General Economic and Major Market Trends

The United States economy performed very well in 2000. As measured by the gross domestic product (GDP), economic activity rose at an annual rate of 4.2% to $9,318.5 billion (1996 dollars), an increase from $8,875.8 billion (1996 dollars) in 1999. GDP increased 1.3% during the first quarter, fell to 0.7% during the second quarter, then increased to 2.2% in the third quarter and 1.0% in the fourth quarter. The average rate of growth in the current expansion, which began in the second quarter of 1991, is 3.6%. After growing rapidly until the middle of 2000, the economy showed signs of moderating in the second half of that year; this trend has continued into 2001.

After increasing 1.5% in the fourth quarter of 2000 and twice that in the third quarter, growth of gross domestic purchases fell 0.2% in the first quarter of 2001. The current economic expansion, now in its 11th consecutive year, has slowed, reflected by the first 6 months of 2001. Overall rates of inflation were higher during the first half of 2001 than they were during the last half of 2000. Also, some economic forecasts are calling for slow growth for the last half of 2001 as well as higher prices and a less than favorable employment outlook. Despite this outlook, economic expansion continues, although at a declining rate of growth. Advanced estimates of GDP showed a slowdown in economic growth to an annual rate of 1.0% for 2001 as a whole, down from the 1.3% rate in the first quarter but above the 0.2% rate during the second quarter.

Growth in real GDP in the first half of 2001 shows the continued growth of the economy, although the rate of growth is below the 3.6% average rate for the current expansion. Leading economic indicators are mixed; after increasing 3.2% in the first quarter, real personal consumption expenditures (PCE) increased 1.7% in the second quarter. Gross domestic purchases increased about as much as did GDP. Consumer spending and government spending were the biggest contributors to the increase in real GDP in the second quarter. The largest offset in the second quarter was a sharp drop in nonresidential fixed investment that subtracted almost 1.9 percentage points from GDP growth.

The largest contributors to the second quarter decline in GDP growth were private nonresidential fixed investment and larger decreases in exports compared with that in the first quarter, and a slowdown in consumer spending. Nonresidential fixed investment declined 0.04% during the first quarter from the fourth quarter in 2000 before declining 3.7% in the second quarter of 2001. This was below its 9.5% average rate of growth for the current expansion and subtracted almost 1.9 percentage points from GDP growth. Computers and peripheral equipment and software both declined from the fourth quarter of 2000. Computers and peripheral equipment have fallen by 9.8% since the fourth quarter, and software declined by 2.9% over the first two quarters of 2001. In addition, after increasing 3.2% in the first quarter, prices of personal consumption expenditures increased 1.7%. Energy and food prices slowed, and other PCE prices increased less than half as much as in the first quarter. After increasing 3.3% the first quarter, the GDP price index increased 2.3% in the second quarter. Import and export prices, which are both components of this index, declined in the second quarter.

The U.S. economic forecast for 2002 calls for a slowdown in GDP growth—from 4.2% in 2000 to 2.0% in 2002. Early estimates for 2001 indicate growth in GDP at about 2.7%. Although forecasts for U.S. growth have been lowered for 2001 and 2002, the economy is not expected to slide into a recession. The lower forecast is driven by the struggling business sector, where investment is forecast to contract 2% in 2001, lower than earlier forecasts of 2.4% growth. In 2002, business investment is now forecast to grow a modest 1.0%, which is well below previous estimates. The current economic forecasts do not take into consideration consumer and market reaction in the wake of the terrorist attacks that destroyed the World
Trade Center in New York and damaged the Pentagon in Washington, D.C. The economies of the United States and the world are certainly at risk of recession after the terrorist attacks, but the long-term outlook for both isn’t clear.

With a large forest resource and high production and consumption of wood products, the United States continues to play an important role in world forest product markets. The United States has the world’s highest consumption of paper and paperboard (about 95 million metric tons in 2000), which is mostly supplied by domestic production and imports from Canada (American Forest & Paper Association, AF&PA). The U.S. forest products industry harvests more than 490 million cubic meters of softwood and hardwood timber, manufacturing about 120 million cubic meters of lumber and 27 million cubic meters of structural panel products in 2000.

New housing construction, which accounts for more than a third of U.S. annual consumption of softwood sawn wood and structural panels and for substantial volumes of other softwood and hardwood products, remained high through 2000 and into the first half of 2001. A comparison of the first half of this year to the first half of last year indicates that overall starts, not seasonally adjusted, grew 0.6% to 811,000. All the gain between these two periods occurred in the single-family sector, where output rose to 649,000 units. Multifamily starts fell to 162,000 units during the first 6 months of the year, a decline of 5% from levels in the year 2000. Total housing starts for June 2001 were reported at an annual rate of 1.658 million, representing an increase of 3% from May. In May, mobile home shipments increased for the 4th consecutive month to an adjusted 188,000 units. Comparing the first half of 2001 to 2000, the greatest strength lay in the West where single-family output advanced 7%, followed by a 4% gain in the South. Production in the Midwest declined by 2%, while that in the Northeast fell by 9%. In June, the real value of new residential construction increased for the third consecutive month to a seasonally adjusted annual rate of $233.5 billion, with all the gain attributed to the single-family sector. The second quarter averaged a seasonally adjusted $232.2 billion, up 1% from the first quarter and 3.2% above the fourth quarter of last year. In contrast to residential construction is nonresidential activity, where the values for new construction appear to be descending fast. The value of all nonresidential buildings was at an annual rate of $170.4 billion in June 2001, down 0.6% from May and nearly 10% below the 2001 high of $188.4 billion reached in January. The National Association of Home Builders (NAHB) forecast calls for the housing sector to remain strong with only a minor setback in the second half of 2001, with starts and sales ending the year above the levels of 2000.

Along with the strong new residential construction market in 2000, investment in residential repair and remodeling kept pace as expenditures rose 7% to $153.9 billion (1996 dollars), from $142.9 billion of a year ago. Actual expenditures for improvements and repairs to all properties amounted to an estimated $44 billion during the third quarter of 2000. Of this amount, owners of all owner-occupied properties spent $30 billion and owners of rental, vacant, and seasonal properties spent $14.1 billion.

Three other indicators of demand for wood products declined in 2001 relative to 2000:

- Industrial production—an important demand determinant for pallet lumber, containerboard, and some grades of paper—fell 0.7% in June to 142.5% of its 1992 average; second quarter production was down 5.6% at an annual rate. After 9 consecutive months of decline, industrial production in June was more than 3.5% below its level in June 2000.

- Furniture and fixtures output—a determinant of high-grade lumber production—rose 12.2% in 2000 and continued to increase to a high of 144.1 in January 2001 before falling to a low of 139.2 in May.

- Paper products output—a determinant of pulp wood and wood residue use, as well as recycled fiber availability and use—declined slightly (0.09%) for all of 2000 as compared to the previous year. Index (1992=100) of paper products output for the first half of 2001 remains below the 116.1 annual average for 2000.

In summary, housing starts should remain strong, although slightly lower, in 2001, after a strong showing in 2000; activity in the principal markets for U.S. timber was also slightly lower in 2000 than in 1999. After moderating during the first two quarters of 2001, growth is expected to continue to moderate for the rest of
the year. Even though the rate of growth is slowing, most analysts predict that conditions favorable to the growth of timber markets will continue. Selected U.S. economic indicators are shown in Table 1.

### Table 1. Selected U.S. economic indicators, 1998–2002

<table>
<thead>
<tr>
<th>Indicator</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross domestic product (billion 1996 dollars)</td>
<td>8,515.7</td>
<td>8,875.8</td>
<td>9,318.5</td>
<td>9,340.6(^a)</td>
<td>9,370.2(^a)</td>
</tr>
<tr>
<td>New housing starts (million units)</td>
<td>1.622</td>
<td>1.675</td>
<td>1.575</td>
<td>1.612(^b)</td>
<td>1.611(^b)</td>
</tr>
<tr>
<td>Mobile home shipments (thousand units)</td>
<td>374</td>
<td>348</td>
<td>250</td>
<td>182(^b)</td>
<td>205(^b)</td>
</tr>
<tr>
<td>Nonresidential investment in structures (billion 1996 dollars)</td>
<td>177.6</td>
<td>173.4</td>
<td>179.7</td>
<td>170.6(^c)</td>
<td>172.0(^c)</td>
</tr>
<tr>
<td>Total industrial production (Index: 1992 = 100)</td>
<td>134.0</td>
<td>139.6</td>
<td>147.5</td>
<td>138.3(^a)</td>
<td>139.1(^a)</td>
</tr>
<tr>
<td>Furniture and fixtures (billion 1992 dollars)</td>
<td>121.4</td>
<td>125.5</td>
<td>142.9</td>
<td>140.1(^d)</td>
<td>141.0(^d)</td>
</tr>
<tr>
<td>Paper products (Index: 1992 = 100)</td>
<td>115.0</td>
<td>116.2</td>
<td>116.1</td>
<td>113.7(^d)</td>
<td>112.4(^d)</td>
</tr>
</tbody>
</table>

\(^b\)National Association of Home Builders, Housing Economics, August 2001.  
\(^d\)Economic Indicators, July 2001.

### Timber Products Production, Trade, and Consumption

#### Sawn Softwood

Housing and other construction markets have been strong in 2001 and are likely to finish the year only slightly below the levels recorded a year ago for softwood lumber consumption. According to the Western Wood Products Association (WWPA), during the first 6 months of 2001 softwood lumber consumption fell 9.2% from last year’s pace; shipment of softwood lumber from Western mills fell 6.6% during the first half of 2001 as compared with 2000 shipment. Production has declined in all regions; the southern pine region has shown the largest decline, falling 9.1% for the first 6 months in 2001. Apparent consumption for the first 6 months of 2001 was 64.4 million cubic meters, 3.0% below the first 6 months of the consumption of 66.4 million cubic meters in 2000. If U.S. housing construction slumps, timber prices are likely to drift downward after their strong start this year.

Sawn softwood imports rose 2.8% during the first 6 months of 2001 relative to the same time period of a year ago. The volume of Canadian imports increased by 2.4% over this period. Canadian imports constituted 94% of all sawn softwood imports. However, other suppliers such as Europe continued to increase their share of the U.S. market. Total sawn softwood imports were 45.9 million cubic meters in 2000, an increase of 1.4% over 1999.

During the first 6 months of 2001, U.S. exports fell 23.7% compared with exports for the same period in 2000. Exports to Canada increased 2.7% over the first half of 2001. Exports to the European Union fell 15.9% for the first 5 months of 2001 compared to the first 5 months of 2000, and exports to the Pacific Rim fell 3.9% over the first 5 months of this year compared to last year.
Production of sawn softwood declined 9.2% in the first 6 months of 2001 compared with the same period in 2000. In 2000, 84.9 million cubic meters of sawn softwood was produced. The production of sawn softwood for 2001 is forecast to remain close to production levels of a year ago.

**Sawn Hardwood**

In 2000, production of sawn hardwood increased by 4.7% to 35.4 million cubic meters. Imports increased by 12.5% compared with imports in the same period in 1999. During the first 5 months of 2001, the decline in imports exceeded the decline in exports: imports declined 20.6% and exports 10.3%. Exports to European Union countries declined 15.9%, and exports to Pacific Rim nations fell 3.9%. Given the estimated growth rates for production, declining trade figures, and a strong housing market, apparent consumption for 2001 is forecast to decline slightly from the 2000 volume.

**Softwood Log Trade**

Softwood log exports to the Pacific Rim fell 6.7% in the first 5 months of 2001 compared with exports in the same period in 2000, while softwood log exports to the European Union rose 122.5%. Total softwood log exports from the western United States declined 2.1% in 2000 compared with 1999 exports; this level was well below export levels throughout the 1990s. During 2000, timber harvest from the National Forests continued to decline but at lower rate than that in earlier years. The largest volume of decline has been occurring in the Pacific Northwest. The U.S. South has undergone a steady increase in softwood log production, in part because of the harvest decline in the West.

**Hardwood Log Trade**

Hardwood log exports and imports increased during the first 5 months of 2001. Exports rose 20.0% while imports rose 38.4%, compared with this period of a year ago. For all of 2000, exports to Canada rose 12.3%. During the first 5 months of 2001, exports to the Pacific Rim rose 14.3% and exports to the European Union rose 11.7%. During 2000, hardwood log imports from Canada increased by 35.6% from the previous year. For the first 4 months of 2001, imports from Canada increased 70.8%. Canada traditionally provides about 95% of imports.

**Pulpwood**

Combined roundwood and forest chip production for pulp and wood-based panel mills was 201 million cubic meters in 2000, relatively unchanged from 1999. This includes mill residue used for pulp. The rate of increase for roundwood pulpwood is expected to continue to decline during 2001. Pulpwood supplied from residues is decreasing relative to roundwood. The roundwood portion of pulpwood was 175 million cubic meters in 2000, a slight decrease from 1999 (based on pulpwood receipts data from the Forest Resources Association and woodpulp production data from the AF&PA). Trade patterns have continued to have a significant impact on paper and paperboard production and have affected pulpwood use. Exports of paper, paperboard, and converted products increased by 5.2% in 2000. Imports of paper and paperboard also exceeded their 1999 volumes by 3.6%.

**Softwood Plywood**

Softwood plywood production was 15.5 million cubic meters in 2000 according to APA–The Engineered Wood Association. This was a decline of 1.9% from 1999. The volume of softwood plywood production fell throughout the 1990s. Softwood plywood production for the first two quarters of 2001 declined by 18.9% compared to that in 2000. The APA–The Engineered Wood Association predicts that plywood production will fall to 14.6 million cubic meters in 2001.

Softwood plywood imports and exports were both in negative territory in 2000 compared with 1999 data: imports declined 7.5% and exports declined 3%. Softwood plywood imports increased and exports decreased during the first two quarters of 2001. Plywood exports to Canada fell by 5% during this period, and plywood imports from Canada increased by 27.1%. Based on information not reflected in these trends, 2001 exports are estimated to be 8.0% above 2000 levels, and 2001 imports are estimated to be 26% below...
2000 levels. Given these estimates, apparent consumption of plywood is estimated to decrease in 2000, as more market share for structural panels is taken by oriented strandboard (OSB).

**Oriented Strandboard**

According to the APA–The Engineered Wood Association, OSB production for the first two quarters of 2001 exceeded production in this period in 2000 by only 0.6%. In 2000, 10.5 million cubic meters of OSB were produced compared with 10.3 million cubic meters in 1999. The growth rate from 1999 to 2000 was 2.5%, which is lower than the 6.2% growth rate experienced between 1998 and 1999. Between 1996 and 2000, OSB capacity grew rapidly in the United States and Canada—by 25% in 1996, 5% in 1997, 5% in 1998, and 3% in 1999; it remained level in 2000. Despite the growth in capacity and high demand, prices have continued to moderate. The pricing trends for OSB are projected to continue through 2001. In 2000, OSB exports increased by 6.7% (115,000 cubic meters); imports increased by 242,000 cubic meters, a rise of 3.4% from 1999.

Given these estimates, apparent consumption of OSB for 2001 is forecast to be 17.2 million cubic meters, a 1.0% rise from 2000. Because OSB now accounts for 53% of structural panel consumption (1% rise from 1999), OSB consumption is expected to continue to exceed plywood consumption.

**Hardwood Plywood**

Hardwood plywood production was 1.9 million cubic meters in 2000, an increase of .3 million cubic meters over 1999 production. This includes core material such as softwood plywood and OSB. An increase of about 2% in hardwood plywood is estimated for 2001, with total production remaining at about 2 million cubic meters. Hardwood plywood imports declined 0.9% in 2000 compared with 1999. During the first 5 months of 2001, imports declined 8.1% compared to the first 5 months of 2000. If this trend continues, hardwood plywood imports will likely total 2.2 million cubic meters in 2001. The amount of hardwood plywood exported in 2000 was 160,000 cubic meters.

**Particleboard and Medium Density Fiberboard**

Information from the Composite Panel Association indicates that particleboard and medium-density fiberboard (MDF) production varied during 2000. Particleboard production was 8.4 million cubic meters, a decrease of 1.8%, and MDF production was 2.6 million cubic meters, increasing by 3.7%. During the first 5 months of 2001, particleboard imports decreased by 1.2% on a value basis and MDF imports increased by 22% on a volume basis. Exports of particleboard for the first 5 months of 2001 increased by 1.9% and MDF exports declined by 12.5%.

**Hardboard**

Based on data from the American Hardboard Association, 11.2 million cubic meters of hardboard was produced in 2000, a 16% drop from the 1999 level. Hardboard imports declined along with production by 1.0% in 2000, but this trend was reversed during the first 5 months of 2001 as imports increased by 29%. Hardboard exports increased in 2000 by 2.8% but declined the first 5 months of 2001, falling 15.8%.

**Insulating Board**

Available information from the AF&PA showed that 3.1 million cubic meters of insulation board was produced in 2000, unchanged from 1999. Production of insulation board has been flat for several years as have trade patterns. This has resulted in a stable level of apparent consumption of 3.3 million cubic meters.

**Fuelwood**

Using data from the most recent Department of Energy survey, adjusting for the 2000 winter weather and a declining trend in fuelwood use per household, fuelwood consumption was estimated to be 74 million cubic meters in 2000, an increase of 2 million cubic meters over 1999. Households use most fuelwood for heating and esthetic enjoyment. Industry uses mill residues rather than roundwood for fuel. A small portion of roundwood fuelwood is used for electric power production. Use for electric power is limited by the low
cost of coal and natural gas alternatives. Fuelwood consumption for 2001 is estimated to be below the level for 2000.

**Forest Products Prices**

Recent trends in the wholesale price of forest products differ across two broad categories: lumber and wood products (lumber, wood-based panels, etc.) and pulp and paper products (Figure 1). Throughout the late 1990s, the composite price of lumber and wood products continued to fluctuate around a level reached by the mid-1990s before leveling off during the last half of 2000. The composite price for lumber has continued to fluctuate during the first half of 2001. Changes in the price of softwood lumber accounted for much of this change and most of the volatility in the index. In 1999, the deflated composite price index reached an all-time high (at a level more than 50% higher than the base year, 1982), followed immediately by a sustained decline that continued throughout 2000 and into 2001. The composite index reached its lowest level in 5 years during this period. In spite of these sustained low prices, U.S. demand for lumber and wood products during 2000 remained near record levels. In contrast, the composite measure of prices in the pulp and paper sector has exhibited considerably less short-term volatility. The period of declining prices from the previous peak (1994–1995) ended in 1997, and by early 1998 the composite index reached the level of the mid-1990s. In deflated terms, the composite index has had little volatility and no trend for nearly 24 months.

![Figure 1— Recent trends in wholesale prices of forest products](image-url)