Korea
Economy and Industry Overview

Corporate Research Division (Hong Kong)
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1. Overview of Korea Economy
### Overview of Korea Economy

<table>
<thead>
<tr>
<th>Year</th>
<th>Real GDP (KRW trillion)</th>
<th>Nominal GDP (KRW trillion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>603</td>
<td>300</td>
</tr>
<tr>
<td>2001</td>
<td>651</td>
<td>330</td>
</tr>
<tr>
<td>2002</td>
<td>721</td>
<td>360</td>
</tr>
<tr>
<td>2003</td>
<td>767</td>
<td>390</td>
</tr>
<tr>
<td>2004</td>
<td>876</td>
<td>420</td>
</tr>
<tr>
<td>2005</td>
<td>920</td>
<td>450</td>
</tr>
<tr>
<td>2006</td>
<td>966</td>
<td>480</td>
</tr>
<tr>
<td>2007</td>
<td>1,043</td>
<td>510</td>
</tr>
<tr>
<td>2008</td>
<td>1,104</td>
<td>540</td>
</tr>
<tr>
<td>2009</td>
<td>1,152</td>
<td>570</td>
</tr>
<tr>
<td>2010</td>
<td>1,265</td>
<td>600</td>
</tr>
<tr>
<td>2011</td>
<td>1,333</td>
<td>630</td>
</tr>
<tr>
<td>2012</td>
<td>1,377</td>
<td>660</td>
</tr>
<tr>
<td>2013</td>
<td>1,429</td>
<td>690</td>
</tr>
<tr>
<td>2014</td>
<td>1,485</td>
<td>720</td>
</tr>
<tr>
<td>2015</td>
<td>2.6%</td>
<td>750</td>
</tr>
</tbody>
</table>

#### Quarterly GDP Trend ~ The growth rate slightly improved in 4Q15

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Real GDP Growth (YoY, %)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4Q13</td>
<td>3.5</td>
</tr>
<tr>
<td>1Q14</td>
<td>3.9</td>
</tr>
<tr>
<td>2Q14</td>
<td>3.4</td>
</tr>
<tr>
<td>3Q14</td>
<td>3.3</td>
</tr>
<tr>
<td>4Q14</td>
<td>2.7</td>
</tr>
<tr>
<td>1Q15</td>
<td>2.5</td>
</tr>
<tr>
<td>2Q15</td>
<td>2.2</td>
</tr>
<tr>
<td>3Q15</td>
<td>2.7</td>
</tr>
<tr>
<td>4Q15</td>
<td>3.0</td>
</tr>
</tbody>
</table>

### GDP Growth Trend

Annual GDP growth slowed down due to weak export and softened manufacturing, while recent quarterly GDP improved slightly.

- Korea economy, as a mature economy, posted low single-digit growths since 2012.
- In 2015, although real GDP growth remained positive, it slowed down to 2.6% YoY from 3.3% YoY in 2014.
- Slowdown in annual GDP was largely due to weak export and decelerated manufacturing.

- Quarterly GDP growth in YoY terms maintained to rise modestly in 4Q15 due to improvement in private consumption and construction sectors.
- However, it is too early to determine the growth is on the solid rising trajectory due to lackluster major economic drivers of cautious manufacturing and weak export.

(Note) 1. Preliminary data was used for 2015  
2. Due to the change of System of National Accounts, GDP figures were restated from 2000
(Source) Bank of Korea (“BOK”)
Regarding production activity, manufacturing accounted for 28.6% of total real GDP followed by retail and food hospitality (10.4%) in 4Q15. Besides, finance & insurance and construction accounted for 5.7% and 4.5% respectively.

In 4Q15, quarterly GDP growth trend in YoY terms maintained a modest rise. It was supported by improvement in construction and manufacturing compared with the growths in the previous quarter. Also, retail and food hospitality sector saw improvement.

(Note) 1. Preliminary data was used from 1Q14-3Q15 and advanced estimate data was used for 4Q15
2. Others include real estates & leasing, public admin & defense, information and telecommunication, educational service, business service and etc
3. Due to the change of System of National Accounts, restated GDP figures were used

(Source) BOK
Recent quarterly GDP growth was supported by construction investment and private consumption. Regarding expenditure, private consumption accounted for 47.2% of total real GDP in 4Q15 followed by construction investment (14.8%), government consumption (14.4%), and plant & equipment investment (9.4%). Besides, net export shared 6.2% of total real GDP as export accounted for 55.8%, while import accounted for 49.6%.

In 4Q15, rising trend in YoY terms was due to further growths in private consumption and construction investment. Export grew in real term largely owing to appreciation of USD.

(Note) 1. Preliminary data was used from 1Q14-3Q15 and advanced estimate data was used for 4Q15
2. Others include intangible fixed asset investment, other gross capital formation and statistical discrepancy
3. Due to the change of System of National Accounts, restated GDP figures were used
(Source) BOK
2. Korean Economic Indicator and Outlook
2. Korean Economic Indicator and Outlook

<Export Condition> Export value declined as export unit price dropped affected by low oil price and softened China demand

Korea’s total export in nominal terms declined by -8.0% YoY to USD 526,757 million in 2015.

- By product, semiconductor accounted for 11.9% of total export followed by general machinery (8.9%), automobile (8.7%), shipyard (7.6%), petrochemical (7.2%) and petroleum (6.1%).

- By destination, export to China accounted for 26.0% of total export followed by US (13.3%), ASEAN-5 (11.0%), EU (9.1%) and Japan (4.9%).

In 2015, while export volume still grew albeit a slower pace, export value faltered due to decline in export unit price dragged by drop in oil price. Under the circumstances, export value to major destinations posted negative growths. Particularly, further slow growth in China economy has led to a weak export. Export to US edged down due to weak demand in certain products such as steel products. Exports to EU and Japan were further pressured by depreciation of their local currencies.

### Total Export and Growth Rate

![Total Export and Growth Rate Chart](chart1.png)

(Source) CEIC

### Fx Rate (KRW/USD and JPY/USD)

![Fx Rate Chart](chart2.png)

(Source) Bloomberg

### Export Growth by Major Destinations (Value in USD base)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>China</td>
<td>24.4</td>
<td>12.2</td>
<td>18.0</td>
<td>11.5</td>
<td>-5.1</td>
<td>34.8</td>
<td>14.8</td>
<td>0.1</td>
<td>8.6</td>
<td>-0.4</td>
<td>-5.6</td>
</tr>
<tr>
<td>US</td>
<td>-3.5</td>
<td>4.5</td>
<td>6.0</td>
<td>1.3</td>
<td>-18.8</td>
<td>32.3</td>
<td>12.8</td>
<td>4.1</td>
<td>6.0</td>
<td>13.3</td>
<td>-0.6</td>
</tr>
<tr>
<td>ASEAN-5</td>
<td>9.1</td>
<td>12.8</td>
<td>17.7</td>
<td>23.7</td>
<td>-17.8</td>
<td>39.1</td>
<td>32.8</td>
<td>10.1</td>
<td>7.5</td>
<td>1.4</td>
<td>-1.5</td>
</tr>
<tr>
<td>EU</td>
<td>15.4</td>
<td>11.0</td>
<td>13.4</td>
<td>6.3</td>
<td>-20.2</td>
<td>14.8</td>
<td>4.1</td>
<td>-11.4</td>
<td>-1.0</td>
<td>5.7</td>
<td>-6.9</td>
</tr>
<tr>
<td>Japan</td>
<td>10.7</td>
<td>10.4</td>
<td>-0.6</td>
<td>7.1</td>
<td>-22.9</td>
<td>29.4</td>
<td>40.8</td>
<td>-2.2</td>
<td>-10.7</td>
<td>-7.2</td>
<td>-20.5</td>
</tr>
<tr>
<td>Total</td>
<td>12.0</td>
<td>14.4</td>
<td>14.1</td>
<td>13.6</td>
<td>-13.9</td>
<td>28.3</td>
<td>19.0</td>
<td>-1.3</td>
<td>2.1</td>
<td>2.3</td>
<td>-8.0</td>
</tr>
</tbody>
</table>

(Note) ASEAN-5: Indonesia, Malaysia, Philippines, Thailand, and Vietnam

(Source) CEIC
Unemployment rate remained low during 4Q15. Annually, average rate in 2015 slightly went up along with economic slowdown.

Unemployment rate may keep steady level, although it may rise in a very near term due to seasonal factor. Anticipated stable economic growth would uphold steady employment. Meantime, youth unemployment rate is likely to remain high.

CPI inflation slightly rose during 4Q15. However, annual CPI was record low in 2015 mainly due to crash in oil price, while core CPI inflation edged up annually.

CPI inflation may rise. Demand side might improve slightly supported by possible economic improvement. Meantime, the adverse impact by the earlier steep fall in oil price may start to diminish from the second half of this year. Thus, CPI inflation would see rather modest increase.

(Note) Core CPI excludes oil and agricultural products
(Source) Korean Statistical Information Service ("KOSIS")
2. Korean Economic Indicator and Outlook

<kospi index> Index declined under the weak investment sentiments due to rising uncertainties in global and domestic economic growths

- The total market capitalization posted KRW 1,207 trillion as of end Jan 2016 from KRW 431 trillion in early-2005.
- Over the recent past months, KOSPI index continued to decline below 2000 level. Investment sentiments were discouraged by concern over economic slowdown under rising uncertainty in global conditions due to further moderating China’s economy, implementation of interest rate rise by US Fed and consistent low oil price.

(KOSPI Index Trend)

(Source) Korea Stock Exchange
Sentiment and Economic Composite Indices

Sentiments softened recently. Leading indices indicated modest economic expansion in the near term.

- Business Sentiment Index ("BSI") and Consumer Sentiment Index ("CSI") declined recently after some recovery from MERS impact.
- Sentiments softened due to lack of strong catalyst in export and domestic growths.
- For leading indicators, LCI and CLI saw mild up-trends in 4Q15. Given that, Korea economy is expected to expand modestly in the near term.

(Note) 1. BSI: Business Sentiment Index / CSI: Consumer Sentiment Index
2. BSI, CSI: above 100 means number of positive responses exceeds number of negative responses; below 100 means number of positive responses is less than number of negative responses
(Source) BOK

Economic Composite Index

(Note) 1. LCI, CCI indices: Average 2010=100
2. CLI (RHS) Index: above 100 and increasing indicates expansion; above 100 and decreasing indicates downturn; below 100 and decreasing indicates slowdown; below 100 and increasing indicates recovery
(Source) KOSIS, OECD
### Outlook of Korea Economy

Korea GDP may slightly improve supported by export benefiting from appreciated USD and steady domestic demand.

- Korea real GDP is projected to improve marginally in 2016-17.
- Export growth in real terms is likely to improve slightly partially due to appreciation of USD. However, further slowdown in China economy may especially weigh on Korea’s export.
- Domestic demand might be largely steady.
  - Private spending may rise softly along with a modest economic growth. Growth would be limited due to high household debt amid rising economic uncertainties. However, purchasing power might be sustained by low unemployment rate and still low interest rate.
  - Construction investment may decelerate from the high base. While softening sentiments could restrain the growth, it may continue to grow supported by previous favorable orderings.

### Real GDP Growth Forecast

<table>
<thead>
<tr>
<th></th>
<th>2015e</th>
<th>BOK (as of Jan-16)</th>
<th>IMF (as of Jan-16)</th>
<th>OECD (as of Feb-16)</th>
</tr>
</thead>
<tbody>
<tr>
<td>World</td>
<td>3.1</td>
<td>3.2</td>
<td>3.4</td>
<td>3.4</td>
</tr>
<tr>
<td>Korea</td>
<td>2.7</td>
<td>3.0</td>
<td>3.2</td>
<td>3.2</td>
</tr>
<tr>
<td>China</td>
<td>6.9</td>
<td>6.6</td>
<td>6.4</td>
<td>6.3</td>
</tr>
<tr>
<td>US</td>
<td>2.5</td>
<td>2.4</td>
<td>2.3</td>
<td>2.6</td>
</tr>
<tr>
<td>Euro area</td>
<td>1.5</td>
<td>1.7</td>
<td>1.8</td>
<td>1.7</td>
</tr>
<tr>
<td>Japan</td>
<td>0.6</td>
<td>1.0</td>
<td>0.7</td>
<td>1.0</td>
</tr>
</tbody>
</table>

(Note) 1. Data for Euro area, BOK and IMF cover 17 countries and OECD covers 15 countries
2. Data for Korea by IMF and OECD was based on the forecasted figures as of Oct-15 and as of Nov-15 respectively

(Source) BOK, IMF, OECD
3. Trends of Major Industry in Korea
Electronics industry production slightly declined YoY in Jan-Nov 2015. Production softened as export slowed down to a flat growth and domestic demand was tepid.

Export growths to developing countries in Asia (i.e. China and ASEAN) were offset by export decline in other markets.

Looking forward, electronics industry may remain largely flat. Apart from high base, semiconductor growth may relatively ease affected by continuous weak demand from PC and low DRAM price. However, steady demand from mobile device and increasing memory contents per device might support the sector. Handset may maintain to grow but at modest paces under the influence of slowdown in smartphone demand.
3. Trends of Major Industry in Korea

Automobile production in Korea grew slightly by 0.7% YoY to 4.56 million units in 2015.

Domestic sales rose favourably stimulated by ongoing consumption tax cut and new models. Multipurpose vehicle continued to attract demand (i.e. SUV sales: 33.9% YoY) and supported sales growth.

Export remained challenged. Although export to one of major markets US rose by 18.1% YoY, export to other markets were sluggish due to their weak demand or weakened their local currencies.

Looking forward, domestic production may maintain to grow slightly.

Domestic sales is expected to rise marginally. Sales might be positive during the first half supported by extended consumption tax cut period (i.e. Feb-Jun), while it would decline in the latter half.

Export is expected to slightly recover in view of mild improvement of global automobile demand. Increase in overseas production capacity would restrain export growth. However, tariff cuts under FTA (i.e. US, Canada, EU and Australia) may support export to turn positive to a certain extent.
Industry might stay steady with marginal growth potential due to slight improvement in domestic demand and steady export

- Ethylene production remained largely flat in year-on-year term at 8.27 million tons in 2015 although there were more maintenance works compared with a year earlier. Production of major petrochem sectors grew modestly due to capacity expansion in intermediaries.

- Amid mostly flat demand sales, export volume of major petrochem sectors rose supported by increased capacity. While, export value plunged as export unit price dropped due to persistent low oil price.

- Looking forward, ethylene production as well as overall production of major petrochem sectors may remain steady with marginal rise possibility.

- Domestic demand may stay soft with a marginal growth potential along with modest economic growth.

- Export demand is likely to remain mostly flat. Slowdown in China economy would be unfavorable, but demand from other Asia countries (i.e. India and Vietnam) may grow further.

- Cost competitiveness of naphtha cracking products by Korea would be maintained to compete against low cost coal or gas based products as oil price is projected to stay low. Meantime, ethylene margin spread may remain steady due to relatively stable supply and demand balance.

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**Ethylene Production**

- Ethylene Production: 8.27 mil (`15) (YoY Growth: -0.2% (`15) (RHS)
- Production & Export of Major Petrochem Sectors

**Export of Petrochemical Products**

- (USD billion) (YoY, %)
- (Source) MOTIE, MKE

**Raw Materials and Ethylene Price Trend**

- (USD/bbl) (USD/MT)
- (Source) Bloomberg
Steel Industry may stay weak due to continuous soft domestic demand and weak export given tepid world steel demand outlook in supply glut

- Crude steel production fell by -2.6% YoY in 2015 due to weak demand.
- Domestic sales for major products were subdued. While demand from construction industry increased, other major downstream industries remained lackluster.
- Export in value declined significantly due to tepid demand as well as overall price drop. Especially, demand on steel pipes for oil and gas from US fell sharply largely due to deterred development activities in low oil price environment.
- Looking forward, steel industry may remain weak as demands are unlikely to recover significantly and oversupply condition might persist.
  - Domestic demand would be soft as there is lack of strong sign of improvement in major downstream demands.
  - Export is expected to be weak given tepid world steel demand outlook. In particular, China is expected to see another negative growth in steel consumption. Thus, export would be more focused on developed economies in western markets.
3. Trends of Major Industry in Korea

<Shipbuilding> Industry may remain weak condition due to sluggish demand and overall overcapacity.

- New ship completion increased by 6.8% YoY to 11.15 million tons in 2015 due to previous orderbook growths.
- LPG/LNG carrier completion maintained to rise, but container declined. Oil tanker increased sharply as demand has been improved in response to increase in oil production. Bulker rose largely due to low base.
- For new contracting and orderbook by Korea, both declined YoY in 2015.
- Looking forward, shipbuilding industry would remain subdued owing to weak demand and overcapacity.
  ✓ LPG/LNG carrier may attract certain demand, but its new orders would continue to soften after the substantial orders earlier.
  ✓ Container might be tepid due to structural overcapacity.
  ✓ Tanker could continue to receive certain level of new orders supported by storage demand.
  ✓ Bulker might remain sluggish amid soft demand in commodity and overcapacity.

<table>
<thead>
<tr>
<th>Ship Completion</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Completion</strong></td>
<td>12.54</td>
<td>14.21</td>
<td>12.38</td>
<td>11.04</td>
<td>10.44</td>
<td>11.15</td>
</tr>
<tr>
<td><strong>YoY</strong></td>
<td>N.A.</td>
<td>13.3</td>
<td>-12.9</td>
<td>-10.8</td>
<td>-5.4</td>
<td>6.8</td>
</tr>
</tbody>
</table>

(Source) CEIC
Retail sales may increase modestly in line with mild improvement of private spending.

Retail sales rose by 1.9% YoY to KRW 367 trillion in 2015 supported by stimulus grand promotions led by government.

By sector, despite unexpected MERS outbreak, most sectors registered positive sales growths in 2015. Although department store continued to decline, the pace decelerated owing to more aggressive promotions. Not-in-store maintained higher growth. Convenience store’s growth was largely owing to cigarette tax rise.

Looking forward, retail sales may continue to grow. Although soft consumer and retailer sentiments reflect that consumer may adopt relatively cautious stance on spending, retail sales may increase modestly in view of mild improvement in private spending.
4. Conclusion
Outlook of Korea Economy and Major Industry

- Korea economy is projected to improve slightly in 2016. Despite growing, economy may continue to remain under the soft condition due to tight export environment and largely steady domestic demand.

- Export in real terms might be able to expect some marginal growths benefiting from appreciated USD effect. Demand improvement from some developed economies and FTAs could support export to a certain extent. Nevertheless, overall environment may continue to be fragile. Possible further slowdown in China economy would especially weigh on Korea’s export.

- Domestic demand is likely to be steady. Private spending may rise modestly. Growth might be limited by high household debt under rising economic uncertainties. However, purchasing power would be sustained by low unemployment rate and still low interest rate. Plant & equipment investment may continue to rise albeit at a slower pace. Despite overall cautious atmospheres due to growth uncertainties, stimulus policies may support positive growth. Construction investment might decelerate from the high base. While softening construction sentiments could restrain the growth, it would remain positive from previous favorable orderings.

- Regarding major industry, due to vulnerable export conditions, most major manufacturing industries are unlikely to see significant improvements. Electronics may remain soft and stay largely flat due to tepid demand. Automobile is expected to grow marginally due to positive domestic sales and export supported by extended consumption tax cut period and FTAs. Petrochemical production may remain largely steady with possible soft rise due to modest economic growth. Steel would stay weak owing to tepid domestic demand and weak export under lackluster demand and supply glut in global. Shipbuilding would continue to be subdued. Retail sales may rise modestly in line with mild growth of private spending.
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