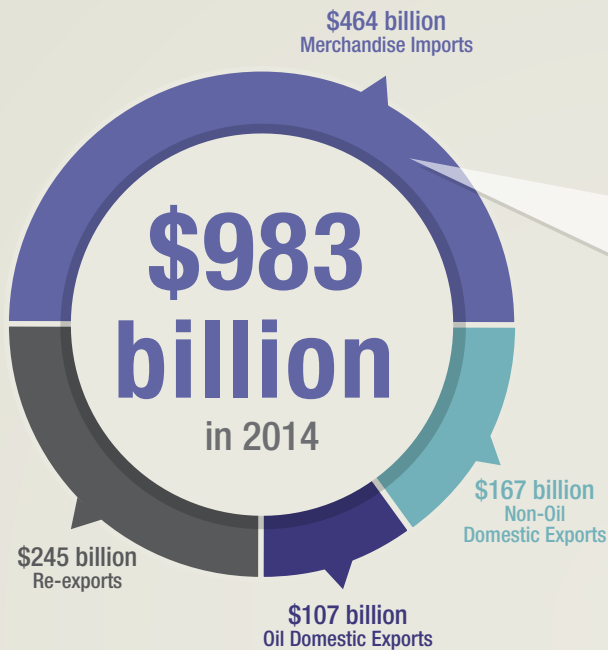




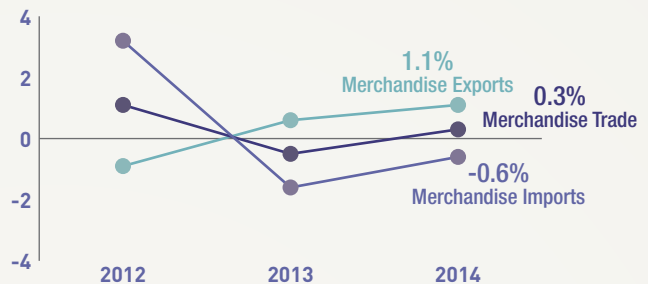
## CHAPTER 4

# EXTERNAL TRADE

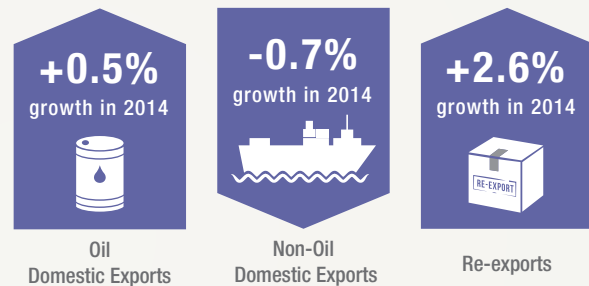
Total Merchandise Trade  
Amounted to...



### GROWTH IN MERCHANDISE TRADE



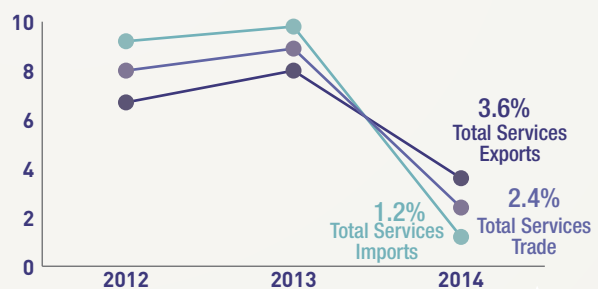
Total Merchandise Exports increased by  
**1.1%** in 2014



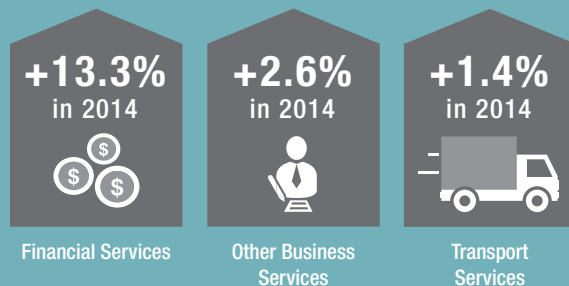
Total Services Trade  
Amounted to...



### GROWTH IN SERVICES TRADE



Main Drivers of Services Export Growth were...



## OVERVIEW

Singapore's total merchandise trade declined by 4.8 per cent in the fourth quarter of 2014, following the 3.5 per cent contraction in the preceding quarter. Similarly, total services trade contracted marginally by 0.3 per cent in the fourth quarter, compared to an increase of 1.5 per cent in the third quarter.

Despite weaker performance in the second half of 2014, Singapore's total merchandise trade expanded by 0.3 per cent to \$983 billion for the whole of 2014, compared to \$980 billion in 2013. Oil trade contracted by 1.7 per cent, while non-oil trade expanded by 1.0 per cent. Merchandise exports grew by 1.1 per cent, while merchandise imports declined by 0.6 per cent.

Services trade expanded by 2.4 per cent to \$357 billion in 2014, compared to \$349 billion in 2013. Growth in services exports and imports eased to 3.6 per cent and 1.2 per cent respectively in 2014.

## MERCHANDISE TRADE

### Merchandise Exports

Total merchandise exports declined by 3.8 per cent in the fourth quarter, extending the 1.4 per cent contraction in the preceding quarter (Exhibit 4.1). The decline can be attributed to both domestic exports and re-exports. Domestic exports contracted by 6.6 per cent, following the 0.7 per cent decrease in the third quarter. Likewise, re-exports declined by 0.6 per cent, extending the 2.3 per cent contraction in the preceding quarter.

*Exhibit 4.1: Growth Rates of Total Merchandise Trade, Merchandise Exports and Merchandise Imports (In Nominal Terms)*

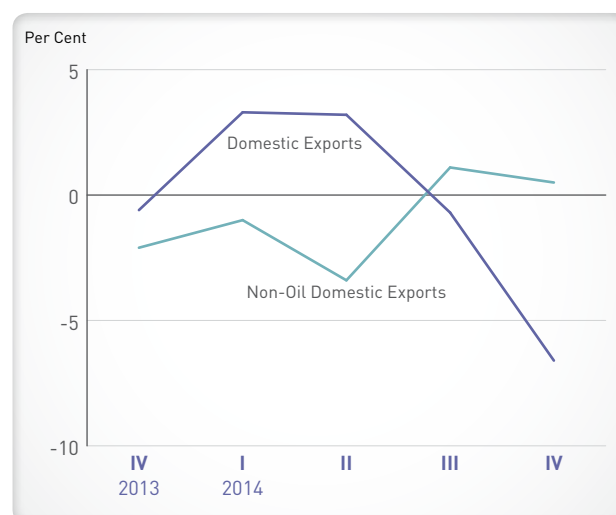
	2013	2014	2014	2014	
		II	III	IV	
<b>Total Merchandise Trade</b>	-0.5	2.9	-3.5	-4.8	<b>0.3</b>
<b>Merchandise Exports</b>	0.6	2.7	-1.4	-3.8	<b>1.1</b>
<b>Domestic Exports</b>	-3.8	3.2	-0.7	-6.6	<b>-0.3</b>
Oil	-0.3	14.4	-3.3	-17.7	<b>0.5</b>
Non-Oil	-6.0	-3.4	1.1	0.5	<b>-0.7</b>
<b>Re-Exports</b>	6.2	2.3	-2.3	-0.6	<b>2.6</b>
<b>Merchandise Imports</b>	-1.6	3.0	-5.7	-6.0	<b>-0.6</b>
Oil	-5.5	5.6	-5.5	-18.0	<b>-1.7</b>
Non-Oil	0.2	1.8	-5.8	-0.6	<b>-0.1</b>

Against the backdrop of a sluggish global economy, the growth in merchandise exports remained modest for the whole of 2014, at 1.1 per cent. This was a slight improvement from the 0.6 per cent increase in 2013.

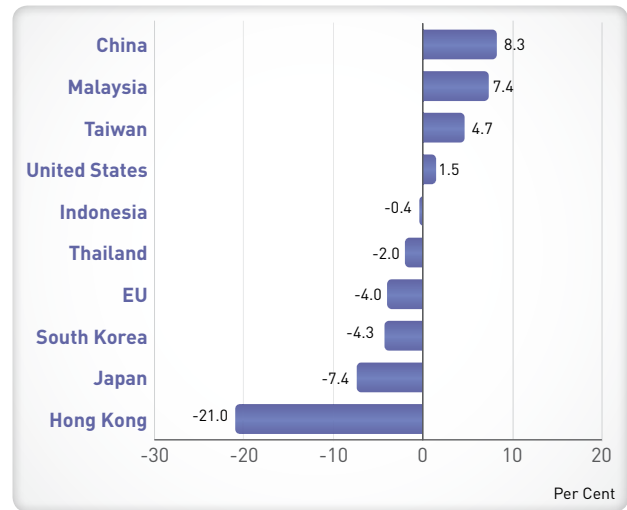
### Non-Oil Domestic Exports

Non-oil domestic exports (NODX) expanded by 0.5 per cent in the fourth quarter. This marked the second consecutive quarter of expansion after eight quarters of decline. However, the pace of recovery slowed from the 1.1 per cent recorded in the preceding quarter (Exhibit 4.2). The rise in NODX was due to an expansion in non-electronics NODX, which more than offset the decline in electronics NODX.

*Exhibit 4.2: Changes in Domestic Exports*



**Exhibit 4.3: Growth Rates of Non-Oil Domestic Exports to Top Ten Markets in 2014**



Electronics NODX contracted by 4.5 per cent in the fourth quarter, following the 6.3 per cent decline in the preceding quarter. The contraction in electronics NODX was primarily due to lower domestic exports of parts of integrated circuits (ICs), parts of personal computers (PCs) and disk drives. By contrast, non-electronics NODX increased by 2.8 per cent in the fourth quarter, following the 4.4 per cent growth in the third quarter. The growth in non-electronics NODX was due to higher shipments of specialised machinery, food preparations and heating & cooling equipment.

For the full year, NODX declined by 0.7 per cent, a smaller decline as compared to the 6.0 per cent drop the year before. Electronics NODX continued to pose a drag, declining by 9.4 per cent. In comparison, non-electronics NODX grew by 3.3 per cent, reversing the 3.3 per cent decline in the previous year. However, the improvement in non-electronics NODX was more than offset by the decline in electronics NODX.

The top ten NODX markets accounted for 78 per cent of Singapore's total NODX in 2014. Singapore's NODX to all top ten markets, with the exception of China, Malaysia, Taiwan and the US, declined in 2014 (Exhibit 4.3). The biggest declines were seen in Hong Kong, the EU-28 and Japan. A fall in the sales of parts of ICs, aircraft parts and parts of PCs led to the lower NODX to Hong Kong. The decline in NODX to the EU-28 was mainly due to lower domestic exports of ICs, PCs and parts of ICs, while NODX to Japan fell on the back of declines in domestic exports of pharmaceuticals, disk media products and ICs. By contrast, NODX to China and Malaysia expanded by 8.3 per cent and 7.4 per cent respectively. NODX to China increased due to higher exports of petrochemicals, heating & cooling equipment and pumps. Increased shipments of petrochemicals, parts of PCs and diodes & transistors led to the rise in NODX to Malaysia.

## Oil Domestic Exports

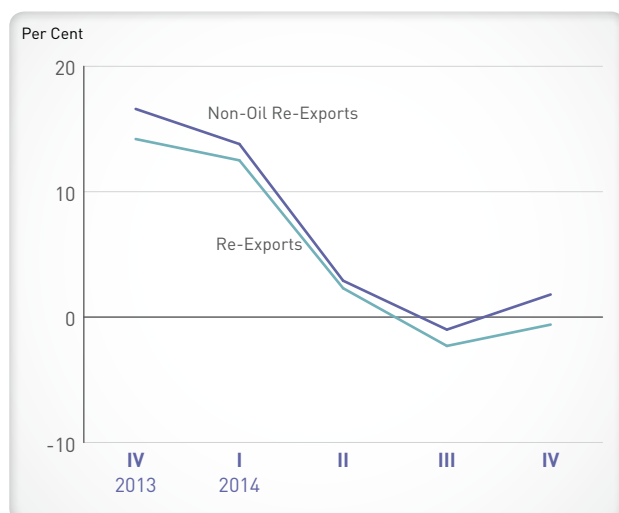
Oil domestic exports declined by 18 per cent in the fourth quarter, after the 3.3 per cent contraction in the preceding quarter. This marked the steepest quarterly decline since the third quarter of 2009. The decline in oil domestic exports reflected the sharp fall in oil prices during this period. In volume terms, however, growth in oil domestic exports remained positive at 3.8 per cent in the fourth quarter, faster than the 1.8 per cent expansion in the third quarter.

For the full year, oil domestic exports rose by 0.5 per cent, reversing the 0.3 per cent decline in 2013. The growth in oil domestic exports was driven mainly by higher oil sales to Indonesia, the EU-28 and Malaysia. In volume terms, oil domestic exports expanded by 7.2 per cent in 2014, after the rise of 5.4 per cent in 2013.

## Non-oil Re-Exports

Non-oil re-exports (NORX) rose by 1.8 per cent in the fourth quarter, in contrast to the decline of 1.0 per cent in the previous quarter (Exhibit 4.4). Both electronics and non-electronics re-exports expanded in the fourth quarter. Electronics re-exports increased by 2.5 per cent, reversing the 2.9 per cent contraction in the third quarter. The increase in electronics re-exports was driven by ICs, telecommunications equipment and diodes & transistors. Non-electronics NORX rose by 1.1 per cent, the same rate of growth as the preceding quarter, mainly due to higher re-exports of electrical machinery, printed matter and structures of ships & boats.

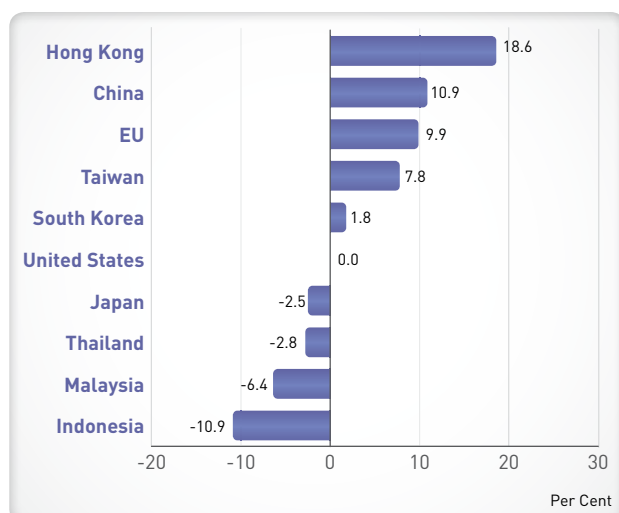
Exhibit 4.4: Changes in Re-Exports



For the whole of 2014, NORX expanded by 4.0 per cent, slower than the 9.8 per cent increase in 2013. The expansion was supported by increases in both electronics (4.5 per cent) and non-electronics NORX (3.5 per cent).

NORX to the top ten markets expanded in 2014, with the exception of Indonesia, Malaysia, Thailand and Japan (Exhibit 4.5). NORX to Hong Kong, China and the EU-28 saw the fastest growth. NORX to Hong Kong expanded by 19 per cent on stronger re-exports of ICs, diodes & transistors and jewellery. Higher shipments of ICs, telecommunications equipment and structures of ships & boats led to the 11 per cent growth in NORX to China. NORX to the EU-28 rose by 9.9 per cent, mainly because of increased sales of precious stones & pearls, parts of PCs and motorcycles.

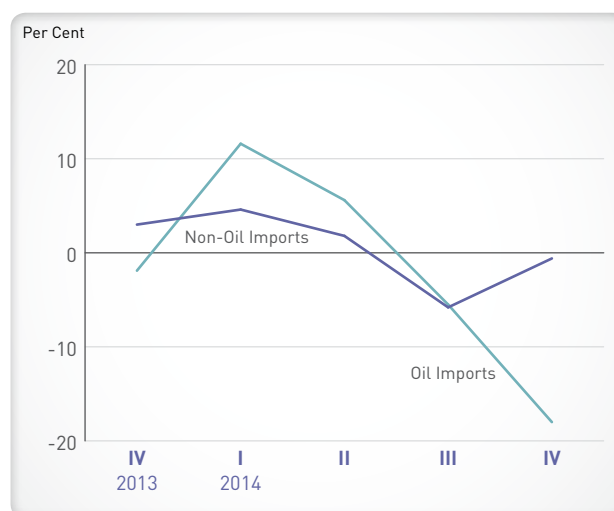
Exhibit 4.5: Growth Rates of Non-Oil Re-Exports to Top Ten Markets in 2014



## MERCHANDISE IMPORTS

Non-oil imports declined slightly by 0.6 per cent in the fourth quarter, an improvement from the 5.8 per cent contraction in the preceding quarter (Exhibit 4.6). The decline in non-oil imports was due to a decrease in electronics imports, which outpaced the growth in non-electronics imports. Lower purchases of ICs, parts of PCs and disk media products contributed to the 4.0 per cent contraction in electronics imports. Non-electronics imports expanded by 1.5 per cent, due to increased imports of pumps, nickel and non-monetary gold.

Exhibit 4.6: Changes in Merchandise Imports



Oil imports decreased by 18 per cent in the fourth quarter, furthering the 5.5 per cent decline in the preceding quarter. The decline was accelerated by the sharp fall in oil prices in the fourth quarter. In volume terms, oil imports rose by 9.9 per cent, in contrast to the 0.2 per cent contraction in the preceding quarter.

For the full year, non-oil imports contracted modestly by 0.1 per cent, in contrast to the 0.2 per cent increase in 2013. Although slight, this marked the first annual contraction in non-oil imports since 2009. Oil imports fell by 1.7 per cent in 2014, following the 5.5 per cent decline in 2013.

## SERVICES TRADE

### Services Exports

Services exports grew by 0.8 per cent in the fourth quarter, slower than the 3.0 per cent increase in the preceding quarter (Exhibit 4.7). Exports of telecommunications, computers & information and financial services posted strong growth of 8.2 per cent and 6.3 per cent respectively. The largest decline was for the exports of maintenance and repair services, which fell by 18 per cent, following the decline of 7.2 per cent in the preceding quarter.

*Exhibit 4.7: Growth Rates of Total Services Trade, Services Exports and Services Imports (In Nominal Terms)*

	2013	2014			2014
		II	III	IV	
<b>Total Services Trade</b>	8.9	1.6	1.5	-0.3	<b>2.4</b>
<b>Services Exports</b>	8.0	2.3	3.0	0.8	<b>3.6</b>
<b>Services Imports</b>	9.8	1.0	0.1	-1.4	<b>1.2</b>

For 2014 as a whole, services exports grew by 3.6 per cent, easing from the robust growth of 8.0 per cent in the previous year. Exports of all categories rose in 2014, with financial services posting the fastest growth of 13 per cent, extending the 11 per cent increase in the preceding year. Growth in financial services exports contributed 1.8 percentage-points to the full-year growth in services exports.

### Services Imports

Services imports contracted by 1.4 per cent in the fourth quarter, reversing the 0.1 per cent gain in the preceding quarter.

Among the services import categories, financial services saw the fastest growth in the fourth quarter, at 14 per cent. On the other hand, imports of government goods & services saw two consecutive quarters of decline, contracting by 9.1 per cent in the fourth quarter and 9.4 per cent in the third quarter.

For 2014 as a whole, services imports rose by 1.2 per cent, lower than the 9.8 per cent growth in 2013. Among the services import categories, financial services imports posted the fastest full-year growth of 17 per cent, and contributed 0.5 percentage-points to the full-year growth in services imports.

# Recent Trends and Outlook for Singapore's Services and Merchandise Exports

### *Services exports have grown in importance, reflecting structural shifts in the economy*

Services exports are playing a more important role in the Singapore economy. As we have highlighted in a previous box article, the value-added (VA) contribution of services exports to the economy increased considerably in recent years, while the VA contribution of goods exports has remained stable over the same period.<sup>1</sup>

The growing importance of services exports reflects a structural shift in the economy towards services. Exportable services industries, such as finance & insurance and wholesale trade, continue to grow, while manufacturing industries are also becoming increasingly services-oriented with knowledge- and skill-intensive activities. This increasing importance of services exports translates into increasing VA contributions to the Singapore economy because services exports generate more VA per dollar than merchandise exports.<sup>2</sup>

### *In recent years, services exports have recorded robust growth, driven by modern services...*

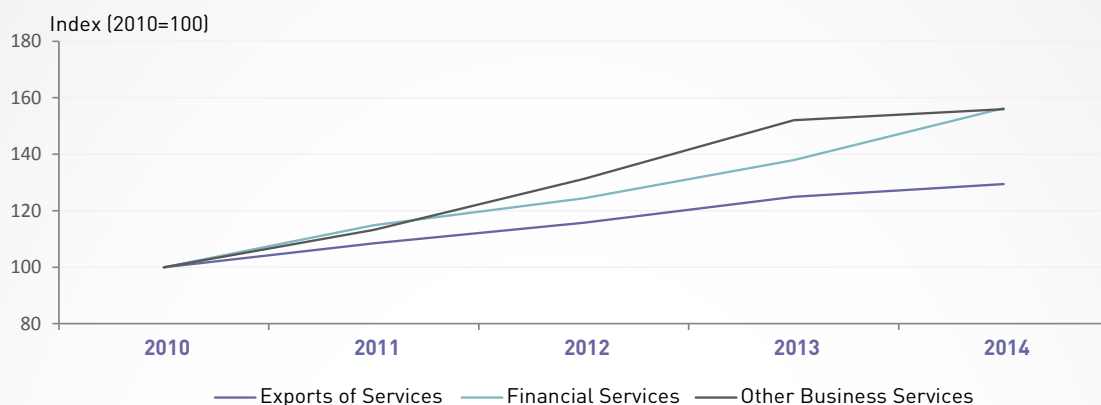
Services exports have performed well in recent years, growing by 6.7 per cent on a compounded annual growth rate (CAGR) basis from 2010 to 2014, significantly higher than the 2.0 per cent growth in merchandise exports over this period.

Growth in services exports was driven primarily by financial services and other business services categories (which include business management, accounting, legal and other professional services) (Exhibit 1). These two export categories account for close to 40 per cent of Singapore's services exports, and registered a CAGR of 12 per cent each between 2010 and 2014, much faster than the 6.7 per cent growth for overall services exports. Their rapid growth reflects Singapore's increasing attractiveness as a financial and business services hub within the region, as well as the growing external demand for such services.

<sup>1</sup> Based on OECD-WTO's Trade in Value-added (TiVA) data for Singapore, the VA contribution of services exports to the economy increased considerably between 2000 and 2009, rising from 24 per cent of GDP to 34 per cent of GDP. By contrast, the VA contribution of goods exports has remained stable, at around 23 per cent of GDP over the same period.

<sup>2</sup> In particular, services exports generate 51 cents per dollar exported whereas domestic exports of goods and re-exports of goods generate 34 cents and 13 cents, respectively.

Exhibit 1: Trends in Singapore Exports



Source: Singapore Department of Statistics

### *...and are expected to grow in importance in the years to come*

The importance of services exports is likely to grow further, supported by both external and domestic trends.

Externally, the rise of the middle class and urbanisation in Asian economies such as ASEAN, China and India will continue to underpin the demand for modern services, including urban solutions and professional services. With the implementation of the ASEAN Economic Community (AEC) in 2015, services exporters in the immediate region will benefit from reduced barriers to services trade, the lowering of foreign equity limits and the liberalisation of more services sectors. In addition, the Regional Comprehensive Economic Partnership (RCEP), which links ASEAN, China and five other free trade agreement partners<sup>3</sup>, is expected to boost intra-regional trade flows when completed, benefitting Singapore's wholesale trade sector. These trends should help to spur growth in services exports by Singapore-based companies.

Domestically, the ongoing servicisation of manufacturing to encompass high value-added services activities (e.g., design, R&D and headquarter operations) will also provide a boost to services exports. This trend is expected to gather pace, as the adoption of new technologies such as additive manufacturing and robotics amongst manufacturers require many of them to be more deeply involved in product design, process engineering and other complementary services activities. It will also be supported by efforts by the government to deepen R&D and engineering expertise within the workforce.

### *By contrast, the performance of Singapore's merchandise exports has been sluggish in recent years*

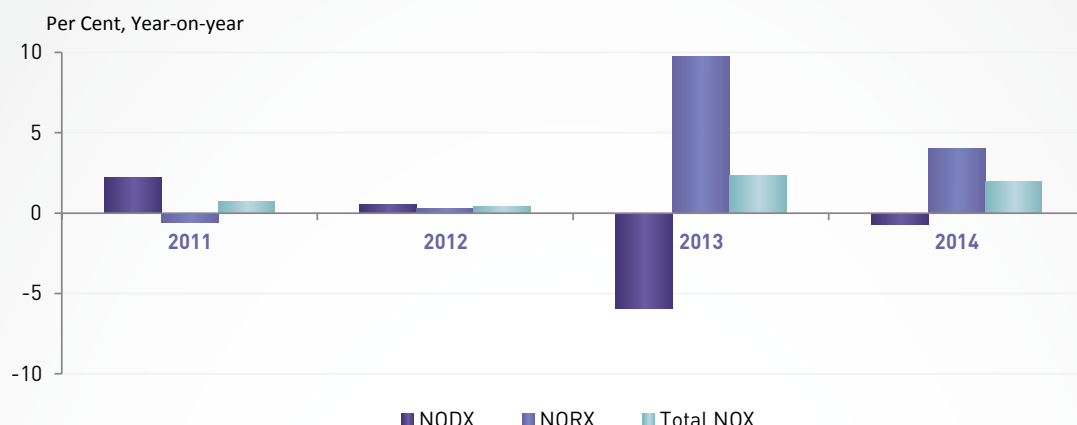
Singapore's merchandise exports have experienced slower growth in recent years. Between 2010 and 2014, Singapore's merchandise exports increased by a CAGR of 2.0 per cent, compared to 13 per cent in the four years before the Global Financial Crisis (GFC). The weakness in merchandise exports was primarily due to sluggish non-oil domestic exports (NODX), which declined in 2013 and 2014, after recording modest gains in the preceding two years (Exhibit 2).<sup>4</sup> On the other hand, non-oil re-exports (NORX) picked up strongly in 2013 following two years of stagnation and continued to register an expansion in 2014.

<sup>3</sup> These are Japan, Republic of Korea, India, Australia and New Zealand.

<sup>4</sup> Domestic exports generally refer to exports of Singapore origin. Re-exports generally refer to goods which are exported from Singapore in the same form as they have been imported without major transformation.



**Exhibit 2: Changes in NODX and NORX**

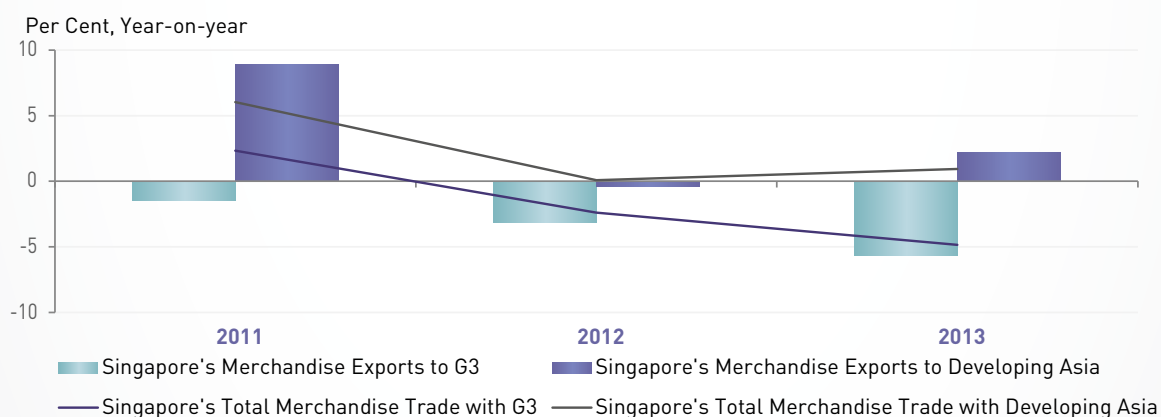


Source: International Enterprise Singapore

### *Weakness in Singapore's merchandise exports reflects global trends...*

The weakness in the performance of Singapore's merchandise exports reflects a global pattern of decelerating merchandise trade growth in recent years. Data collected by the International Monetary Fund (IMF) shows that total merchandise trade for the G3 economies (US, EU and Japan) reversed its 17 per cent expansion in 2011 to register a 3.0 per cent decline in 2012 and flat growth in 2013.<sup>5</sup> In Developing Asia, growth in total merchandise trade moderated considerably to 5.2 and 4.5 per cent in 2012 and 2013 respectively, from 26 per cent in 2011.<sup>6</sup> Correspondingly, Singapore's exports to these key markets declined over the same period (Exhibit 3).

**Exhibit 3: Changes in Total Merchandise Trade and Exports for G3 and Developing Asia**



Source: International Enterprise Singapore

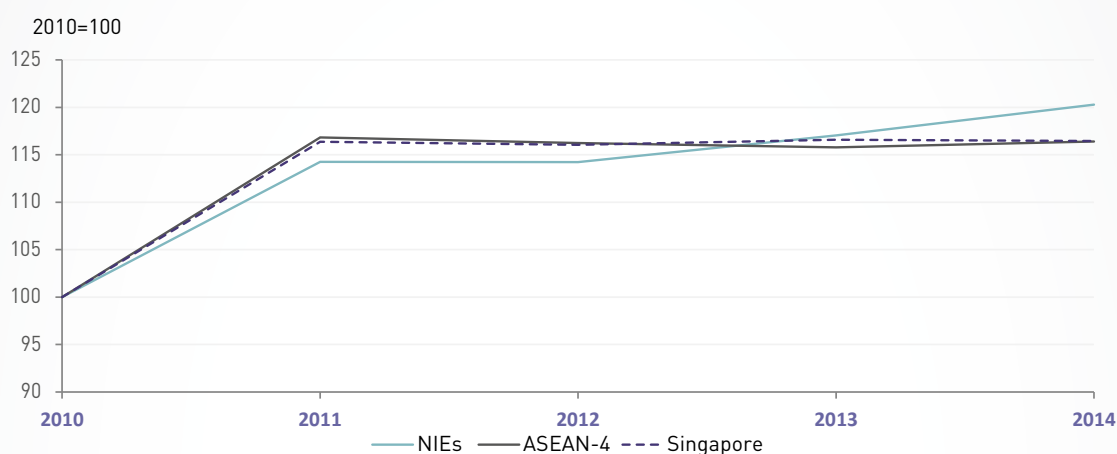
<sup>5</sup> 2013 is the latest period for which the IMF's trade data is available.

<sup>6</sup> The economies classified by IMF as part of Developing Asia include, but are not limited to, China, India, Indonesia, Malaysia, Myanmar, Philippines, Thailand and Vietnam.

### *Notwithstanding the challenging external conditions, Singapore's merchandise exports performed in line with other regional economies'*

Despite the challenging external circumstances, the recent performance of Singapore's merchandise exports was largely in line with that of other regional economies', including the ASEAN-4 (Exhibit 4). While our exports also kept pace with the Newly Industrialised Economies' (NIEs) between 2010 and 2013, the latter's exports expanded at a faster clip compared to Singapore's and ASEAN-4's exports in 2014.<sup>8</sup>

**Exhibit 4: Trends in Total Merchandise Exports for Singapore and Selected Regional Economies**



Source: International Enterprise Singapore

### *In the near-term, Singapore's non-oil merchandise exports growth is likely to remain modest*

The near-term outlook for Singapore's merchandise exports remains modest. While economic growth in the US is expected to accelerate, the recovery in the Eurozone is likely to remain weak due to deflationary pressures and sluggish labour market conditions. Japan's economy is also expected to remain lacklustre, weighed down by the sales tax hike in April last year. In China, growth is expected to ease further on the back of the ongoing correction in the real estate market. The recent decline in oil prices has also dampened growth prospects in oil-exporting economies, although it could benefit oil-importing economies. Taking into account these external factors, IE Singapore expects Singapore's NODX to grow moderately by 1 to 3 per cent in 2015.

Likewise, services exports are also expected to provide support to overall exports growth. In particular, modern services exports such as financial services and other business services are expected to hold up well, with growth underpinned by firm regional demand catering to a rising Asian middle class.

*Contributed by:*

Economics Division  
Foreign Economic Policy Division

Ministry of Trade and Industry

<sup>8</sup> The Newly Industrialised Economies are Hong Kong, South Korea and Taiwan. In 2014, merchandise exports from Singapore and ASEAN-4 remained flat at -0.1 per cent and 0.5 per cent growth respectively. On the other hand, merchandise exports from the NIEs expanded at a faster clip of 2.8 per cent.

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Feng, A. and Teo, J. (2014). Rising Contribution of Services Exports to the Singapore Economy. Economic Survey of Singapore, Second Quarter 2014.

# CHAPTER 5

## Balance of Payments





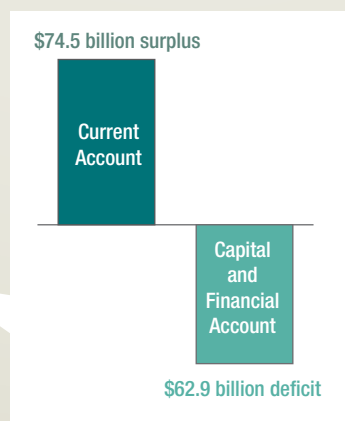
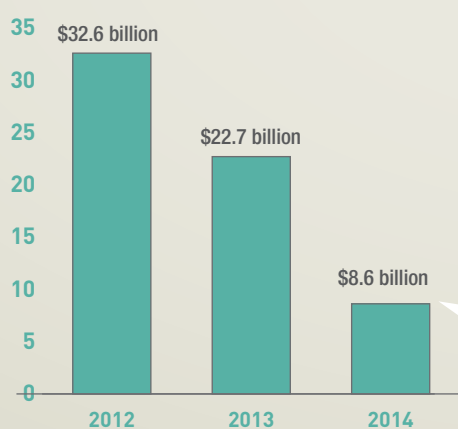


## CHAPTER 5

# BALANCE OF PAYMENTS

Singapore's balance of payments surplus came in at **\$8.6 billion** at the end of 2014.

### BALANCE OF PAYMENTS SURPLUS



## OVERVIEW

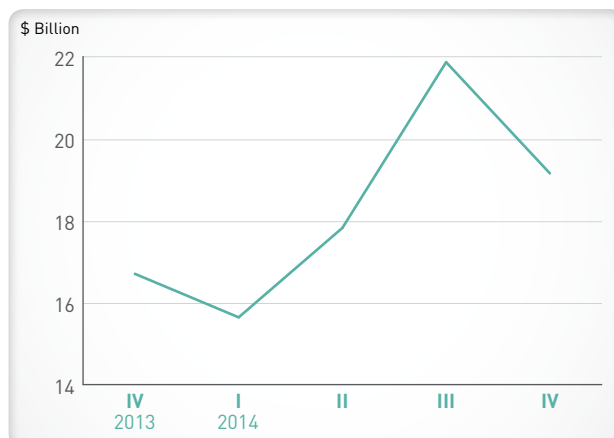
Singapore's balance of payments surplus declined from \$3.4 billion in the third quarter of 2014 to \$0.1 billion in the final quarter.

For the year as a whole, the surplus in the overall balance of payments narrowed from \$23 billion to \$8.6 billion. This was due to a larger net outflow from the capital and financial account, compared to the increase in the current account surplus. Singapore's official foreign reserves fell to \$340 billion at the end of 2014, equivalent to 8.8 months of merchandise imports.

## CURRENT ACCOUNT

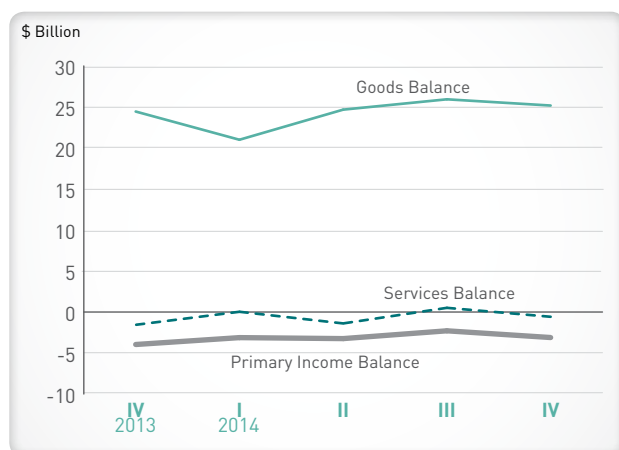
The current account surplus fell from \$22 billion in the third quarter to \$19 billion in the fourth quarter (Exhibit 5.1). For the whole of 2014, however, the current account surplus rose to \$74 billion (19 per cent of GDP) from \$68 billion a year ago (18 per cent of GDP). This expansion was supported by a smaller deficit in the services balance, and a larger surplus in the goods balance.

Exhibit 5.1: Current Account Balance



In terms of the sub-components of the current account, the goods balance saw its surplus narrow by \$0.8 billion to \$25 billion in the fourth quarter, as the fall in exports exceeded that of imports (Exhibit 5.2). For the full year, however, the exports of goods grew by \$1.4 billion, while imports of goods fell by \$2.1 billion. This led to the goods balance recording a larger surplus of \$97 billion in 2014, as compared to \$93 billion in 2013.

**Exhibit 5.2: Components of Current Account Balance**



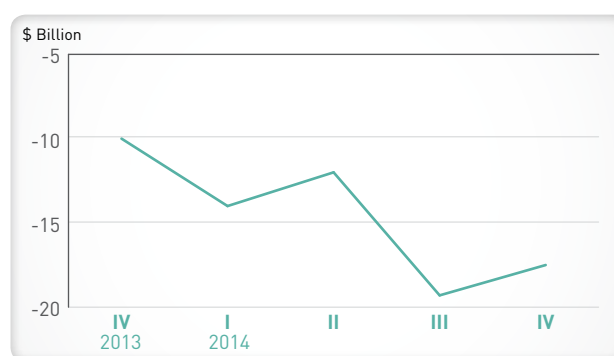
In comparison, the services balance posted a deficit of \$0.6 billion in the fourth quarter, reversing from the \$0.5 billion surplus in the preceding quarter. For the full year, the deficit in the services balance narrowed to \$1.4 billion, from \$5.4 billion in 2013. This was due to a decline in the net imports of other business services and an increase in the net exports of financial services, which more than offset the fall in net exports of transport services and larger net payments for the use of intellectual property.

For the primary income balance, the deficit rose by \$0.8 billion to reach \$3.1 billion in the fourth quarter. For the year as a whole, the shortfall in primary income widened slightly to \$12 billion. While income receipts from residents' overseas investments rose, income payments to foreign investors grew by a larger magnitude.

## CAPITAL AND FINANCIAL ACCOUNT

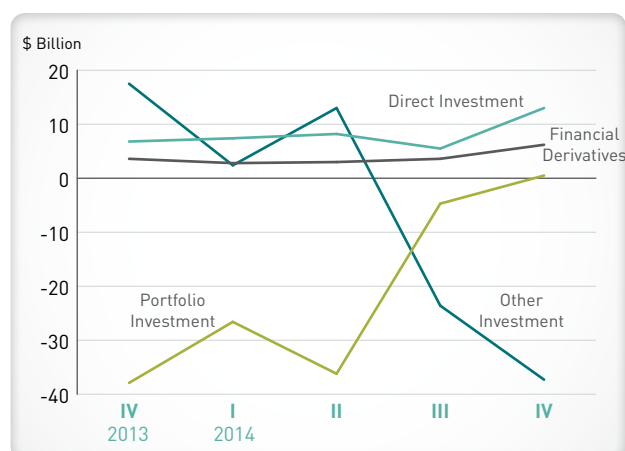
The deficit in the capital and financial account narrowed to \$18 billion in the fourth quarter, from \$19 billion in the previous quarter (Exhibit 5.3). For the year as a whole, net outflows from the account increased to \$63 billion (16 per cent of GDP), from \$45 billion in 2013 (12 per cent of GDP). This mainly reflected the larger net outflows of "other investment" and, to a smaller extent, a reduction in the net inflows of direct investment, which collectively exceeded the decline in net portfolio investment outflows.

**Exhibit 5.3: Capital and Financial Account Balance**



In terms of the sub-components of the capital and financial account, net inflows of direct investment rose to \$13 billion in the fourth quarter, from \$5.5 billion in the third quarter (Exhibit 5.4). For the full year, they amounted to \$34 billion, lower than the \$45 billion recorded in 2013. While there was an increase in foreign direct investment into Singapore in 2014, this was more than offset by a \$15 billion increase in residents' direct investment abroad.

**Exhibit 5.4: Components of Financial Account (Net)**



Net outflows from the “other investment” account increased from \$24 billion in the third quarter to \$37 billion in the final quarter of the year. For 2014 as a whole, net outflows from the account almost doubled to \$46 billion. This largely reflected a reversal from net inflows to the deposit-taking corporate (banking) sector in 2013, to net outflows from the sector in 2014.

Portfolio investment saw net inflows of \$0.5 billion in the fourth quarter, a reversal from the net outflows of \$4.7 billion in the previous quarter. For the full year, portfolio investment recorded a smaller net outflow of \$67 billion, compared to \$82 billion in 2013, mainly due to a reduction in outward investment by private non-bank residents.

Lastly, net inflows of financial derivatives increased by \$2.6 billion to reach \$6.2 billion in the fourth quarter. On an annual basis, net inflows of financial derivatives amounted to \$16 billion in 2014, broadly similar to the previous year.





# CHAPTER 6

## Sectoral Performance





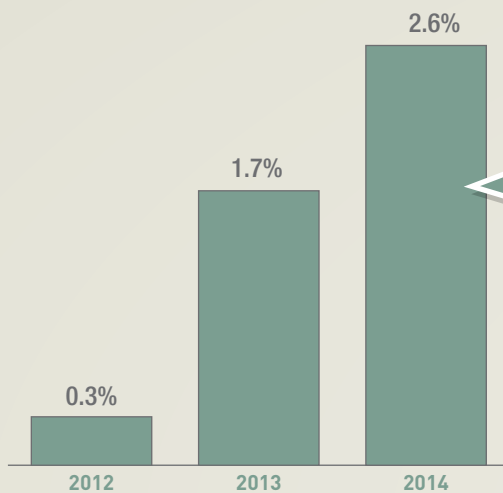


## CHAPTER 6

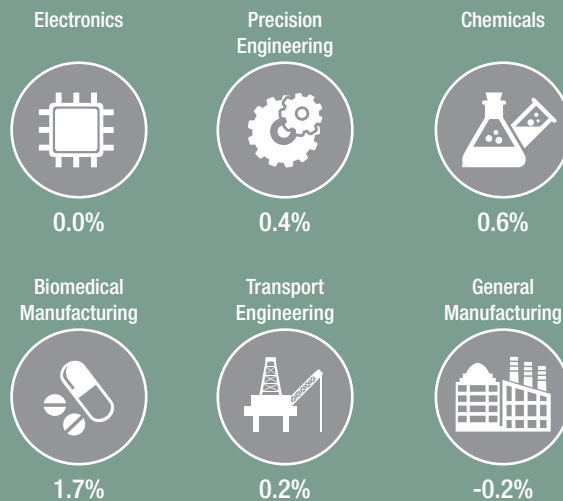
# SECTORAL PERFORMANCE

### Manufacturing Sector

#### REAL GROWTH

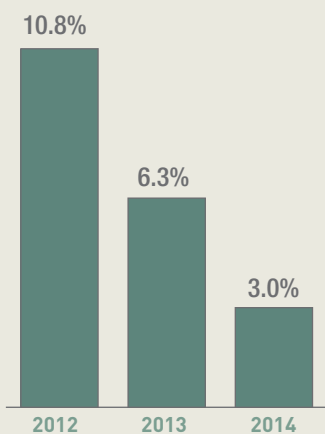


#### CLUSTERS IN MANUFACTURING SECTOR %-POINT CONTRIBUTION IN 2014

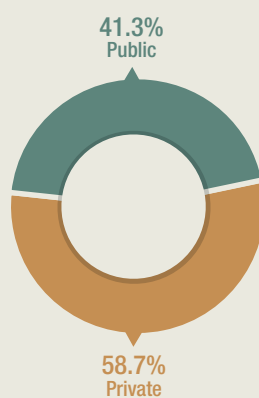


### Construction Sector

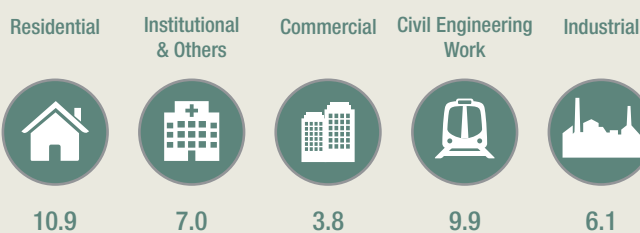
#### REAL GROWTH



#### CERTIFIED PAYMENTS IN 2014

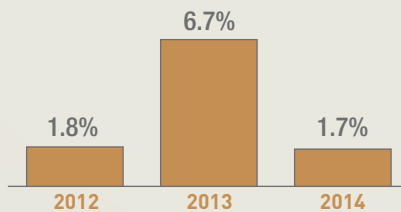


#### CONTRACTS AWARDED IN 2014 (\$, billion)



### Wholesale & Retail Trade Sector

#### REAL GROWTH



#### WHOLESALE TRADE

##### Domestic Wholesale Trade Index growth



-1.2%

##### Foreign Wholesale Trade Index growth



1.5%

#### RETAIL TRADE

##### Retail Sales Index growth (Motor Vehicles)



5.1%

##### Retail Sales Index growth (Non-motor Vehicles)

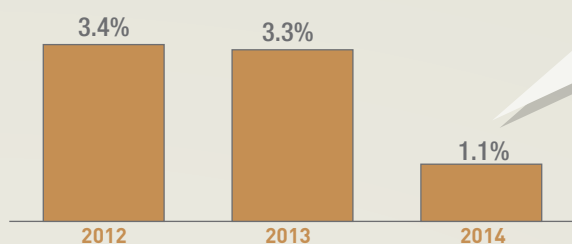


-0.7%



## Accommodation & Food Services Sector

### REAL GROWTH



### ACCOMMODATION

#### Performance of hotels

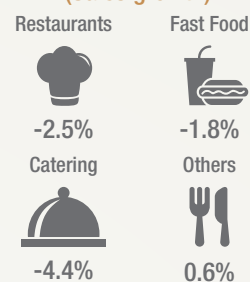


Room revenue growth: 7.2%

Gross lettings growth: 7.1%

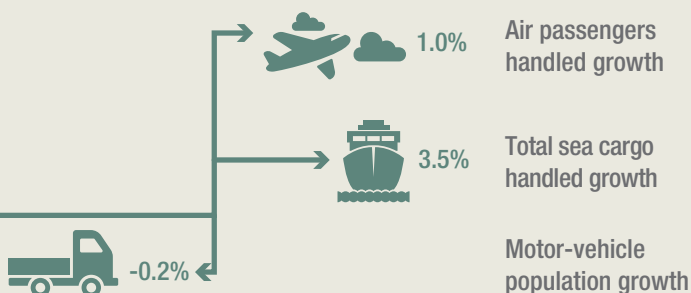
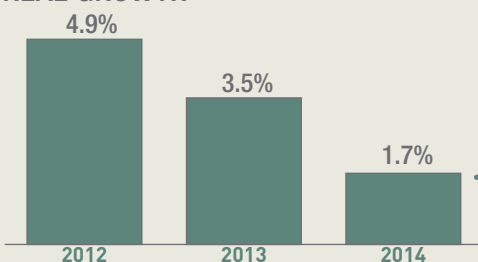
### FOOD SERVICES

#### Performance of F&B (Sales growth)



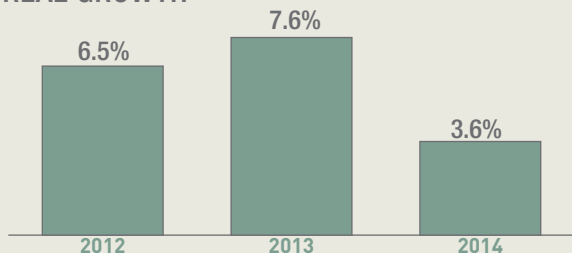
## Transportation & Storage

### REAL GROWTH



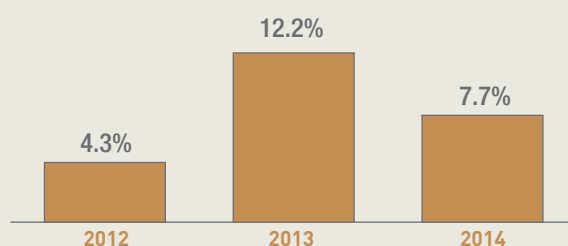
## Information & Communication

### REAL GROWTH

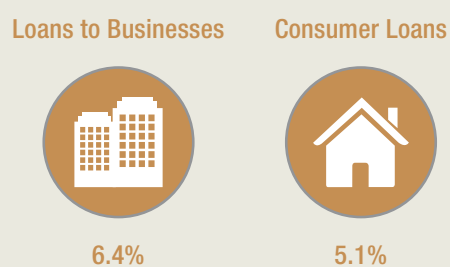


## Finance & Insurance

### REAL GROWTH

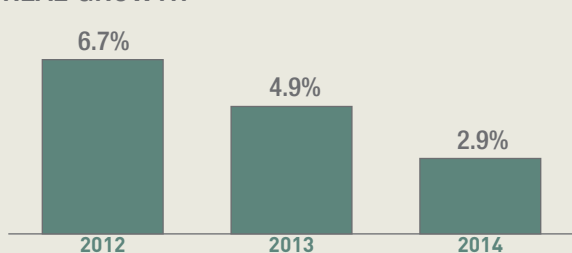


#### Growth of bank loans & advances to non-bank customers in 2014



## Business Services

### REAL GROWTH



# 6.1 Manufacturing

## OVERVIEW

The manufacturing sector contracted by 1.3 per cent in the fourth quarter of 2014, with only the biomedical manufacturing and precision engineering clusters registering growth.

For the whole of 2014, the manufacturing sector grew by 2.6 per cent, an uptick from the 1.7 per cent in the previous year. Growth was supported primarily by the biomedical manufacturing and chemicals clusters.

## OVERALL MANUFACTURING PERFORMANCE

Manufacturing output contracted by 1.3 per cent in the fourth quarter, due to declines in the chemicals, electronics, general manufacturing and transport engineering clusters (Exhibit 6.1). For the whole of 2014, manufacturing output rose by 2.6 per cent, driven largely by the biomedical manufacturing cluster, which accounted for about 65 per cent of the overall growth (Exhibit 6.2).

Exhibit 6.1: Manufacturing Growth Rates

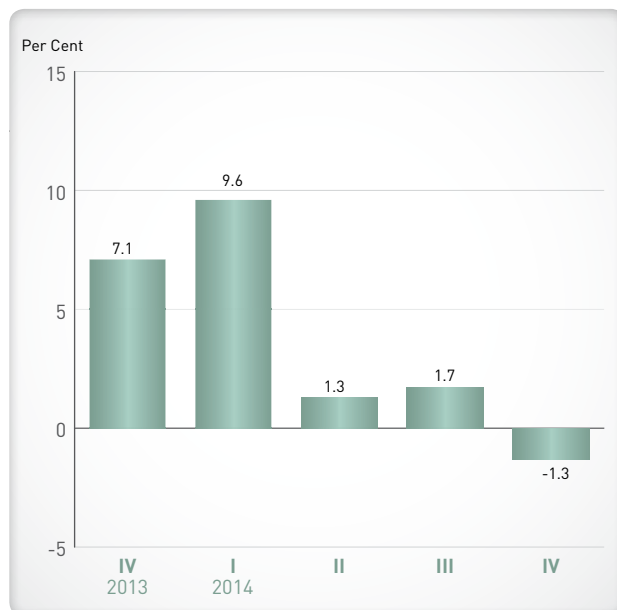
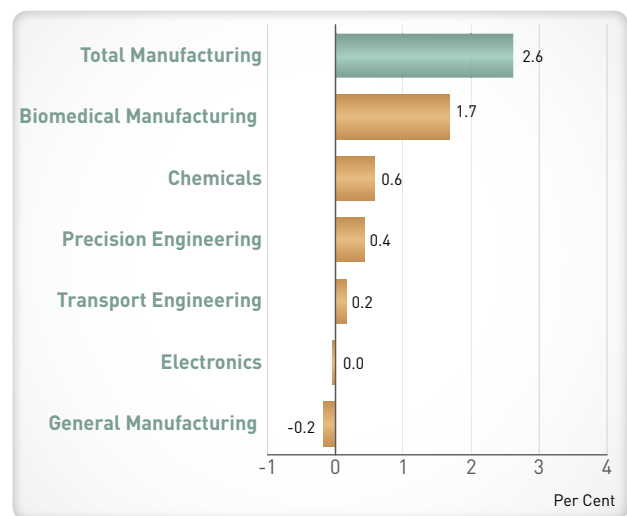


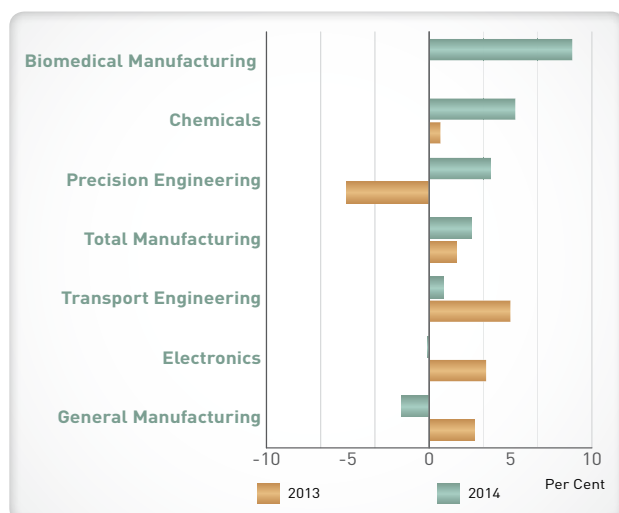
Exhibit 6.2: Percentage-Point Contribution to Manufacturing Sector's Growth in 2014



## PERFORMANCE OF CLUSTERS

Among the manufacturing clusters, the biomedical manufacturing cluster recorded the strongest growth of 6.3 per cent in the fourth quarter, with expansions seen across all segments. Specifically, the medical technology segment grew by 9.5 per cent on the back of strong export demand for new products launched within the year, while pharmaceuticals output rose by 5.4 per cent due to a higher production of active pharmaceutical ingredients. For 2014 as a whole, the biomedical manufacturing cluster grew by 8.8 per cent, after registering flat growth in 2013 (Exhibit 6.3).

Exhibit 6.3: Manufacturing Clusters' Growth



The precision engineering cluster expanded by 5.0 per cent in the fourth quarter, supported by growth in both the machinery & systems (M&S) and precision modules & components (PMC) segments. Specifically for the M&S segment, production increased by 7.1 per cent, driven by higher export demand for semiconductor-related equipment. Meanwhile, the precision modules & components (PMC) segment grew by 2.7 per cent. For the full year, the precision engineering cluster expanded by 3.8 per cent. This was driven by the M&S segment, which grew by 7.7 per cent as domestic firms benefitted from a strong rebound in global spending on semiconductor-related equipment in 2014.

The chemicals cluster contracted by 1.8 per cent in the fourth quarter, largely due to plant maintenance shutdowns in the petroleum and petrochemicals segments. The plant shutdowns contributed to a 17 per cent contraction in the petroleum segment, while growth in the petrochemicals segment moderated to 2.4 per cent from the double-digit growth rates seen in the three preceding quarters. For 2014 as a whole, the chemicals cluster expanded by 5.3 per cent, driven primarily by the ramp-up in production from new plant capacities in the petrochemicals segment.

The electronics cluster declined by 2.6 per cent in the fourth quarter, dragged down by broad-based declines in all segments except for the infocomms and consumer electronics and other electronics modules & components segments. For the full year, the electronics cluster contracted by 0.1 per cent, as weak performance in data storage and computer peripherals segments more than offset the expansion in the semiconductor segment. The data storage segment was likely adversely affected by sluggish global demand for end-products such as PCs and servers.

Output of the general manufacturing industries declined by 5.5 per cent in the fourth quarter. While the food, beverages & tobacco segment grew by 2.8 per cent, the printing segment contracted by 7.6 per cent. In addition, the output of the miscellaneous industries segment fell by 9.3 per cent, marking the second consecutive quarter of decline due to lower demand for construction-related materials such as steel structural components. For 2014 as a whole, the general manufacturing industries declined by 1.7 per cent.

The transport engineering cluster recorded a decline of 6.8 per cent in the last quarter of 2014, with the marine & offshore engineering and aerospace segments posing a key drag on growth. Specifically, the marine & offshore engineering segment contracted by 4.6 per cent, due to lower contributions from rig building activities compared to the high base in the last quarter of 2013. For the whole of 2014, the segment expanded by 4.4 per cent. Meanwhile, the aerospace segment registered the third consecutive quarter of contraction in the fourth quarter (17 per cent), on account of the weak demand for engine repair jobs. Output in the aerospace segment was also affected by airlines replacing older fleets with newer planes that require less maintenance. For the full year, the aerospace segment contracted by 7.6 per cent. With the contraction in the aerospace segment weighing on growth, the transport engineering cluster grew by a modest 0.9 per cent in 2014.

## 6.2 Construction

### OVERVIEW

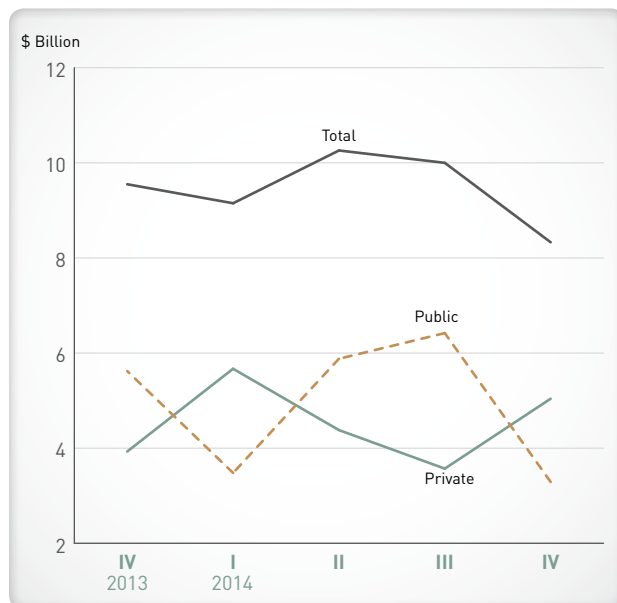
The construction sector grew by 0.7 per cent in the fourth quarter of 2014, moderating from the 1.1 per cent growth registered in the previous quarter. This was due to slower growth in private industrial and private residential construction activities.

For the whole of 2014, the sector expanded by 3.0 per cent, slower than the 6.3 per cent growth in the previous year, as a decline in private sector construction output posed a drag on growth.

### CONSTRUCTION DEMAND

Construction demand (or contracts awarded) fell by 13 per cent year-on-year to \$8.3 billion in the fourth quarter, as the decline in public sector construction demand more than offset the increase in private sector construction demand (Exhibit 6.4).

Exhibit 6.4: Contracts Awarded



Despite the year-on-year decline in the fourth quarter, total construction demand for the full year expanded by 5.4 per cent to set a new record high of \$38 billion. Slightly over half of total construction demand in 2014 was contributed by the public sector (Exhibit 6.5).

Exhibit 6.5: Contracts Awarded, 2014 (\$ Billion)

	Total	Public	Private
<b>Total</b>	37.7	19.1	18.7
<b>Residential</b>	10.9	4.8	6.1
<b>Commercial</b>	3.8	0.1	3.7
<b>Industrial</b>	6.1	0.5	5.6
<b>Institutional &amp; Others</b>	7.0	5.2	1.9
<b>Civil Engineering Works</b>	9.9	8.5	1.4

#### Public Sector

In the fourth quarter, public sector construction demand fell by 42 per cent year-on-year, primarily due to a decline in contracts awarded for residential building works and civil engineering works.

For the full year, public sector construction demand increased by 28 per cent to \$19 billion. The growth was supported by the institutional and other building developments segment, which saw its value of contracts awarded doubled to \$5.2 billion in 2014 on the back of contracts awarded for projects such as the Sengkang General and Community Hospitals and the Tampines Town Hub project. Construction demand was also boosted by a significant increase in civil engineering construction demand on account of the award of various Thomson-East Coast MRT Line contracts.



## Private Sector

Private sector construction demand in the fourth quarter rose by 28 per cent year-on-year to \$5.0 billion. The spike was mainly due to an increase in commercial construction demand arising from the award of the contract for Project Jewel, a mega development planned as part of the expansion of Changi Airport.

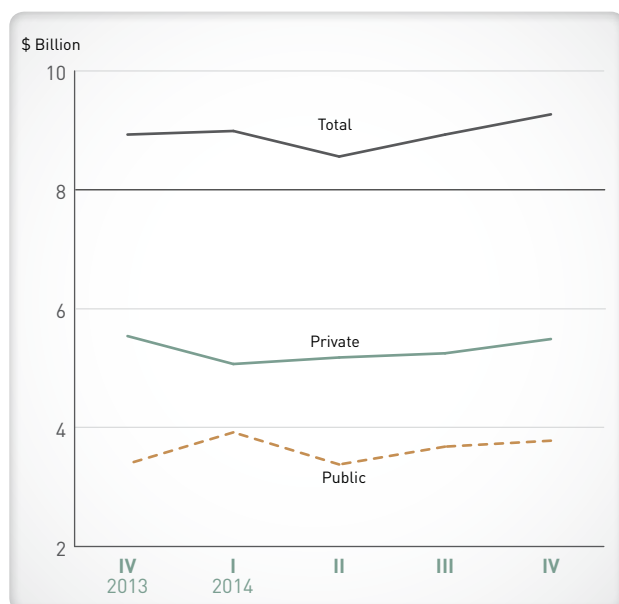
For the full year, total private sector construction demand moderated from \$21 billion in 2013 to \$19 billion in 2014. The moderation was due to a fall in construction demand for residential developments as developers remained cautious amidst a slowdown in the private residential property market.

In contrast to residential construction demand, all other segments saw higher or similar levels of demand in 2014 as compared to 2013. Notably, industrial building demand rose by 8.1 per cent, supported by contracts awarded for Mapletree Business City II, Carros Centre and various Engineering, Procurement and Construction (EPC) projects. In addition, demand for institutional & other building projects increased by 75 per cent, boosted by the construction of Changi Airport's Terminal 4. On the other hand, both commercial and civil engineering construction demand remained similar to 2013's levels.

## CONSTRUCTION ACTIVITIES

Construction output (or certified payments) expanded by 3.8 per cent year-on-year to \$9.3 billion in the fourth quarter, supported by a higher level of construction activities from the public sector (Exhibit 6.6).

Exhibit 6.6: Certified Payments



For the full year, construction output expanded by 6.1 per cent to a record high of \$36 billion. Growth was underpinned by strong on-site construction activities for institutional and other building developments, as well as civil engineering works by the public sector.

## Public Sector

Public sector construction output rose by 12 per cent year-on-year in the fourth quarter, supported by institutional and other building developments and civil engineering construction activities, which grew by 21 per cent and 12 per cent respectively.

For the full year, public sector construction output expanded by 18 per cent from \$13 billion in 2013 to \$15 billion in 2014. The increase was due largely to on-site construction activities for institutional buildings (35 per cent) and civil engineering (15 per cent) projects. Some of the major projects under construction included the Ng Teng Fong Hospital, National Art Gallery, and Downtown MRT line Stages 2 and 3.

By contrast, public sector industrial construction output fell by 18 per cent in 2014, following the near completion of Phases 1 & 2 of the Singapore Liquefied Natural Gas (LNG) Terminal at Jurong Island.

## Private Sector

Private sector construction output declined by 1.0 per cent year-on-year in the fourth quarter. This was largely due to a fall in private industrial and private residential construction activities.

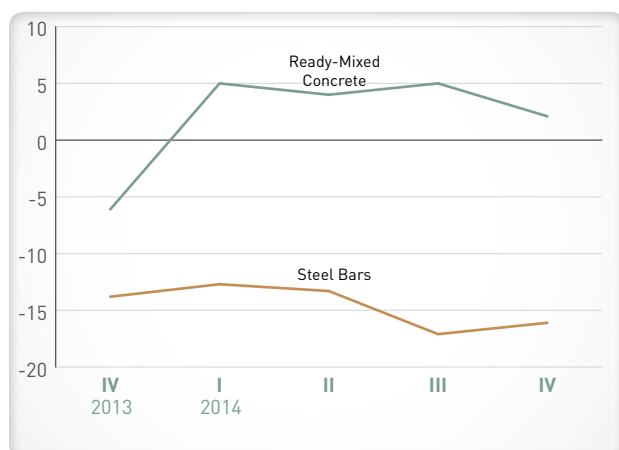
Similarly, private sector construction output for 2014 as a whole declined slightly by 0.6 per cent, largely due to a contraction in building activities related to industrial projects (12 per cent). On the other hand, on-site construction activities for civil engineering (32 per cent), residential (4.0 per cent) and institutional building (9.8 per cent) projects continued to expand, helping to partially offset the decline in industrial building projects.

## CONSTRUCTION MATERIALS

For the full year, the total consumption of ready-mixed concrete reached 15 million m<sup>3</sup> in 2014, which was comparable to 2013's level. However, the total consumption of steel rebars<sup>1</sup> saw an increase from 1.6 million tonnes in 2013, to about 1.8 million tonnes. The increase came on the back of a high level of construction activities in 2014, as well as a surge in import volume amidst depressed global steel prices.

Compared to a year ago, the average market price of Grade 40 pump ready-mixed concrete<sup>2</sup> fell by 1 per cent year-on-year in December 2014 to \$103.3 per m<sup>3</sup> (Exhibit 6.7). Similarly, the average market price of steel rebars<sup>3</sup> dropped by 15 per cent to \$612.5 per tonne in December 2014, due to an oversupply of steel rebars in the Chinese market coupled with falling input costs.

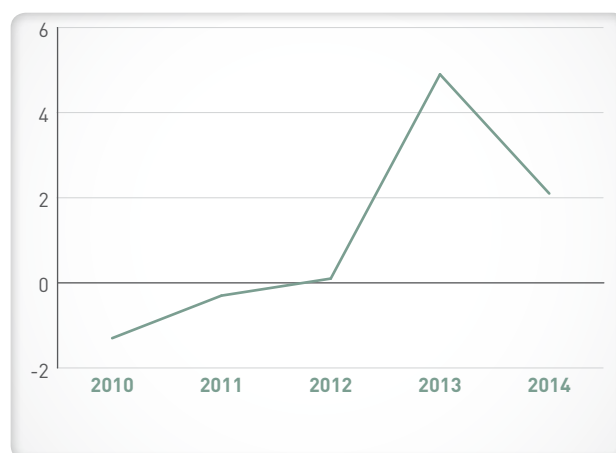
Exhibit 6.7: Changes in Market Prices of Construction Materials



## CONSTRUCTION COSTS

BCA's Tender Price Index (TPI) increased by 2.1 per cent in 2014 (Exhibit 6.8), moderating from the 4.9 per cent increase in 2013. The increase came on the back of higher labour costs stemming from various foreign manpower tightening measures and additional cost provisions made by contractors in anticipation of future labour shortages. However, the increase in manpower-related costs was partially offset by more competitive pricing by tenderers, as well as the decline in the prices of basic construction materials such as steel rebars.

Exhibit 6.8: Changes in Tender Price Index



<sup>1</sup> Rebar consumption is estimated from net imports plus local production (without factoring in stock levels).

<sup>2</sup> The market prices are based on contracts with non-fixed price, fixed price and market retail price.

<sup>3</sup> The market prices refer to 16mm to 32mm High Tensile rebar and are based on fixed price supply contracts with contract period of 6 months or below.

## CONSTRUCTION OUTLOOK

BCA has forecast that total construction demand in 2015 will be between \$29 billion and \$36 billion (Exhibit 6.9). Demand from the public sector is expected to be sustained at between \$18 billion and \$21 billion, which is about 60 per cent of the total construction demand. The boost to overall public sector construction demand is likely to come from stronger institutional and civil engineering construction works, even as residential works continue to trend lower.

On the other hand, private sector construction demand is projected to soften to between \$11 billion and \$15 billion, as developers continue to adopt a more cautious stance amidst weakening property market sentiments and continued global economic uncertainties.

Total construction output in 2015 is projected to remain strong at between \$35 billion and \$37 billion, supported by the high levels of construction demand registered in the past few years.

Exhibit 6.9: Projected Construction Demand in 2015

	\$ Billion
<b>Public Sector</b>	<b>18.0 – 21.0</b>
<b>Building Construction Sub-total</b>	<b>10.5 – 12.7</b>
Residential	3.4 – 3.8
Commercial	0.1 – 0.1
Industrial	2.1 – 2.8
Institutional & Others	4.9 – 5.9
<b>Civil Engineering Works Sub-total</b>	<b>7.5 – 8.3</b>
<b>Private Sector</b>	<b>11.0 – 15.0</b>
<b>Building Construction Sub-total</b>	<b>8.9 – 10.7</b>
Residential	3.2 – 4.0
Commercial	1.9 – 2.3
Industrial	3.1 – 3.5
Institutional & Others	0.8 – 0.9
<b>Civil Engineering Works Sub-total</b>	<b>2.2 – 4.4</b>
<b>TOTAL CONSTRUCTION DEMAND</b>	<b>29.0 – 36.0</b>

## 6.3 Wholesale & Retail Trade

### OVERVIEW

The wholesale & retail trade sector grew by 0.6 per cent in the fourth quarter of 2014, moderating from the 2.1 per cent growth in the preceding quarter.

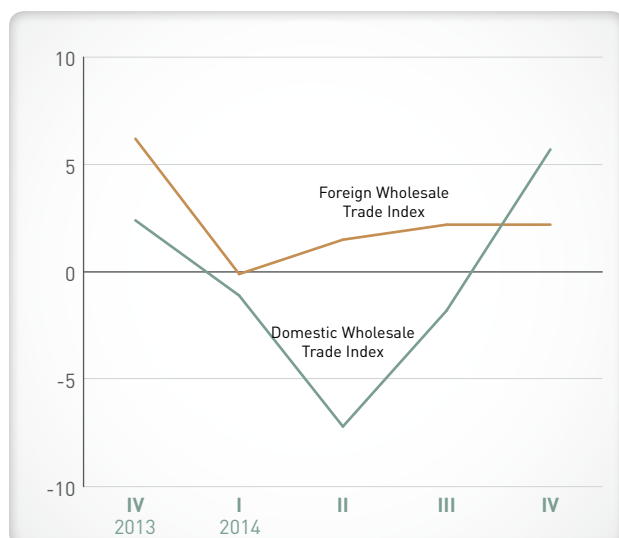
For the whole of 2014, the sector grew by 1.7 per cent, slowing from the 6.7 per cent growth in 2013. Growth of the sector was driven primarily by the wholesale trade segment.

### WHOLESALE TRADE

Both domestic and foreign wholesale trade sales volume expanded in the fourth quarter. Specifically, the domestic wholesale trade index increased by 5.7 per cent, reversing three consecutive quarters of contraction (Exhibit 6.10). The recovery was supported by sales of petroleum & petroleum products (11 per cent) and telecommunications & computers (23 per cent). For the full year, the domestic wholesale trade index contracted by 1.2 per cent, reversing the 5.0 per cent increase in 2013.

The foreign wholesale trade index rose by 2.2 per cent in the fourth quarter, the same rate of growth as in the preceding quarter. Akin to the domestic wholesale trade index, growth was also driven by the increase in sales of petroleum & petroleum products (7.0 per cent) and telecommunications & computers (16 per cent) to external markets. For the whole of 2014, growth of the foreign wholesale trade index moderated to 1.5 per cent, from 8.8 per cent in the previous year. This was in line with the slower growth in world trade volumes for the whole year.

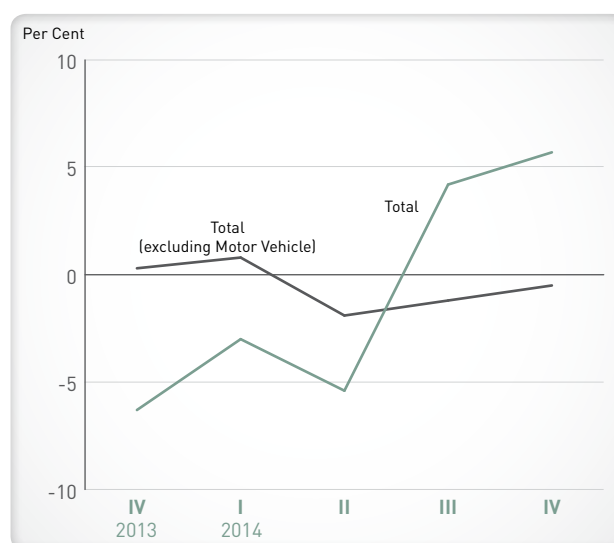
Exhibit 6.10: Changes in Wholesale Trade Index at Constant Prices



### RETAIL SALES

The retail trade segment saw steady growth in the fourth quarter. Specifically, retail sales volume rose by 5.7 per cent, extending the 4.2 per cent growth in the previous quarter (Exhibit 6.11). This came on the back of motor vehicle sales, which rose by 43 per cent in the fourth quarter compared to 34 per cent in the third quarter. Excluding motor vehicles, retail sales volume remained weak, recording the third consecutive quarter of decline in the fourth quarter, at 0.5 per cent.

Exhibit 6.11: Changes in Retail Sales Index at Constant Prices

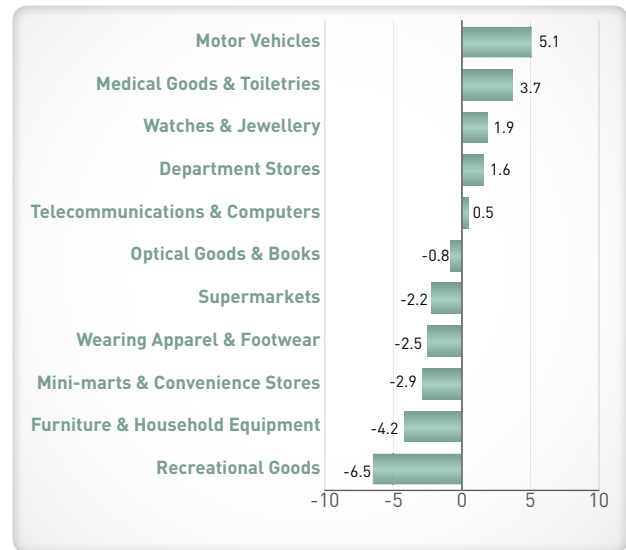


For the full year, the retail trade segment turned the corner as sales volume grew by 0.3 per cent, reversing the 4.4 per cent decline in 2013. This recovery was driven by the 5.1 per cent increase in motor vehicle sales, which came on the back of an uptick in certificate of entitlement (COE) quota in the second half of 2014.



Excluding motor vehicles, sales were weak as volume dipped by 0.7 per cent in 2014, a reversal from the 1.1 per cent growth in the previous year. This weakness could partly be due to operational difficulties, including tighter manpower constraints, faced by retailers. The 3.1 per cent fall in visitor arrivals in 2014 might have also dampened shopping expenditure by tourists, which could in turn have weighed on the sales of discretionary goods such as recreational goods (6.5 per cent) and wearing apparels & footwear (2.5 per cent).

**Exhibit 6.12: Changes in Retail Sales Index at Constant Prices for Major Segments in 2014**



## 6.4 Accommodation & Food Services

### OVERVIEW

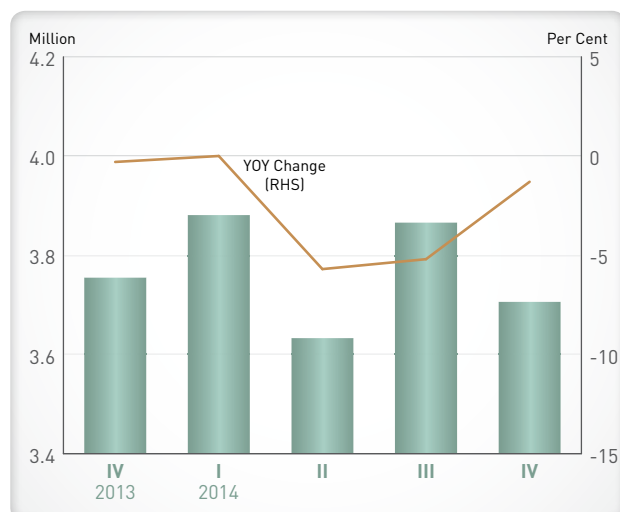
The accommodation & food services sector grew by 1.3 per cent in the fourth quarter of 2014, slightly faster than the 1.0 per cent increase in the previous quarter.

For the whole of 2014, the sector expanded by 1.1 per cent, a moderation from the 3.3 per cent growth in 2013.

### VISITOR ARRIVALS

In the fourth quarter, Singapore received 3.7 million visitors, 1.3 per cent lower compared to the same period a year ago (Exhibit 6.13).

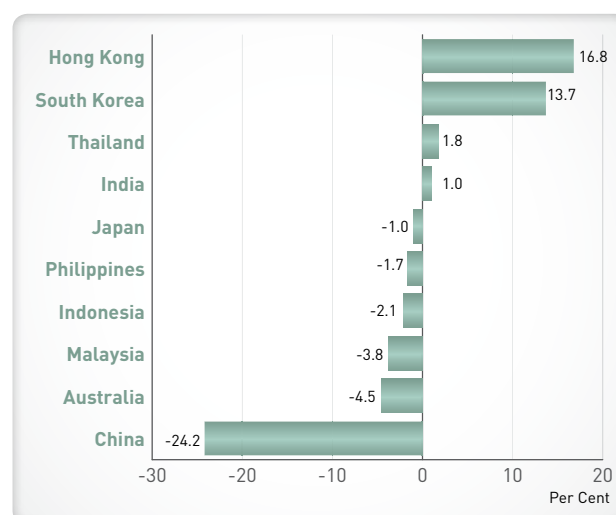
Exhibit 6.13: Visitor Arrivals



For the full year, led by a 24 per cent plunge in Chinese arrivals, total visitor arrivals fell by 3.1 per cent to 15 million. The sharp fall in Chinese tourists was caused primarily by pricier tour packages as a result of stricter regulations imposed on Chinese travel agencies in October 2013. In addition, the air crash incidents as well as political unrests in Thailand earlier in the year also dampened Chinese demand for Singapore-Malaysia-Thailand tour packages.

In terms of source markets, visitor arrivals from Asia reached 12 million, accounting for 77 per cent of total visitor arrivals in 2014. Hong Kong (17 per cent) and South Korea (14 per cent) posted the highest growth rates during this period (Exhibit 6.14).

Exhibit 6.14: Market share of Top Ten Visitor Generating Markets in 2014



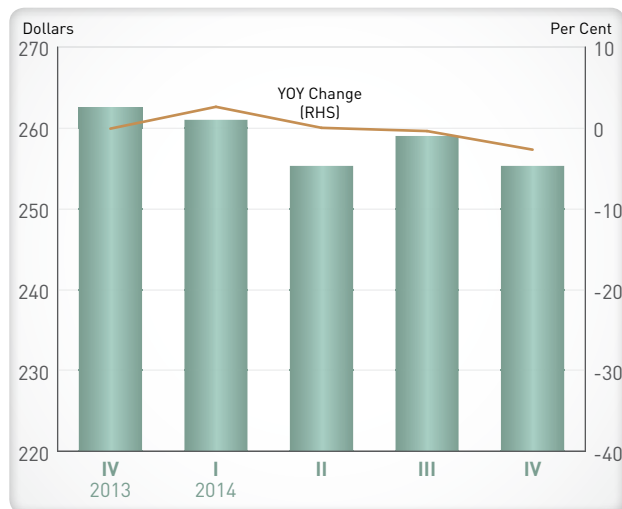
Singapore's top five visitor-generating markets in 2014 were Indonesia (3.0 million visitors), China (1.7 million), Malaysia (1.2 million), Australia (1.1 million) and India (0.9 million). Together, they accounted for 53 per cent of total visitor arrivals.

<sup>1</sup> The country breakdown for visitor arrival figures from October to December 2013 is not available.

## ACCOMMODATION

In the fourth quarter, growth in hotel room revenue eased from 7.1 per cent in the third quarter to 3.1 per cent, following poorer performance by gazetted hotels. The revenue per available room of hotels declined by 8.4 per cent, on the back of a 2.7 per cent decline in average room rate to \$255 (Exhibit 6.15). This was due to a climb in room supply even as the number of visitor arrivals weakened for the quarter. As a result, the average occupancy rate dipped by 0.9 percentage-points to 85 per cent.

Exhibit 6.15: Average Hotel Room Rate

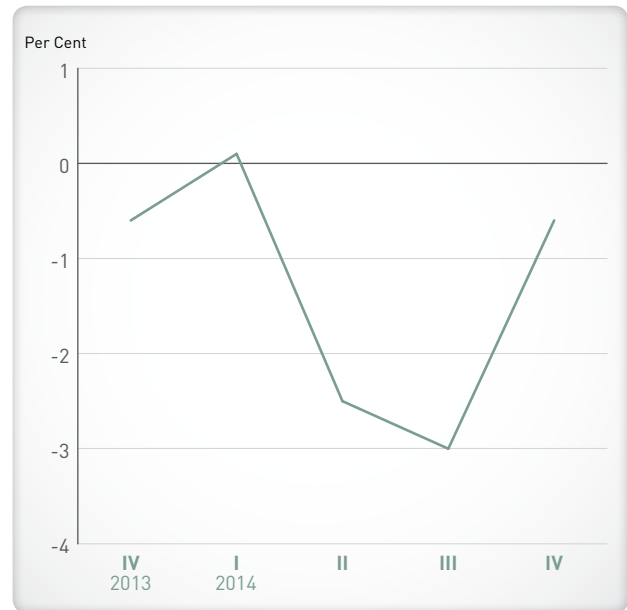


Nonetheless, for the full year, the performance of the accommodation segment held steady. Notably, the room revenue of gazetted hotels rose by 7.2 per cent to \$3.1 billion, on the back of a 7.1 per cent increase in gross lettings. This resilience was likely due to the increase in length of stay of tourists in Singapore, which in turn supported the demand for hotel rooms.

## Food & Beverage Services

In the fourth quarter, the food & beverage sales volume continued to fall, albeit at a slower pace (Exhibit 6.16). Specifically, sales volume shrank by 0.6 per cent, a smaller decline as compared to the 3.0 per cent fall in the previous quarter. The moderation in the magnitude of the decline came on the back of smaller drops in catering, fast food outlet and restaurant sales.

Exhibit 6.16: Changes in Food and Beverage Services Index at Constant Prices



For the full year, the food & beverage sales volume declined by 1.5 per cent, reversing the 0.1 per cent growth in the previous year. Notably, sales of food caterers, restaurants and fast food outlets contracted by 4.4 per cent, 2.5 per cent and 1.8 per cent respectively, a reversal from the 2.2 per cent, 0.9 per cent and 1.3 per cent growth respectively in 2013.

## 6.5 Transportation & Storage

### OVERVIEW

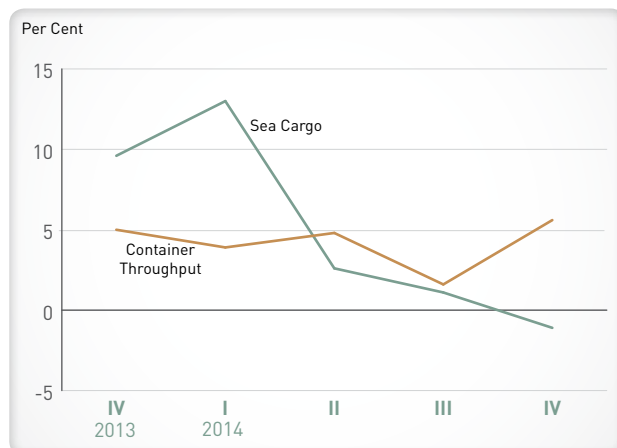
The transportation & storage sector contracted by 0.4 per cent in the fourth quarter of 2014, moderating from the 0.1 per cent growth in the preceding quarter, due to weakness in both the water and air transport segments.

For the whole of 2014, the sector grew by 1.7 per cent, slower than the growth of 3.5 per cent in 2013. Growth of the sector was driven mainly by the water transport segment.

### WATER TRANSPORT

Container throughput expanded by 5.6 per cent in the fourth quarter, improving from the 1.6 per cent growth in the previous quarter (Exhibit 6.17).

*Exhibit 6.17: Changes in Container Throughput and Sea Cargo Handled*



By contrast, sea cargo volumes contracted by 1.1 per cent in the fourth quarter, reversing the 1.1 per cent expansion in the previous quarter. The decline was mainly due to weak oil-in-bulk shipping tonnage which contracted by 13 per cent.

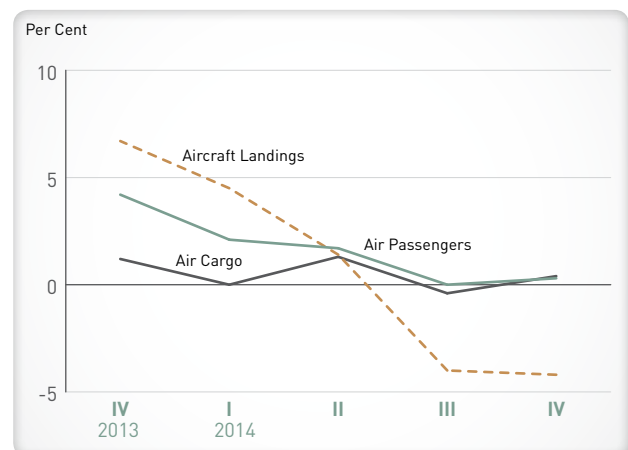
For the whole of 2014, container throughput increased by 4.0 per cent, extending the 2.9 per cent increase in 2013. As a result, the number of TEUs handled by Singapore's ports surpassed the previous peak of 32.6 million in 2013, to reach 33.9 million.

On the other hand, sea cargo volumes posted moderately lower growth of 3.5 per cent in 2014, compared to 4.3 per cent in 2013. The moderation in growth was mainly due to weak oil-in-bulk shipping tonnage, which grew at a tepid 0.4 per cent.

### AIR TRANSPORT

Air passenger traffic handled by Changi Airport rose by 0.3 per cent in the fourth quarter, a slight improvement over the flat growth recorded in the previous quarter (Exhibit 6.18). The recovery came on the back of an improvement in air passenger traffic to and from Thailand as well as China by the end of the year.

*Exhibit 6.18: Changes in Air Transport*



A similarly promising trend was observed in air cargo shipments, which grew by 0.4 per cent in the fourth quarter, reversing the 0.4 per cent contraction in the previous quarter. Growth was supported by a recovery in electronics re-exports in the fourth quarter.

By contrast, aircraft landings declined by 4.2 per cent to 43,064 in the fourth quarter, extending the contraction recorded in the previous quarter.



For the whole of 2014, the air transport segment posted resilient growth amidst a challenging external environment. Air passenger traffic handled by Changi Airport grew by 1.0 per cent, slower than the 5.7 per cent increase in 2013. The weaker growth was due to slower regional air travel. In particular, air passenger traffic to and from Thailand saw a contraction of 11 per cent, possibly due to lingering concerns over the political situation in Thailand in the first three quarters of the year.

Air cargo shipments rose marginally by 0.3 per cent in 2014, similar to the 0.5 per cent increase in the previous year. Growth in air cargo volumes was likely supported by the increase in electronics re-exports, which helped to offset some of the weakness in electronics domestic exports.

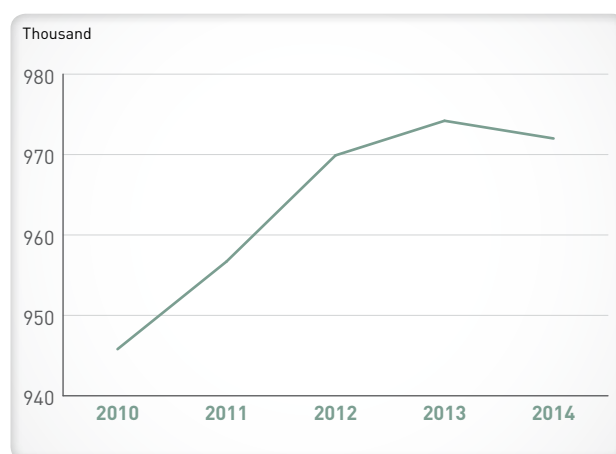
Finally, the number of aircraft arrivals in 2014 reached 170,680, slightly lower compared to the 171,850 recorded in 2013. This represents the first contraction in aircraft landings since 2003.

## LAND TRANSPORT

As of December 2014, the total number of vehicles registered with the Land Transport Authority (LTA) was 972,037, a decrease of 0.2 per cent from the number of vehicles registered in December 2013 (Exhibit 6.19). This is the first contraction in the number of vehicles registered since 2002.

The vehicles registered as at December 2014 comprised 600,176 private and company cars, 18,847 rental cars, 28,736 taxis, 17,554 buses, 145,026 motorcycles and scooters, and 161,698 goods vehicles and other vehicle types.

*Exhibit 6.19: Motor Vehicles Registered*



## 6.6 Information & Communications

### OVERVIEW

The information & communications sector grew by 4.4 per cent in the fourth quarter of 2014, extending the 4.0 per cent expansion in the preceding quarter.

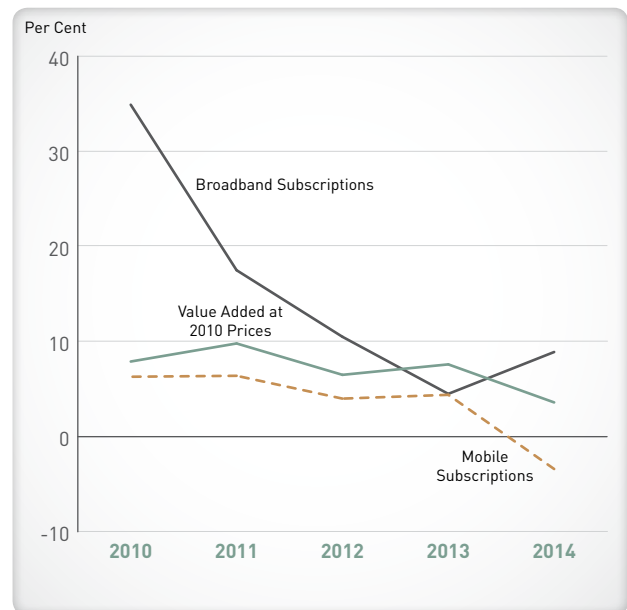
For the whole of 2014, the sector posted growth of 3.6 per cent, easing from the 7.6 per cent growth in 2013.

### TELECOMMUNICATIONS

In 2014, the telecommunications segment posted healthy growth, as consumers continued to upgrade to the more profitable 4G tiered data plans. By the end of November 2014<sup>1</sup>, overall 4G subscriptions surged by 65 per cent, while 2G and 3G subscriptions fell by 73 per cent and 12 per cent respectively. This trend was likely driven by the increased variety of new 4G-enabled mobile phones in Singapore.

In addition, the number of broadband subscribers continued to rise. Specifically, by November 2014, overall broadband subscriptions expanded by a robust 8.9 per cent, on the back of healthy growth in both wireless broadband and optical fibre broadband subscriptions (Exhibit 6.20).

Exhibit 6.20: Information & Communications Growth



<sup>1</sup> Full year data are not available at the time of publication.

## 6.7 Finance & Insurance

### OVERVIEW

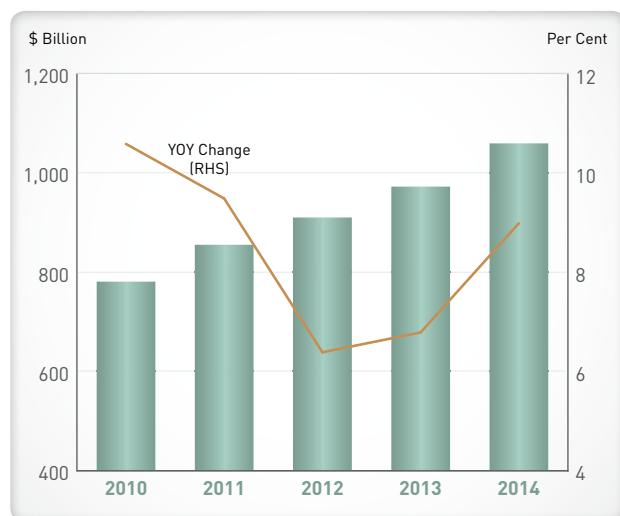
The finance & insurance sector continued its robust growth in the fourth quarter of 2014. Growth came in at 10 per cent, similar to the 9.9 per cent registered in the previous quarter.

For the whole of 2014, the sector expanded by 7.7 per cent, slower than the 12 per cent growth in the previous year. Growth was supported mainly by the insurance segment as well as fund management activities.

### COMMERCIAL BANKS

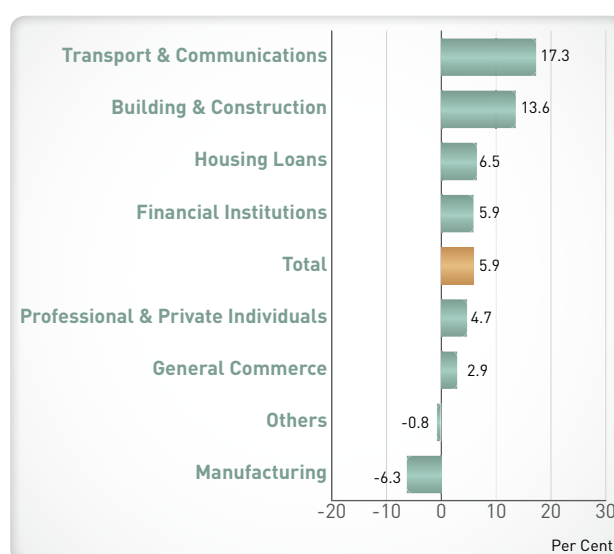
The total assets/liabilities of commercial banks grew by 9.0 per cent to reach \$1.1 trillion in 2014 (Exhibit 6.21). Interbank loan volumes posted a 28 per cent expansion, a turnaround from the 23 per cent contraction in the preceding year. Meanwhile, growth in domestic non-bank lending eased from the double-digit rates posted in the previous four years to 5.9 per cent in 2014. As at end-2014, loans to non-bank customers reached \$608 billion, up from \$574 billion in 2013.

Exhibit 6.21: Total Assets and Liabilities of Commercial Banks



The moderation in non-bank lending growth came on the back of weaker credit expansion to both domestic businesses and consumers. Notably, corporate loans extended to trade-related industries (manufacturing, general commerce and transport, storage & communication) rose by 2.6 per cent in 2014, compared with a 28 per cent increase in 2013 (Exhibit 6.22). Meanwhile, consumer lending was also tempered by a dip in housing loans growth in tandem with the muted performance of the property market. Residential property loan volume grew by 6.5 per cent, down from 9.6 per cent the year before.

Exhibit 6.22: Growth of Bank Loans and Advances to Non-Bank Customers by Industry in 2013



Growth in the total deposits of non-bank customers also decelerated in 2014 to 2.4 per cent, from 3.6 per cent in the preceding year, bringing the total non-bank deposit base to \$550 billion. In part, this was due to a withdrawal of deposits by non-bank financial institutions.

## FINANCE COMPANIES

Finance companies recorded a 6.6 per cent expansion in total assets/liabilities, an improvement over the flat outturn in 2013 (Exhibit 6.23). The gains were largely underpinned by the non-bank lending segment, which grew by 6.3 per cent in 2014, up from 3.0 per cent the year before. The increase in non-bank loan volume was in part driven by a 29 per cent rise in loans to financial institutions.<sup>1</sup> By contrast, there was some pullback in hire-purchase financing, largely driven by a decline in hire purchase loans for motor vehicles (-11 per cent) in 2014 (Exhibit 6.24).

On the liabilities front, deposits of non-bank customers grew by 7.3 per cent, supported by a surge in fixed deposits.

Exhibit 6.23: Total Assets and Liabilities of Finance Companies

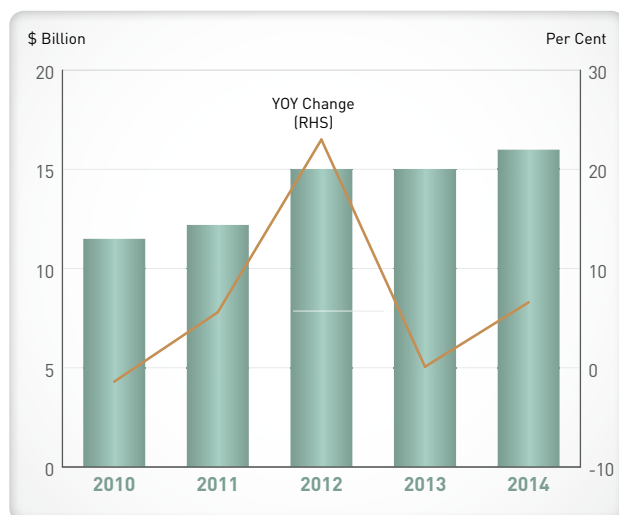
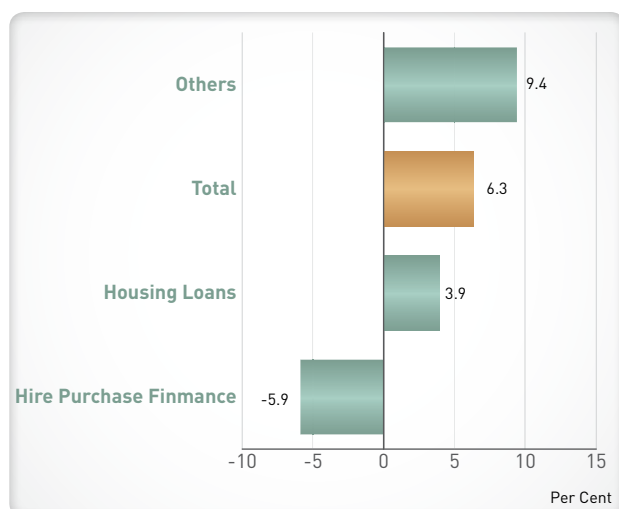


Exhibit 6.24: Growth of Loans and Advances of Finance Companies in 2014

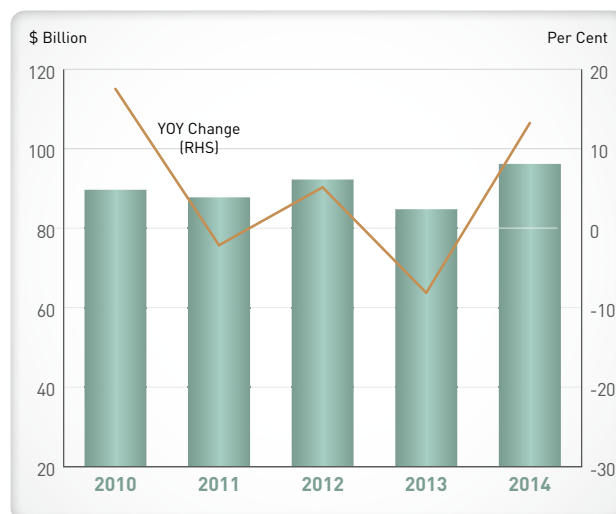


## MERCHANT BANKS

In 2014, merchant banks' overall assets/ liabilities rose by 13 per cent to \$96 billion, a turnaround from the 8.1 per cent contraction in the preceding year (Exhibit 6.25). The recovery was underpinned by a strong performance in the offshore segment, which saw non-bank loan growth accelerating to 7.9 per cent, from 3.0 per cent in 2013.

On the other hand, merchant banks' domestic operations shrank for the second consecutive year, with non-bank lending declining by 3.1 per cent.

Exhibit 6.25: Total Assets and Liabilities of Merchant Banks



## ASIAN DOLLAR MARKET

Total assets/liabilities of the Asian Dollar Market were largely unchanged at US\$1.2 trillion, after registering modest growth of 0.9 per cent in 2014 (Exhibit 6.26). Interbank loans fell by 7.3 per cent, its first contraction since 2009, following a cutback in lending to banks outside Singapore. Concomitantly, the pace of non-bank loan growth slowed to 8.1 per cent, less than half the rate seen in 2013, as credit extended to both residents and non-residents softened.

Interbank deposits recorded a 5.1 per cent decline in 2014. Meanwhile, non-bank deposits grew by 7.7 per cent, compared to 11 per cent in the preceding year, as the contribution from non-residents moderated.



Exhibit 6.26: Total Assets and Liabilities of the Asian Dollar Market

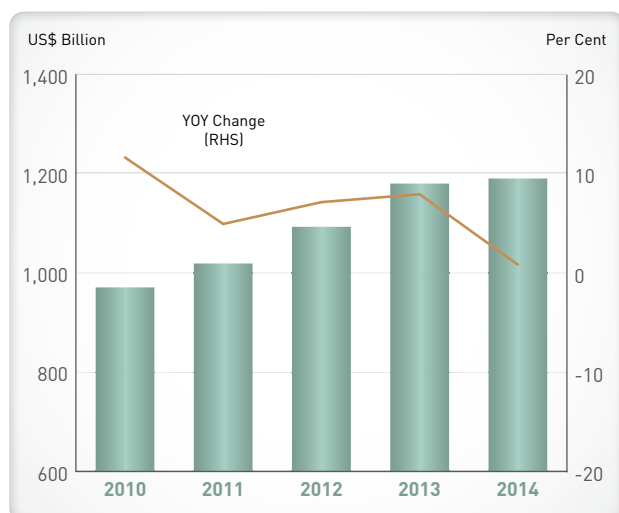
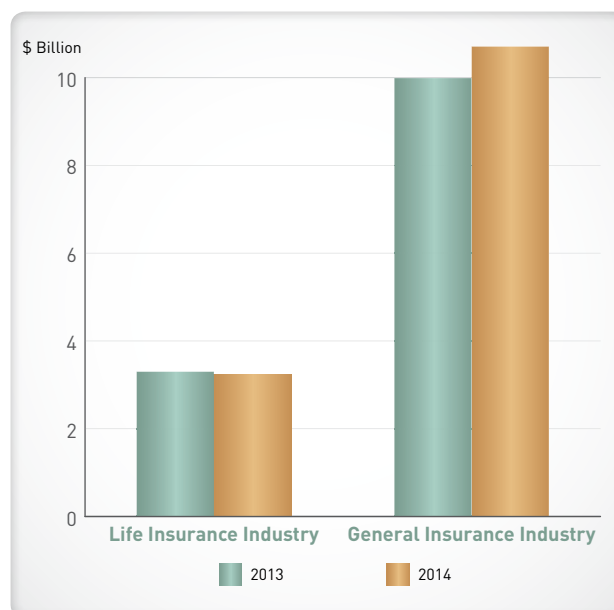


Exhibit 6.27: Premiums in the Insurance Industry



## INSURANCE INDUSTRY

Total weighted new business premiums<sup>2</sup> in the direct life insurance industry fell by 1.7 per cent to \$3.2 billion in 2014 (Exhibit 6.27). This was mainly due to an 8.8 per cent drop in regular premium business to \$2.3 billion. The higher regular premium business in 2013, as a result of re-pricing of Integrated Shield Plans, had tapered off in 2014. By contrast, there was healthy growth of 22 per cent for single premium business, largely attributable to increased uptake in participating and non-participating products.<sup>3</sup> Despite a contraction in total weighted new business premiums, the overall net income of the direct life insurance industry increased to \$1.9 billion from \$0.4 billion in 2013, driven by gains in investment returns.

In the general insurance industry, gross premiums<sup>4</sup> rose by 7.2 per cent to \$11 billion in 2014, with offshore and domestic businesses accounting for \$6.7 billion and \$4.0 billion respectively. The general insurance industry recorded an operating profit of \$2.0 billion in 2014, a 39 per cent increase from the preceding year.

## CENTRAL PROVIDENT FUND

Total CPF balances grew by 8.9 per cent to \$275 billion in 2014.

Members' contributions for the year amounted to \$30 billion, while total withdrawals reached \$17 billion. This resulted in a net contribution of \$13 billion, similar to the level recorded in 2013.

CPF Lifelong Income Scheme for the Elderly (CPF LIFE) has also made rapid progress since its inception in 2009. As at 30 December 2014, more than 140,000 CPF members were registered under the national annuity scheme, and the CPF LIFE fund stands at \$7 billion.

Under the Public Housing Scheme and Private Property Scheme, net withdrawals grew by 5.8 per cent to reach \$176 billion in 2014.

As at 31 December 2014, the number of members under the CPF Medishield scheme was 3.7 million, reflecting a 1.3 per cent increase over 2013.

<sup>2</sup> Include premiums from both individual and group life insurance businesses.

<sup>3</sup> Participating products are insurance policies which provide both guaranteed and non-guaranteed benefits. The sum assured is a guaranteed benefit and is paid when the policy matures or upon the death of the insured. Participating policyholders are allowed to participate or share in the profits of the insurance company's participating fund. This is paid in the form of bonuses or cash dividends, which are non-guaranteed benefits. Non-participating products pay just the sum assured when the policy matures or upon the death of the insured. The policyholder does not participate or share in the profits of the insurance company's participating fund and is not entitled to any non-guaranteed benefits.

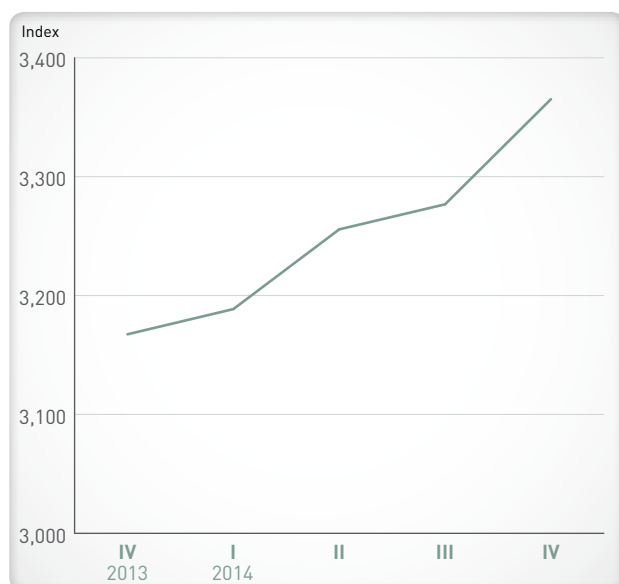
<sup>4</sup> Gross premium figures for the general insurance industry include gross premiums for direct general insurance as well as general reinsurance.

## STOCK MARKET

At the start of 2014, investors were unsettled by vulnerabilities in the external environment, namely the tail risk scenarios of a sharper-than-expected slowdown in China and a disorderly unwinding of quantitative easing by the Federal Reserve. These contributed to a selloff in the local bourse, with the Straits Times Index (STI) falling to a trough of 2,960 points in early February, its lowest level since late 2012. In subsequent months, the STI recovered despite geopolitical risk events such as conflicts in Ukraine and Iraq, and political unrest in Thailand, albeit with turnover volume at the lowest since 2012.

The local bourse continued to face a risk-off environment for most of the second half of 2014, following an escalation of geopolitical tensions, the re-surfacing of concerns over the strength of the global economic recovery as growth in Japan and Europe petered, and a precipitous decline in global oil prices. However, a strong performance on Wall Street in December, which came on the back of encouraging US economic data and the Federal Reserve's assessment that it can be patient in beginning to normalise its monetary policy stance, inspired a similar year-end rally in the local bourse. This allowed the STI to close the year 6.2 per cent above its end-2013 level (Exhibit 6.28).

Exhibit 6.28: Straits Times Index



## SECURITIES MARKET

In 2014, the total turnover value of the securities market decreased by 25 per cent to \$266 billion, while total turnover volume fell by 44 per cent to 502 billion shares. This translated to a 25 per cent decline in the average daily traded value to \$1.1 billion, while the average daily traded volume also shrank by 44 per cent to 2.0 billion shares.

At the end of 2014, the total number of listed companies in Singapore was 775, with a combined market capitalisation of \$998 billion, a 6.1 per cent increase from 2013's level. In 2014, there were 620 companies listed on SGX's Mainboard, while the other 155 companies were listed on SGX's Catalist.

## DERIVATIVES MARKET

In 2014, SGX's derivatives market activity rose by 7.4 per cent to 120 million contracts. Compared to 2013, total futures trading volume grew by 11 per cent to 112 million, while options on futures trading volume declined by 24 per cent to 8.0 million contracts. The most actively-traded contracts were the FTSE China A50 Index Futures, the Nikkei 225 Stock Index and the SGX CNX Nifty Index futures, which formed 81 per cent of the total volume traded on SGX's derivatives trading platform.

In 2014, Intercontinental Exchange Group (ICE) bought over the Singapore Mercantile Exchange (SMX), which ceased operations in February 2014. ICE has announced that ICE Futures Singapore will commence operations in March 2015.

## FOREIGN EXCHANGE MARKET

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Singapore's foreign exchange market posted an average daily turnover of US\$340 billion in 2014, an increase of 0.83 per cent from the previous year. Trading in major currencies such as the United States Dollar, Euro and Japanese Yen continued to dominate the market, with the US Dollar/Japanese Yen currency pair registering the highest trading volume. Trading in the US Dollar/Singapore Dollar currency pair contributed less than 10 per cent to the total turnover.

In 2014, the British Pound weakened by 5.9 per cent against the US Dollar, while both the Euro and the Japanese Yen fell by 12 per cent. The outperformance

of the US Dollar was attributable to the widening divergence in economic growth and monetary policy paths amongst the advanced economies in favour of the United States. Third quarter US GDP growth expanded at the fastest annualised pace in 11 years, while the Federal Reserve concluded its asset purchases in October 2014. By contrast, the Bank of Japan and the European Central Bank expanded their monetary easing programmes in a bid to revive their economies. This put downward pressure on the Japanese Yen and the Euro. The British Pound also depreciated as a result of a moderation in growth momentum amid low inflation in the United Kingdom, which prompted expectations that the start of the policy tightening cycle by the Bank of England would be pushed back.

## 6.8 Business Services

### OVERVIEW

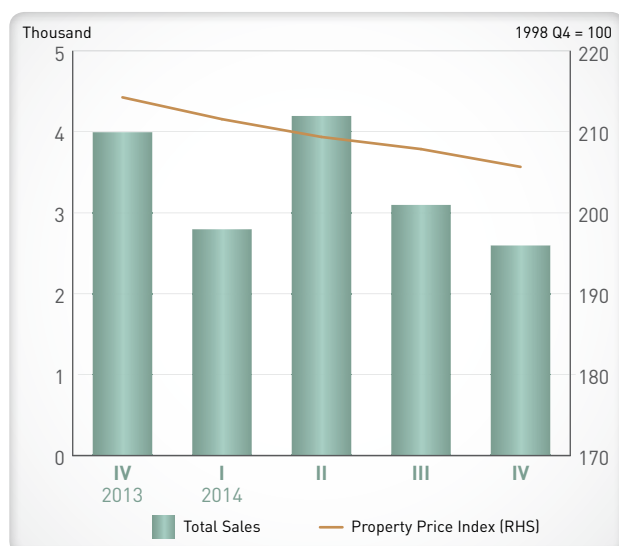
The business services sector grew by 2.9 per cent in the fourth quarter of 2014, extending the 2.6 per cent growth registered in the previous quarter. Growth was supported by rental and leasing as well as other professional, scientific and technical activities.

For 2014 as a whole, the sector expanded by 2.9 per cent, slower than the 4.9 per cent growth in the previous year, as a result of the slowdown in the real estate segment.

### REAL ESTATE

Growth in the real estate segment slowed in 2014, primarily due to weakness in the private residential property market. In the fourth quarter of 2014, total private residential property sales contracted by 33 per cent, representing the eighth consecutive quarter of decline, as property cooling measures such as the Total Debt Servicing Ratio (TDSR) and the Additional Buyer's Stamp Duty continued to dampen demand (Exhibit 6.29). For the full year, total sales declined by 44 per cent to 12,723 units, the lowest level of sales since 2004. Along with weaker sales, residential property prices fell by 4.0 per cent in 2014, the first year of price decline since the global financial crisis in 2008.

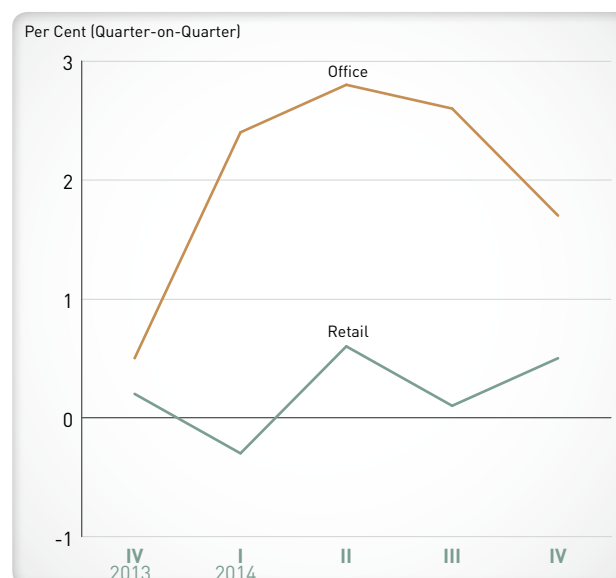
*Exhibit 6.29: New Sales of Private Residential Units and Private Residential Property Price Index*



In contrast to the private residential market, the private retail space market remained resilient in the fourth quarter, despite the challenging operating environment faced by retailers. Notably, prices of private retail space rose by 1.5 per cent on a quarter-on-quarter basis, reversing the 0.2 per cent contraction in the previous quarter. For the whole of 2014, prices in the private retail space market grew by 0.9 per cent.

Likewise, rentals of private retail space in the central region registered steady growth, rising by 0.5 per cent on a quarter-on-quarter basis in the fourth quarter, following the 0.1 per cent increase in the previous quarter (Exhibit 6.30). For 2014, rentals of private retail space rose by 0.9 per cent, compared to the 0.8 per cent contraction in 2013.

*Exhibit 6.30: Changes in Rentals of Private Sector Office and Shop Spaces*





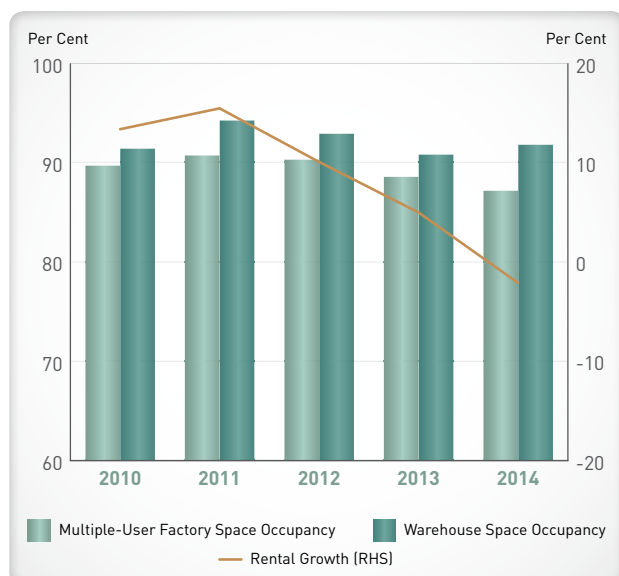
In the private office space market, prices have also remained resilient, recording an increase of 2.4 per cent on a quarter-on-quarter basis in the fourth quarter, faster than the 1.6 per cent growth in the preceding quarter. For the whole year, prices grew by 4.5 per cent, moderating slightly from the 5.2 per cent increase in 2013.

In terms of rentals, office space rentals rose by 1.7 per cent on a quarter-on-quarter basis in the fourth quarter, easing from the 2.6 per cent increase in the preceding quarter. For the full year, office rentals posted strong growth of 9.8 per cent, as compared to 1.3 per cent in 2013. The resilience in price and rental growth in the office space market came on the back of the robust demand for prime office space from companies such as those in the IT sector, as well as the limited supply of office space entering the market.

In the industrial space market, prices have started to soften from the peak achieved in the second quarter of 2014. Industrial space prices contracted by 0.1 per cent in the fourth quarter on a quarter-on-quarter basis, following from the 0.9 per cent contraction in the third quarter. For the whole of 2014, prices rose by 3.5 per cent, similar to the 3.2 per cent increase in 2013.

Likewise, industrial space rentals have softened, declining by 0.6 per cent on a quarter-on-quarter basis in the fourth quarter, extending the 1.8 per cent decline in the preceding quarter. For the whole year, rentals in the industrial space market fell by 2.1 per cent, a reversal from the 5.0 per cent increase in 2013. The decline was driven by private multiple-user factory space, which saw rentals fall by 0.7 per cent in 2014 (Exhibit 6.31).

Exhibit 6.31: Occupancy Rate and Rental Growth of Industrial Space



The weakness in rentals came on the back of an increased supply of available factory space. In particular, a net 530,000 sq m of available multiple-user factory space entered the market in 2014, significantly higher than the 338,000 sq m of space added the year before. With the increase in supply, occupancy rates of multiple-user factory space fell to 87 per cent, the lowest level recorded since 2006.

## PROFESSIONAL SERVICES

Growth of the professional services segment remained healthy in the fourth quarter. For the whole year, the segment was supported by strong growth in the business & management consulting segment, as well as the architectural and engineering services segment. The latter was in turn due to robust construction activities.

## 6.9 Overview of Sectors in 2014

### OVERALL ECONOMY

STRUCTURE OF ECONOMY	Nominal Value Added (% Share)	Real Growth (%)
<b>TOTAL</b>	100.0	<b>2.9</b>
<b>Goods Producing Industries</b>	25.0	<b>2.7</b>
Manufacturing	18.4	2.6
Construction	5.1	3.0
Utilities	1.4	2.1
Other Goods Industries	0.0	1.6
<b>Services Producing Industries</b>	70.4	<b>3.2</b>
Wholesale & Retail Trade	17.5	1.7
Transportation & Storage	6.9	1.7
Accommodation & Food Services	2.2	1.1
Information & Communications	4.0	3.6
Finance & Insurance	12.5	7.7
Business Services	15.8	2.9
Other Services Industries	11.5	2.4
<b>Ownership of Dwellings</b>	4.6	<b>4.3</b>

WHOLESALE & RETAIL TRADE	Nominal Value Added (% Share)	Real Growth (%)
<b>Wholesale &amp; Retail Trade</b>	100.0	<b>1.7</b>
Wholesale Trade	89.9	1.9
Retail Trade	10.1	0.0

ACCOMMODATION & FOOD SERVICES	Nominal Value Added (% Share)	Real Growth (%)
<b>Accommodation &amp; Food Services</b>	100.0	<b>1.1</b>
Accommodation	46.8	3.3
Food & Beverage	53.2	-0.6

TRANSPORTATION & STORAGE	Nominal Value Added (% Share)	Real Growth (%)
<b>Transportation &amp; Storage</b>	100.0	<b>1.7</b>
Land Transport*	20.5	2.0
Water Transport*	37.7	2.5
Air Transport*	21.9	-0.3
Storage & Other Support Services	17.0	1.3
Post & Courier	3.0	3.9

\*Including supporting services

### SECTORAL BREAKDOWN

MANUFACTURING	Nominal Value Added (% Share)	Real Growth (%)
<b>Manufacturing</b>	100.0	<b>2.6</b>
Electronics	26.8	-0.1
Chemicals	11.0	5.3
Biomedical Manufacturing	17.8	8.8
Precision Engineering	14.8	3.8
Transport Engineering	17.2	0.9
General Manufacturing Industries	12.5	-1.7

INFORMATION & COMMUNICATIONS	Nominal Value Added (% Share)	Real Growth (%)
<b>Information &amp; Communications</b>	100.0	<b>3.6</b>
Telecommunications	34.0	3.0
IT & Information Services	42.7	4.1
Others	23.3	3.7

FINANCE & INSURANCE	Nominal Value Added (% Share)	Real Growth (%)
<b>Finance &amp; Insurance</b>	100.0	<b>7.7</b>
Banking	51.4	<b>6.9</b>
Security Dealing	2.9	<b>-12.5</b>
Fund Management	10.5	<b>17.7</b>
Insurance	15.1	<b>15.6</b>
Others	20.1	<b>3.7</b>

OTHER SERVICES INDUSTRIES	Nominal Value Added (% Share)	Real Growth (%)
<b>Other Services Industries</b>	100.0	<b>2.4</b>
Public Administration & Defence	22.9	<b>1.6</b>
Education, Health & Social Work	50.8	<b>2.0</b>
Arts, Entertainment & Recreation	14.1	<b>3.2</b>
Others	12.2	<b>4.6</b>

BUSINESS SERVICES	Nominal Value Added (% Share)	Real Growth (%)
<b>Business Services</b>	100.0	<b>2.9</b>
Real Estate	33.5	<b>0.3</b>
Rental & Leasing	13.8	<b>8.1</b>
Legal	3.6	<b>2.5</b>
Accounting	2.5	<b>0.7</b>
Head Offices & Business Representative Offices	10.6	<b>-1.4</b>
Business & Management Consultancy	4.7	<b>6.5</b>
Architectural & Engineering	12.2	<b>3.2</b>
Other Professional, Scientific & Technical Services	7.9	<b>7.0</b>
Other Administrative & Support Services	11.2	<b>4.5</b>

# CHAPTER 7

## Economic Outlook







# CHAPTER 7

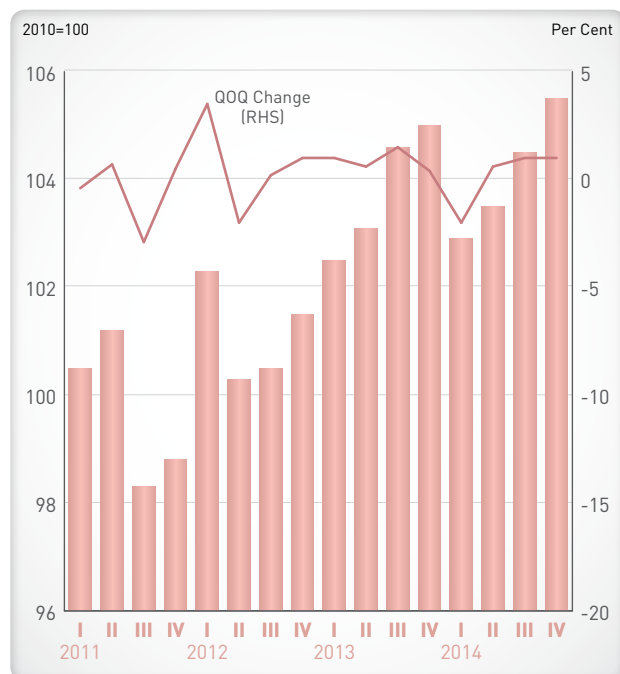
# ECONOMIC OUTLOOK

## LEADING INDICATORS

In the near term, the economic environment is expected to remain challenging, with the composite leading index (CLI) pointing to muted growth in the Singapore economy.

The CLI rose by 1.0 per cent on a quarter-on-quarter basis in the fourth quarter of 2014, similar to the increase of 1.0 per cent in the preceding quarter (Exhibit 7.1). Of the nine components within the index, five components increased compared to the previous quarter, namely, stock of finished goods, money supply, non-oil sea cargo handled, domestic liquidity, and new companies formed. On the other hand, three components – stock price, non-oil retained imports and wholesale trade – declined compared to a quarter ago. The US Purchasing Managers' Index remained flat.

Exhibit 7.1: Composite Leading Index Levels and Growth Rate



## OUTLOOK FOR 2015

The global economic outlook has softened in recent months, with growth in 2015 expected to come in only marginally better than in 2014 (Exhibit 7.2). The pace of recovery is also likely to remain uneven across the economies, with the US economy being the main bright spot. Growth in the US economy is expected to accelerate in 2015, supported by domestic demand. However, growth in the Eurozone is expected to remain weak, due to sluggish labour market conditions and deflationary pressures. China's growth is also expected to ease further in 2015 on the back of sluggish real estate activities, although the slowdown is likely to be contained. Furthermore, while the recent plunge in oil prices could benefit oil-importing economies, it has dampened growth prospects in oil-exporting economies.

Exhibit 7.2: GDP and World Trade Forecasts

	2014 (Estimate)	2015 (Forecast)
<b>World Trade</b>	3.1	<b>3.8</b>
<b>World GDP</b>	3.3	<b>3.5</b>
<b>United States</b>	2.4	<b>3.2</b>
<b>Eurozone</b>	0.8	<b>1.2</b>
<b>Japan</b>	0.2	<b>1.3</b>
<b>China</b>	7.4	<b>7.0</b>
<b>Hong Kong SAR</b>	2.2	<b>2.7</b>
<b>South Korea</b>	3.3	<b>3.4</b>
<b>Taiwan</b>	3.5	<b>3.6</b>
<b>Indonesia</b>	5.0	<b>5.3</b>
<b>Malaysia</b>	5.8	<b>4.8</b>
<b>Thailand</b>	0.6	<b>3.7</b>
<b>Singapore</b>	2.9	<b>2.0 – 4.0<sup>^</sup></b>

Source: Various Official Sources, IMF and Consensus Forecast

<sup>^</sup> MTI's forecast range

At the same time, the external outlook remains clouded with significant downside risks and uncertainties. In the Eurozone, slow growth and persistent low inflation have heightened fears that the Eurozone will fall into a deflationary spiral. In China, there is the risk of a sharp correction in the real estate market, which could have severe negative spill-over effects on construction and real estate investment activities. This could in turn lead to a sharper-than-expected slowdown in the Chinese economy. In the US, there are lingering uncertainties over when and the pace at which the Federal Reserve (Fed) will raise the Fed Funds rate. An unexpected tightening of monetary conditions could weigh on US' financial markets and business sentiments. Finally, with the sharp correction in commodity prices and recent capital outflows from emerging markets, there may be fiscal and financial stresses in some emerging market economies.

Amidst this challenging global economic environment, externally-oriented sectors such as the manufacturing and wholesale trade sectors are likely to face headwinds. Domestically, the labour market is expected to remain tight, with low unemployment and rising vacancy rates. As a result, labour-intensive sectors such as construction, retail and food services may see their growth weighed down by labour constraints. Nonetheless, other domestically-oriented sectors such as business services are expected to remain resilient.

Taking into account the above factors, and barring the full materialisation of downside risks, the Singapore economy is expected to grow at a modest pace of **2.0 to 4.0 per cent** in 2015.

○ **FEATURE  
ARTICLE**





Res URate

1Q 2010: 3.2%

1Q 2011: 2.7%



Inclusive  
Growth

social  
capital

Income  
mobility

# PROGRESSIVE SOCIETY

Demographics

skills &  
Education



# FEATURE ARTICLE

## DRIVERS OF LABOUR PRODUCTIVITY GROWTH TRENDS IN SINGAPORE

Labour productivity grew by 2.5% per annum from 2009 to 2014

### Shift-Share Analysis

Productivity improved within most sectors, but productivity growth of **domestically-oriented sectors** lagged behind that of **export-oriented sectors**

Sectors with highest productivity growth:



Biomedical Manufacturing



Precision Engineering



Transport Engineering

Overall labour productivity has been weighed down by a shift in employment towards **less productive sectors**



Lower employment growth in more productive sectors such as Transportation & Storage

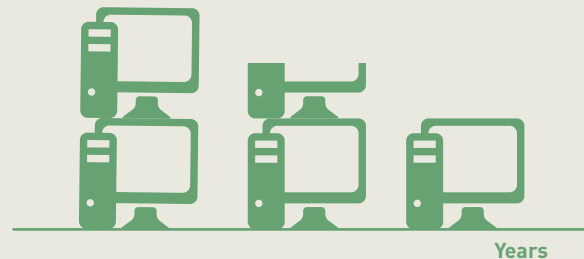


Higher employment growth in less productive sectors such as Food & Beverage Services and Construction

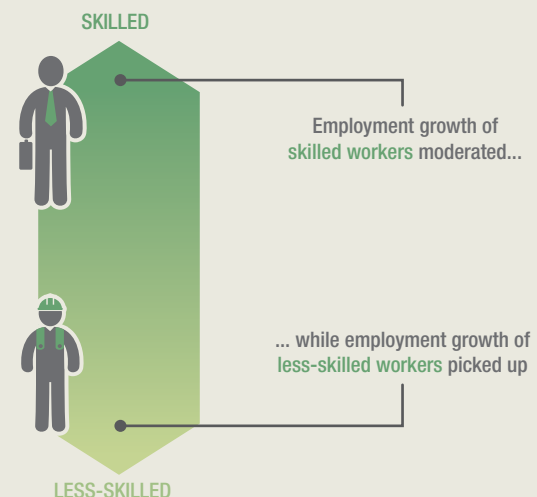
### Growth Accounting Analysis

**Capital intensity** (i.e., capital per worker) and labour quality improvements supported productivity growth from 2009 to 2013

However, there are signs of a slowdown in **capital intensity** gains (e.g., in terms of machinery & equipment growth) in recent years



**Labour quality** improvements also slowed



## OVERVIEW

- This article examines the drivers of Singapore's labour productivity growth in recent years.
- First, using shift-share analysis, we find that Singapore's labour productivity growth from 2009 to 2014 was driven by productivity improvements in most sectors, especially export-oriented sectors. However, the gains were partially offset by a shift in employment towards less productive sectors, including Construction and Food & Beverage Services.
- Second, using growth accounting analysis, we find that capital intensity (i.e., capital per worker) and labour quality improvements supported productivity growth over the period of 2009 to 2013. However, there are signs of a slowdown in capital intensity gains (e.g., in terms of machinery & equipment growth), as well as labour quality improvements in more recent years.

*The views expressed in this paper are solely those of the authors and do not necessarily reflect those of the Ministry of Trade and Industry or the Government of Singapore.*

## INTRODUCTION

Since 2010, the National Productivity Council (NPC) has spearheaded Singapore's productivity efforts, with the target of achieving productivity growth of 2 to 3 per cent per annum over the decade.<sup>1</sup> Between 2009 and 2014, overall productivity growth for the economy came in at a compounded annual growth rate (CAGR) of 2.5 per cent, although most of the gains can be attributed to the strong rebound in 2010 following the Global Financial Crisis (GFC). Excluding 2010, productivity growth has been lacklustre, at 0.3 per cent on a CAGR basis

This article examines the drivers of Singapore's productivity growth in recent years from two perspectives. The first is through a shift-share analysis to examine the extent to which Singapore's productivity growth was due to productivity changes within sectors, or shifts in employment across sectors with different productivity levels. The second is through a growth accounting analysis to examine how changes in capital intensity and labour quality have affected labour productivity growth.

## SHIFT-SHARE ANALYSIS OF LABOUR PRODUCTIVITY GROWTH: AN UPDATE

An earlier shift-share analysis found that between 2008 and 2013, Singapore's productivity growth was supported by productivity growth within sectors, but weighed down by a shift in employment towards less productive sectors.<sup>2</sup> This section updates the analysis using the most recent data. In particular, we examine labour productivity growth over three 5-year periods: 1999-2004, 2004-2009 and 2009-2014.

### Methodology

Using shift-share decomposition, overall labour productivity growth<sup>3</sup> in the economy may be expressed as the sum of three effects:

- Within Effect: the contribution of productivity growth within sectors to overall productivity growth;
- Static Shift Effect: the contribution of changes in the employment shares of sectors with *different productivity levels* to overall productivity growth; and
- Dynamic Shift Effect: the contribution of changes in the employment shares of sectors with *different productivity growth rates* to overall productivity growth.

<sup>1</sup> The target was set by the Economic Strategies Committee (ESC), and had the base year of 2009.

<sup>2</sup> See Goh (2014).

<sup>3</sup> It should be noted that in the shift-share analysis, labour productivity growth over a period is computed as annual averages, and not in CAGR terms. As such, the figures may not match the productivity growth figures reported in the first paragraph.

In equation form, this can be represented as:

$$\frac{P_t - P_{t-1}}{P_{t-1}} = \sum_{i=1}^n \left[ \left( \frac{P_{it} - P_{it-1}}{P_{it-1}} \right) \times \frac{Y_{it-1}}{Y_{t-1}} \right] + \sum_{i=1}^n \left[ \left( \frac{P_{it-1}}{P_{t-1}} \right) \times \left( \frac{L_{it}}{L_t} - \frac{L_{it-1}}{L_{t-1}} \right) \right] + \sum_{i=1}^n \left[ \left( \frac{P_{it} - P_{it-1}}{P_{t-1}} \right) \times \left( \frac{L_{it}}{L_t} - \frac{L_{it-1}}{L_{t-1}} \right) \right]$$

Where  $P_t$  is the productivity level of the economy in period  $t$ ;

$Y_t = \sum_{i=1}^n Y_{it}$  is the total VA of the economy in period  $t$ ;

$L_t = \sum_{i=1}^n L_{it}$  is the total employment of the economy in period  $t$ ; and

$i = 1, \dots, n$  is the  $i^{th}$  sector in the economy.

## Findings

### Overall

From 2009 to 2014, Singapore's labour productivity grew by 2.6 per cent per year on average, reversing the decline of 1.0 per cent per year in the previous five years.<sup>4</sup> As shown in Exhibit 1, productivity growth was supported by higher productivity growth within sectors (i.e., positive Within Effect), but dampened by an increase in employment shares in less productive sectors relative to more productive sectors (i.e., negative Static Shift Effect):

- **Within Effect:** Productivity improvements in the different sectors contributed 3.1 percentage-points to overall productivity growth each year on average over this period. This was a marked improvement from the previous 5-year period (-0.2 percentage-points each year), but still lower compared to the earliest 5-year period (+3.5 percentage-points each year).
- **Static Shift Effect:** The increase in employment shares of less productive sectors reduced overall productivity growth by 0.2 percentage-points each year on average in the last five years. While this was comparable to the Static Shift Effect of -0.3 percentage-points per year in the previous 5-year period, it was a reversal of the trend in the earliest 5-year period (+0.7 percentage-points each year).
- **Dynamic Shift Effect:** This effect was negative in all three 5-year periods, although the magnitude was very small (lower than -0.05 percentage-points each year).

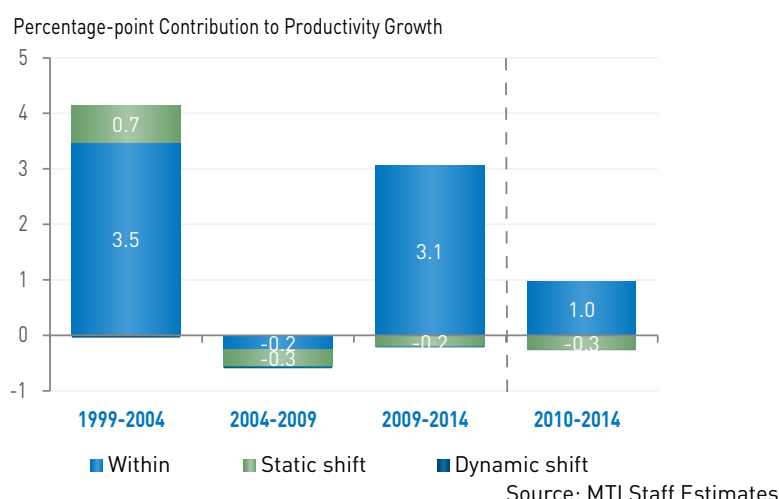
However, a further examination of the trends within the latest 5-year period (2009-2014) reveals that the positive Within Effect was mainly due to the productivity boost in 2010 on the back of the economic recovery from the GFC.<sup>5</sup> The Within Effect since 2010 was less positive (+1.0 percentage-point each year), even as the Static Shift Effect remained negative (-0.3 percentage-points each year) and continued to weigh on productivity growth.

<sup>4</sup> The figures here refer to annual averages. Using CAGRs, the corresponding figures would be 2.5 per cent and -1.1 per cent over 2009-2014 and 2004-2009 respectively.

<sup>5</sup> Overall productivity improved by 11.6 per cent in 2010. From 2010 to 2014, overall productivity grew marginally, at an average rate of 0.3 per cent.



**Exhibit 1: Decomposition of Labour Productivity Growth<sup>6</sup>**



### Within Effects

Our key observations for the period from 2009 to 2014 are as follows:

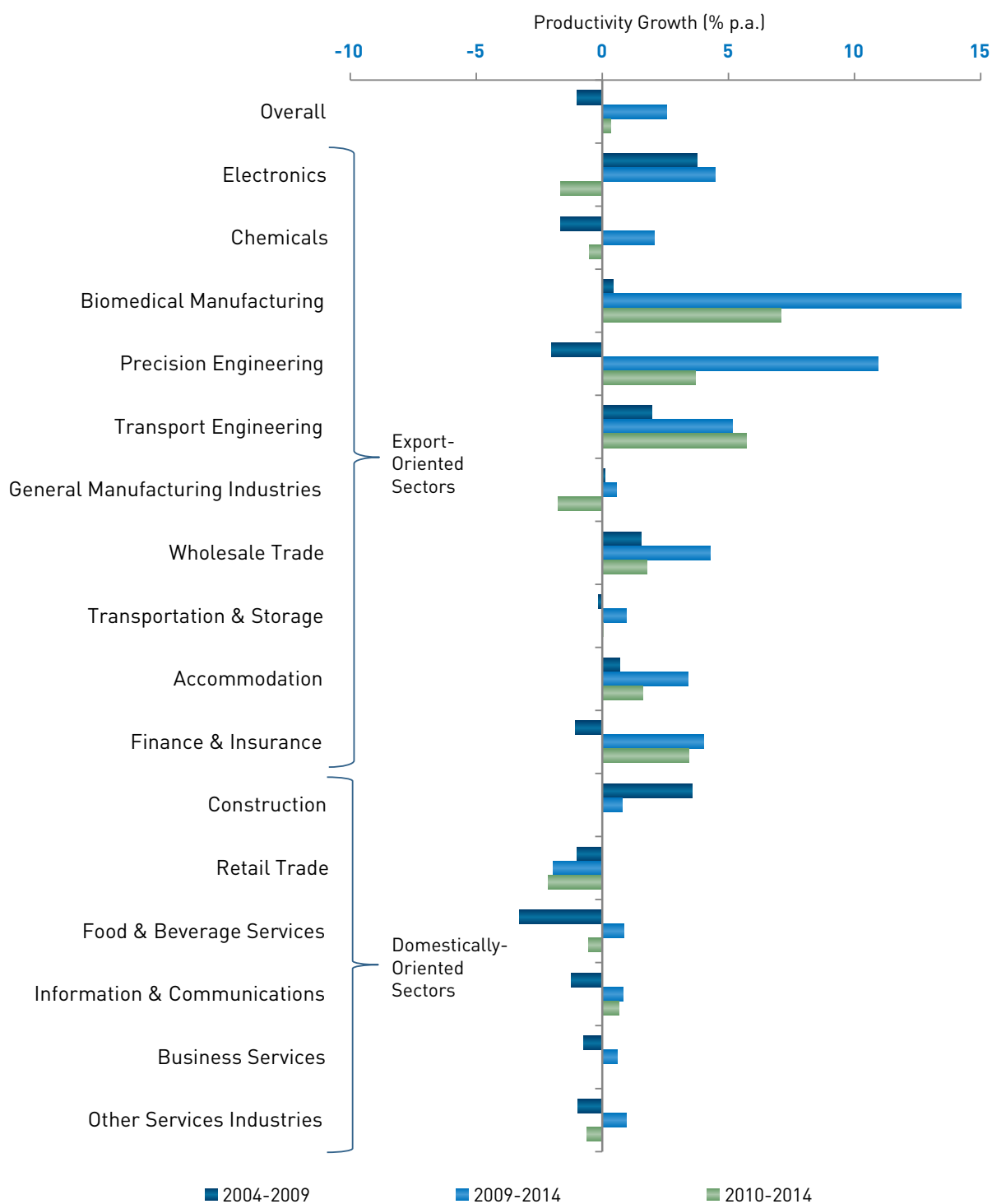
- The Within Effect over the period was supported by productivity growth in most sectors, except for Retail Trade.
- Compared to the preceding five years, the average productivity growth of most sectors was higher. However, the picture is mixed when compared against the earliest 5-year period — while the average productivity growth of sectors like Biomedical Manufacturing, Precision Engineering, Transport Engineering and Finance & Insurance improved in the most recent five years, that of sectors like Electronics and Information & Communications was lower.
- The productivity performance of export-oriented and domestically-oriented sectors differed significantly over the period, with the productivity growth of domestically-oriented sectors (0.8 per cent per year on average) lagging behind that of export-oriented sectors (5.3 per cent per year average) (Exhibit 2).<sup>7</sup>
  - Excluding the rebound year of 2010, the trends remained the same. Between 2010 and 2014, the productivity of export-oriented sectors grew by 2.2 per cent per year on average, driven by the Biomedical Manufacturing, Precision Engineering and Transport Engineering sectors. By contrast, the productivity of domestically-oriented sectors fell by 0.1 per cent per annum on average, with the sharpest decline seen in the Retail Trade sector.
- The stronger productivity performance of the export-oriented sectors should not come as a surprise, as exporting firms have to constantly improve their products and processes in order to compete globally. Another possible reason is that firms which are able to expand to overseas markets are likely to be more productive in the first place.<sup>8</sup>

<sup>6</sup> The Within Effect, Static Shift Effect and Dynamic Shift Effect do not sum up to overall productivity growth as they exclude the contribution of ownership of dwellings and taxes on products.

<sup>7</sup> The classification of a sector as export- or domestically-oriented is determined based on its export share of total output as estimated using the 2010 Input-Output tables and tourism receipts. This finding is similar to the results of an earlier analysis for the period from 2010 to 2013 (Economics Division, Ministry of Trade & Industry, 2014).

<sup>8</sup> See Bernard and Jensen (2004), and Clerides, Lach and Tybout (1998).

Exhibit 2: Average Sectoral Productivity Growth (2004-2009, 2009-2014, 2010-2014)



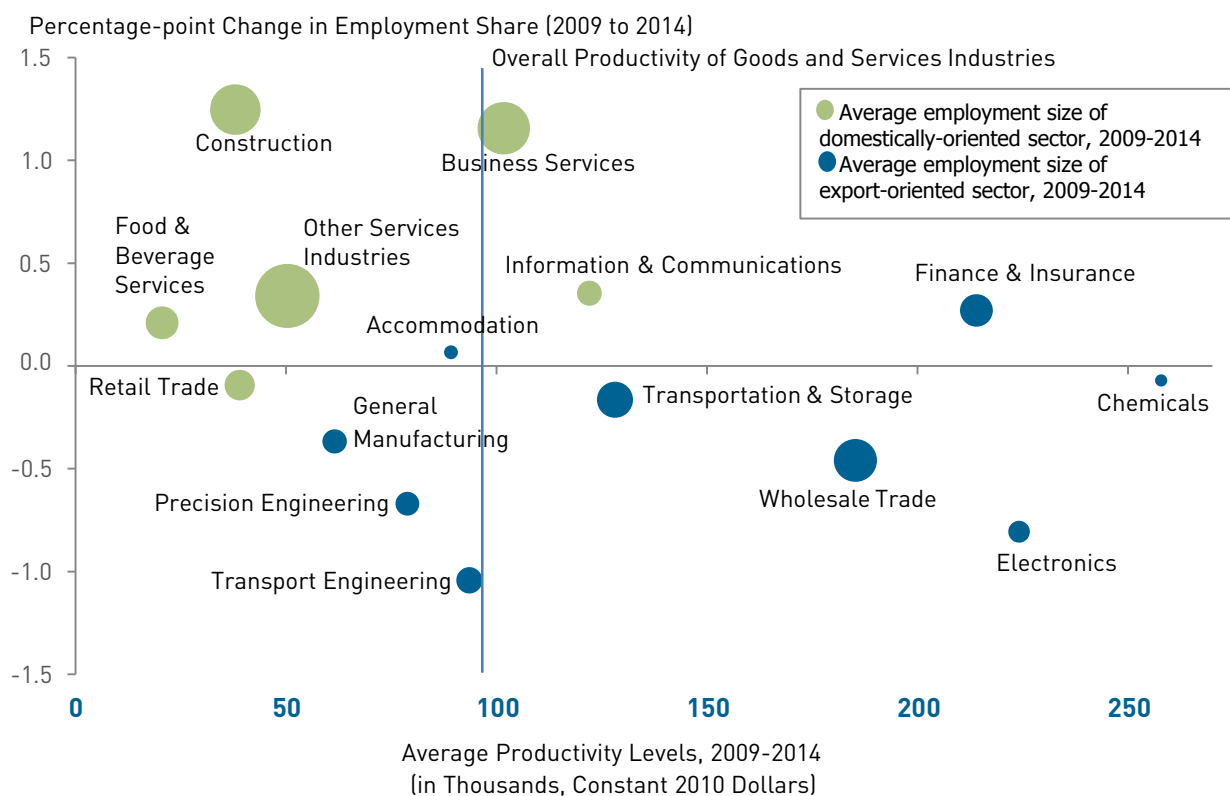
Source: Singapore Department of Statistics and MTI Staff Estimates

## Static Shift Effects

- From 2009 to 2014, the share of workers employed in less productive, domestically-oriented sectors generally increased relative to that in the more productive, export-oriented sectors, thus weighing down overall productivity growth (Exhibit 3). In particular, we observe the following:
- Export-oriented sectors that were more productive than the overall economy like Transportation & Storage, Wholesale Trade, Electronics and Chemicals saw a decline in their employment shares. While most of these sectors saw employment growth over the period, their employment gains were insufficient to offset the employment growth in the less productive sectors, thus resulting in a shift in employment share towards the latter.
- On the other hand, there was an increase in the employment share of domestically-oriented sectors that were less productive than the overall economy like Construction, Food & Beverage Services and Other Services Industries. There could be a few reasons for this. First, employment growth in the Construction sector was strong due to the ramp-up in building and infrastructural works in recent years (e.g., public housing and new MRT lines). Second, more previously economically-inactive older, as well as less-educated locals have entered the workforce in recent years,<sup>9</sup> possibly incentivised by schemes such as the Workfare Income Supplement (WIS) scheme.<sup>10</sup> As the barriers to entry in some of the less productive sectors (e.g., Food & Beverage Services) are lower, it may have been easier for these workers to enter these sectors. Third, to cater to the needs of our population, the healthcare and social services sectors (classified under Other Services Industries) have seen an expansion of their manpower needs.

Excluding 2009, the trends highlighted above remain similar for the period of 2010-2014.

Exhibit 3: Static Shift Effects by Sectors<sup>11</sup>



Source: MTI Staff Estimates

<sup>9</sup> Between 2009 and 2014, the labour force participation rate of residents aged 25 to 64 increased from 79.9 per cent to 82.3 per cent, while that of residents aged 65 and above increased from 17.2 per cent to 25.2 per cent.

<sup>10</sup> An earlier study by Leong et al (2014) found that WIS encouraged less-educated Singaporeans, especially those who were older, to enter the workforce between 2007 to 2010. The WIS was subsequently enhanced in 2013.

<sup>11</sup> The Biomedical Manufacturing sector is not shown to improve readability as its average productivity level (2009-2014) exceeded that of other sectors by a large amount. Its change in employment share from 2009 to 2014 was marginal.

## Summary

Singapore experienced higher labour productivity growth between 2009 and 2014, as compared to the earlier period of 2004 to 2009. Overall productivity growth was supported by productivity growth in most sectors, with the export-oriented sectors experiencing higher productivity growth than the domestically-oriented ones. However, overall productivity growth was dampened by a shift in employment share towards less productive sectors such as Construction.

Our findings have two broad policy implications. First, to boost overall productivity growth, there is a need for the Government to continue to drive productivity improvements within the sectors, especially the domestically-oriented ones. Second, the Government should continue with efforts to restructure our economy towards more productive sectors, and to equip Singaporeans with the skills to enter these sectors, in order to arrest the negative shift effect.

## GROWTH ACCOUNTING ANALYSIS OF LABOUR PRODUCTIVITY GROWTH

Capital intensity and labour quality are important determinants of labour productivity growth. A higher level of capital intensity means that each worker has more machines and technology to work with, thereby enabling them to be more productive. A higher quality workforce is also more productive as better trained workers may be more efficient and are also able to produce higher value-added products.

These two factors are also pertinent in our current push towards productivity-driven growth. At the firm level, the Government has introduced several tax incentives and grants since 2010 to encourage firms to innovate and make more capital investments. At the worker level, the Government is investing heavily in pre-employment and continuing education & training (CET) to upskill the quality of the workforce.

In this section, we use a growth accounting approach to examine changes in capital intensity (i.e., capital per worker) and labour quality in the economy in recent years, and determine how they have affected labour productivity growth

### Methodology

We adopt a traditional growth accounting approach to analyse labour productivity growth over two decades from 1993 to 2013.<sup>12</sup> Productivity growth is decomposed into contributions from capital intensity, labour quality and Total Factor Productivity (TFP). TFP - which can be taken as a measure of the impact of the use of more efficient technologies and business practices on productivity growth - is computed as a residual in our analysis.

We model the economy using a Cobb-Douglas production function with constant returns to scale:

$$Y = A \cdot \prod_i L_i^{b_i} \cdot \prod_j K_j^{c_j}$$

Where Y = real output;

A = Total Factor Productivity (TFP);

$L_i$  = employment of  $i^{\text{th}}$  type of labour;

$b_i$  = share of output of the  $i^{\text{th}}$  type of labour;

$K_j$  = net stock of  $j^{\text{th}}$  type of capital;

$c_j$  = share of output of  $j^{\text{th}}$  type of capital; and

$\sum_i b_i + \sum_j c_j = 1$  (i.e., constant returns to scale)

<sup>12</sup> We are not able to analyse productivity growth in 2014 as capital stock data for 2014 is not available yet. Capital stock data for earlier years may also be revised when 2014 capital stock data is available.



Under the standard neoclassical assumptions of competitive markets where inputs are paid their marginal products, output growth will be approximately a function of the weighted growth in inputs and TFP growth:

$$\Delta Y \approx \sum_i b_i \Delta L_i + \sum_j c_j \Delta K_j + \Delta A$$

Labour productivity growth can then be decomposed into the three components as represented in the equation below:

$$\Delta \frac{Y}{L} \approx S_L \cdot \sum_i (s_i - l_i) \Delta L_i + \sum_j c_j \left( \Delta \frac{K_j}{L} \right) + \Delta A$$

Productivity growth  $\approx$  Contribution from changes in labour quality + Contribution from changes in capital intensity + Contribution from TFP

Where  $S_L$  = total wage share of output;  
 $s_i$  = wage share of  $i^{\text{th}}$  type of labour out of total wages; and  
 $l_i$  = employment share of  $i^{\text{th}}$  type of labour

In this study, we examine the contributions from five types of capital, viz, Machinery & Equipment, Computer Software, Research & Development (R&D), Transport Equipment, and Construction & Works. As the focus of the study is on capital stock used by firms for production, residential buildings are excluded from Construction & Works. Correspondingly, the imputed ownership of residential dwellings is also removed from the productivity computation. To estimate the share of output of the different capital types, we compute their user costs based on their respective market values, depreciation rates and the relevant prevailing cost of financial capital.

For labour quality, we categorise labour into skilled and less-skilled labour based broadly on their occupation types. The quality for each type of labour is proxied by its average wage. When the number of skilled workers increases faster than that of less-skilled workers, overall labour quality improves, contributing positively to labour productivity growth. Conversely, if the number of less-skilled workers rises faster than the number of skilled workers, labour quality deteriorates and dampens productivity growth.

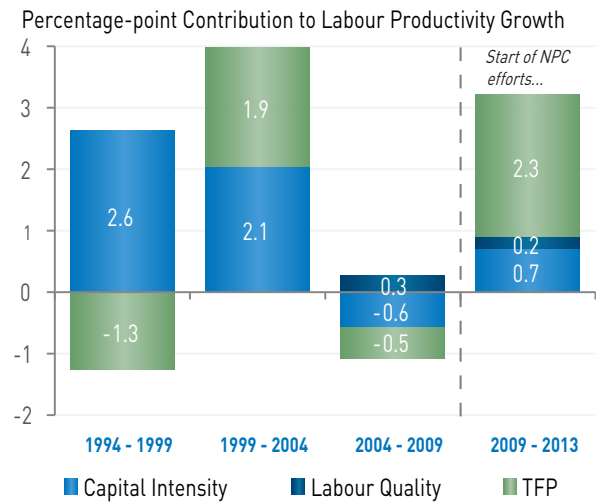
### Decomposition of overall labour productivity growth

We find that from 2009 to 2013, capital intensity, labour quality as well as TFP all contributed positively to productivity growth (Exhibit 4):

- Capital intensity improvements contributed an average of 0.7-percentage points to productivity growth each year from 2009 to 2013, compared to the downward drag of 0.6 percentage-points each year in the earlier five years. Nonetheless, this was still lower than the contributions seen in the mid-1990s to mid-2000s, when growth in capital intensity contributed an average of 2.1 to 2.6 percentage-points to productivity growth each year.
- Labour quality improvements contributed an average of 0.2 percentage-points to productivity growth per year from 2009 to 2013. This was similar to the contribution of labour quality in the earlier five years (+0.3 percentage-points).<sup>13</sup>
- TFP is estimated to have contributed an average of 2.3 percentage-points to productivity growth per year over this period, higher than its contribution in the preceding 5-year period (-0.5 percentage-points). This suggests that technological progress and improvements in processes and business practices may have been a key driver of productivity growth in the latest period.

<sup>13</sup> We are not able to estimate the impact of labour quality in the earlier years as data is not available. The effects of labour quality were hence subsumed under TFP in the first two five-year periods (1994 – 2004).

**Exhibit 4: Contributions from Capital Intensity and Labour Quality to Labour Productivity Growth<sup>14</sup>**

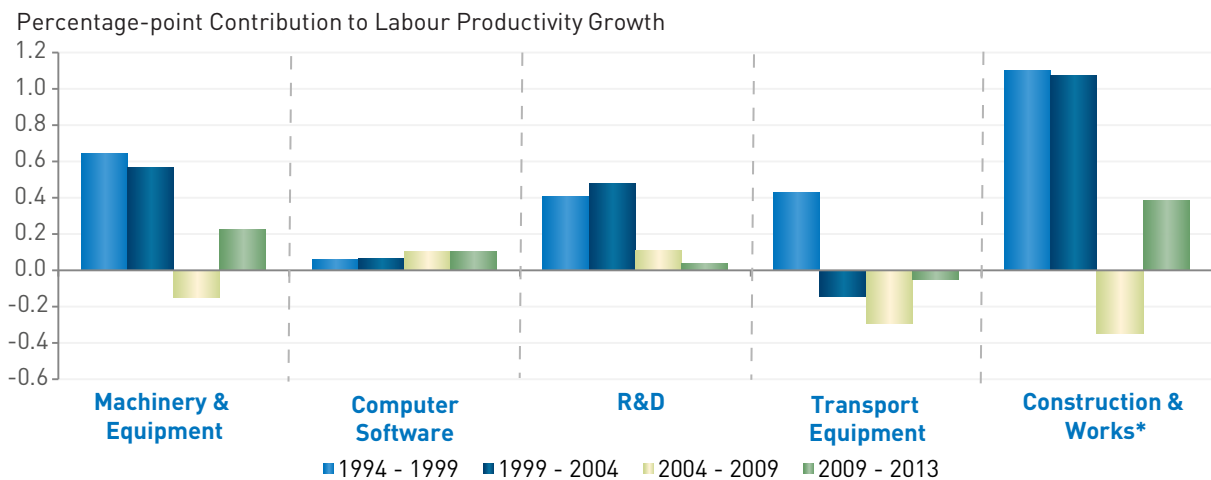


### Contribution from capital intensity

Next, we delve deeper into the contribution of capital intensity by different capital types. Looking at the latest period from 2009 to 2013 (Exhibit 5), we find that the results differed across the various types of capital:

- Contributions from Machinery & Equipment (M&E) and Construction & Works (excluding residential buildings) improved in the latest period as compared to the previous 5-year period. In particular, the rebound in the contribution from Construction & Works (excluding residential buildings) was in line with the step-up in infrastructure projects in recent years.
- Contributions from Computer Software and R&D fell when compared to the previous 5-year period, but remained positive. On the other hand, the contribution from Transport Equipment remained negative in the latest period.

**Exhibit 5: Contribution from Capital Intensity to Labour Productivity Growth, 1994 – 2013**



\*Residential buildings are excluded

<sup>14</sup> The contributions from three components – capital intensity, labour quality and TFP – will not sum up to productivity growth for the overall economy as ownership of residential dwellings has been removed from the productivity computation.

However, examining the trends within the latest period (2009-2013) in greater detail, we observe a decline in the contribution from M&E, as the growth in M&E capital stock moderated from 6.1 per cent in 2010 to 4.3 per cent in 2013.

The moderation in the growth of the M&E capital stock may have been caused by firms becoming more cautious due to uncertainties in the global economy. Globally, we note that there has also been a slowdown in capital expenditure in M&E. For example, in the US, real private investments in M&E fell from 9.0 per cent in 2010 to 4.7 per cent in 2013; while in Germany, it fell from 10.1 per cent to -1.9 per cent. Similarly, Standard & Poor's has reported a decline in the growth of global non-financial corporate capital expenditure, from 10 per cent in 2011 to 6 per cent in 2012 and -1 per cent in 2013.<sup>15</sup> Slower growth in investments and corporate expenditure may have occurred as firms cut down on investments on the back of lower expectations of future profits. In Singapore, the presence of government schemes to help firms invest in machinery and equipment may have helped to offset in part the negative impact of uncertainties on firms' investments.

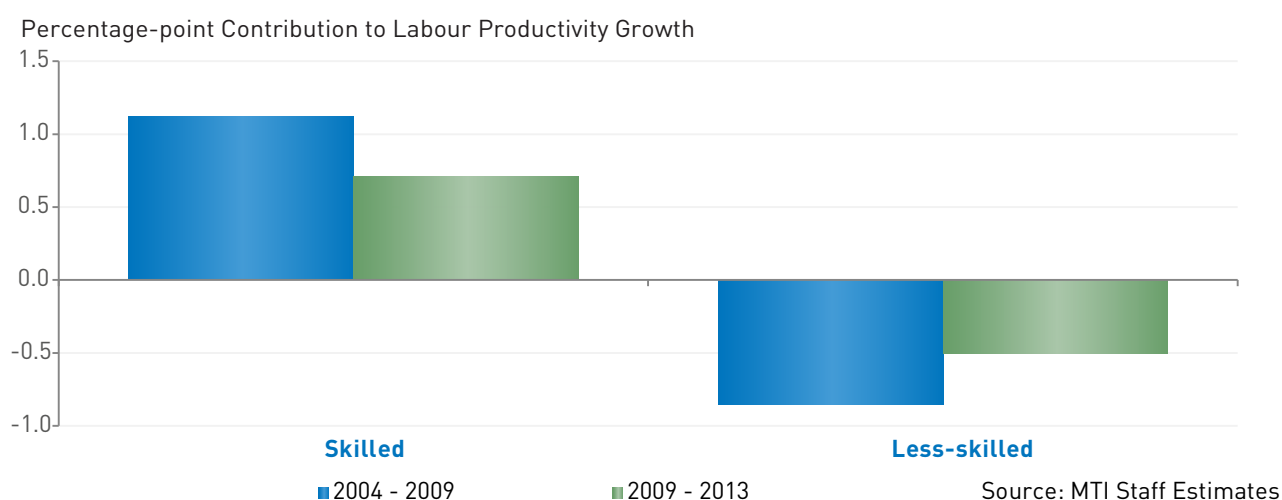
### Contribution from labour quality

Turning to labour quality, we find that for the period from 2009 to 2013, the contribution from labour quality to productivity growth was positive, at around 0.2 percentage-points per year. The improvement in labour quality over the period came about in spite of a slowdown in the employment growth of skilled workers, as the employment growth of less-skilled workers had slowed down by more (Exhibit 6).

However, examining the trends within the period in greater detail, we observe that the rate of improvement in labour quality has declined. This was due to a pick-up in the employment growth of less-skilled workers in more recent years, even as the employment growth of skilled workers moderated.

The increase in less-skilled workers in recent years may in part be due to the manpower needs of the construction sector, as well as the entry of less-skilled Singaporeans into the workforce. Specifically, the construction sector expanded substantially in the last few years with the step-up in building and infrastructure projects. This led to an expansion in the number of less-skilled foreign workers in the workforce. At the same time, as mentioned earlier in the shift-share analysis, less-educated Singaporeans have also been encouraged to enter the workforce amidst a tight labour market, possibly incentivised by schemes such as the WIS.

**Exhibit 6: Contribution from Labour Quality to Labour Productivity Growth, 2004 – 2013**



<sup>15</sup> See Standard & Poor's Rating Services (2014). Figures in the report are rounded to the nearest whole number.

## Summary

Using growth accounting analysis, we find that improvements in capital intensity, labour quality and TFP contributed positively to overall labour productivity growth between 2009 and 2013. However, delving more deeply into the trends within the period, we find that contribution from capital intensity, especially in terms of M&E capital, has declined in more recent years. The weakness in M&E mirrors the trends seen globally, and could be partly attributed to global economic uncertainties. In this climate, Government schemes to encourage firms to invest in machinery and equipment may be even more pertinent.

Similarly, contributions from labour quality improvements have declined in more recent years, in part due to the strong growth in less-skilled workers in the construction sector, even as the growth in skilled workers in the economy tapered. However, as the construction sector presses ahead with efforts to raise its productivity, and the skills profile of Singaporeans improves with our pre-employment and CET efforts, we expect labour quality to improve over time.

## CONCLUSION

Between 2009 and 2014, productivity growth has come in within the 2-3 per cent target set by the Economic Strategies Committee. However, excluding the 2010 rebound, productivity growth in the most recent four years from 2010 to 2014 has been lacklustre. This article suggests four reasons for this:

- First, productivity of domestically-oriented sectors has remained weak, lagging behind that of externally-oriented sectors.
- Second, productivity has been weighed down by a shift in employment towards less productive sectors, with higher employment growth in sectors like Construction relative to more productive sectors like Transportation & Storage.
- Third, capital intensity growth has slowed in more recent years, weighed down in particular by the slowdown in M&E capital growth.
- Lastly, improvements in labour quality may have also fallen in more recent years, due to faster growth in the number of less-skilled workers in the economy relative to skilled workers. The former was in turn partly due to an increase in the workforce of the Construction sector.

To improve our overall productivity, we must press on with efforts to restructure the economy towards more productive sectors. We also need to continue to equip our workforce with the skills needed to take on higher value-added jobs in the economy, while helping companies to invest in capital and improve their technological and business process capabilities.

*Contributed by:*

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