2. Supply trends and final demand

(1) Outline of supply trends for final demand

2008 supply trends

【Characteristics】
- Overall supply for final demand decreased by 2.5% compared to the previous year, down for the first time in six years.
- Overall industrial supply for consumption decreased by 0.3% (id.), down for the first time in ten years, due to a decrease in personal consumption, although government consumption increased.
- Overall industrial supply for investment decreased by 5.4% (id.), down for the second consecutive year, due to decreases in private corporation facilities, private housing and public investment.
- Exports decreased by 5.9% (id.), down for the first time in seven years, and imports also decreased by 0.6% (id.), down for the first time in ten years.
- IT-related consumption decreased by 2.9% (id.), down for the first time in four years, and IT-related investment also decreased by 1.7% (id.), down for the first time in six years including a leveling-off period.

Changes in the Indices of All Industries (Final demand components) (2000=100, Ratios to the previous year (quarter))

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ratio to the previous year</td>
<td>Ratio to the previous year</td>
<td>Ratio to the previous year</td>
<td>Ratio to the previous year</td>
<td>Ratio to the previous year</td>
</tr>
<tr>
<td>Total of final demand sector</td>
<td>2.3</td>
<td>1.6</td>
<td>▲ 0.7</td>
<td>0.9</td>
<td>▲ 0.3</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>5.9</td>
<td>6.9</td>
<td>▲ 0.3</td>
<td>2.2</td>
<td>1.0</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>1.5</td>
<td>1.1</td>
<td>0.4</td>
<td>0.5</td>
<td>0.1</td>
</tr>
<tr>
<td>Consumption</td>
<td>1.1</td>
<td>1.1</td>
<td>▲ 0.3</td>
<td>0.3</td>
<td>0.1</td>
</tr>
<tr>
<td>Personal consumption</td>
<td>1.4</td>
<td>1.4</td>
<td>▲ 0.9</td>
<td>0.4</td>
<td>0.3</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>2.6</td>
<td>4.0</td>
<td>▲ 0.7</td>
<td>▲ 0.4</td>
<td>1.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>1.0</td>
<td>0.8</td>
<td>▲ 0.8</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Special IT-related</td>
<td>1.4</td>
<td>1.9</td>
<td>▲ 0.9</td>
<td>2.5</td>
<td>3.8</td>
</tr>
<tr>
<td>Government consumption</td>
<td>0.5</td>
<td>0.4</td>
<td>1.2</td>
<td>▲ 0.1</td>
<td>▲ 0.2</td>
</tr>
<tr>
<td>Investment</td>
<td>1.5</td>
<td>▲ 0.6</td>
<td>▲ 3.4</td>
<td>0.3</td>
<td>1.0</td>
</tr>
<tr>
<td>Public investment</td>
<td>▲ 7.8</td>
<td>▲ 4.5</td>
<td>▲ 3.5</td>
<td>0.6</td>
<td>0.2</td>
</tr>
<tr>
<td>Private housing</td>
<td>4.5</td>
<td>▲ 8.6</td>
<td>▲ 9.1</td>
<td>0.2</td>
<td>▲ 4.0</td>
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<tr>
<td>Private corporation facilities</td>
<td>3.9</td>
<td>3.0</td>
<td>▲ 1.9</td>
<td>0.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>3.7</td>
<td>5.3</td>
<td>▲ 9.7</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td>Construction</td>
<td>4.6</td>
<td>▲ 2.4</td>
<td>▲ 7.3</td>
<td>▲ 0.1</td>
<td>▲ 0.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>4.0</td>
<td>3.9</td>
<td>3.0</td>
<td>▲ 3.1</td>
<td>▲ 5.0</td>
</tr>
<tr>
<td>Special IT-related</td>
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<td>10.0</td>
<td>▲ 1.7</td>
<td>10.8</td>
<td>0.4</td>
</tr>
<tr>
<td>Exports</td>
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<td>9.8</td>
<td>▲ 3.7</td>
<td>4.6</td>
<td>0.1</td>
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<tr>
<td>Mining and manufacturing (Goods)</td>
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<td>8.9</td>
<td>▲ 1.3</td>
<td>3.4</td>
<td>▲ 0.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
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<td>8.0</td>
<td>▲ 1.0</td>
<td>3.5</td>
<td>0.8</td>
</tr>
<tr>
<td>Imports</td>
<td>6.9</td>
<td>4.6</td>
<td>▲ 0.6</td>
<td>1.3</td>
<td>0.5</td>
</tr>
<tr>
<td>Mining and manufacturing (Goods)</td>
<td>6.8</td>
<td>2.3</td>
<td>0.4</td>
<td>0.4</td>
<td>0.4</td>
</tr>
<tr>
<td>Tertiary industries (Services)</td>
<td>7.2</td>
<td>6.6</td>
<td>▲ 1.6</td>
<td>1.8</td>
<td>6.4</td>
</tr>
</tbody>
</table>

Notes: 1. As the indices of all industries (Final demand components) are calculated using various statistical data, preliminary figures are used for some basic data. Therefore, you should note that the indices of the previous quarters have been corrected to the revised figures.
2. The ratios to the previous year are original indices and others are based on seasonally adjusted indices.
3. Due to the base revision in 2005 for some data (Breakdown List of Mining and Manufacturing Shipments and Table of Gross Supply), from January 2007 onward, data regarding the mining and manufacturing sector are processed so as to correct to those based on the 2005 base for calculating the indices of all industries (Final demand components).
Source: “The Indices of All Industries (Final demand components)” (Estimated values)
Trends in IT-related consumption and investment

Characteristics

IT-related consumption for 2008 decreased by 2.9% from the previous year, down for the first time in four years and non-IT-related consumption also decreased by 0.8% (id.), both down for the first time in six years.

IT-related investment for private corporation facilities decreased by 1.7% (id.), down for the first time in six years including a leveling-off period. Non-IT-related investment also decreased, registering a decline of 5.6%, down for the first time in six years.

<table>
<thead>
<tr>
<th>Changes in IT-related Consumption</th>
<th>Changes in IT-related Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Index level (2000=100; Seasonally adjusted)</td>
<td>Index level (2000=100; Seasonally adjusted)</td>
</tr>
</tbody>
</table>

Notes:
1. IT-related consumption is consumption related to cellular telephones, personal handy-phone systems (PHS), personal computers, fixed telecommunications and mobile telecommunications that are supplied for personal consumption.
2. IT-related investments are investments related to communication wires and cables, power wires and optical fiber products for cables, digital and full color copying machines, key system telephone equipment, facsimile machines, electronic switching systems, digital transmission equipment, fixed communication equipment, personal handy-phone systems (PHS), basic exchanges for mobile customer premises equipment, general purpose computers, mid-range computers, personal computers, external storage, input-output units, terminal equipment, software development and program creation (subcontracts) that are supplied to private corporation facilities.
3. Out of the aforementioned items, “PHS” and “facsimile machines” were excluded from the indices of industrial shipments due to the base revision in 2005. Therefore, they are excluded for the calculation of data from January 2007 onward.

Source: "The Indices of All Industries (Final demand components)” (Estimated values)
**Trends in personal consumption viewed from “The Indices of All Industries (Final demand components)” (Estimated values)**

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**Analysis point 1**

Indices of All Industries for personal consumption decreased for the second consecutive quarter

**Characteristics**

- The Indices of All Industries (Final demand components) for personal consumption registered a decline for the second consecutive quarter. On a quarterly basis, the margin of the decline in the forth quarter of 2008 (2.0%) was the largest since the second quarter of 1997.
- Supply from the mining and manufacturing industry in the fourth quarter of 2008 decreased by 7.4% from the previous quarter, down for the fourth consecutive quarter. The decline was the largest, using 2000 as the basis.
- Supply from the tertiary industry has been on a moderate declining trend since the third quarter of 2007, decreasing by 0.4% (id.) in the fourth quarter of 2008, down for the second consecutive quarter.

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**Analysis point 2**

Supply from the mining and manufacturing industry declined significantly in the fourth quarter of 2008

**Characteristics**

Looking at the long-term trends and cycles of supply from the mining and manufacturing industry by using the HP filter (Note), supply had been relatively stable up until the expansion stage of the 14th cycle, but it declined notably in the fourth quarter of 2008.

(Example: Durable consumer goods – for cultural and recreational activities, and cars and motorcycles)

**Fig. II-1-15 Changes in Trend and Circulatory Components**

(Durable Consumer Goods for Cultural and Recreational Activities)

(For other goods, see the main text.)

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Note: For judging economic stages, “reference dates of business cycles” (Cabinet Office) are used. Shadowed parts are recession period (the same in other figures below).

Source: “Indices of All Industries (Final demand components)” (Estimated values)
(Example: Items that contributed significantly to changes in supply for cars and motorcycles)

**Characteristics**

- Trend components of large passenger cars increased continuously, while circulatory components moved irrespective of ups and downs of the economy up until the expansion stage of the 14th cycle. This suggests that supply for large passenger cars grew steadily without being affected by economic fluctuations. However, the decline in the fourth quarter of 2008 was notable.
[Characteristics] The magnitude of the decline in the trend growth rate of small passenger cars diminished up until the second quarter of 2003 but has been expanding again in the 14th cycle. Circulatory components have been on a rise since the third quarter of 2007, showing different moves from declines in tandem with business slowdown seen in the contraction stages of the 12th cycle and the 13th cycle.

Fig. II-1-20 Changes in Trend and Circulatory Components (Durable Consumer Goods for Cars and Motorcycles: Small Cars) (2000=100; Seasonally adjusted)

Source: "Indices of All Industries (Final demand components)" (Estimated values)
**Trends in capital investment and machinery orders**

**Analysis point 1**
~ The index of capital investment for all industries declined for the sixth consecutive quarter ~

**Characteristics**
- The index of capital investment for all industries (excluding Finance and Insurance) for the 14th cycle has been on a declining trend for the sixth consecutive quarter, after hitting a peak in the first quarter of 2007.
- By industry, the manufacturing industry saw a slight index decline in the third quarter of 2008. This was the first decline in 22 quarters. However, the growth rate compared with 4 quarters before remained positive at 0.5%.
- In contrast, in the third quarter of 2008, the index for the non-manufacturing industry (excluding Finance and Insurance) was below 100 for the first time in 12 quarters. The deterioration was notable, as the growth rate compared with 4 quarters before was at -12.8%.

**Notes:**
1. The amount of capital investment is adjusted originally by the X-11 default of the X-12-ARIMA method.
2. The amount of capital investment for all industries does not include Finance and Insurance.

**Fig. II-2-13 Changes in the Index of Capital Investment (All Industries and All Sizes) (2005=100, Seasonally adjusted, 4-quarter backward moving average, comparison with 4 quarters before)**

Looking at the index of machinery orders, which is a leading indicator of capital investment, the index (private sector excluding volatile orders for ships and those from electric power companies) for the 14th cycle has been on a declining trend after reaching a record high in the second quarter of 2006.

**Analysis point 2**
~ Deterioration of machinery orders was notable in the manufacturing industry ~

**Characteristics**
- By industry, in the forth quarter of 2008, the manufacturing industry declined 32.8% compared with 4 quarters before, and the non-manufacturing industry (excluding volatile orders) decreased 15.7% (id.). The decline was notable in the manufacturing industry.
- Such a sharp decline of machinery orders is highly likely to cause further deterioration in capital vestment.

**Notes:**
1. The amount of machinery orders is adjusted originally by the X-11 default of the X-12-ARIMA method.
2. The figure above shows only the index of machinery orders after the second quarter of 1987 due to data availability.

**Source:** "Orders Received for Machinery" (Cabinet Office)
### Analysis point 3

"Break-even point ratio started to rise again"

### Characteristics

- The break-even point ratio for all industries (excluding Finance and Insurance) for the 14th cycle has been on a rise, after recording the lowest level in the second quarter of 2007.
- By industry, the break-even point ratio started to rise after the third quarter of 2007, both for the manufacturing industry and the non-manufacturing industry (excluding Finance and Insurance). In particular, the manufacturing industry saw a sharp rise.
- Therefore, fixed costs and variable costs will further decrease in the future, posing a negative impact on capital investment.

![Fig. II-2-18 Changes in Break-Even Point Ratio (4-quarter backward moving average)](image)

Notes: 1. Fixed costs = Personnel cost + Depreciation cost + Interest cost, etc.
   Variable costs = Sales – Ordinary profit – Fixed costs
   Break-even point = Fixed costs / (1 – (Variable costs / Sales))
   Break-even point ratio = Break-even point / Sales x 100
2. The non-manufacturing industry does not include Finance and Insurance.

Source: “Financial Statements Statistics of Corporations by Industry” (Ministry of Finance)
(2) Outline of exports and imports

2008 export and import trends

【Characteristics】

Looking at the trends of exports for 2008 (on a quantity basis), exports as a whole decreased 5.9% from the previous year, due to decreases in exports of goods (the mining and manufacturing industry), down 4.3% (id.), and received services (the tertiary industry), down 4.0% (id).

By region, exports of goods increased in ASEAN and the Middle East, while showing decreases in the United States, Europe, and East Asia.

![Changes in Exports by Region (Goods)](chart)

Index level (YR2005=100, Seasonally adjusted)

【Characteristics】

Looking at the trends of imports for 2008 (on a quantity basis), imports as a whole decreased 0.6% from the previous year, due to a 5.6% decrease (id.) in service payments (the tertiary industry), although imports of goods (the mining and manufacturing industry) increased 0.4% (id.).

By region, imports from ASEAN increased, but imports from East Asia, Europe, the Middle East, and the United States decreased.

![Changes in Imports by Region (Goods)](chart)

Index level (YR2005=100, Seasonally adjusted)

Notes: 1. The export index is estimated by rearranging the trade statistics with the shipment index group, and the import index is estimated by rearranging the trade statistics with the total supply index group.
2. The regional classification was amended according to the revision of the base year 2000. The names of each of the countries are as follows:
   ASEAN: Singapore, Thailand, Malaysia, the Philippines, Indonesia, Vietnam, Myanmar, Laos, Brunei and Cambodia;
   East Asia: The Republic of Korea, Taiwan, China (including Hong Kong);
   Middle East: Iran, Iraq, Bahrain, Saudi Arabia, Kuwait, Qatar, Oman, Israel, Jordan, Syria, Lebanon, the United Arab Emirates, Gaza and Yemen.

Sources: “Breakdown List of Mining and Manufacturing Shipments” and “Table of Total Supply of Mining and Manufacturing” (Estimated values)