

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

FORM 10-K

**Annual Report Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

For the fiscal year ended
December 31, 2019

Commission File Number
1-7107

LOUISIANA-PACIFIC CORPORATION

(Exact name of registrant as specified in its charter)

Delaware
(State of Incorporation)

93-0609074
(I.R.S. Employer
Identification No.)

414 Union Street Suite 2000
Nashville TN 37219
(Address of principal executive offices)

(615) 986 - 5600
(Registrant's telephone number
including area code)

Securities registered pursuant to Section 12(b) of the Act:

<u>Title of Each Class</u>	<u>Trading Symbol</u>	<u>Name of Each Exchange on Which Registered</u>
Common Stock, \$1 par value	LPX	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): Yes No

State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was sold, or the average bid and asked price of such common equity, as of the last business day of the registrant's most recently completed second fiscal quarter: \$2,476,306,551.

Indicate the number of shares outstanding of each of the registrant's classes of common stock as of the latest practicable date: 112,020,187 shares of Common Stock, \$1 par value, outstanding as of February 7, 2020.

Documents Incorporated by Reference

Certain portions of the registrant's Definitive Proxy Statement for its 2020 Annual Meeting of Stockholders (which is expected to be filed with the Securities and Exchange Commission within 120 days after the end of the registrant's 2019 fiscal year) are incorporated by reference into Part III by this annual report on Form 10-K.

Except as otherwise specified and unless the context otherwise requires, references to “LP,” the “Company,” “we,” “us,” and “our” refer to Louisiana-Pacific Corporation and its subsidiaries.

ABOUT FORWARD-LOOKING STATEMENTS

Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934 (the Exchange Act) provide a “safe harbor” for forward-looking statements to encourage companies to provide prospective information about their businesses and other matters as long as those statements are identified as forward-looking and are accompanied by meaningful cautionary statements identifying important factors that could cause actual results to differ materially from those discussed in the statements. This annual report on Form 10-K contains, and other reports and documents filed by us with the Securities and Exchange Commission (SEC) may contain forward-looking statements. These statements are based upon the beliefs and assumptions of, and on information available to, our management.

The following statements are or may constitute forward-looking statements: (1) statements preceded by, followed by or that include words like “may,” “will,” “could,” “should,” “believe,” “expect,” “anticipate,” “intend,” “plan,” “estimate,” “project,” “potential,” “continue,” “likely,” or “future” or the negative or other variations thereof and (2) other statements regarding matters that are not historical facts, including without limitation, plans for product development, forecasts of future costs and expenditures, possible outcomes of legal proceedings, capacity expansion, and other growth initiatives and the adequacy of reserves for loss contingencies.

Factors that could cause actual results to differ materially from those expressed or implied by the forward-looking statements include, but are not limited to, the following:

- changes in governmental fiscal and monetary policies, including tariffs, and levels of employment;
- changes in general economic conditions;
- changes in the cost and availability of capital;
- changes in the level of home construction and repair activity;
- changes in competitive conditions and prices for our products;
- changes in the relationship between supply of and demand for building products;
- changes in the financial or business conditions of third-party wholesale distributors and dealers;
- changes in the relationship between supply of and demand for raw materials, including wood fiber and resins, used in manufacturing our products;
- changes in the cost of and availability of energy, primarily natural gas, electricity, and diesel fuel;
- changes in the cost of and availability of transportation;
- difficulties in the launch or production ramp-up of newly introduced products;
- unplanned interruptions to our manufacturing operations, such as explosions, fires, inclement weather, natural disasters, accidents, equipment failures, labor disruptions, and supply interruptions;
- changes in other significant operating expenses;
- changes in currency values and exchange rates between the U.S. dollar and other currencies, particularly the Canadian dollar, Brazilian *real* and Chilean *peso*;
- changes in general and industry-specific environmental laws and regulations;
- changes in tax laws, and interpretations thereof;
- changes in circumstances giving rise to environmental liabilities or expenditures;
- warranty costs exceeding our warranty reserves;
- challenge or exploitation of our intellectual property or other proprietary information by others in the industry;
- changes in the funding requirements of our defined benefit pension plans;
- the resolution of existing and future product-related litigation and other legal proceedings;
- the amount and timing of any repurchases of our common stock and the payment of dividends on our common stock, which will depend on market and business conditions and other considerations; and
- acts of public authorities, war, civil unrest, natural disasters, fire, floods, earthquakes, inclement weather and other matters beyond our control

In addition to the foregoing and any risks and uncertainties specifically identified in the text surrounding forward-looking statements, any statements in the reports and other documents filed by us with the SEC that warn of risks or uncertainties associated with future results, events, or circumstances identify important factors that could cause actual results, events and circumstances to differ materially from those reflected in the forward-looking statements.

ABOUT THIRD-PARTY INFORMATION

In this annual report on Form 10-K, we rely on and refer to information regarding industry data obtained from market research, publicly available information, industry publications, U.S. government sources, and other third parties. Although we believe the information is reliable, we cannot guarantee the accuracy or completeness of the information and have not independently verified it.

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PART I

ITEM 1. Business

General

We are a leading provider of high-performance building solutions serving the new home construction, repair and remodeling, and outdoor structures markets. We have leveraged our expertise to become an industry leader known for innovation, quality, and reliability. Our customers are primarily retail, wholesale, homebuilding, and industrial businesses. The Company was founded in 1973 and is headquartered in Nashville, Tennessee.

The table below summarizes the relative sizes of our business segments in 2019:

Segment	Net Sales (in millions)	Percentage of 2019 Net Sales
Siding	\$ 963	42 %
Oriented Strand Board (OSB)	777	34 %
Engineered Wood Products (EWP)	396	17 %
South America	159	7 %
Other	20	1 %
Intersegment	(5)	— %
	\$ 2,310	

Our Business Segments

Siding

We believe that we are the largest producer of engineered wood siding serving diverse end-markets. Our Siding segment consists of LP SmartSide® Strand and Fiber trim and siding, LP CanExel® prefinished siding, and LP Outdoor Building Solutions® products for premium outdoor buildings. Our SmartSide® products consist of a full line of engineered wood siding, trim, soffit, and fascia. These products offer superior protection against hail, wind, moisture, fungal decay, and termites compared to solid wood. Our CanExel® siding and accessory product offerings include pre-finished lap and trim products in a variety of patterns and textures. These products are used in new construction, repair and remodeling, and outdoor structures such as sheds.

We drive product innovation by utilizing our technological expertise in wood and wood composites to better address the needs of our customers. We intend to increase our Siding product offerings and production capacity of these higher-margin, value-added products through the addition of lower-cost plants, the conversion of existing OSB plants from commodity structural panel production to exterior siding products, the expansion of our pre-finished offerings, and the introduction of new, innovative products.

Oriented Strand Board (OSB)

Our OSB segment manufactures and distributes OSB structural panel products including LP TechShield® radiant barrier, LP WeatherLogic® weather-resistant sheathing, LP TopNotch® sub-flooring, LP Legacy® premium sub-flooring, and LP FlameBlock® fire-rated sheathing.

OSB is an innovative, affordable, and sustainable product made from wood strands, arranged in layers, and bonded with resin and wax. OSB is used as roof decking, sidewall sheathing, and floor underlayment. Originally introduced by LP as an alternative to plywood in North America, it is estimated for 2019 that OSB accounted for approximately 66% of the structural panel consumption in the U.S. and Canada, with plywood accounting for the remainder. Based upon our

production in 2019 of 3.8 billion square feet, we estimate that we account for 17% of the U.S. and Canadian OSB market and 12% of the overall structural panel market. In 2019, value-added OSB (Structural Solutions) accounted for 43% of our OSB shipments as compared to 38% in 2018.

To enhance what we believe to be our industry-leading position in the OSB business, we plan to: (1) leverage our expertise in OSB to capitalize on new opportunities for revenue growth through Structural Solutions product lines; (2) deliver superior quality and service; (3) reduce costs and improve throughput and recovery by continuing to focus on efficiency, raw materials cost reductions and logistics; and (4) manage our capacity to meet our customers' expected needs for OSB.

We have produced and sold some amounts of OSB in our Siding and EWP segments.

Engineered Wood Products (EWP)

Our EWP segment is comprised of LP SolidStart® I-Joist (I-Joist), Laminated Veneer Lumber (LVL), and Laminated Strand Lumber (LSL) and other related products. This segment also includes the sale of I-Joists produced by our joint venture with Resolute Forest Products, Inc. In North America, we are one of the top three producers (including our joint venture production) of I-Joists, LVL and LSL. A plywood mill associated with our LVL operations in British Columbia is also included in this segment. We believe that our engineered I-Joists, which are used primarily in residential and commercial flooring and roofing systems and other structural applications, are stronger, lighter and straighter than conventional lumber joists of similar dimensions. Our LVL and LSL are high-grade, value-added structural products used in applications where extra strength and quality are required, such as headers and beams.

Our strategy is to strengthen our brand recognition in the EWP market by growing our distribution and dealer network by providing superior technical support and leveraging our sales and marketing relationships to cross-sell our EWP products. Additionally, we are seeking to drive costs down by reducing support costs in the business and improving operating efficiencies in our manufacturing facilities.

South America

Our South American segment manufactures and distributes OSB structural panel and siding products in South America and certain export markets. This segment also distributes and sells related products to encourage the region's transition to wood frame construction. We believe that we are the leading producer of OSB and siding in South America, and are positioned to capitalize on the growing demand for wood-based residential construction in South America.

Our Business Strategy

Continue to Grow Our Siding Business. We believe that we are currently a leading producer of treated engineered wood siding and, therefore, are positioned to benefit from demand growth as it continues to displace alternative siding materials such as vinyl, wood, fiber cement, and other materials. We have consistently grown our Siding segment above the underlying market growth rates, and this segment is less sensitive to new housing market cyclicality as over 50% of its demand comes from other markets, including sheds, retail, and repair and remodeling. We believe that our leading market position and innovative products in these other markets should allow us to serve this expected growth.

Generate Value-Added Sales Growth through Customer Focus and Innovation. We believe that our products help customers address labor shortages because they are easier to work with and often combine multiple steps into a single product system. Our marketing efforts drive awareness and a greater understanding of our products' potential with builders, repair and remodel contractors, industrial manufacturers, and major home improvement retailers. Through our sales efforts, we target customers by channel and focus on providing them with a broad array of traditional and specialty building products coupled with quality service. We continue to grow our Structural Solutions line of high value-add OSB products to provide more stable margins. Our strategically located facilities in

the U.S., Canada, Chile, and Brazil allow us to be closer to our customers and more responsive to their changing needs. We prioritize high-quality service and continue to build on our reputation for on-time shipments. In addition, we continually seek to identify new specialty building solutions and markets where we can utilize our core competencies in the design, manufacturing, and marketing of building products.

Focus on Operating Efficiencies, Cost Reductions, and Portfolio Optimization. We continue to improve the Overall Equipment Effectiveness (OEE) of our manufacturing facilities. Our OEE programs have produced excellent returns from efficiency projects across our manufacturing organization. We have also structured our management teams along product lines to enhance our ability to implement best practices across operations. Given these initiatives and the strategic locations of many of our facilities, we believe that we are one of the lowest average delivered-cost producers of OSB in North America.

As market conditions change, we plan to adapt our product mix, selectively invest in new technologies that modernize our manufacturing facilities, and manage our capacity to best match customer demand. We believe that these strategies optimize our portfolio and margins and enhance the quality and consistency of our earnings.

Pursue Selected Strategic Transactions. We continuously evaluate strategic investments in assets, businesses, and technologies. We believe that our pursuit of these opportunities, if successful, could enable us to increase the size and scope of our businesses or joint ventures

Expand Internationally. We believe that our investments in South America should help us continue to satisfy the growing demand for wood-based residential construction in this region. Continued investments as a market leader in this region should allow us to capitalize on demand while diversifying our revenue mix and market cyclicalities.

Our Market

Our sales and marketing efforts are primarily focused on traditional distribution, professional building products dealers, home centers, third-party wholesale buying groups, and other retailers. The wholesale distribution channel includes a variety of specialized and broad-line wholesale distributors and dealers focused primarily on the supply of products for use by professional builders and contractors. The retail distribution channel includes large retail chains catering to the do-it-yourself (DIY) and repair and remodeling markets as well as smaller independent retailers.

Our Customers

We seek to maintain a broad customer base and a balanced approach to national distribution through both wholesale and retail channels. In 2019, our top ten customers accounted for approximately 42% of our sales. Our principal customers include the following:

- Wholesale distribution companies, which supply building materials to retailers on a regional, state or local basis;
- Distributors, who provide building materials to smaller retailers, contractors, and others;
- Building materials professional dealers that specialize in sales to professional builders, remodeling firms, and trade contractors that are involved in residential home construction and light commercial building;
- Retail home centers that provide access to consumer markets with a broad selection of home improvement materials and increasingly serve professional builders, DIY remodelers, and trade contractors; and
- Shed producers that design, construct, and distribute prefabricated residential and light commercial structures, including fully manufactured, modular, and panelized structures, for consumer and professional markets.

Seasonality

Our business is subject to seasonal variances, with demand for many of our products tending to be higher during the building season, which generally occurs in the second and third quarters in North America and the fourth and first quarters in South America. Occasionally, we engage in promotional activities designed to stimulate demand for our product

s, such as reducing our selling prices and providing extended payment terms, particularly at times when demand is otherwise reduced. We do this in an effort to better balance our inventory levels with demand, manage the logistics of our product shipments, and allow our production facilities to run efficiently.

Our Competitors / Competition

The building products industry is highly competitive. We compete internationally with several thousand forest and building products firms, ranging from very large, fully integrated firms to smaller enterprises that may manufacture a few items. We also compete less directly with firms that manufacture substitutes for wood building products.

In terms of our commodity OSB, we generally compete based upon price, quality, and availability of products. In terms of our specialty products, including Siding, EWP, and various Structural Solutions OSB products, we generally compete based upon performance features offered, quality, availability of products, and price.

Our Manufacturing

We operate manufacturing facilities throughout North and South America. Our facilities utilize the best available manufacturing techniques based on the needs of our businesses, and we continuously work to improve efficiency and productivity, as measured by OEE. We currently operate 23 strategically located facilities in the U.S. and Canada, two facilities in Chile, and one facility in Brazil. We also operate facilities through our joint ventures in North America.

Strategic Sourcing

We rely on various suppliers to furnish the raw materials and inputs used in the manufacturing of our products. To maximize our buying effectiveness in the marketplace, we have a central strategic sourcing group that consolidates purchases of certain materials and indirect items across business segments. The goal of the strategic sourcing group is to develop global strategies for a given component group, identify suppliers that meet our business requirements, and develop long-term relationships with these vendors. By developing these strategies and relationships, we seek to leverage our material needs to implement leading practices, reduce costs, improve process efficiency, and improve operating performance.

Raw Materials

Wood fiber is the primary raw material used in most of our operations, and the primary source of wood fiber is timber. The primary end-markets for timber harvested in the North America are manufacturers who supply: (1) the housing market, where it is used in the construction of new housing and the repair and remodeling of existing housing; (2) the pulp and paper market; (3) commercial and industrial markets; (4) export markets; and (5) emerging biomass energy production markets. The supply of timber is limited by the availability of timberlands and access to the wood fiber. The availability of timberlands, in turn, is limited by several factors, including forest management policies, alternate uses of land, and loss to urban or suburban real estate development. Because wood fiber is subject to commodity pricing, the cost of various types of timber that we purchase in the market has, at times, fluctuated greatly due to weather, governmental regulations, or economic and other industry conditions. However, our mills are generally located near large and diverse supplies of timber. We source all our wood fiber sustainably, as certified by the Sustainable Forestry Initiative.

In addition to wood fiber, we use significant quantities of various resins in our manufacturing processes. Resin product costs are influenced by changes in the prices of raw materials used to produce resin, primarily petroleum products and energy, as well as competing demand for resin products. Currently, we purchase most of our resin from three major suppliers. However, there can be no assurance that pricing or availability of resins will not be impacted by competing demand.

While a significant portion of our energy requirements is met at our plants by the energy produced from the conversion of wood waste, we also purchase electricity and natural gas. Energy prices have experienced significant vol

atility in recent years, particularly in deregulated markets. We attempt to mitigate our exposure to energy price changes through the selective use of long-term supply agreements.

Environmental Compliance / Climate Change

Our operations are subject to many environmental laws and regulations governing, among other things, the discharge of pollutants and other emissions on or into the land, water, and air, the disposal of hazardous substances or other contaminants, the remediation of contamination and the restoration and reforestation of timberlands. In addition, certain environmental laws and regulations impose liability and responsibility on present and former owners, operators, or users of facilities and sites for contamination at such facilities and sites without regard to causation or knowledge of contamination. Compliance with environmental laws and regulations can significantly increase the costs of our operations. In some cases, plant closures can invoke more rigorous compliance requirements. Violations of environmental laws and regulations can subject us to additional costs and expenses, including defense costs and expenses and civil and criminal penalties. We cannot guarantee that the environmental laws and regulations to which we are subject will not become more stringent or be more stringently implemented or enforced in the future.

Changes in global or regional climate conditions and current or future governmental responses to such changes at the international, U.S. federal, and state levels, such as regulating and/or taxing the production of carbon dioxide and other “greenhouse gases” to facilitate the reduction of emissions into the atmosphere, and/or the imposition of taxes or other incentives to produce and use “cleaner” energy, may increase energy costs, limit harvest levels, and impact our operations or our planned or future growth. Because our manufacturing operations depend on significant amounts of energy and raw materials, these initiatives could have an adverse impact on our operations and profitability. Future legislation or regulatory activity in this area remains uncertain, as does the potential impact on our operations.

We are committed to complying with all applicable environmental laws and regulations and intend to devote significant management attention to such matters. In addition, we occasionally undertake construction projects for environmental control equipment or incur other environmental costs that extend an asset’s useful life, improve its efficiency, and/or improve the property’s marketability.

Additional information concerning environmental matters is set forth under Item 3, Legal Proceedings, and in Note 16 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

Employees

We employ approximately 4,800 people, about 1,600 of whom are members of unions, primarily in Canada, Chile, and Brazil. While we do not currently anticipate any work stoppages, there can be no assurance that work stoppages will not occur.

Available Information

We file annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, proxy statements and other information with the SEC. Our SEC filings are available to the public over the internet at the SEC’s website at <http://www.sec.gov>.

In addition, we will make available our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act through our internet website at <http://www.lpcorp.com> under the "Investor Relations" tab as soon as reasonably practicable after we electronically file such material with, or furnish it to, the SEC. Information contained on, or accessible through, our website is not a part of, and is not incorporated by reference into, this annual report on Form 10-K.

Segment and Price Trend Data

The following table sets forth, for each of the last three years: (1) our sales volumes; (2) housing starts and (3) the estimated average wholesale price of OSB sold in the United States. In addition, information concerning our: (1) net sales by business segment; (2) profit by business segment; (3) identifiable assets by segment; (4) depreciation and amortization by business segment; (5) capital expenditures by business segment; and (6) geographic segment information is included in Note 20 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

Sales Information Summary

Sales Volume	Year Ended December 31, 2019					
	Siding	OSB	EWP	Total		
SmartSide® Strand siding (MMSF)	1,234	—	—	1,234		2019
SmartSide® Fiber siding (MMSF)	204	—	—	204	Housing starts ¹ :	
CanExel® siding (MMSF)	42	—	—	42	Single-Family	888
OSB - commodity (MMSF)	47	2,144	17	2,208	Multi-Family	402
OSB - Structural Solutions (MMSF)	3	1,599	19	1,621		1,290
LVL (MCF)	—	—	7,015	7,015		
LSL (MCF)	—	—	3,040	3,040		
I-Joist (MMLF)	—	—	98	98		
Sales Volume	Year Ended December 31, 2018					
	Siding	OSB	EWP	Total		
SmartSide® Strand siding (MMSF)	1,139	—	—	1,139		2018
SmartSide® Fiber siding (MMSF)	222	—	—	222	Housing starts ¹ :	
CanExel® siding (MMSF)	36	—	—	36	Single-Family	876
OSB - commodity (MMSF)	136	2,582	34	2,752	Multi-Family	374
OSB - Structural Solutions (MMSF)	61	1,610	36	1,707		1,250
LVL (MCF)	—	—	6,932	6,932		
LSL (MCF)	—	—	3,694	3,694		
I-Joist (MMLF)	—	—	86	86		
Sales Volume	Year Ended December 31, 2017					
	Siding	OSB	EWP	Total		
SmartSide® Strand siding (MMSF)	1,059	—	—	1,059		2017
SmartSide® Fiber siding (MMSF)	254	—	—	254	Housing starts ¹ :	
CanExel® siding (MMSF)	48	—	—	48	Single-Family	848
OSB - commodity (MMSF)	230	2,642	34	2,906	Multi-Family	354
OSB - Structural Solutions (MMSF)	—	1,604	39	1,643		1,202
LVL (MCF)	—	—	7,577	7,577		
LSL (MCF)	—	—	3,176	3,176		
I-Joist (MMLF)	—	—	87	87		

¹ Actual U.S. Housing starts data reported by U.S. Census Bureau is based upon seasonally adjusted information published through January 17, 2020.

	2019	2018	2017
COMMODITY PRODUCT PRICE TRENDS⁽¹⁾			
OSB, MSF, 7/16" span rating (North Central price)	\$ 210	\$ 350	\$ 353
OSB, MSF, 7/16" span rating (Western Canada price)	\$ 166	\$ 307	\$ 326
OSB, MSF, 7/16" span rating (Southwest price)	\$ 177	\$ 319	\$ 334

(1) Prices represent yearly averages stated in dollars per thousand square feet (MSF). Source: *Random Lengths*.

ITEM 1A. Risk Factors

You should be aware that the occurrence of any of the events described in this Risk Factors section and elsewhere in this annual report on Form 10-K or in any other of our filings with the SEC could have a material adverse effect on our business, financial position, results of operations and cash flows. In evaluating us, you should consider carefully, among other things, the risks described below, and the matters described in “About Forward-Looking Statements.”

Our business primarily relies on North American new home construction and repair, which are impacted by risks associated with fluctuations in the housing market. Downward changes in the general economy, the housing market or other business conditions could adversely affect our results of operations, cash flows, and financial condition. The housing market is sensitive to changes in economic conditions and other factors, such as the level of employment, access to labor, consumer confidence, consumer income, availability of financing, interest rate and inflation levels, and growth of the gross domestic product.

Adverse changes in any of these conditions generally, or in any of the markets where we operate, could decrease demand for our products and could adversely impact our businesses by: causing consumers to delay or decrease homeownership; making consumers more price-conscious resulting in a shift in demand to smaller homes; making consumers more reluctant to make investments in their existing homes; or making it more challenging to secure loans for major renovations or new home construction. Although the U.S. new home construction market is improving, demand for new homes is still recovering after the 2007-2009 U.S. economic recession and continues to remain below average historical levels. Additionally, higher interest rates, high levels of unemployment, restrictive lending practices, heightened regulation, and increased foreclosures could have a material adverse effect on our financial position, results of operations, and cash flows.

We have a high degree of product concentration in OSB. OSB accounted for about 39%, 54%, and 54% of our North American sales in 2019, 2018, and 2017, respectively, and we expect OSB sales to continue to account for a substantial portion of our revenues and profits in the future. The concentration of our business in the OSB market further increases our sensitivity to commodity pricing and price volatility. Historical prices for our commodity products have been volatile, and we, like other participants in the building products industry, have limited influence over the timing and extent of price changes for our products. Commodity product pricing is significantly affected by the relationship between supply and demand in the building products industry. Product supply is influenced primarily by fluctuations in available manufacturing capacity. Demand is affected by the state of the economy in general and a variety of other factors, including the level of new residential construction activity and home repair and remodeling activity, changes in the availability and cost of mortgage financing. In this competitive environment, with so many variables for which we do not control, we cannot guarantee that pricing for our OSB products will not decline from current levels. The continued development of builder and consumer preference for our OSB products (commodity and Structural Solutions) over competitive products is critical to sustaining and expanding demand for our products. Therefore, a failure to maintain and increase builder and consumer acceptance of our OSB products could have a material adverse effect on our financial position, liquidity, results of operations, and cash flows.

Intense competition in the building products industry could prevent us from increasing or sustaining our net sales and profitability. The markets for our products are highly competitive. Our competitors range from very large, fully integrated forest and building products firms to smaller firms that may manufacture only one or a few types of products. Many of our competitors may have greater financial and other resources, greater product diversity, and better access to raw materials than we do, and certain of the mills operated by our competitors may be lower-cost producers than the mills operated by us. Increased competition in any of the markets in which we compete would likely cause pricing pressures in those markets. Any of these factors could have a material adverse effect on our financial position, results of operations, and cash flows.

Our reliance on third-party wholesale distribution channels could impact our business. We offer our products directly and through a variety of third-party wholesale distributors and dealers. Adverse changes in the financial or business condition of these wholesale distributors and dealers could subject us to losses and affect our ability to bring our products to market. They could have a material adverse effect on our business, financial position, liquidity, results of operations, and

cash flows. Further, our ability to effectively manage inventory levels at wholesale distributor locations may be impaired under such arrangements, which could increase expenses associated with excess and obsolete inventory and negatively impact cash flows.

Our results of operations may be adversely affected by potential shortages of raw materials and increases in raw material costs. The most significant raw material used in our operations is wood fiber. Wood fiber is subject to commodity pricing, which fluctuates based on market factors over which we have no control. In addition, the cost of various types of wood fiber that we purchase in the market has at times fluctuated greatly because of governmental, economic or industry conditions, and may be affected by increased demand resulting from initiatives to increase the use of biomass materials in the production of heat, power, bio-based products, and biofuels. Wood fiber supply could also be influenced by natural events, such as forest fires, severe weather conditions, insect epidemics, and other natural disasters, which may increase wood fiber costs, restrict access to wood fiber, or force production curtailments.

In addition to wood fiber, we also use a significant quantity of various resins in our manufacturing processes. Resin product costs are influenced by changes in the prices or availability of raw materials used to produce resins, primarily petroleum products, as well as demand for and availability of resin products. The selling prices of our products have not always increased in response to raw material cost increases. We are unable to determine to what extent, if any, we will be able to pass any future raw material cost increases through to our customers through product price increases. Our inability to pass increased costs through to our customers could have a material adverse effect on our financial condition, results of operations, and cash flows.

Many of the Canadian forestlands from which we obtain wood fiber also are subject to the constitutionally protected treaty or common-law rights of the aboriginal peoples of Canada. Most of British Columbia is not covered by treaties and, as a result, the claims of British Columbia's aboriginal peoples relating to forest resources are largely unresolved, although many aboriginal groups are actively engaged in treaty discussions with the governments of British Columbia and Canada. Final or interim resolution of claims brought by aboriginal groups are expected to result in additional restrictions on the sale or harvest of timber and may increase operating costs and affect timber supply and prices in Canada

We mostly depend on third parties for transportation services and increases in costs and the availability of transportation could materially and adversely affect our business and operations. Our business depends on the transportation of many products, both domestically and internationally. We rely primarily on third parties for transportation of the products we manufacture and/or distribute as well as for delivery of our raw materials. In particular, a significant portion of the goods we manufacture and raw materials we use are transported by railroad or trucks, which are highly regulated. If any of our third-party transportation providers were to fail to deliver the goods we manufacture or distribute in a timely manner, we may be unable to sell those products at full value or at all. Similarly, if any of these providers were to fail to deliver raw materials to us in a timely manner, we may be unable to manufacture our products in response to customer demand. In addition, if any of these third parties were to cease operations or cease doing business with us, we may be unable to replace them at a reasonable cost. Any failure of a third-party transportation provider to deliver raw materials or finished products in a timely manner could harm our reputation, negatively affect our customer relationships and have a material adverse effect on our financial condition and results of operations. In addition, an increase in transportation rates or fuel surcharges could materially and adversely affect our sales and profitability.

We may experience difficulties in the launch or production ramp-up of new products, which could adversely affect our business. As we ramp up manufacturing processes for newly introduced products, we may experience difficulties, including manufacturing disruptions, delays or other complications, which could adversely impact our ability to serve our customers, our reputation, our costs of production and, ultimately, our financial position, results of operations and cash flows.

Unplanned events may interrupt our manufacturing operations, which may adversely affect our business. The manufacturing of our products is subject to unplanned events such as explosions, fires, inclement weather, natural disasters, accidents, equipment failures, labor disruptions, transportation interruptions, and supply interruptions.

Operational interruptions could significantly curtail the production capacity of a facility for a period of time. We have redundant capacity and capability to produce many of our products within our manufacturing platform to mitigate our business risk from such interruptions, but major or prolonged interruptions could compromise our ability to meet our customers' needs. Delayed delivery of our products to customers who require on-time delivery from us may cause customers to purchase alternative products at a higher cost, reschedule their own production, or incur other incremental costs. Customers may be able to pursue financial claims against us for their incremental costs, and we may incur costs to correct such problems in addition to any liability resulting from such claims. Interruptions may also harm our reputation among actual and potential customers, potentially resulting in a loss of business. To the extent these losses are not covered by insurance, our financial position, results of operations, and cash flows could be adversely affected by such events.

We are subject to significant environmental regulation and environmental compliance expenditures and liabilities. Our businesses are subject to many environmental laws and regulations, particularly with respect to discharges of pollutants and other emissions on or into the land, water and air, and the disposal and remediation of hazardous substances or other contaminants and the restoration and reforestation of timberlands. Compliance with these laws and regulations is a significant factor in our business. We have incurred and expect to continue to incur significant expenditures to comply with applicable environmental laws and regulations. Moreover, the environmental laws and regulations to which we are subject could become more stringent in the future, which could result in additional compliance costs or restrictions on our ability to manufacture our products or operate our business. Our failure to comply with applicable environmental laws and regulations and permit requirements could result in civil or criminal fines or penalties or enforcement actions, including regulatory or judicial orders enjoining or curtailing operations or requiring corrective measures, installation of pollution control equipment, or remedial actions.

Some environmental laws and regulations impose liability and responsibility on present and former owners, operators, or users of facilities and sites for contamination at such facilities and sites, without regard to causation or knowledge of contamination. In addition, we occasionally evaluate various alternatives with respect to our facilities, including possible dispositions or closures. Investigations undertaken in connection with these activities may lead to discoveries of contamination that must be remediated, and closures of facilities may trigger compliance requirements that are not applicable to operating facilities. Consequently, we cannot guarantee that existing or future circumstances or developments with respect to contamination will not require significant expenditures by us.

We are subject to various environmental, product liability, and other legal proceedings, matters, and claims. The outcome of these proceedings, matters, and claims, and the magnitude of related costs and liabilities are subject to uncertainties. We currently are, or from time to time in the future may be, involved in a number of environmental matters and legal proceedings, including legal proceedings involving antitrust, warranty or non-warranty product liability claims, negligence and other claims, including claims for wrongful death, personal injury and property damage alleged to have arisen out of the use by others of our or our predecessors' products or the release by us or our predecessors of hazardous substances. The conduct of our business involves the use of hazardous substances and the generation of contaminants and pollutants. In addition, the end-users of many of our products are members of the general public. Environmental matters and other legal matters and proceedings, including class action settlements relating to certain of our products, have in the past caused and, in the future, may cause us to incur substantial costs. The actual or alleged existence of defects in any of our products could also subject us to significant product liability claims. We have established contingency reserves in our Consolidated Financial Statements with respect to the estimated costs of existing environmental matters and legal proceedings to the extent that our management has determined that such costs are both probable and reasonably estimable as to amount. However, such reserves are based upon various estimates and assumptions relating to future events and circumstances, all of which are subject to inherent uncertainties. We regularly monitor our estimated exposure to environmental and litigation loss contingencies and, as additional information becomes known, may change our estimates significantly. However, no estimate of the range of any such change can be made at this time. We may incur costs in respect of existing and future environmental matters and legal proceedings as to which no contingency reserves have been established. We cannot assure you that we will have sufficient resources available to satisfy the related costs and expenses associated with these matters and proceedings.

Warranty claims relating to our products and exceeding our warranty reserves could have a material adverse effect on our business. We have offered, and continue to offer, various warranties on our products. Although we maintain reserves for warranty-related claims and we have established and recorded product-related warranty reserves on our Consolidated Financial Statements, we cannot guarantee that warranty expense levels or the results of any warranty-related legal proceedings will not exceed our reserves. If our warranty reserves are significantly exceeded, the costs associated with such warranties could have a material adverse effect on our financial position, results of operations, and cash flows.

Because our intellectual property and other proprietary information may become publicly available, we are subject to the risk that competitors could copy our products or processes. Our success depends, in part, on the proprietary nature of our technology, including non-patentable intellectual property, such as our process technology. To the extent that a competitor can reproduce or otherwise capitalize on our technology, it may be difficult, expensive, or impossible for us to obtain adequate legal or equitable relief. Also, the laws of some foreign countries may not protect our intellectual property to the same extent as do the laws of the United States. In addition to patent protection of intellectual property rights, we consider elements of our product designs and processes to be proprietary and confidential and/or trade secrets. To safeguard our confidential information, we rely on employee, consultant, and vendor nondisclosure agreements and contractual provisions and a system of internal and technical safeguards to protect our proprietary information. However, any of our registered or unregistered intellectual property rights may be subject to challenge or possibly exploited by others in the industry, which could materially adversely affect our financial position, results of operations, cash flows, and competitive position.

We have not independently verified the results of third-party research or confirmed assumptions or judgments upon which it may be based, and the forecasted and other forward-looking information contained therein is subject to inherent uncertainties. We refer in this annual report on Form 10-K and other documents that we file with the SEC to historical, forecasted and other forward-looking information published by sources such as *Resource Information Systems, Inc. (RISI)*, *Forest Economic Advisors, LLC (FEA)*, *Random Lengths Publications, Inc. (Random Lengths)* and the U.S. Census Bureau that we believe to be reliable. However, we have not independently verified this information and, with respect to the forecasted and forward-looking information, have not independently confirmed the assumptions and judgments upon which it is based. Forecasted and other forward-looking information is necessarily based on assumptions regarding future occurrences, events, conditions and circumstances and subjective judgments relating to various matters, and is subject to inherent uncertainties. Actual results may differ materially from the results expressed or implied by, or based upon, such forecasted and forward-looking information.

Cybersecurity risks related to the technology used in our operations and other business processes, as well as security breaches of company, customer, employee, and vendor information, could adversely affect our business. We rely on various information technology systems to capture, process, store, and report data and interact with customers, vendors, and employees. Despite careful security and controls design, implementation, updating, and internal and independent third-party assessments, our information technology systems, and those of our third-party providers, could become subject to security breaches, cyber-attacks, employee misconduct, computer viruses, misplaced or lost data, programming and/or human errors or other similar events. Network, system, and data breaches could result in misappropriation of sensitive data or operational disruptions, including interruption to systems availability and denial of access to and misuse of applications required by our customers to conduct business with us. In addition, hardware and operating system software and applications that we procure from third parties may contain defects in design or manufacture, including "bugs" and other problems that could unexpectedly interfere with the operation of the systems. Misuse of internal applications, theft of intellectual property, trade secrets, or other corporate assets, and inappropriate disclosure of confidential information could stem from such incidents. A breach in cybersecurity could result in manipulation and destruction of sensitive data, cause critical systems to malfunction, be damaged or shut down, and lead to disruption to our operations and production downtimes, potentially for lengthy periods of time. Theft of personal or other confidential data and sensitive proprietary information could also occur as a result of a breach in cybersecurity, exposing us to costs and liabilities associated with privacy and data security laws in the jurisdictions in which we operate. Additionally, a breach could expose us, our customers, our suppliers, and our employees to risks of misuse of such information. Such negative consequences of cyberattacks or security breaches could adversely affect our reputation, competitive position, bus

ness, or results of operations. The lost profits and increased costs related to cyber or other security threats or disruptions may not be fully insured against or indemnified by other means. A security failure could also impact our ability to operate our businesses effectively, adversely affect our reported financial results, impact our reputation, and expose us to potential liability or litigation. We may be required to expend additional resources to continue to enhance our security measures to investigate and remediate any security vulnerabilities.

From time to time, we may implement new technology systems or replace and/or upgrade our current information technology systems. These upgrades or replacements may not improve our productivity to the levels anticipated and may subject us to inherent costs and risks associated with implementing, replacing and updating these systems, including potential disruption of our internal control structure, substantial capital expenditures, demands on management time and other risks of delays or difficulties in transitioning to new systems or of integrating new systems into other existing systems. Our inability to prevent information technology system disruptions or to mitigate the impact of such disruptions could have an adverse effect on us.

Because we have operations outside the United States and report our earnings in U.S. dollars, unfavorable fluctuations in currency values and exchange rates could have a material adverse effect on our results of operations. Because our reporting currency is the U.S. dollar, our non-U.S. operations face the additional risk of fluctuating currency values and exchange rates. Such operations may also face hard currency shortages and controls on currency exchange. Changes in the value of foreign currencies (principally Canadian dollars, Brazilian reals, and Chilean pesos) could have an adverse effect on our results of operations. We have, in the past, entered into foreign exchange contracts associated with certain of our indebtedness and may continue to enter into foreign exchange contracts associated with major equipment purchases to manage a portion of the foreign currency rate risk. We historically have not entered into currency rate hedges with respect to our exposure from operations, although we may do so in the future. There can be no assurance that fluctuation in foreign currencies and other foreign exchange risks will not have a material adverse effect on our financial position, results of operations or cash flows.

Covenants and events of default in our debt instruments could limit our ability to undertake certain types of transactions and adversely affect our liquidity. Our revolving credit facility and the indenture governing our 4.875% Senior Notes due 2024 (2024 Senior Notes) contain a number of restrictive covenants that impose operating and financial restrictions on us and may limit our ability to engage in acts that may be in our long-term best interest, including, among others, restrictions on our ability to incur indebtedness, grant liens to secure indebtedness, engage in sale and leaseback transactions and merge or consolidate or sell all or substantially all of our assets.

In addition, restrictive covenants in our revolving credit facility require us to maintain specified financial ratios and satisfy other financial condition tests. Our ability to meet those financial ratios and tests can be affected by events beyond our control, and we may be unable to meet them.

A breach of the covenants or restrictions under our revolving credit facility or under the indenture governing the 2024 Senior Notes could result in an event of default under the applicable indebtedness. Such a default may allow the creditors to accelerate the related debt. A payment default or an acceleration following an event of default under our revolving credit facility or our indenture for our 2024 Senior Notes could trigger an event of default under the other indebtedness obligation, as well as any other debt to which a cross-acceleration or cross-default provision applies, which could result in the principal of and the accrued and unpaid interest on all such debt becoming due and payable. In addition, an event of default under our revolving credit facility could permit the lenders under our revolving credit facility to terminate all commitments to extend further credit under that facility. Furthermore, if we were unable to repay any amounts due and payable under our revolving credit facility, those lenders could proceed against the collateral granted to them to secure that indebtedness. In the event our lenders or noteholders accelerate the repayment of our borrowings, we and our subsidiaries may not have sufficient assets to repay that indebtedness.

As a result of these restrictions, we may be:

- limited in how we conduct our business and grow in accordance with our strategy;

- unable to raise additional debt or equity financing to operate during general economic or business downturns; or
- unable to compete effectively or to take advantage of new business opportunities.

In addition, our financial results, our level of indebtedness, and our credit ratings could adversely affect the availability and terms of any additional or replacement financing.

More detailed descriptions of our revolving credit facility and the indenture governing our 2024 Senior Notes are included in filings made by us with the SEC, along with the documents themselves, which provide the full text of these covenants.

Our defined benefit plan funding requirements or plan settlement expense could impact our financial results and cash flow. We have several pension plans in the U.S. and Canada, covering many of the Company's employees. Benefit accruals under our defined benefit pension plan in the U.S. were frozen as of January 1, 2010. Significant changes in interest rates, decreases in the fair value of plan assets, and timing and amount of benefit payments could affect the funded status of our plans, and could increase future funding requirements of the plans. A significant increase in future funding requirements could have a negative impact on our financial position, results of operations, and cash flows. These plans allow eligible retiring employees to receive lump-sum distributions of benefits earned. Under applicable accounting rules, if annual lump sum distributions exceed an actuarially determined threshold of the total of the annual service and interest costs, we would be required to recognize, in the current period of operations, a settlement expense of a portion of the unrecognized actuarial loss, which could have a negative impact on our results of operations.

In addition to the risks discussed above, we are subject to a variety of other risks as a publicly traded U.S. manufacturing company. As a publicly-traded U.S. manufacturing company, we are subject to a variety of other risks, each of which could adversely affect our financial position, results of operations or cash flows, or the price of our common stock. These risks include but are not limited to:

- the effects of global economic uncertainty;
- the ability to attract and retain key management and other personnel and develop effective succession plans;
- pursuing growth through acquisitions, including the ability to identify acceptable acquisition candidates, finance and consummate acquisitions on favorable terms and successfully integrate acquired assets or businesses;
- compliance with a wide variety of health and safety laws and regulations and changes to such laws and regulations;
- the exertion of influence over us, individually or collectively, by a few entities with concentrated ownership of our stock;
- taxation by multiple jurisdictions and the impact of such taxation on the effective tax rate and the amount of taxes paid;
- changes in tax laws and regulations;
- new or modified legislation related to health care;
- compliance with Section 404 of the Sarbanes-Oxley Act of 2002, including the potential impact of compliance failures; and
- failure to meet the expectations of investors, including as a result of factors beyond the control of an individual company.

ITEM 1B. *Unresolved Staff Comments*

None.

ITEM 2. Properties

Information regarding our principal facilities is set forth in the following table. Information regarding currently operating production capacities is based on annual typical operating rates and normal production mixes under current market conditions, considering known constraints such as log supply. Market conditions, fluctuations in log supply, environmental restrictions, and the nature of current orders may cause actual production rates and mixes to vary significantly from the production rates and mixes shown.

OSB		Siding⁴	
<u>OSB - 3/8" basis, million square feet</u>		<u>Siding - 3/8" basis, million square feet</u>	
Carthage, TX	500	Dawson Creek, British Columbia, Canada	300
Peace Valley, British Columbia, Canada ¹	800	Newberry, MI	140
Hanceville, AL	420	Hayward, WI ²	475
Jasper, TX	475	Tomahawk, WI	220
Maniwaki, Quebec, Canada	650	Two Harbors, MN	200
Roxboro, NC	525	Roaring River, NC	275
Sagola, MI	420	East River, Nova Scotia, Canada	55
Clarke County, AL	725	Swan Valley, Manitoba, Canada ²	350
	8 facilities		8 facilities
	<u>4,515</u>		<u>2,015</u>
EWP		South America	
<u>L-Joist, million lineal feet³</u>		<u>OSB / Siding — 3/8" basis, million square feet</u>	
Red Bluff, CA	80	Panguipulli, Chile	290
		Lautaro, Chile	160
		Ponta Grossa, Brazil	300
<u>LVL, thousand cubic feet</u>			3 facilities
Golden, BC, Canada	4,000		<u>750</u>
Wilmington, NC	4,600		
	2 facilities		
	<u>8,600</u>		
<u>LSL, thousand cubic feet</u>			
Houlton, ME ²	5,500		

¹ The Peace Valley facility curtailed operations in the third quarter of 2019.

² The Hayward, WI and Swan Valley, Manitoba, Canada siding facilities and the Houlton, ME LSL facility can produce commodity OSB when market conditions warrant.

³ In addition to the plants described, our 50/50 joint venture with Resolute Forest Products, Inc. owns and operates a plant in St. Prime, Quebec, Canada, and a plant in La Rouche, Quebec, Canada. The combined annual production capacity of these facilities is 140 million lineal feet.

⁴ In addition to the plants listed, we own and operate two finishing facilities in St. Louis, MO, and Green Bay, WI, which support our siding production.

ITEM 3. *Legal Proceedings***ENVIRONMENTAL MATTERS**

We are involved in a number of environmental proceedings and activities and may be wholly or partially responsible for known or unknown contamination existing at a number of other sites at which we have conducted operations or disposed of waste. Based on the information currently available, management believes that any fines, penalties or other costs or losses resulting from these matters should not have a material adverse effect on our financial position, results of operations, cash flows or liquidity.

OTHER PROCEEDINGS

We are party to other legal proceedings in the ordinary course of business. Based on the information currently available, we believe that the resolution of such proceedings should not have a material adverse effect on our financial position, results of operations, cash flows, or liquidity.

CONTINGENCY RESERVES

We maintain reserves for the estimated cost of the legal and environmental matters referred to above. However, as with any estimate, the uncertainty of predicting the outcomes of claims and litigation and environmental investigations and remediation efforts could cause actual costs to vary materially from current estimates. Due to various uncertainties, we cannot predict to what degree actual payments will exceed the recorded liabilities related to these matters. However, it is possible that, in either the near term or the longer term, revised estimates or actual payments will significantly exceed the recorded liabilities.

For information regarding our financial statement reserves for the estimated costs of the environmental and legal matters referred to above, see Note 16 of the Notes to the Consolidated Financial Statements included in Item 8 in this annual report on Form 10-K.

ITEM 4. *Mine Safety Disclosures*

N/A

PART II

ITEM 5. *Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities*

The common stock of LP is listed on the New York Stock Exchange with the ticker symbol "LPX." As of February 7, 2020, there were approximately 4,289 holders of record of our common stock.

ISSUER PURCHASES OF EQUITY SECURITIES

The following amount of our common stock was repurchased under these authorizations during the quarter ended December 31, 2019:

Period	Total Number of Shares Purchased as Part of Publicly Announced Purchase Plans or Programs ¹	Average Price Paid Per Share	Approximate Dollar Value of Shares Available for Repurchase Under the Plans or Programs
October 1, 2019 - October 31, 2019	1,459,459	\$ 25.90	\$ 120
November 1, 2019 - November 30, 2019	1,549,939	\$ 29.33	\$ 75
December 1, 2019 - December 31, 2019	2,562,496	\$ 29.17	\$ —
Total for Fourth Quarter 2019	5,571,894		

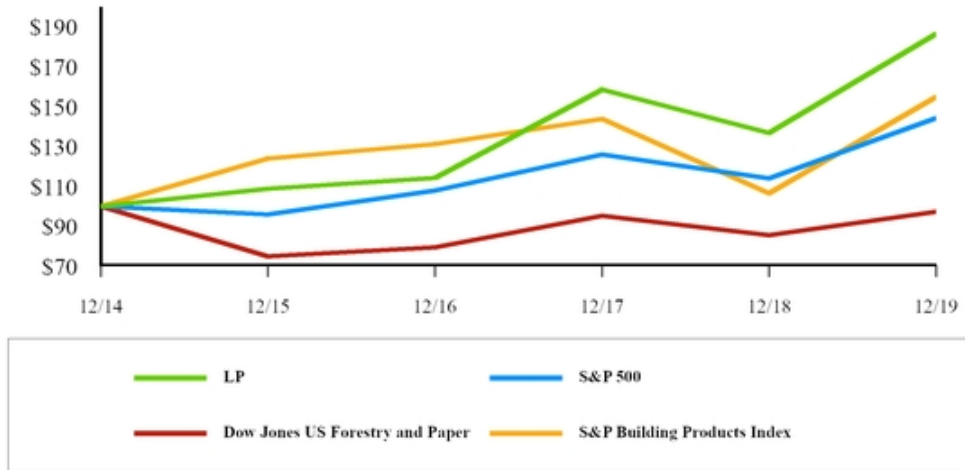
¹In February 2019, we announced that our Board of Directors authorized a stock repurchase plan under which we may repurchase up to \$600 million of our common stock (Repurchase Program). As of October 1, 2019, \$400 million of our common stock had been repurchased under the Repurchase Program pursuant to an accelerated share repurchase (ASR) agreement with Goldman Sachs & Co. LLC, and the remaining \$200 million were repurchased during the fourth quarter of 2019. During the fourth quarter of 2019, there were no share repurchases outside of the Repurchase Program.

Additional repurchases of common stock may be made through open market, block and privately-negotiated transactions, including SEC Rule 10b5-1 plans, at such times and in such amounts as management deems appropriate, subject to Board of Directors' authorization, market and business conditions, regulatory requirements, and other factors.

PERFORMANCE GRAPH

The following graph compares the cumulative total return to investors, including dividends paid (assuming reinvestment of dividends) and appreciation or depreciation in stock price, from an investment in LP common stock for the period from December 31, 2014, through December 31, 2019, to the total cumulative return to investors from the Standard & Poor's 500 Stock Index and the Dow Jones U.S. Forestry & Paper Index for the same period. Stockholders are cautioned that the graph shows the returns to investors as of the dates noted and may not be representative of the returns for any other past or future periods.

**Comparison of 5 Year Cumulative Total Return
Among LP, the S&P 500 Index and the Dow Jones U.S. Forestry & Paper Index**



ITEM 6. Selected Financial Data
Dollar amounts in millions, except per share
Year ended December 31
SUMMARY INCOME STATEMENT DATA

	2019	2018	2017 ⁽¹⁾	2016 ⁽¹⁾	2015 ⁽¹⁾⁽²⁾
Net sales	\$ 2,310	\$ 2,828	\$ 2,734	\$ 2,233	\$ 1,893
Income from continuing operations	\$ (10)	\$ 399	\$ 391	\$ 150	\$ (86)
Net income	\$ (10)	\$ 395	\$ 390	\$ 150	\$ (88)
Net income attributed to LP	\$ (5)	\$ 395	\$ 390	\$ 150	\$ (88)
Income from continuing operations, per share—basic	\$ (0.04)	\$ 2.79	\$ 2.71	\$ 1.05	\$ (0.60)
Income from continuing operations, per share—diluted	\$ (0.04)	\$ 2.76	\$ 2.67	\$ 1.03	\$ (0.60)
Net income per share—basic	\$ (0.04)	\$ 2.76	\$ 2.70	\$ 1.04	\$ (0.62)
Net income attributed per share—diluted	\$ (0.04)	\$ 2.73	\$ 2.66	\$ 1.03	\$ (0.62)
Average shares of common stock outstanding					
Basic	123	143	144	143	142
Diluted	123	144	146	145	142
Cash dividends declared per common share	\$ 0.54	\$ 0.52	\$ —	\$ —	\$ —
SUMMARY BALANCE SHEET INFORMATION					
Cash and cash equivalents	\$ 181	\$ 878	\$ 928	\$ 659	\$ 435
Working capital (excluding cash and cash equivalents)	\$ 194	\$ 147	\$ 162	\$ 120	\$ 191
Total assets	\$ 1,835	\$ 2,514	\$ 2,449	\$ 2,031	\$ 2,176
Long-term debt, excluding current portion	\$ 348	\$ 347	\$ 351	\$ 374	\$ 752
Capital expenditures	\$ (163)	\$ (214)	\$ (149)	\$ (125)	\$ (114)
Acquisition of businesses / investment in unconsolidated affiliates	\$ 27	\$ (45)	\$ (21)	\$ —	\$ —
NON-GAAP MEASURES					
Adjusted EBITDA ⁽³⁾	\$ 209	\$ 660	\$ 678	\$ 350	\$ 78
Adjusted Income ⁽³⁾	\$ 45	\$ 397	\$ 339	\$ 130	\$ (46)

⁽¹⁾ As of January 1, 2018, we adopted guidance under ASU No 2017-17, "Retirement Benefits - Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost" which reclassified interest cost, expected return on assets, amortization of prior service costs, amortization of net actuarial losses and settlement costs from Cost of sales, Selling, general and administrative expenses and Other operating credits and charges to Non-operating income (expense). All prior periods were restated to reflect this adoption.

⁽²⁾ As of December 31, 2015, we adopted guidance under ASU No 2015-03, "Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs," which reclassified certain deferred debt costs as a direct deduction from the carrying amount of that debt liability. All prior periods were restated to reflect this adoption.

⁽³⁾ See reconciliation and definitions to the most directly reportable U.S. generally accepted accounting principles (U.S. GAAP) measures included in Item 7 of this annual report on Form 10-K.

ITEM 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

This Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our Consolidated Financial Statements and related Notes and other financial information appearing elsewhere in this annual report on Form 10-K. The following discussion includes statements that are forward-looking statements that are based on the beliefs of our management, as well as assumptions made by, and information currently available to, our management.

OVERVIEW

General

We are a leading provider of high-performance building solutions serving the new home construction, repair and remodeling, and outdoor structures markets. We also market and sell our products to primarily retail home centers, wholesalers, distributors, and homebuilding and industrial businesses. Our manufacturing facilities are primarily located in the U.S. and Canada, and we also operate two facilities in Chile and one facility in Brazil.

To serve these markets, we operate in four segments: Siding, OSB, EWP, and South America.

Executive Summary

We recorded a \$518 million (or 18%) decrease in net sales to \$2.3 billion for the year ended December 31, 2019, from \$2.8 billion reported for the year ended December 31, 2018, primarily due to \$416 million of reduced OSB prices and reductions in OSB shipments across all North American segments.

We recorded a net loss attributed to LP of \$5 million ((\$0.04) per diluted share) during 2019 compared to net income of \$395 million (\$2.73 per diluted share) during the prior year. In addition to the OSB pricing and shipment declines, we recorded pre-tax impairment charges of \$92 million. Included within these impairment charges are \$47 million related to non-operating assets located at Val-d'Or and St Michel, Quebec, Canada; Cook, Minnesota; and Silsbee, Texas; and \$39 million related to an EWP facility producing LSL and OSB and \$5 million related to a Siding facility that we expect to sell. These impairment charges reflect changes to anticipated usage of these facilities driven by market changes and improved operating efficiencies across our remaining facilities.

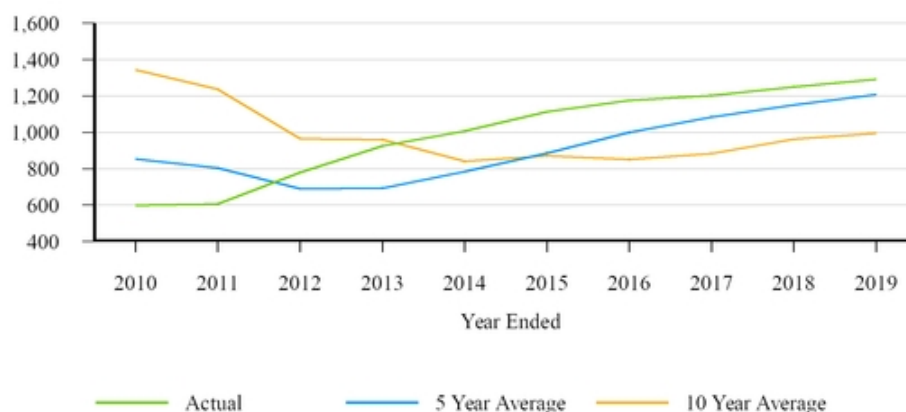
Our Adjusted EBITDA decreased \$451 million to \$209 million for the year ended December 31, 2019, from \$660 million for the year ended December 31, 2018, primarily due to the OSB pricing and shipment declines, partially offset by the SmartSide® Strand revenue growth.

Demand for Building Products

Demand for our products correlates to a significant degree to the level of new home construction activity in North America, which historically has been characterized by significant cyclical activity. The U.S. Census Bureau reported that actual single and multi-family housing starts in 2019 were about 3% higher than in 2018. Single-family housing starts were about one percent higher than in 2018. We believe that the level of building continues to be impacted by a lack of available labor.

While near-term residential construction is constrained in the U.S., positive long-term fundamentals exist. Increased immigration, the changing age distribution of the population, and historically low-interest rates are expected to lead to more household formations. The chart below, which is based on data published by U.S. Census Bureau, provides a graphical summary of new housing starts for single and multi-family in the U.S. showing actual and rolling five and ten-year averages for housing starts.

Housing Starts



Supply and Demand for Siding

SmartSide® siding is a specialty building material and is subject to competition from various siding technologies, including vinyl, stucco, wood, fiber cement, brick, and other. We believe we are the largest manufacturer to the \$800 million engineered wood siding market. The overall siding market is estimated to be over \$10 billion. We have consistently grown our SmartSide® Strand siding above the underlying market growth rates. SmartSide® Strand is generally less sensitive to new housing market cyclicality since roughly 60% of its demand comes from other markets, including: sheds, retail, and repair and remodel. Our growth in this market depends upon continued displacement of vinyl, wood fiber, cement and stucco alternatives, our product innovation and our technological expertise in wood and wood composites to address the needs of our customers.

Supply and Demand for OSB

OSB is a commodity product, and it is subject to competition from manufacturers worldwide. Product supply is influenced primarily by fluctuations in available manufacturing capacity and imports. The ratio of overall OSB demand to capacity generally drives price.

CRITICAL ACCOUNTING POLICIES AND SIGNIFICANT ESTIMATES

Management's Discussion and Analysis of Financial Condition and Results of Operations are based upon our Consolidated Financial Statements, which have been prepared in accordance with U.S. GAAP. The preparation of these financial statements requires management to make informed estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. Our financial position and/or results of operations may be materially different when reported under different conditions or when using different assumptions in the application of such policies. In the event estimates or assumptions prove to be different from actual amounts, adjustments are made in subsequent periods to reflect more current information. Our significant accounting policies are disclosed in the Consolidated Financial Statements and Item 8 of this annual report on Form 10-K. The following discussion addresses our most critical accounting policies, which are those that are both important to the portrayal of our financial condition and results of operations and that require significant judgment or use of complex estimates.

Long-lived Assets

Property, plant and equipment, and long-lived assets (including amortizable identifiable intangible assets) are tested

for recoverability whenever events or changes in circumstances indicate that its carrying amount may not be recoverable, including but not limited to facility curtailments and asset abandonments. When such events occur, we group long-lived assets with other assets and liabilities at the lowest level for which identifiable cash flows exist. We compare the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset or asset group to the carrying amount of a long-lived asset or asset group. The cash flows are based on our best estimate of future cash flows derived from the most recent business projections. The significant assumptions used to determine estimated cash flows are the cash inflows and outflows directly resulting from the use of those assets in operations, including sales volume, product pricing, support costs, and other costs to operate. We recognize an impairment loss if the amount of the asset's carrying value exceeds the asset's estimated fair value. Fair value is estimated primarily using discounted expected future cash flows on a market-participant basis. If we recognize an impairment loss, the adjusted carrying amount of the asset becomes its new cost basis. For a depreciable long-lived asset, the new cost basis is depreciated (amortized) over the remaining estimated useful life of that asset.

Our impairment loss calculations contain uncertainties because they require management to make assumptions and to apply judgment to estimate future cash flows and asset fair values. We have not made any material changes in our impairment loss assessment methodology in the periods presented. We do not believe a material change in the estimates or assumptions that we use to calculate long-lived asset impairments is likely. However, if actual results are not consistent with our estimates and assumptions used in estimating future cash flows and asset fair values, we may be exposed to losses that could be material.

Defined Benefit Pension Plans

We have a number of pension plans in the U.S. and Canada, covering many of the Company's employees. Benefit accruals under our defined benefit pension plan in the U.S. were frozen as of January 1, 2010, and benefit accruals under our defined benefit pension plan in Canada were frozen as of January 1, 2020.

We are required to make assumptions that are used to calculate the related assets, liabilities, and expenses recorded in our Consolidated Financial Statements. Net actuarial gains and losses occur when actual experience differs from any of the assumptions used to value defined benefit pension plans or when assumptions change as they may each year. The primary factors contributing to actuarial gains and losses are changes in the discount rate and the differences between expected and actual returns on pension plan assets. This accounting method results in the potential for volatile and challenging to forecast gains and losses.

We record amounts relating to these defined benefit pension plans based on various actuarial assumptions, including discount rates, assumed rates of return, compensation increases, and life expectancy. We review our actuarial assumptions on an annual basis and make modifications to the assumptions based on current economic conditions and trends. The assumptions utilized in recording our obligations under our plans are based on our experience and on advice from our independent actuaries. However, differences in actual experience or changes in the assumptions may materially affect our financial condition or results of operations.

As of December 31, 2019, we used a discount rate and long-term rate of return assumption of 3.1% and 5.8%, respectively, for our U.S. defined benefit pension plan. We used a discount rate and a long-term rate of return assumption of 3.0% and 3.4%, respectively, for our Canadian plans as of December 31, 2019.

- A 50 basis point change in our discount rate assumption would lead to an increase or decrease in our pension liability of approximately \$17 million.
- A 50 basis point change in the long-term rate of return on plan assets used in accounting for our pension plans would have a \$1 million impact on pension expense, and a 50 basis point change in the discount rate would have a nominal impact on pension expense.

It is not possible to forecast or predict whether there will be actuarial gains and losses in future periods, and if required, the magnitude of any such adjustment. These gains and losses are driven by differences in actual experience or changes in the assumptions that are beyond our control, such as changes in interest rates and the actual return on pension plan assets.

Income Taxes

We establish deferred tax liabilities or assets for temporary differences between financial and tax reporting bases and subsequently adjust them to reflect changes in tax rates expected to be in effect when the temporary differences reverse. We review our deferred tax assets for recoverability and establish valuation allowances based on historical taxable income, projected future taxable income, applicable tax strategies, and the expected timing of the reversals of existing temporary differences. A valuation allowance is provided when it is more likely than not that some portion or all of the deferred tax assets will not be realized. As of December 31, 2019, the valuation allowances on our deferred tax assets were \$11 million.

In addition, we evaluate uncertainties in the application of complex tax regulations in the calculation of tax liabilities. We provide for uncertain tax positions and the related interest and penalties based upon management's assessment of whether a tax benefit is more likely than not to be sustained upon examination by tax authorities. We make this assessment based only on the technical merits of the tax position. The technical merits of a tax position derive from both statutory and judicial authority (legislation and statutes, legislative intent, regulations, rulings, and case law) and their applicability to the facts and circumstances of the tax position. If a tax position does not meet the more likely than not recognition threshold, the benefit of that position is not recognized in the financial statements, and a liability to unrecognize the tax benefits is established. A tax position that meets the more likely than not recognition threshold is measured to determine the amount of benefit to recognize in our Consolidated Financial Statements. The tax benefit recognized is measured as the largest amount of benefit that is greater than 50% likely of being realized upon ultimate resolution with a taxing authority. The actual benefits (expense) ultimately realized may differ from our estimates. In future periods, changes in facts, circumstances, and new information may require us to change the recognition and measurement estimates with regard to individual tax positions. Changes in recognition and measurement estimates are recorded in the Consolidated Financial Statements in the period in which such changes occur. As of December 31, 2019, we had liabilities for unrecognized tax benefits pertaining to uncertain tax positions totaling \$38 million.

Customer Program Costs

Our businesses routinely incur customer program costs to obtain favorable product placement, to promote sales of products and to maintain competitive pricing. Customer program costs and incentives, including rebates and promotion and volume allowances, are accounted for as a reduction in net sales at the time the program is initiated and/or the revenue is recognized. The costs include, but are not limited to, volume allowances and rebates, promotional allowances, and cooperative advertising programs. These costs are recorded at the later of the time of sale or the implementation of the program based on management's best estimates.

Our estimates are based on historical and projected experience for each type of program or customer. Volume allowances are accrued based on our estimates of customer volume achievement and other factors incorporated into customer agreements, such as new products, merchandising support, and customer training.

Although we believe we can reasonably estimate customer volumes and support and the related customer payments at interim periods, it is possible that actual results could be different from previously estimated amounts. At the end of each year, a significant portion of the actual volume and support activity is known. Thus, we do not believe that a material change in the amounts recorded as customer program costs payable is likely. As of December 31, 2019, we had \$34 million accrued as customer rebates.

NON-GAAP FINANCIAL MEASURES

In evaluating our business, we utilize non-GAAP financial measures that fall within the meaning of SEC Regulation G and Regulation S-K Item 10(e), which we believe provide users of the financial information with additional meaningful comparison to prior reported results. Non-GAAP measures do not have standardized definitions and are not defined by U.S. GAAP. In this annual report on Form 10-K, we disclose earnings from continuing operations

before interest expense, income taxes, depreciation and amortization, and exclude stock-based compensation expense, impairment of long-lived assets, other operating credits and charges, net, loss on early debt extinguishment, investment income and other non-operating items as Adjusted EBITDA from continuing operations (Adjusted EBITDA) which is a non-GAAP financial measure. We have included Adjusted EBITDA in this report because we view it as an important supplemental measure of our performance and believe that it is frequently used by interested persons in the evaluation of companies that have different financing and capital structures and/or tax rates. We also disclose Adjusted income from continuing operations attributed to LP, which excludes impairment of long-lived assets, interest expense outside of normal operations, other operating credits and charges, net, other non-operating items, and adjusts for a normalized tax rate (Adjusted Income). We believe that Adjusted Income is a useful measure for evaluating our ability to generate earnings and that providing this measure should allow interested persons to more readily compare the earnings for past and future periods.

Neither Adjusted EBITDA nor Adjusted Income is a substitute for the U.S. GAAP measure of net income or for any other U.S. GAAP measures of operating performance. It should be noted that other companies may present similarly-titled measures differently and, therefore, as presented by us, these measures may not be comparable to similarly-titled measures reported by other companies. Adjusted EBITDA and Adjusted Income have material limitations as performance measures because they exclude items that are actually incurred or experienced in connection with the operations of our business.

The following table presents significant items by operating segment and reconciles Net income to Adjusted EBITDA:

Dollar amounts in millions			
Year Ended December 31,	2019	2018	2017
Net income	\$ (10)	\$ 395	\$ 390
Add (deduct):			
Loss from noncontrolling interest	5	—	—
Loss from discontinued operations	—	4	1
Income from continuing operations attributed to LP	(5)	399	391
Provision for income taxes	(13)	122	119
Depreciation and amortization	122	120	123
Stock-based compensation	9	8	10
Impairment of long-lived assets	92	11	9
Other operating credits and charges, net	1	(2)	3
Interest expense, net	9	(2)	9
Non-operating items	(6)	4	14
Adjusted EBITDA	\$ 209	\$ 660	\$ 678
Siding	\$ 177	\$ 202	\$ 192
OSB	10	425	459
EWP	26	26	23
South America	34	40	33
Other	(11)	(8)	(6)
Corporate	(27)	(25)	(23)
Adjusted EBITDA	\$ 209	\$ 660	\$ 678

The following table provides the reconciliation of net income to Adjusted Income:

Dollar amounts in millions										
Year ended December 31,	2019		2018		2017		2016		2015	
Net income	\$	(10)	\$	395	\$	390	\$	150	\$	(88)
Add (deduct):										
Loss from noncontrolling interest		5		—		—		—		—
Loss from discontinued operations		—		4		1		1		2
Impairment of long-lived assets		92		11		9		(9)		2
Gain on acquisition		(14)		—		—		—		—
Other operating credits and charges, net		1		(2)		3		18		17
Interest expense outside of normal operations		—		—		—		3		—
Other operating credits and charges, net associated with joint venture		—		—		—		—		(1)
Early debt extinguishment		—		—		—		17		—
Reported tax provision		(13)		122		119		20		(3)
Normalized tax provision at 25% for 2019 and 2018 and 35% for 2017, 2016 and 2015		(16)		(132)		(183)		(70)		25
Adjusted Income		45		397		339		130		(46)
Adjusted Diluted EPS	\$	0.37	\$	2.75	\$	2.32	\$	0.89	\$	(0.32)

OUR OPERATING RESULTS

Our results of operations for each of our segments are discussed below, as are results of operations for the “other” category, which comprises other products that are not individually significant. See Note 20 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K for further information regarding our segments.

Siding

The Siding segment consists of LP SmartSide® trim and siding, LP CanExel® prefinished siding, as well as LP Outdoor Building Solutions® innovative products for premium outdoor buildings.

Segment Sales, Adjusted EBITDA, and Adjusted EBITDA margin for this segment were as follows:

Dollar amounts in millions									
Year ended December 31,	2019		2018		2017		Increase (decrease)		
	2019 - 2018	2018 - 2017							
Sales	\$	963	\$	942	\$	884		2 %	7%
Adjusted EBITDA		177		202		192		(12)%	5%
Adjusted EBITDA margin		18%		21%		22%			

Sales in this segment by product line were as follows:

Dollar amounts in millions				Increase (decrease)	
	2019	2018	2017	2019 - 2018	2018 - 2017
Year ended December 31,					
SmartSide® Strand siding	\$ 797	\$ 725	\$ 646	10 %	12 %
SmartSide® Fiber siding	101	106	111	(5)%	(4)%
CanExel® siding	46	37	49	23 %	(24)%
OSB - commodity	9	39	67	(78)%	(41)%
OSB - Structural Solutions	1	23	—	(96)%	NA
Other	9	12	10	(23)%	18 %
Total	\$ 963	\$ 942	\$ 884		

Percent changes in average sales prices and unit shipments are as follows:

	2019 versus 2018		2018 versus 2017	
	Average Selling Price	Unit Shipments	Average Selling Price	Unit Shipments
SmartSide® Strand siding	3%	8 %	5%	8 %
SmartSide® Fiber siding	4%	(8)%	10%	(13)%
CanExel® siding	2%	19 %	2%	(25)%

Year Ended December 31, 2019, Compared to Year Ended December 31, 2018

Net sales increased \$21 million (or two percent) compared to 2018, primarily due to SmartSide® Strand revenue growth of 10%. SmartSide® Strand siding revenue comprised 81% of the total siding shipments in 2019 as compared to 71% in 2018. The increase in SmartSide® Strand siding revenue reflects the increased market penetration in key markets and the implementation of price increases in the first quarter of 2019.

SmartSide® Fiber siding shipments decreased from 2018 due to loss of market and channel penetration as customers shifted towards alternative products, including SmartSide® Strand. CanExel® siding revenue increased from 2018 due to better Canadian distributor sales and changes to the product mix in 2019. Additionally, we had lower sales of OSB produced at our Siding mills during 2019.

Siding Adjusted EBITDA decreased by \$25 million (or 12%) from 2018, primarily due to the \$18 million of conversion costs associated with our Dawson Creek facility and the reduction of OSB produced at our Siding mills.

Year Ended December 31, 2018, Compared to Year Ended December 31, 2017

Net sales increased \$58 million (or seven percent) compared to 2017, reflecting improved SmartSide® Strand siding pricing and shipments offset in part by reductions in SmartSide® Fiber and CanExel® siding shipments and OSB shipments. SmartSide® Strand siding revenue comprised 71% of the total siding shipments in 2018 as compared to 67% in 2017. The increase in SmartSide® Strand siding revenue reflected the increased market penetration in key markets and the introduction of new products. Additionally, the SmartSide® Strand average prices increased due to favorable product mix and a pricing increase in the first quarter of 2018.

SmartSide® Fiber siding shipments decreased from 2017 due to the loss of market penetration from price increases. CanExel® siding revenue decreased from 2017 due to Canadian distributors depleting their inventory levels and unfavorable changes to the product mix in 2018. OSB produced at our siding mills decreased from 2017 due to certain logistical challenges.

Siding Adjusted EBITDA increased \$11 million (or five percent) compared to 2017 due to better SmartSide® Strand siding prices and higher shipments offset by increases in raw materials, primarily resin, expenses associated with the conversion of our Dawson Creek facility, logistical challenges resulting in higher freight and lower throughput, principally at our Dawson Creek facility, and increases in sales and marketing expenses.

OSB

The OSB segment manufactures and distributes OSB structural panel products including LP OSB, LP TechShield® radiant barrier, LP TopNotch® sub-flooring, LP Legacy® super tough, moisture-resistant sub-flooring and LP FlameBlock® fire-rated sheathing. OSB is manufactured using wood strands arranged in layers and bonded with resins and wax. Significant cost inputs to produce OSB and approximate breakdown percentages for 2019 include wood fiber (30%), resin and wax (19%), labor and burden (17%), utilities (five percent), and manufacturing and other (29%).

Segment Sales, Adjusted EBITDA, and Adjusted EBITDA margin for this segment were as follows:

Dollar amounts in millions				Increase (decrease)				
	Year ended December 31,	2019	2018	2017	2019 - 2018	2018 - 2017		
Sales	\$	777	\$	1,305	\$	1,303	(40)%	— %
Adjusted EBITDA		10		425		459	(98)%	(7)%
Adjusted EBITDA margin		1%		33%		35%		

Sales in this segment by product line were as follows:

Dollar amounts in millions				Increase (decrease)				
	Year ended December 31,	2019	2018	2017	2019 - 2018	2018 - 2017		
OSB - commodity	\$	387	\$	746	\$	766	(48)%	(3)%
OSB - Structural Solutions		381		551		525	(31)%	5 %
Other		9		8		12	2 %	(33)%
	\$	777		1,305		1,303		

Percent changes in average sales prices and unit shipments are as follows:

	2019 versus 2018		2018 versus 2017	
	Average Selling Price	Unit Shipments	Average Selling Price	Unit Shipments
OSB - commodity	(38)%	(17)%	—%	(2)%
OSB - Structural Solutions	(29)%	(1)%	4%	— %

Year Ended December 31, 2019, Compared to Year Ended December 31, 2018

Net sales decreased \$528 million (or 40%) from 2018, primarily due to \$407 million of reduced prices and reductions in shipments reflecting the change in overall market demand and supply during 2019. These decreases were partially offset by increases in our Structural Solutions mix, which comprised 43% of the total OSB shipments in 2019 as compared to 38% in 2018 due to our continued transformation of our OSB business model.

Adjusted EBITDA decreased \$415 million (or 98%) from 2018, primarily due to the decline in OSB prices and shipments, and partially offset by improved operating efficiencies.

Year Ended December 31, 2018, Compared to Year Ended December 31, 2017

Net sales decreased \$2 million (or less than one percent) from 2017, primarily due to reductions in OSB shipments reflecting the overall market demand. Our Structural Solutions mix comprised 38% of the total OSB shipments in both 2018 and 2017, respectively.

Adjusted EBITDA decreased \$34 million (or seven percent) from 2017 due to increases in Structural Solutions pricing, and partially offset by increasing raw material costs (primarily resin) and manufacturing costs due to downtime related to logistics associated with our western Canadian operations, maintenance capital improvements and market curtailments (primarily in the fourth quarter of 2018).

EWP

The EWP segment consists of LP SolidStart® I-Joist (IJ), Laminated Veneer Lumber (LVL), Laminated Strand Lumber (LSL), and other related products. This segment also includes the sales of I-Joist and LVL products produced by our joint venture and sales of plywood produced as a by-product of the LVL production process.

Segment Sales, Adjusted EBITDA, and Adjusted EBITDA margin for this segment were as follows:

Dollar amounts in millions Year ended December 31,	2019	2018	2017	Increase (decrease)	
				2019 - 2018	2018 - 2017
Sales	\$ 396	\$ 409	\$ 384	(3)%	6%
Adjusted EBITDA	26	26	23	(1)%	12%
Adjusted EBITDA margin	7%	6%	6%		

Sales in this segment by product line were as follows:

Dollar amounts in millions Year ended December 31,	2019	2018	2017	Increase (decrease)	
				2019 - 2018	2018 - 2017
LVL	\$ 142	\$ 141	\$ 144	— %	(2)%
I-Joist	137	122	117	13 %	4 %
LSL	50	59	47	(16)%	26 %
OSB - commodity	3	10	9	(70)%	5 %
OSB - Structural Solutions	8	14	13	(44)%	5 %
Other, including plywood and related products	56	63	53	(11)%	17 %
Total	\$ 396	\$ 409	\$ 384		

Percent changes in average sales prices and unit shipments are as follows:

	2019 versus 2018		2018 versus 2017	
	Average Selling Price	Unit Shipments	Average Selling Price	Unit Shipments
LVL	— %	1 %	9%	(9)%
I-Joist	(1)%	14 %	8%	(1)%
LSL	4 %	(18)%	10%	16 %

Year Ended December 31, 2019, Compared to Year Ended December 31, 2018

Net sales decreased \$13 million (or three percent) from 2018, primarily due to decreased shipments of LSL and decreases in OSB produced at EWP mills. These decreases were partially offset by shipment increases for LVL and

I-Joists.

Adjusted EBITDA was flat from 2018 due to favorable absorption from increased I-Joist production levels and lower input costs. This increase was offset by operational efficiency savings and lower sales of OSB produced at EWP mills.

Year Ended December 31, 2018, Compared to Year Ended December 31, 2017

Net sales increased \$25 million (or seven percent) from 2017, primarily due to increased pricing across product lines and favorable changes in product mix partially offset by decreased LVL and I-Joist shipments. Shipments declined in LVL due to customers depleting their inventory levels. LSL shipments increased due to improved market demand and continued penetration into new applications.

Adjusted EBITDA increased \$3 million (or 12%) from 2017, primarily due to the realization of price increases and reductions in manufacturing costs due to higher utilization across all EWP mills offset by increases in raw material costs, principally, lumber, veneer, and OSB.

South America

Our South America segment manufactures and distributes OSB structural panel and siding products in South America and certain export markets. This segment has manufacturing operations in two countries, Chile and Brazil, and operates sales offices in Chile, Brazil, Peru, Columbia, and Argentina.

Segment Sales, Adjusted EBITDA, and Adjusted EBITDA margin for this segment were as follows:

Dollar amounts in millions				Increase (decrease)	
	2019	2018	2017	2019 - 2018	2018 - 2017
Year ended December 31,					
Sales	\$ 159	\$ 161	\$ 155	(1)%	4%
Adjusted EBITDA	34	40	33	(15)%	20%
Adjusted EBITDA margin	21%	25%	22%		

Sales in this segment by product were as follows:

Dollar amounts in millions				Increase (decrease)	
	2019	2018	2017	2019 - 2018	2018 - 2017
Year ended December 31,					
OSB -Structural Solutions	\$ 138	\$ 135	\$ 132	2 %	3%
Siding	19	22	20	(13)%	8%
Other	3	4	3	(32)%	21%
Total	\$ 159	\$ 161	\$ 155		

Percent changes in average sales prices and unit shipments for 2019 compared to 2018 are as follows:

	2019 versus 2018		2018 versus 2017	
	Average Selling Price	Unit Shipments	Average Selling Price	Unit Shipments
OSB	(12)%	17 %	12%	(8)%
Siding	(4)%	(10)%	4%	5 %

Year Ended December 31, 2019, Compared to Year Ended December 31, 2018

Net sales decreased \$2 million (or one percent) compared to 2018 due to pricing pressure from increased competition in export markets in South America and Asia and unfavorable foreign currency fluctuations, partially offset by increases in local and export shipments.

Adjusted EBITDA decreased \$6 million (or 15%) from 2018, primarily due to pricing pressure from increased competition and unfavorable foreign currency fluctuations.

Year Ended December 31, 2018, Compared to Year Ended December 31, 2017

Net sales increased \$6 million (or four percent) from 2017 due to increased market penetration and OSB price increases implemented in South America offset by decreased shipments in South America due to the slowing housing market in Chile and continued economic weakness across South America.

South America Adjusted EBITDA increased \$7 million (or 20%) from 2017 due to the OSB price increases partially offset by operating costs associated with the start-up of our third mill in Chile.

Other

Our other products segment includes our off-site framing operation Entekra Holdings, LLC (Entekra), remaining timber and timberlands, and other minor products, services, and closed operations, which are not classified as discontinued operations.

Other net sales were \$20 million for 2019 as compared to \$11 million in 2018. The increase from 2018 was due to our acquisition of a controlling interest in Entekra in 2019. Adjusted EBITDA was \$(11) million for 2019 as compared to \$(8) million for 2018.

Other sales were \$11 million for 2018 as compared to \$12 million in 2017. Adjusted EBITDA was \$(8) million for 2018 as compared to \$(6) million of Adjusted EBITDA for 2017.

GENERAL CORPORATE AND OTHER EXPENSE, NET

General corporate and other expenses primarily comprise corporate overhead unrelated to business activities such as: wages and benefits, professional fees, insurance, and other expenses for corporate functions, including certain executive officers, public company activities, tax, internal audits, and other corporate functions.

General corporate and other expense, net, was \$30 million in 2019 as compared to \$28 million in 2018 and 2017. The increase in 2019 as compared to 2018 was primarily due to increased costs associated with investments in transformation activities.

IMPAIRMENTS OF LONG-LIVED ASSETS

During 2019, we recorded \$92 million of pre-tax impairment charges of our non-operating and operating long-lived assets. Included within these impairment charges are \$47 million related to non-operating assets located at Val-d'Or and St Michel, Quebec, Canada; Cook, Minnesota; and Silsbee, Texas; and \$39 million related to an EWP facility producing LSL and OSB and \$5 million related to a Siding facility that we expect to sell. These impairment charges reflect changes to anticipated usage of these facilities driven by market changes and improved operating efficiencies across our remaining facilities.

Impairments of long-lived assets were \$11 million and \$9 million in 2018 and 2017, respectively. During 2018, we recorded a loss on impairment of long-lived assets associated with a non-operating facility that was anticipated to be sold.

OTHER OPERATING CREDITS AND CHARGES, NET

For a discussion of other operating credits and charges, net, see Note 14 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

NON-OPERATING INCOME (EXPENSE)

For a discussion of Non-operating income (expense), see Note 14 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

INCOME TAXES

We recorded a tax benefit of \$13 million in 2019 and a provision of \$122 million in 2018. For 2019, the primary differences between the U.S. statutory rate of 21% and the effective rate relate to state income tax, foreign tax rates, tax credits, uncertain tax positions, and changes in the valuation allowance. We paid \$20 million and \$90 million of income taxes net of tax refunds in 2019 and 2018, respectively.

LEGAL AND ENVIRONMENTAL MATTERS

For a discussion of legal and environmental matters involving us and the potential impact thereof on our financial position, results of operations and cash flows, see Item 3 in this annual report on Form 10-K as well as Note 16 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

LIQUIDITY AND CAPITAL RESOURCES

Overview

Our principal sources of liquidity are existing cash and investment balances, cash generated by our operations, and our ability to borrow under such credit facilities as we may have in effect from time to time. We may also, from time to time, issue and sell equity, debt or hybrid securities, or engage in other capital market transactions.

Our principal uses of liquidity are paying the costs and expenses associated with our operations, servicing outstanding indebtedness, paying dividends, and making capital expenditures. We may also, from time to time, prepay or repurchase outstanding indebtedness or shares or acquire assets or businesses that are complementary to our operations. Any such repurchases may be commenced, suspended, discontinued or resumed, and the method or methods of effecting any such repurchases may be changed at any time, or from time to time, without prior notice.

Operating Activities

During 2019, we generated \$159 million of cash from operations as compared to \$511 million of cash from operations in 2018. This change reflects the lower OSB commodity pricing in 2019 compared to 2018 partially offset by tax refunds from prior years of \$14 million received in 2019 and a \$41 million reduction in pension contributions. At December 31, 2019, and December 31, 2018, we had working capital of \$194 million and \$147 million, respectively. Changes in working capital primarily related to increases in our income tax receivables during 2019.

Investing Activities

During 2019, net cash used for investing activities was \$137 million as compared to \$238 million in 2018. Capital expenditures were \$163 million for 2019, primarily related to the expansion of our siding business as well as growth and maintenance capital. Additionally, we acquired \$40 million of cash in connection with our acquisition of a controlling interest in Entekra and the resulting consolidation of Entekra's financial results with those of the Company and paid \$13 million in acquisitions and investments during 2019.

During 2018, we incurred \$214 million of capital expenditures primarily related to the start-up of our additional production line in Chile, as well as growth and maintenance capital. We also used \$45 million to initially invest in a previously unconsolidated affiliate, Entekra, which was consolidated in 2019. Additionally, we received a payment of \$22 million on notes receivable from assets sales.

Capital expenditures in 2020 are expected to be approximately \$130 million to \$140 million related to expansions in our Siding segment and maintenance projects. We expect to fund our capital expenditures through cash on hand, cash generated from operations, and available borrowing under our credit facility, as necessary.

Financing Activities

During 2019, net cash used in financing activities was \$717 million as compared to \$317 million in 2018. During 2019, we used \$65 million to pay cash dividends, \$638 million to repurchase stock, and \$5 million to repay outstanding debt. During 2018, we used \$74 million to pay cash dividends, \$212 to repurchase stock, \$25 million to repay outstanding debt, and \$9 million related to the net share settlement of equity awards.

CREDIT AGREEMENT

In June 2019, we entered into an amended and restated credit agreement with various lenders and American AgCredit, PCA, as administrative agent, and CoBank, ACB, as a letter of credit issuer. The amended and restated credit agreement provides for a \$350 million revolving credit facility, with a \$60 million sub-limit for letters of credit, and matures on June 27, 2024. As of December 31, 2019, no revolving borrowings were outstanding under this credit facility.

The credit agreement contains a financial covenant that requires us and our consolidated subsidiaries to have, as of the end of each quarter, a capitalization ratio (i.e., funded debt to total capitalization) of no more than 50%. As of December 31, 2019, we were in compliance with all financial covenants under the credit agreement. The credit agreement contains customary events of default, the occurrence of which could result in the acceleration of our obligation to repay the indebtedness outstanding thereunder.

OTHER LIQUIDITY MATTERS

Auction-Rate Securities

As of December 31, 2019, we had \$5 million (\$19 million, par value) of principal invested in auction-rate securities (ARS). The ARS held by us are securities with long-term nominal maturities for which the interest rates were historically reset through a Dutch auction each month. We do not currently require our ARS to be liquidated in order to fund our day-to-day operations, and we are prepared to hold them until maturity, if necessary.

2024 Senior Notes

In September 2016, we issued the 2024 Senior Notes in the aggregate principal amount of \$350 million, which mature on September 15, 2024. For additional information regarding the 2024 Senior Notes, please see Note 12 of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

Contingency Reserves

Contingency reserves, which represent an estimate of future cash needs for various contingencies (principally, environmental reserves), totaled \$10 million at December 31, 2019, of which \$2 million is estimated to be payable within one year. There is inherent uncertainty concerning the reliability and precision of such estimates, and as such, the amounts ultimately paid in resolving these contingencies could exceed the current reserves by a material amount.

Off-Balance Sheet Arrangements

As of December 31, 2019, we did not have any off-balance sheet arrangements.

Contractual Obligations

The table below summarizes our contractual obligations as of December 31, 2019, over the next several years. See

the discussion above concerning provisions that could accelerate the due dates on our long-term debt.

Dollars amounts in millions	Payments due by period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Contractual obligations					
Long-term debt ¹	\$ 351	\$ —	\$ 1	\$ 350	\$ —
Interest payments on long-term debt ²	85	17	34	34	—
Operating leases	59	11	14	5	29
Other long-term obligations ³	30	12	15	3	—
Total contractual cash obligations^{4,5}	\$ 525	\$ 40	\$ 64	\$ 392	\$ 29

¹ As described in Note 12 of the Notes to Consolidated Financial Statements, our 2024 Senior Notes are subject to certain acceleration provisions.

² The estimate of interest payments assumes interest is paid through the date of maturity or expiration of the related debt based upon stated rates in the respective debt instruments.

³ Other long-term obligations primarily consist of obligations related to information technology infrastructure.

⁴ Unrecognized uncertain tax positions have been excluded from the above table as it is not reasonably possible to estimate when these unrecognized uncertain tax positions may need to be paid. As of December 31, 2019, the amount of uncertain tax positions excluded from the above table is \$38 million.

⁵ As of December 31, 2019, LP had warranty reserves of \$8 million. These have been excluded from the above table as it is not reasonably possible to determine when these may need to be paid.

Impact of Inflation

The Company does not believe inflation has had a material impact on sales or operating results during periods covered in this document.

Potential Impairments

We continue to review several mills and investments for potential impairments. Management currently believes we have adequate support for the carrying value of each of these assets based upon the anticipated cash flows that result from our estimates of future demand, pricing and production costs, assuming certain levels of planned capital expenditures. If demand and pricing for the relevant products continue at levels significantly below cycle average demand and pricing, or should we decide to invest capital in alternative projects, or should changes occur related to our wood supply for these locations, it is possible that further impairment charges will be required. As of December 31, 2019, we concluded that the remaining curtailed facility in our OSB segment is temporarily idled rather than abandoned, and it remains within its historical asset group, for which no impairment is required.

We also review from time to time possible dispositions of various assets in light of current and anticipated economic and industry conditions, our strategic plan, and other relevant factors. Because a determination to dispose of particular assets can require management to make assumptions regarding the transaction structure of the disposition and to estimate the net sales proceeds, which may be less than previous estimates of undiscounted future net cash flows, we may be required to record impairment charges in connection with decisions to dispose of assets.

PROSPECTIVE ACCOUNTING PRONOUNCEMENTS

See Note 2 for discussion of prospective accounting pronouncements of the Notes to the Consolidated Financial Statements included in Item 8 of this annual report on Form 10-K.

ITEM 7A. Quantitative and Qualitative Disclosures About Market Risk

Each of our international operations has transactional foreign currency exposures related to buying and selling in currencies other than the local currencies in which it operates. Exposures are related to the U.S. Dollar relative to the Canadian dollar, Brazilian real, and the Chilean peso. We also have translation exposure resulting from translating the financial statements of foreign subsidiaries into United States dollars. Although we have in the past entered into foreign exchange contracts associated with certain of our indebtedness and may continue to enter into foreign exchange contracts associated with major equipment purchases to manage a portion of the foreign currency rate risk, we historically have not entered into currency rate hedges with respect to our exposure from operations, although we may do so in the future.

Some of our products are sold as commodities, and therefore sales prices fluctuate daily based on market factors over which we have little or no control. The most significant commodity product we sell is OSB. Based upon an assumed North America annual production capacity in the OSB segment of 4.5 billion square feet (3/8" basis) or 3.9 billion square feet (7/16" basis), a \$1 change in the annual average price per thousand square feet on 7/16" basis would change annual pre-tax profits by approximately \$4 million. However, with the curtailment of our Peace Valley facility and a decrease in capacity to 3.7 billion square feet (3/8" basis) or 3.2 billion square feet (7/16" basis) in 2020, a \$1 change in the annual average price per thousand square feet on a 7/16" basis would change annual pre-tax profits by approximately \$3 million.

We historically have not entered into material commodity futures and swaps, although we may do so in the future.

ITEM 8. *Financial Statements and Supplementary Data*

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Louisiana-Pacific Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Louisiana-Pacific Corporation and subsidiaries (the “Company”) as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, cash flows, and stockholders’ equity for each of the three years in the period ended December 31, 2019, and the related notes (collectively referred to as the “financial statements”). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2019, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control-Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 13, 2020, expressed an unqualified opinion on the Company’s internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Property, plant and equipment, net - Peace Valley Facility in British Columbia - Refer to Notes 1 and 15 to the financial statements

Critical Audit Matter Description

The Company evaluates long-lived assets for impairment whenever events or changes in circumstances indicate that the carrying amounts are no longer recoverable. As part of this evaluation, the Company determines the lowest level for which identifiable cash flows are largely independent of other groups of assets. During the current year, the

Company indefinitely curtailed production at the Peace Valley facility in British Columbia (the “Facility”). The Company concluded that the Facility is temporarily idled rather than abandoned, and it remains within its historical asset group, for which no impairment is required.

We identified the Company’s conclusion that the Facility is temporarily idled rather than abandoned, including the reasonableness of the Company’s assertion that it could restart the facility, as a critical audit matter because of the significant judgment required by the Company in reaching this conclusion. Our audit procedures performed to evaluate this conclusion required a high degree of auditor judgment.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the Company’s determination that the Facility is temporarily idled or abandoned included the following, among others:

- We tested the effectiveness of controls over the Company’s consideration of available information to determine whether the Facility is temporarily idled or abandoned.
- We evaluated the reasonableness of the Company’s conclusion by:
 - Evaluating the Company’s history of reopening mills after an indefinite curtailment.
 - Inquiring of senior financial and operational personnel to (1) corroborate that the Company has not committed to a plan to abandon the Facility and (2) understand the market conditions that would support restarting the Facility.
 - Comparing the market conditions identified that support restarting the Facility to (1) historical conditions, (2) internally forecasted conditions, and (3) forecasted conditions included in industry and analyst reports for the Company.
 - Inspecting internal and external communications regarding the planned future usage of the Facility.
 - Inspecting evidence of ongoing maintenance activities at the Facility.

/s/ Deloitte & Touche LLP

Nashville, Tennessee
February 13, 2020

We have served as the Company’s auditor since 1997.

Consolidated Statements of Income
Dollar amounts in millions, except per share

	Year ended December 31,		
	2019	2018	2017
Net sales	\$ 2,310	\$ 2,828	\$ 2,734
Cost of sales	(2,007)	(2,084)	(1,998)
Gross profit	303	744	736
Selling, general, and administrative expenses	(230)	(209)	(191)
Impairment of long-lived assets	(92)	(11)	(9)
Other operating credits and charges, net	(1)	2	(3)
Income from operations	(20)	526	533
Interest (expense) income	(9)	2	(9)
Other non-operating items	6	(4)	(14)
Income from continuing operations before income taxes	(23)	524	510
Provision for income taxes	13	(122)	(119)
Equity in unconsolidated affiliate	—	(3)	—
Income from continuing operations	(10)	399	391
Loss from discontinued operations before income taxes	—	(5)	(2)
Provision for income taxes from discontinued operations	—	1	1
Loss from discontinued operations	—	(4)	(1)
Net income	\$ (10)	\$ 395	\$ 390
Net loss attributed to noncontrolling interest	5	—	—
Net income attributed to LP	\$ (5)	\$ 395	\$ 390
Amounts attributed to LP common shareholders:			
Income from continuing operations, net of tax	\$ (5)	\$ 399	\$ 391
Loss from discontinued operations, net of tax	—	(4)	(1)
	\$ (5)	\$ 395	\$ 390
Basic net income per share attributed to LP:			
Income per share from continuing operations	\$ (0.04)	\$ 2.79	\$ 2.71
Loss per share from discontinued operations	—	(0.03)	(0.01)
Net income per share - basic	\$ (0.04)	\$ 2.76	\$ 2.70
Diluted net income per share attributed to LP:			
Income per share from continuing operations	\$ (0.04)	\$ 2.76	\$ 2.67
Loss per share from discontinued operations	—	(0.03)	(0.01)
Net income per share - diluted	\$ (0.04)	\$ 2.73	\$ 2.66
Average shares of common stock used to compute net income per share:			
Basic	123	143	144
Diluted	123	144	146

See Notes to the Consolidated Financial Statements.

Consolidated Statements of Comprehensive Income
Dollar amounts in millions

	Year ended December 31,		
	2019	2018	2017
Net income	\$ (10)	\$ 395	\$ 390
Other comprehensive income, net of tax			
Foreign currency translation adjustments	(10)	(17)	7
Unrealized gains on securities, net of reversals	(1)	—	1
Defined benefit pension plans:			
Change benefit obligations	—	3	2
Amortization of amounts included in net periodic benefit cost	4	6	6
Other	—	—	(1)
Other comprehensive income (loss), net of tax	(7)	(8)	15
Comprehensive income	\$ (17)	\$ 387	\$ 405
Comprehensive income associated with noncontrolling interest	5	—	—
Comprehensive income attributed to LP	\$ (12)	\$ 387	\$ 405

See Notes to the Consolidated Financial Statements.

Consolidated Balance Sheets
Dollar amounts in millions

	December 31,	
	2019	2018
ASSETS		
Cash and cash equivalents	\$ 181	\$ 878
Receivables, net of allowance for doubtful accounts of \$1 million at December 31, 2019 and 2018	164	128
Inventories	265	273
Prepaid expenses and other current assets	9	8
Total current assets	619	1,287
Timber and timberlands	63	62
Property, plant and equipment, net	965	1,010
Operating lease assets	44	—
Goodwill and other intangible assets	50	26
Investments in and advances to affiliates	10	49
Restricted cash	14	14
Other assets	69	62
Deferred tax asset	1	4
Total assets	\$ 1,835	\$ 2,514
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current portion of long-term debt	\$ —	\$ 5
Accounts payable and accrued liabilities	242	234
Income taxes payable	—	21
Current portion of contingency reserves	2	2
Total current liabilities	244	262
Long-term debt, excluding current portion	348	347
Deferred income taxes	73	62
Non-current operating lease liabilities	36	—
Contingency reserves, excluding current portion	8	9
Other long-term liabilities	125	134
Total liabilities	834	814
Redeemable noncontrolling interest	10	—
Stockholders' equity:		
Preferred stock, \$1 par value, 15,000,000 shares authorized, no shares issued	—	—
Common stock, \$1 par value; 200,000,000 shares authorized; 129,665,899 shares and 111,945,021 shares issued and outstanding, respectively, as of December 31, 2019; and 153,358,542 shares 136,833,191 shares issued and outstanding, respectively, as of December 31, 2018	130	153
Additional paid-in capital	454	458
Retained earnings	966	1,613
Treasury stock, 17,720,878 shares and 16,525,351 shares, at cost as of December 31, 2019 and 2018, respectively	(406)	(378)
Accumulated comprehensive loss	(153)	(146)
Total stockholders' equity	991	1,700
Total liabilities and stockholders' equity	\$ 1,835	\$ 2,514

See Notes to the Consolidated Financial Statements.

Consolidated Statements of Cash Flows
Dollar amounts in millions

	Year ended December 31,		
	2019	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	\$ (10)	\$ 395	\$ 390
Adjustments to net income:			
Depreciation and amortization	123	120	123
Impairment of long-lived assets	92	11	9
Gain on acquisition	(14)	—	—
Deferred taxes	10	27	1
Pension contributions	(1)	(41)	(13)
Other adjustments, net	20	24	24
Changes in assets and liabilities (net of acquisitions):			
Receivables	(21)	3	(35)
Inventories	3	(2)	(23)
Prepaid expenses	(1)	—	(2)
Accounts payable and accrued liabilities	(4)	(21)	23
Income taxes payable, net of receivables	(37)	2	(21)
Net cash provided by continuing operating activities	160	518	476
Net cash used in discontinued operating activities	(1)	(7)	(2)
Net cash provided by operating activities	159	511	474
CASH FLOWS FROM INVESTING ACTIVITIES			
Property, plant, and equipment additions	(163)	(214)	(149)
Acquisition of businesses, net of cash acquired	30	—	(21)
Receipt of proceeds from note receivable from asset sales	—	22	—
Payment of long-term deposit	—	—	(32)
Investment in unconsolidated affiliates	(3)	(45)	—
Other investing activities, net	(1)	(1)	3
Net cash used in investing activities	(137)	(238)	(199)
CASH FLOWS FROM FINANCING ACTIVITIES			
Repayment of long-term debt	(5)	(25)	(3)
Payment of cash dividends	(65)	(74)	—
Purchase of stock	(638)	(212)	—
Other financing activities, net	(9)	(6)	(6)
Net cash used in financing activities	(717)	(317)	(9)
EFFECT OF EXCHANGE RATE ON CASH, CASH EQUIVALENTS, AND RESTRICTED CASH	(2)	(5)	3
Net increase (decrease) in cash, cash equivalents, and restricted cash	(697)	(49)	269
Cash, cash equivalents, and restricted cash at the beginning of the year	892	941	672
Cash, cash equivalents, and restricted cash at the end of the year	\$ 195	\$ 892	\$ 941
Supplemental cash flow information:			
Cash paid for income taxes, net	\$ (20)	\$ (90)	\$ (143)
Cash paid for interest, net	\$ (13)	\$ (1)	\$ (12)

See Notes to the Consolidated Financial Statements.

Consolidated Statements of Stockholders' Equity
Dollar and share amounts in millions, except per share amounts

	Common Stock		Treasury Stock		Additional Paid-In Capital	Retained Earnings	Accumulated Comprehensive Loss	Total Stockholders' Equity
	Shares	Amount	Shares	Amount				
Balance as of December 31, 2016	153	\$ 153	9	\$ (189)	\$ 478	\$ 890	\$ (137)	\$ 1,195
Net income	—	—	—	—	—	390	—	390
Issuance of shares under stock plans, net of taxes withheld	—	—	(1)	12	(17)	—	—	(6)
Compensation expense associated with stock plans	—	—	—	—	10	—	—	10
Other comprehensive income	—	—	—	—	—	—	15	15
Balance as of December 31, 2017	153	153	8	(178)	470	1,280	(122)	1,604
Cumulative effect of the adoption of accounting principles	—	—	—	—	—	12	(17)	(5)
Net income	—	—	—	—	—	395	—	395
Cash dividends on common stock paid (\$0.13 per share)	—	—	—	—	—	(74)	—	(74)
Issuance of shares under stock plans, net of taxes withheld	—	—	(1)	12	(21)	—	—	(9)
Purchase of treasury stock	—	—	9	(212)	—	—	—	(212)
Compensation expense associated with stock plans	—	—	—	—	9	—	—	9
Other comprehensive income	—	—	—	—	—	—	(8)	(8)
Balance as of December 31, 2018	153	153	16	(378)	458	1,613	(146)	1,700
Net income	—	—	—	—	—	(5)	—	(5)
Cash dividends on common stock paid (\$0.135 per share)	—	—	—	—	—	(65)	—	(65)
Issuance of shares under stock plans, net of taxes withheld	—	—	—	10	(13)	—	—	(3)
Purchase of stock	(23)	(23)	2	(38)	—	(577)	—	(638)
Compensation expense associated with stock awards	—	—	—	—	9	—	—	9
Other comprehensive income	—	—	—	—	—	—	(7)	(7)
Balance as of December 31, 2019	130	\$ 130	18	\$ (406)	\$ 454	\$ 966	\$ (153)	\$ 991

See Notes to the Consolidated Financial Statements

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NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

Louisiana-Pacific Corporation and our subsidiaries are a leading provider of high-performance building solutions serving the new home construction, repair and remodeling, and outdoor structures markets. In addition to our U.S. operations, the Company also maintains manufacturing facilities in Canada, Chile, and Brazil through foreign subsidiaries and joint ventures. The principal customers for our building solutions are retailers, wholesalers, and homebuilding and industrial businesses in North America and South America, with limited sales to Asia, Australia, and Europe. References to "LP," "the Company," "we," "our," and "us" refers to Louisiana-Pacific Corporation and its consolidated subsidiaries as a whole.

See Note 20 below for further information regarding our products and segments.

Basis of Presentation

The accompanying Consolidated Financial Statements have been prepared in accordance with U.S. GAAP. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the Consolidated Financial Statements and accompanying notes. Actual results could differ from those estimates.

The Consolidated Financial Statements include the accounts of LP and our controlled subsidiaries. All intercompany transactions, profits, and balances have been eliminated.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand and short-term investments of three months or less when purchased. These investments are stated at cost, which approximates market value.

Receivables

Receivables consisted of the following:

Dollar amounts in millions	December 31,	
	2019	2018
Trade receivables	\$ 111	\$ 88
Income tax receivable	35	16
Other receivables	19	25
Allowance for doubtful accounts	(1)	(1)
	<u>\$ 164</u>	<u>\$ 128</u>

Trade receivables are primarily generated by sales of our products to our wholesale and retail customers. Other receivables at December 31, 2019 and 2018, primarily consist of sales tax receivables, vendor rebates, interest receivables, a receivable associated with an affiliate and other miscellaneous receivables.

Investments

Our long-term investments are classified as available-for-sale and are reported at estimated fair value. Unrealized gains and losses, net of tax, on these investments are reported as a separate component of "Accumulated

comprehensive loss” in Stockholders’ Equity until realized. Impairment losses are charged to income for other-than-temporary declines in fair value. Realized gains and losses (including impairments) are recorded as investment income. For purposes of computing realized gains and losses, the cost is identified on a specific identification basis. As of December 31, 2019 and 2018, we had \$5 million (\$19 million, par value) and \$6 million (\$19 million, par value), respectively, invested in auction-rate securities (ARS). The ARS held by us are securities with long-term nominal maturities for which the interest rates may be reset through a Dutch auction each month. Our investments in ARS represent interests in collateralized debt obligations supported by pools of residential and commercial mortgages and other securities. The contractual maturities of these debt securities classified as available for sale at December 31, 2019, exceed one year.

Fair Value of Financial Instruments

We have, where appropriate, estimated the fair value of financial instruments. These fair value amounts may be significantly affected by the assumptions used, including the discount rate and estimates of cash flows. Accordingly, the estimates presented are not necessarily indicative of the amounts that could be realized in a current market exchange.

Inventory

Inventories are valued at the lower of cost or net realizable value. Inventory costs include materials, labor, and operating overhead. The LIFO (last-in, first-out) method is used for a minor portion of our log inventories with the remaining inventories valued at FIFO (first-in, first-out) or average cost. Included in the inventory balance is a lower cost of market adjustment of \$13 million as of December 31, 2019, and \$11 million as of December 31, 2018. Inventory consisted of the following:

Dollar amounts in millions	December 31,	
	2019	2018
Logs	\$ 47	\$ 57
Other raw materials	32	25
Semi-finished inventory	26	23
Finished products	160	168
Total	\$ 265	\$ 273

Timber and Timberlands

Timber and timberlands are comprised of timber deeds and allocations of the purchase price to Canadian timber harvesting licenses. Timber deeds are transactions in which we purchase timber, but not the underlying land. The cost of timber deeds is capitalized in timber and timberlands and charged to the cost of timber harvested as the volume is removed. Timber that has been severed but has not yet been delivered to a facility is included in timber and timberlands. As of December 31, 2019 and 2018, we had timber and timberlands of \$25 million and 21 million, respectively.

The values associated with timber licenses were allocated in the purchase price allocations for Le Groupe Forex (Forex), Peace Valley OSB, and the assets of Evans Forest Products. These licenses have a life of twenty to twenty-five years. These licenses are amortized on a straight-line basis over the life of the facilities. As of December 31, 2019 and 2018, we had timber licenses of \$38 million and \$41 million, respectively. Certain Canadian timber harvesting licenses also include future requirements for reforestation. The fair value of the future estimated reforestation obligation is accrued and recognized in cost of sales based on the volume of timber harvested; fair value is determined by discounting the estimated future cash flows using a credit adjusted risk-free rate. Subsequent changes to the fair value resulting from the passage of time and revisions to fair value calculations are recognized in earnings as they occur.

Property, Plant, and Equipment

Property, plant, and equipment, including capitalized interest, are recorded at cost and consisted of the following:

Dollar amounts in millions	December 31,	
	2019	2018
Property, plant, and equipment, at cost:		
Land, land improvements, and logging roads, net of road amortization	\$ 168	\$ 169
Buildings	350	330
Machinery and equipment	1,965	1,949
Construction in progress	46	148
	2,529	2,596
Accumulated depreciation	(1,564)	(1,586)
Property, plant, and equipment, net	\$ 965	\$ 1,010

Depreciation of machinery and equipment is principally calculated by the units of production method, which approximates a straight-line basis over the estimated useful lives of the machinery and equipment (typically seven to fifteen years). Buildings, land improvements, and the remaining machinery and equipment are depreciated on a straight-line basis over their estimated useful lives, which typically range from three to twenty years.

Depreciation expense is included in our Consolidated Statements of Income as noted below:

Dollar amounts in millions	Years ended December 31,		
	2019	2018	2017
Cost of sales	\$ 120	\$ 117	\$ 120
Selling, general and administrative expenses	3	3	3
Total depreciation and amortization	\$ 123	\$ 120	\$ 123

Logging road construction costs are capitalized and included in land and land improvements. These costs are amortized as the timber volume adjacent to the road system is harvested.

Long-lived assets to be held and used by us (primarily property, plant, and equipment and timber and timberlands) are reviewed for impairment when events or changes in circumstances indicate that the carrying amount of the assets may not be recoverable. When impairment is indicated, the book values of the assets are written down to their estimated fair value as calculated by the expected discounted cash flow or estimated net sales price. See Note 15 below for a discussion of charges related to impairments of property, plant, and equipment.

Long-lived assets that are held for sale are written down to the estimated sales proceeds less cost to sell unless the estimated net proceeds exceed the carrying value.

Goodwill and Intangible Assets

Goodwill and indefinite-lived intangible assets are assessed annually for impairment during the fourth quarter or earlier upon the occurrence of certain events or substantive changes in circumstances. Impairment is evaluated by applying a fair value based test. Impairment losses would be recognized whenever the implied fair value of goodwill is less than its carrying value. The Company's 2019, 2018 and 2017 annual impairment assessment, which were performed in the fourth quarter of each year, did not result in impairments of our goodwill and intangible assets.

Investments in Affiliates

We account for investments in affiliates when we do not have a controlling financial interest using the equity method under which LP's share of earnings and losses of the affiliate is reflected in earnings and dividends are credited against the investment in affiliate when declared.

Restricted Cash

Our restricted cash accounts generally secure outstanding letters of credit.

Accounts Payable and Accrued Liabilities

Accounts payable and accrued liabilities were as follows:

Dollar amounts in millions	December 31,	
	2019	2018
Accounts payable	\$ 127	\$ 116
Salaries and wages payable	48	58
Accrued severance	4	6
Taxes other than income taxes	7	4
Accrued rebates	34	30
Current portion of operating lease liabilities	8	—
Other accrued liabilities	14	20
Total Accounts payable and accrued liabilities	\$ 242	\$ 234

Other accrued liabilities at December 31, 2019 and 2018, primarily consist of reforestation liabilities, accrued rent, uncertain tax positions, worker compensation liabilities, warranty reserves, and other items. Additionally, included in Accounts payable is \$15 million and \$22 million related to capital expenditures that had not yet been paid as of December 31, 2019, and as of December 31, 2018, respectively.

Other Long-Term Liabilities

Other long-term liabilities were as follows:

Dollar amounts in millions	December 31,	
	2019	2018
Asset retirement obligations	\$ 11	\$ 12
Uncertain tax positions	37	40
Post-retirement obligations	9	8
Pension obligations, net	25	25
Warranty reserves	6	11
Other	37	38
Total Other long-term liabilities	\$ 125	\$ 134

Asset Retirement Obligations

We record the fair value of the legal and conditional obligations to retire and remove long-lived assets in the period in which the obligation is incurred. These obligations primarily consist of monitoring costs on closed landfills, timber reforestation obligations associated with our timber licenses in Canada and site restoration costs. When the related liability is initially recorded, we capitalize the cost by increasing the carrying amount of the related long-lived asset. Over time, the liability is accreted to its settlement value, and the capitalized cost is depreciated over the

useful life of the related asset. Upon settlement of the liability, we recognize a gain or loss for any difference between the settlement amount and the liability recorded. The activity in our asset retirement obligation liability for 2019 and 2018 is summarized in the following table.

Dollar amounts in millions	Year ended December 31,	
	2019	2018
Beginning balance	\$ 12	\$ 11
Accretion expense	1	1
Adjusted to expense during the year	(2)	2
Adjusted to other operating credits and charges, net	—	(1)
Ending balance	\$ 11	\$ 12

Income Taxes

We account for income taxes under an asset and liability approach that requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been recognized in our Consolidated Financial Statements or tax returns. In estimating future tax consequences, we generally consider all expected future events other than the enactment of changes in tax laws or rates. The effect on deferred tax assets and liabilities of a change in tax rates will be recognized as income or expense in the period that includes the enactment date. Additionally, deferred tax assets are reduced by a valuation allowance when it is more likely than not that some portion of the deferred tax assets will not be realized.

We recognize liabilities for uncertain tax positions through a two-step process. The first step is to evaluate the tax position for recognition by determining if the weight of the available evidence indicates that it is more likely than not that the position will be sustained on audit, including resolution of related appeals or litigation process, if any. The second step requires us to estimate and measure the tax benefit as the largest amount that is more than 50% likely to be realized upon ultimate settlement. It is inherently difficult and subjective to estimate such amounts, as we determine the probability for various outcomes. We evaluate these uncertain tax provisions when new information becomes available. These revaluations are based upon factors including, but not limited to, changes in circumstances, changes in tax law, successful settlement of issues under audit, and new audit activity. Such a change in recognition or measurement could result in recognition of a tax benefit or an increase to the related provision.

We classify interest related to income tax liabilities or uncertain tax positions as interest expense or interest income and, if applicable, penalties are recognized as a component of income tax expense.

Redeemable Noncontrolling Interest

Redeemable noncontrolling interest in subsidiaries that is redeemable outside of our control is classified as mezzanine equity and measured at the greater of estimated redemption value at the end of each reporting period or the historical cost basis of the noncontrolling interest adjusted for cumulative earnings allocations. Net income attributed to noncontrolling interest is recorded in the Consolidated Statements of Income. Any adjustments to the redemption value of redeemable noncontrolling interest are recognized in accumulated paid-in capital. See Note 8 below for a further discussion of redeemable noncontrolling interest.

Stock-Based Compensation

We have stock award plans covering certain key employees and directors, which provide for awards of restricted stock, restricted stock units, performance stock units, stock-settled stock appreciation rights (SSARS), and stock options. In addition, we offer an Employee Stock Purchase Plan (“ESPP”) to employees.

The fair value of our restricted stock, restricted stock units, and performance stock units is the closing stock price of the Company’s common stock the day preceding the grant date.

Stock-based compensation expense for SSARS and stock options is estimated at the grant date based on an award's fair value as calculated by the Black-Scholes option-pricing model and is recognized as expense over the requisite service period. The Black-Scholes model requires various highly judgmental assumptions, including expected volatility and option life. If any of the assumptions used in the Black-Scholes model change significantly, stock-based compensation expense for future grants may differ materially from that recorded in the current period related to options granted to date. In addition, we estimate the expected forfeiture rate and recognize expense for those shares expected to vest. We estimate the forfeiture rate based on historical experience. To the extent the actual forfeiture rate is different from the estimate, stock-based compensation expense is adjusted accordingly.

Foreign Currency Translation

The functional currency for our Canadian subsidiaries is the U.S. dollar. The books and records for these subsidiaries are maintained in the Canadian dollar. The financial statements of these foreign subsidiaries are remeasured into U.S. dollars using the historical exchange rate for property, plant, and equipment, timber and timberlands (related depreciation and amortization on both property, plant, and equipment and timber and timberlands), goodwill, and certain other non-monetary assets. We use the exchange rate at the balance sheet date for the remaining assets and liabilities, including deferred taxes. A weighted-average exchange rate is used for each period for revenues and expenses. These transaction gains or losses are recorded in "Other non-operating items" on the Consolidated Statements of Income.

The functional currencies of our Argentinean, Brazilian, Chilean, Columbian, and Peruvian subsidiaries are their respective local currencies, and therefore, their books and records are maintained in local currency. Translation adjustments, which are based upon the exchange rate at the balance sheet date for assets and liabilities and the weighted-average rate for the income statement, are recorded in "Accumulated comprehensive loss" in Stockholders' equity on the Consolidated Balance Sheets.

Advertising costs

Advertising costs, which amounted to \$28 million, \$21 million and \$19 million in 2019, 2018 and 2017, respectively, are principally expensed as incurred. Advertising costs include product displays, media production costs, agency fees, sponsorships, and cooperating advertising.

Customer Program Costs

Customer program costs and incentives, including rebates and promotion and volume allowances, are accounted for as a reduction in Net sales at the time the program is initiated and/or the revenue is recognized. These costs are recorded at the time of sale or the implementation of the program based on management's best estimates. Estimates are based on historical and projected experience for each type of program or customer. As of December 31, 2019 and 2018, we had \$34 million and \$30 million, respectively, accrued as customer rebates.

Other Operating Credits and Charges, Net

We classify significant amounts unrelated to ongoing core operating activities as "Other operating credits and charges, net" in the Consolidated Statements of Income. Such items include, but are not limited to, restructuring charges (including severance charges), charges to establish and maintain litigation or environmental reserves, product reserves, retirement charges, gains or losses from settlements with governmental or other organizations, and gains (loss) on the sale of long-lived assets. Due to the nature of these items, amounts in the income statement can fluctuate from year to year. The determination of which items are considered significant and unrelated to core operations is based upon management's judgment.

Retirement Benefits

We are required to use actuarial methods and assumptions in the valuation of defined benefit obligations and the determination of expense. Difference between actual and expected results or changes in the values of the obligations

and plan assets are not recognized in earnings as they occur but, instead, systematically and gradually over subsequent periods. See Note 18 of the Notes to the Consolidated Financial Statements for further information.

Comprehensive Income

Comprehensive income consists of net income and other gains and losses affecting stockholders' equity that are excluded from net income, including foreign currency translation adjustments, costs associated with pension or other post-retirement benefits that have not been recognized as components of net periodic benefit costs, and net unrealized gains or losses on securities and is presented in the accompanying Consolidated Statements of Comprehensive Income.

2. PRESENT AND PROSPECTIVE ACCOUNTING PRONOUNCEMENTS

New Accounting Standards Adopted

In February 2016, the Financial Accounting Standards Board (FASB) issued ASU 2016-02, "Leases (Topic 842)", which supersedes the lease accounting requirements in ASC Topic 840, "Leases." This update requires a dual approach for lessee accounting under which a lessee should account for leases as finance leases or operating leases. Both finance leases and operating leases result in the lessee recognizing a right-of-use asset and a corresponding lease liability on its balance sheet, with a differing methodology for income statement recognition. In July 2018, ASU 2018-10, "Codification Improvements to Topic 842, Leases," was issued to provide more detailed guidance and additional clarification for implementing ASU 2016-02. Furthermore, in July 2018, the FASB issued ASU 2018-11, "Leases (Topic 842): Targeted Improvements," which provides an optional transition method in addition to the existing modified retrospective transition method by allowing a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We adopted the standard on January 1, 2019, using this optional transition method and elected all practical expedients. See Note 11 below for further information.

In October 2016, the FASB issued ASU 2016-16, "Income Taxes (Topic 740), Intra-Entity Transfers of Assets Other Than Inventory." The standard provides guidance that entities recognize the income tax consequences of an intra-entity transfer of an asset other than inventory when the transfer occurs. Consequently, the amendments eliminate the exception for an intra-entity transfer of an asset other than inventory. The new standard is effective for annual reporting periods beginning after December 15, 2018, and interim reporting periods within annual periods beginning after December 15, 2019. We adopted this standard on January 1, 2019, and this adoption did not have a material impact on our consolidated results of operations and financial position.

Accounting Standards Issued But Not Yet Adopted

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326)*. This ASU sets forth a "current expected credit loss" (CECL) model, which requires the measurement of all expected credit losses for financial instruments or other assets (e.g., trade receivables), held at the reporting date based on historical experience, current conditions, and reasonable supportable forecasts. This ASU replaces the existing incurred loss model and is applicable to the measurement of credit losses on financial assets measured at amortized cost and applies to some off-balance sheet credit exposures. ASU 2016-13 also requires enhanced disclosures to help financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an entity's portfolio. This ASU is effective for annual reporting periods ending after December 15, 2019, using a modified retrospective approach. Management is evaluating the impact of ASU 2016-13 on the Company's Consolidated Financial Statements.

In January 2017, the FASB issued ASU 2017-04, "Intangibles—Goodwill and Other (Topic 350)". The standard simplifies the accounting for goodwill impairments by eliminating step 2 from the goodwill impairment test. Instead, if the carrying amount of a reporting unit exceeds its fair value, an impairment loss shall be recognized in an amount equal to that excess, limited to the total amount of goodwill allocated to that reporting unit. The new standard is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. We do

not expect the adoption of this new standard to have a material impact on our consolidated results of operations and financial position.

In August 2018, the FASB issued ASU 2018-13, "Fair Value Measurement (Topic 820): Disclosure Framework - Changes to the Disclosure Requirements for Fair Value Measurement", which amends ASC 820 to add and remove disclosure requirements related to fair value measurement. The amendments include a new disclosure requirement for changes in unrealized gains or losses included in Other Comprehensive Income (OCI) for recurring Level 3 fair value measurements held at the end of the reporting period and the range and the weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. The amendments eliminated disclosure requirements for the amount of and reasons for transfers between Level 1 and Level 2, valuation processes for Level 3 fair value measurements, and policy for timing of transfers between levels of the fair value hierarchy. In addition, the amendments modified certain disclosure requirements to provide clarification or to promote the appropriate exercise of discretion by entities. ASU 2018-13 is effective for fiscal years beginning after December 15, 2019, including interim periods therein. Early adoption is permitted. We do not expect the adoption of this new standard to have a material impact on our consolidated results of operations and financial position.

In August 2018, the FASB issued ASU 2018-14, "Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans," which amends ASC 715 to add, remove, and clarify disclosure requirements related to defined benefit pension and other postretirement plans. The amended guidance modifies the disclosure requirements for employers that sponsor defined benefit pension or other post-retirement plans by removing and adding certain disclosures for these plans. The eliminated disclosures include (a) the amounts in accumulated OCI expected to be recognized in net periodic benefit costs over the next fiscal year, and (b) the effects of a one percentage point change in assumed health care cost trend rates on the net periodic benefit costs and the benefit obligation for post-retirement health care benefits. Additional disclosures include descriptions of significant gains and losses affecting the benefit obligation for the period. The amended guidance is effective for fiscal years ending after December 15, 2020. Early adoption is permitted. The adoption of this guidance will modify our disclosures but is not expected to have a material effect on our Consolidated Financial Statements.

In August 2018, the FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That is a Service Contract," which provides additional guidance on the accounting for costs of implementation activities performed in a cloud computing arrangement that is a service contract. The amendments require an entity in such arrangements to account for implementation costs in the same manner as internal-use software as outlined in ASC 350. The amended guidance is effective for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted. Management is evaluating the impact of ASU 2018-15 on the Company's Consolidated Financial Statements.

3. REVENUE

The following table presents our reportable segment revenues, disaggregated by revenue source. We disaggregate revenue from contracts with customers into major product lines. We have determined that disaggregating revenue into these categories achieves the disclosure objective to depict how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors.

As noted in the segment reporting information in Note 20 below, our reportable segments are: Siding, OSB, EWP, and South America.

Year Ended December 31, 2019

By Product type and family:	Siding	OSB	EWP	South America	Other	Inter-segment	Total
Value-add							
SmartSide® Strand siding	\$ 797	\$ —	\$ —	\$ 19	\$ —	\$ —	\$ 816
SmartSide® Fiber siding	101	—	—	—	—	—	101
CanExel® siding	46	—	—	—	—	—	46
OSB - Structural Solutions	1	381	8	138	—	—	528
LVL	—	—	142	—	—	—	141
LSL	—	—	50	—	—	—	50
I-joist	—	—	137	—	—	—	137
	<u>\$ 945</u>	<u>\$ 381</u>	<u>\$ 337</u>	<u>\$ 156</u>	<u>\$ —</u>	<u>\$ —</u>	<u>1,819</u>
Commodity							
OSB - commodity	9	387	3	—	—	(5)	394
Plywood	—	—	25	—	—	—	25
	<u>9</u>	<u>387</u>	<u>28</u>	<u>—</u>	<u>—</u>	<u>(5)</u>	<u>419</u>
Other							
Other products	9	9	31	3	20	—	72
	<u>\$ 963</u>	<u>\$ 777</u>	<u>\$ 396</u>	<u>\$ 159</u>	<u>\$ 20</u>	<u>\$ (5)</u>	<u>\$ 2,310</u>

Year Ended December 31, 2018

By Product type and family:	Siding	OSB	EWP	South America	Other	Inter-segment	Total
Value-add							
SmartSide® Strand siding	\$ 725	\$ —	\$ —	\$ 22	\$ —	\$ —	\$ 746
SmartSide® Fiber siding	106	—	—	—	—	—	106
CanExel® siding	37	—	—	—	—	—	37
OSB - Structural Solutions	23	551	14	135	—	—	723
LVL	—	—	141	—	—	—	141
LSL	—	—	59	—	—	—	59
I-joist	—	—	122	—	—	—	122
	<u>891</u>	<u>551</u>	<u>336</u>	<u>157</u>	<u>—</u>	<u>—</u>	<u>1,935</u>
Commodity							
OSB - commodity	39	746	10	—	—	—	795
Plywood	—	—	29	—	—	—	29
	<u>39</u>	<u>746</u>	<u>39</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>824</u>
Other							
Other products	12	8	34	4	11	—	69
	<u>\$ 942</u>	<u>\$ 1,305</u>	<u>\$ 409</u>	<u>\$ 161</u>	<u>\$ 11</u>	<u>\$ —</u>	<u>\$ 2,828</u>

Year Ended December 31, 2017

By Product type and family:	Siding	OSB	EWP	South America	Other	Inter-segment	Total
Value-add							
SmartSide® Strand siding	\$ 646	\$ —	\$ —	\$ 20	\$ —	\$ (4)	\$ 662
SmartSide® Fiber siding	111	—	—	—	—	—	111
CanExel® siding	49	—	—	—	—	—	49
OSB - Structural Solutions	—	525	13	132	—	—	670
LVL	—	—	144	—	—	—	144
LSL	—	—	47	—	—	—	47
I-joist	—	—	117	—	—	—	117
	<u>807</u>	<u>525</u>	<u>321</u>	<u>152</u>	<u>—</u>	<u>(4)</u>	<u>1,801</u>
Commodity							
OSB - commodity	67	766	9	—	—	—	842
Plywood	—	—	25	—	—	—	25
	<u>67</u>	<u>766</u>	<u>35</u>	<u>—</u>	<u>—</u>	<u>—</u>	<u>868</u>
Other							
Other products	10	12	28	3	12	—	66
	<u>\$ 884</u>	<u>\$ 1,303</u>	<u>\$ 384</u>	<u>\$ 155</u>	<u>\$ 12</u>	<u>\$ (4)</u>	<u>2,734</u>

Revenue is recognized when obligations under the terms of a contract (purchase orders) with our customers are satisfied; generally, this occurs with the transfer of control of our products. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods. The shipping cost incurred by us to deliver products to our customers is recorded in cost of sales. The expected costs associated with our warranties continue to be recognized as an expense when the products are sold. We recognize revenue as of a point in time.

During 2019, 2018 and 2017, our top ten customers accounted for approximately 42%, 44% and 46% of our sales, respectively, in the aggregate. No individual customer exceeded 10% of our sales in 2019, 2018, or 2017.

Our businesses routinely incur customer program costs to obtain favorable product placement, to promote sales of products and to maintain competitive pricing. Customer program costs and incentives, including rebates and promotion and volume allowances, are accounted for as deductions from net sales at the time the program is initiated. These reductions from revenue are recorded at the time of sale or the implementation of the program based on management's best estimates. Estimates are based on historical and projected experience for each type of program or customer. Volume allowances are accrued based on management's estimates of customer volume achievement and other factors incorporated into customer agreements, such as new product purchases, store sell-through, and merchandising support. Management adjusts accruals when circumstances indicate (typically as a result of a change in volume expectations). As of December 31, 2019 and 2018, we accrued \$34 million and \$30 million, respectively, as customer rebates recorded in Accounts payable and accrued liabilities on our Consolidated Balance Sheets.

We ship some of our products to customers' distribution centers on a consignment basis. We retain title to our products stored at the distribution centers. As our products are removed from the distribution centers by retailers and shipped to retailers' stores, title passes from us to the retailers. At that time, we invoice the retailers and recognize revenue for these consignment transactions. We do not offer a right of return for products shipped to the retailers' stores from the distribution centers. The amount of consignment inventory as of December 31, 2019 and 2018, was \$12 million and \$10 million, respectively.

4. FAIR VALUE MEASUREMENTS

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. The fair value hierarchy requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. We are required to classify these financial assets and liabilities into two groups: recurring—measured on a periodic basis and non-recurring—measured on an as-needed basis.

There are three levels of inputs that may be used to measure fair value:

- Level 1 Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.
- Level 2 Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; or valuations based on models where the significant inputs are observable or can be corroborated by observable market data.
- Level 3 Valuations based on models where significant inputs are not observable. Unobservable inputs are used when little or no market data is available and reflect the Company's own assumptions about the assumptions market participants would use.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2019 and 2018, are summarized in the following tables.

Dollar amounts in millions	December 31, 2019	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Available for sale securities	\$ 5	\$ —	\$ —	\$ 5
Trading securities	4	4	—	—

Dollar amounts in millions	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Available for sale securities	\$ 6	\$ —	\$ —	\$ 6
Trading securities	3	3	—	—

Due to the lack of observable market quotations on a portion of our ARS portfolio, we evaluate the structure of our ARS holdings and current market estimates of fair value, including fair value estimates from banks that rely exclusively on Level 3 inputs. These inputs include those that are based on expected cash flow streams and collateral values, including assessments of counterparty credit quality, default risk underlying the security, discount rates, and overall capital market liquidity. The valuation of our ARS investment portfolio is subject to uncertainties that are difficult to predict. Factors that may impact our valuation include changes to credit ratings of the securities as well as to the underlying assets supporting those securities, rates of default of the underlying assets, underlying collateral value, discount rates, counterparty risk, and ongoing strength and quality of market credit and liquidity.

Trading securities consist of rabbi trust financial assets, which are recorded in other assets in our Consolidated Balance Sheets. The rabbi trust holds assets attributable to the elections of certain management employees to defer the receipt of a portion of their compensation. The assets of the rabbi trust are invested in mutual funds and are reported at fair value based on active market quotations, which represent Level 1 inputs.

The following table summarizes changes in assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the twelve months ended December 31, 2019 and 2018.

Dollar amounts in millions	Available for sale securities
Balance at December 31, 2017	\$ 6
Return of principal on ARS	—
Total realized/unrealized gains	—
Balance at December 31, 2018	6
Return of principal on ARS	(1)
Total realized/unrealized gains	—
Balance at December 31, 2019	\$ 5

Carrying amounts reported on the balance sheet for cash and cash equivalents, receivables, and accounts payable approximate fair value due to the short-term maturity of these instruments. See discussion on fair market values for Long-term Debt included within Note 12 below.

5. EARNINGS PER SHARE

Basic earnings per share are based on the weighted-average number of shares of common stock outstanding. Diluted earnings per share are based upon the weighted-average number of shares of common stock outstanding plus all potentially dilutive securities that were assumed to be converted into common shares at the beginning of the period under the treasury stock method. This method requires that the effect of potentially dilutive common stock equivalents (stock options, SSARs, restricted stock or units, and performance stock units) be excluded from the calculation of diluted earnings per share for the periods in which losses from continuing operations are reported because the effect is anti-dilutive.

The following table sets forth the computation of basic and diluted earnings per share:

Share amounts in millions	Year ended December 31,		
	2019	2018	2017
Denominator for basic earnings per share:			
Weighted average common shares outstanding	123	143	144
Effect of dilutive securities:			
Dilutive effect of employee stock plans	—	1	2
Dilutive potential common shares	123	144	146
Denominator for diluted earnings per share:			
Adjusted weighted average shares	123	144	146

For the year ended December 31, 2019, approximately one million of the outstanding restricted stock and shares of common stock issuable upon exercise of outstanding stock option awards have been excluded from the calculation of diluted earnings per share because the net loss for the year ended December 31, 2019, causes such securities to be anti-dilutive.

6. GOODWILL AND OTHER INTANGIBLE ASSETS

Changes in goodwill by segment for the year ended December 31, 2019 and 2018 are provided in the following table:

Dollar amounts in millions	Siding	OSB	Other	Total
Balance December 31, 2017	\$ —	\$ 16	\$ —	\$ 16
Additions	—	—	—	—
Balance December 31, 2018	\$ —	\$ 16	\$ —	\$ 16
Additions (see Note 8)	4	—	10	14
Balance December 31, 2019	\$ 4	\$ 16	\$ 10	\$ 30

Changes in other intangible assets for the year ended December 31, 2019 and 2018 are provided in the following table:

Dollar amounts in millions	Timber Licenses	Developed Technology	Trademark	Total Other Intangibles
Balance December 31, 2017	\$ 44	\$ 11	\$ —	\$ 55
Amortization	(3)	(1)	—	(4)
Balance December 31, 2018	41	10	—	51
Additions (see Note 8)	—	12	3	15
Amortization	(3)	(2)	—	(5)
Balance December 31, 2019	\$ 38	\$ 20	\$ 3	\$ 61

Included in the balance of timber licenses are values allocated to Canadian forest licenses whose initial value of \$91 million and is amortized over the estimated useful life of twenty to twenty-five years. Amortization expense related to definite-lived intangible assets was \$5 million, \$4 million and \$3 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Developed technology is included in Goodwill and other intangible assets on the Consolidated Balance Sheets.

Amortization of the above intangible assets will be \$5 million per year over the next five years.

7. INVESTMENTS IN AND ADVANCES TO AFFILIATES

At December 31, 2019 and 2018, we had an investment in a joint venture with Resolute Forest Products, Inc. to operate jointly owned I-Joist facilities in Quebec (Resolute-LP). Each partner owns 50% of the venture. We both sell products and raw materials to Resolute-LP, and purchase products for resale from Resolute-LP. We eliminate profits on these sales and purchases, to the extent the inventory has not been sold through to third parties, based on its 50% interest. For the years ended December 31, 2019, 2018 and 2017, we sold \$12 million, \$17 million and \$16 million of products to Resolute-LP and purchased \$70 million, \$58 million and \$60 million of I-Joists from Resolute-LP.

Included in our Consolidated Balance Sheets at December 31, 2019 and 2018, are \$4 million in accounts receivable associated with Resolute-LP. For the years ended December 31, 2019 and 2018, we received \$11 million and \$3 million, respectively, in dividends from Resolute-LP. We classified the receipt of these cash dividends as cash flows from operations. Our cumulative equity in earnings from Resolute-LP exceeds the cumulative distributions received; therefore, the dividends were deemed to be a return on our investment and not a return of our investment.

We are the exclusive distributor of the I-Joists produced and sold by the joint venture, and it is considered an integral part of our operations. We are classifying the income from the joint venture as a reduction in cost of sales. LP recorded income from affiliates of \$11 million in 2019, \$2 million in 2018, and \$4 million in 2017.

8. ACQUISITIONS

Acquisitions have been accounted for as business combinations using the acquisition method and, accordingly, the results of operations of the acquired businesses have been included in our Consolidated Financial Statements since their dates of acquisition. Asset acquisitions have been accounted for under ASU 2017-01. The assets and liabilities of these businesses were recorded in the financial statements at their estimated fair values as of the acquisition dates.

During the year ended December 31, 2018, we invested \$45 million in a start-up design, engineering, and manufacturing company that provides off-site framing for both residential and commercial construction. This investment was recorded as an equity investment based upon the joint control of Entekra. We own 82% of the A units (preferred units) and 55% of the B units (common units) of this entity. Our portion of the earnings and losses of Entekra was included in our Consolidated Statement of Income as "Equity in unconsolidated affiliates" for the year ended December 31, 2018.

During the first quarter of 2019, we obtained a controlling interest in Entekra. Entekra's results of operations have been fully consolidated for periods after December 31, 2018, and we established a redeemable noncontrolling interest related to the minority holders. Due to the pre-existing ownership interest in Entekra, this acquisition was accounted for as a step acquisition in accordance with ASC 805, "Business Combinations." We recognized a gain of \$14 million, recorded within Other non-operating items on our Consolidated Statements of Income in connection with this transaction to record our ownership interest in Entekra at fair value on the acquisition date.

Including our previously owned interest, we acquired net assets of \$56 million, consisting of \$41 million in current assets (including \$40 million in cash), \$6 million in fixed assets, \$25 million of goodwill and other intangible assets less \$1 million in current liabilities and \$15 million in non-controlling interest.

During the second quarter of 2019, we acquired certain assets and liabilities of a pre-finishing siding company located in Wisconsin. The purchase resulted in goodwill of \$4 million.

During the fourth quarter of 2019, we acquired certain assets of an Illinois pre-finishing facility. The purchase resulted in \$3 million of property, plant, and equipment.

9. NONCONTROLLING INTERESTS

Redeemable noncontrolling interest is interest in subsidiaries that is redeemable outside of our control either for cash or other assets. These interests are classified as mezzanine equity and measured at the greater of estimated redemption value or carrying value at the end of each reporting period. Net income attributed to noncontrolling interest is recorded in the Consolidated Statements of Income. Any adjustments to the redemption value of redeemable noncontrolling interest are recognized in either net income or through accumulated paid-in capital, depending on the nature of the underlying security (preferred or common units).

The components of redeemable noncontrolling interests are as follows:

Dollar amounts in millions	December 31,	
	2019	2018
Beginning balance	\$ —	\$ —
Purchase of redeemable common and preferred units	15	—
Net loss attributable to redeemable noncontrolling interest	(5)	—
Adjustment to redemption value	—	—
Ending balance	\$ 10	\$ —

10. INCOME TAXES

Income Tax Provision

The components of income from continuing operations before income taxes, including equity in unconsolidated affiliates, were as follows:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
Domestic	\$ 18	\$ 359	\$ 342
Foreign	(41)	162	168
Total	\$ (23)	\$ 521	\$ 510

The following presents the components of our income tax provision (benefit) from continuing operations.

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
<i>Current tax provision (benefit):</i>			
U.S. federal	\$ (5)	\$ 55	\$ 106
State and local	(1)	8	4
Foreign	(17)	32	8
Net current tax provision (benefit)	(23)	95	118
<i>Deferred tax provision (benefit):</i>			
U.S. federal	7	11	(19)
State and local	(1)	6	8
Foreign	5	11	38
Net valuation allowance increase (decrease)	(1)	(1)	(26)
Net deferred tax provision	10	27	1
Total income tax provision (benefit)	\$ (13)	\$ 122	\$ 119

We paid income taxes, net of refunds, of \$20 million, \$90 million, and \$143 million during 2019, 2018, and 2017, respectively. Included in our Consolidated Balance Sheets at December 31, 2019, are net income tax receivables of \$35 million, and at December 31, 2018, we had a net income tax payable of \$5 million.

Deferred Taxes

The tax effects of significant temporary differences creating deferred tax assets and liabilities were as follows:

Dollar amounts in millions	December 31,	
	2019	2018
Accrued liabilities	\$ 18	\$ 22
Pension and post-retirement benefits	7	8
Share-based compensation	5	5
Benefit relating to capital loss, NOL carryforwards, and credit carryforwards	28	16
Inventories	7	8
Market value write-down of ARS	3	3
Operating lease liabilities	6	—
Valuation allowance	(11)	(12)
Other	8	13
Total deferred tax assets	71	63
Property, plant, and equipment	(121)	(111)
Timber and timberlands	(10)	(10)
Operating lease assets	(6)	—
Investment in Entekra	(6)	—
Total deferred tax liabilities	(143)	(121)
Net deferred tax liabilities	\$ (72)	\$ (58)
Balance sheet classification		
Long-term deferred tax asset	1	4
Long-term deferred tax liability	(73)	(62)
	\$ (72)	\$ (58)

The benefit relating to capital loss, net operating loss (NOL) and credit carryforwards included in the above table at December 31, 2019 consists of:

Dollar amounts in millions	Net Operating Loss	Benefit Amount	Valuation Allowance	Expiration Beginning in
Federal NOL carryforwards	\$ 11	\$ 2	\$ —	No expiration
State NOL carryforwards	266	10	—	2021
Brazil NOL carryforwards	3	1	—	No expiration
Canadian NOL carryforwards	20	5	—	2040
State credit carryforwards		1	—	2020
Canadian capital loss carryforwards		5	(5)	No expiration
Canadian credit carryforwards		4	—	2020
		\$ 28	\$ (5)	

We periodically review the need for valuation allowances against deferred tax assets and recognize these deferred tax assets to the extent that their realization is more likely than not. As part of our review, we consider all positive and negative evidence, including earnings history, the future reversal of deferred tax liabilities, and the relevant expirations of carryforwards. We believe that the valuation allowances provided are appropriate. If future years' earnings differ from the estimates used to establish these valuation allowances, or other objective positive or negative evidence arises, we may be required to record an adjustment resulting in an impact on tax provision

(benefit) for that period.

As of December 31, 2019, certain of our foreign subsidiaries had accumulated undistributed earnings of approximately \$113 million. These earnings have been, and are intended to be, indefinitely reinvested in our foreign operations, and we expect future U.S. cash generation to be sufficient to meet our future U.S. cash needs. As a result, no deferred taxes have been recorded with respect to the difference between the financial accounting value and the tax basis in these subsidiaries.

Since most of these earnings have previously been subject to the one-time U.S. transition tax on foreign earnings required by the 2017 Tax Act, they are eligible to be repatriated without additional US tax. Any additional taxes due with respect to such earnings, if repatriated to the U.S., would generally be limited to foreign withholding taxes, which we estimate could be up to \$22 million.

Tax Rate Reconciliation

The following table summarizes the differences between the U.S. federal statutory tax rates and the total effective tax rates from continuing operations:

	Year ended December 31,		
	2019	2018	2017
Income from continuing operations before income taxes, including equity in unconsolidated affiliates	\$ (23)	\$ 521	\$ 510
U.S. federal tax rate	21 %	21 %	35 %
State and local income taxes	11	3	2
Effect of foreign tax rates	9	2	(3)
Effect of foreign exchange on functional currencies	(4)	(1)	1
Tax credits	8	(1)	(1)
Noncontrolling interest	(4)	—	—
Stock-based compensation	5	(1)	—
Domestic manufacturing deduction	—	—	(2)
Capital gain tax rate differential	5	—	—
Inflationary adjustment	5	—	—
Valuation allowance	8	—	(6)
Uncertain tax positions	(7)	—	1
Effect of U.S. federal rate change on deferred taxes	—	(1)	(3)
Other, net	1	1	(1)
Effective tax rate (%)	58 %	23 %	23 %

We are subject to U.S. federal income tax as well as income taxes of multiple state jurisdictions. Our foreign subsidiaries are subject to income tax in Canada, Chile, Peru, Brazil, Colombia, and Argentina.

We generally remain subject to U.S. federal and state examinations for tax years 2016 and subsequent. In addition to the U.S., we have tax years that remain open and subject to examination by tax authorities in the following major tax jurisdictions: Brazil and Chile for tax years 2014 and subsequent and Canada for tax years 2015 and subsequent. Our tax returns are currently under examination by tax authorities in Canada for years 2017 and 2018 and in Chile for years 2016 through 2018.

Under U.S. GAAP, we are allowed to make an accounting policy election relating to the inclusion of Global Intangible Low-Taxed Income ("GILTI") to treat taxes due on future U.S. income inclusions in taxable income related to GILTI as either (1) a current period expense (the "period cost method") or (2) factoring in such amounts into our measurement of deferred taxes (the "deferred method"). We have elected to treat taxes due on future U.S.

inclusions in taxable income related to GILTI as a current period expense when incurred using the period cost method.

Uncertain Tax Positions

In accordance with the accounting for uncertain tax positions, the following is a tabular reconciliation of the total amount of unrecognized tax benefits at the beginning and end of the years presented:

Dollar amounts in millions	December 31,		
	2019	2018	2017
Beginning balance	\$ 41	\$ 40	\$ 40
Increases:			
Tax positions taken in current year	1	1	—
Tax positions taken in prior years	—	1	1
Decreases:			
Tax positions taken in current year	—	—	—
Tax positions taken in prior years	—	—	(1)
Settlements during the year	(4)	(1)	—
Lapse of statute in current year	—	—	—
Ending balance	\$ 38	\$ 41	\$ 40

Included in the above balances at December 31, 2019, is \$37 million of tax benefits that, if recognized, would affect our effective tax rate. We accrued \$1 million of interest and paid \$2 million of interest during 2019 and accrued no interest and paid no interest during 2018. In total, we have recognized a liability of \$2 million and \$3 million for accrued interest related to our uncertain tax positions as of December 31, 2019 and 2018, respectively.

Over the next twelve months, it is reasonably possible that total unrecognized tax benefits will be reduced by up to \$33 million as a result of the closure of tax examinations and expiring statutes of limitations.

11. LEASES

On January 1, 2019, we adopted ASU 2016-02, "Leases (Topic 842)" (ASC 842), which supersedes the lease accounting requirements in ASC Topic 840, "Leases." The new standard requires entities to recognize, separately from each other, an asset for its right to use (ROU) the underlying asset equal to the liability for its finance and operating lease obligations. Further, the Company is required to present the current and non-current portion of the ROU asset and corresponding lease liability separately.

In July 2018, the FASB issued ASU 2018-11, "Leases (Topic 842) Targeted Improvements", which provides an additional (and optional) transition method whereby the new lease standard is applied at the adoption date and recognized as an adjustment to retained earnings. The amendments have the same effective date and transition requirements as the new lease standard. We have elected to adopt this optional transition method.

Our lease portfolio consists primarily of real estate, mobile equipment at our manufacturing facilities, rail cars to transport our products, and a fleet of vehicles. We determine if an arrangement is a lease at contract inception. A lease exists when a contract conveys to the customer the right to control the use of identified property, plant, or equipment for a period of time in exchange for consideration.

As part of our adoption of ASC 842, we have also elected to apply the following practical expedients as permitted under the new standard:

- Package of practical expedients - We did not reassess whether expiring or existing contracts contain a lease, we

did not reassess the classification of expired or existing leases, and we did not reassess whether lease initial direct costs would qualify for capitalization under the new lease accounting standard.

- Lease and non-lease components as lessee - For leases across all asset classes in which we are a lessee, we did not separate non-lease components from lease components and instead accounted for each separate lease component and the non-lease components associated with that lease component as a single lease component.
- Short-term leases - We have elected not to recognize ROU assets and lease liabilities for short-term leases across all asset classes that have a lease term of 12 months or less. We recognize the lease payments associated with our short-term leases as an expense on a straight-line basis over the lease term.

As most of our leases do not provide an implicit rate, we used our incremental borrowing rate based on the information available at the commencement date in determining the present value of lease payments. The lease term for all of our leases includes the non-cancellable period of the lease plus any additional periods covered by either an option to extend (or not to terminate) the lease that we are reasonably certain to exercise, or an option to extend (or not to terminate) the lease controlled by the lessor.

As of December 31, 2019, our weighted-average discount rates were five percent and four percent for operating and finance leases, respectively. As of December 31, 2019, our weighted-average remaining lease terms were 12 and 3 years for operating and finance leases, respectively.

Our operating and finance leases are included in our December 31, 2019, Consolidated Balance Sheet and Consolidated Statement of Income as follows:

		Classification		
Consolidated Balance Sheet				
Assets:				
Operating lease assets	Operating lease assets		\$	44
Finance lease assets	Property, plant, and equipment, net			1
Total lease assets			\$	45
Liabilities:				
Current				
Operating	Accounts payable and accrued liabilities		\$	8
Finance	Current portion of long-term debt			—
Non-current				
Operating	Non-current operating lease liabilities			36
Finance	Long-term debt, excluding current portion			1
Total lease liabilities			\$	45

		Classification		
Consolidated Statement of Income				
Lease Cost:				
Operating lease cost	Cost of sales and Selling, general and administrative expenses		\$	10
Finance lease cost				
Amortization of leased assets	Cost of sales			—
Interest on lease liabilities	Interest expense			—
Total lease cost			\$	10

For the year ended December 31, 2019, we incurred short-term lease and variable lease costs of \$31 million, and we made cash payments of \$9 million in operating leases.

We obtained ROU assets in exchange for new operating and finance lease liabilities of \$47 million and \$1 million, respectively, for the year ended December 31, 2019.

The following table sets forth the minimum lease payments that are expected to be made in each of the years indicated.

Maturity of Lease Liabilities	Operating Leases		Finance Leases		Total
2020	\$	11	\$	1	\$ 12
2021		8		—	8
2022		6		—	6
2023		3		—	3
2024		2		—	2
2025 and thereafter		29		—	29
Total lease payments		59		1	60
Less: Interest		(15)		—	(15)
Present value of lease liabilities	\$	44	\$	1	\$ 45

12. LONG-TERM DEBT

Dollar amounts in millions	December 31,						
	2019				2018		
	Interest Rate	Principal	Unamortized Debt Costs	Total	Principal	Unamortized Debt Costs	Total
<i>Debentures:</i>							
Senior unsecured notes, maturing 2024, interest rates fixed	4.875%	\$ 350	\$ (3)	\$ 347	\$ 350	\$ (4)	\$ 346
<i>Bank credit facilities:</i>							
Chilean term credit facility, matured 2019, interest rates fixed	UF+3.9%	—	—	—	5	—	5
<i>Other financing:</i>							
Financing leases		1	—	1	1	—	1
Total		351	(3)	348	356	(4)	352
Less: current portion		—	—	—	(5)	—	(5)
Long-term portion		\$ 351	\$ (3)	\$ 348	\$ 351	\$ (4)	\$ 347

In June 2019, we entered into an amended and restated credit agreement with various lenders and American AgCredit, PCA, as administrative agent and CoBank, ACB, as a letter of credit issuer. The credit agreement provides for a \$350 million revolving credit facility, with a \$60 million sub-limit for letters of credit. The credit facility terminates, and all loans made under the credit agreement become due on June 27, 2024. As of December 31, 2019 and 2018, no revolving borrowings were outstanding under the credit facility. Certain of LP's existing and future wholly-owned domestic subsidiaries may guaranty our obligations under the credit facility and, subject to certain limited exceptions, provide security through a lien on substantially all of the personal property of these subsidiaries. Revolving borrowings under the credit agreement accrue interest, at our option, at either a "base rate" plus a margin of 0.875% to 2.00% or LIBOR plus a margin of 1.875% to 3.00%. The credit agreement also includes an unused commitment fee, due quarterly, ranging from 0.3% to 0.6%. The applicable margins and fees within these ranges are based on our ratio of consolidated EBITDA to cash interest charges. The "base rate" is the highest of (i) the Federal funds rate plus 0.5%, (ii) the U.S. prime rate, and (iii) one month LIBOR plus 1.0%.

The credit agreement contains various restrictive covenants and customary events of default. The credit agreement also contains a financial covenant that requires the Company and its consolidated subsidiaries to have, as of the end of each quarter, a capitalization ratio (i.e., funded debt to total capitalization) of no more than 50%. As of December 31, 2019, we were in compliance with all financial covenants under the credit agreement.

In September 2016, we issued \$350 million aggregate principal amount of the 2024 Senior Notes, which mature on September 15, 2024. We may, at our option on one or more occasions, redeem all or any portion of these notes at the redemption prices set forth in the indenture governing the 2024 Senior Notes, plus accrued and unpaid interest, if any, to, but not including, the date of redemption. The indenture governing the 2024 Senior Notes contains certain covenants that, among other things, limit our ability to grant liens to secure indebtedness, engage in sale and leaseback transactions and merge or consolidate or sell all or substantially all of our assets. If we are subject to a "change of control," as defined in

the indenture, we are required to offer to repurchase the 2024 Senior notes at a purchase price equal to 101% of the principal amount thereof plus accrued and unpaid interest, if any, thereon to, but not including, the date of purchase. The indenture governing the 2024 Senior Notes contains customary events of default, including failure to make required payments on the 2024 Senior Notes, failure to comply with certain agreements or covenants contained in the indenture, failure to pay or acceleration of certain other indebtedness and certain events of bankruptcy and insolvency. An event of default in the indenture allows either the indenture trustee or the holders of at least 25% in aggregate principal amount of the then-outstanding 2024 Senior Notes to accelerate, or in certain cases, automatically causes the acceleration of, the amounts due under the 2024 Senior Notes.

The weighted average interest rate for all long-term debt at December 31, 2019 and 2018, was approximately 4.9%. Required repayment of principal for long-term debt is as follows:

Dollar amounts in millions	
Years ending December 31,	
2020	\$ —
2021	1
2022	—
2023	—
2024	350
2025 and after	—
Total	\$ 351

Deferred debt costs are amortized over the life of the related debt using a straight-line basis, which approximates the effective interest method. We amortized deferred debt costs of \$2 million, \$1 million and \$1 million for the years ended December 31, 2019, 2018 and 2017, respectively. Included in these amortized amounts are deferred debt costs associated with our current line of credit, which is recorded within "Other assets" on our Consolidated Balance Sheets.

We estimated the 2024 Senior Notes to have a fair value of \$362 million and \$338 million at December 31, 2019 and 2018, respectively, based upon market quotations. Our 2024 Senior Notes and other long-term debt were categorized as Level 1 in the U.S. GAAP fair value hierarchy. Fair values were based on trading activity among the Company's lenders and the average bid and ask price as determined using published rates.

13. STOCKHOLDERS' EQUITY

Preferred Stock

We are authorized to issue up to 15,000,000 shares of preferred stock at \$1.00 par value. At December 31, 2019, no shares of preferred stock have been issued.

Stock Award Plan

We have a stock-based compensation plan under which stock options, SSARs, restricted stock, restricted stock units, and performance stock units are granted. At December 31, 2019, approximately 3 million shares were available under the current plan for these awards.

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
Total stock-based compensation expense (costs of sales, selling, general and administrative and other operating credits and charges, net)	\$ 9	\$ 8	\$ 10
Income tax benefit related to stock-based compensation	\$ 1	\$ 3	\$ 1
Impact on cash flow due to taxes paid related to net share settlement of equity awards	\$ (5)	\$ (9)	\$ (6)

We recognize the compensation costs on a straight-line basis over the requisite service period of the award, which is generally the vesting term of three years.

SSARs

Prior to January 1, 2018, we granted SSARs to key employees. On exercise, we generally issue these shares from treasury. The SSARs are granted at market price at the date of grant. SSARs become exercisable over three years and expire ten years after the date of grant. Fair values are estimated using the Black-Scholes option-pricing model. The following table summarizes the grant-date fair value of options and SSARs and the assumptions used to develop the fair value estimates for options and SSARs granted during the year ended December 31, 2017:

Weighted average grant-date fair value of options	\$	8.02
Risk-free interest rate		2.1%
Expected volatility		41.0%
Expected life (in years)		6

The Company's estimate of expected volatility for stock options and SSARs is based upon our historical stock prices. We base the risk-free interest rate on U.S. Treasury issues with an equivalent term. The expected life is an estimate of the number of years an award is expected to be outstanding and was determined based on the historical experience of other awards.

Restricted Shares, Restricted Stock Units, and Performance Stock Units

We grant time-vested restricted stock units and performance stock units to certain key employees and directors under our stock award plan. Generally, time-vested restricted stock units granted prior to January 1, 2020, are subject to cliff-vesting for a period of three years from the date of grant for employees and one year for directors. Performance stock units vest based upon the attainment of certain performance metrics over a three-year cumulative performance period. Certain of these awards are eligible to receive dividend equivalent shares. The market value of these awards approximates the grant date fair value of the awards. For awards based upon the achievement of the performance goals, the awards are earned ratably from 0% to 200%. If the performance goals are met at the end of the performance period, the award is adjusted to reflect LP's three-year total shareholder return ("TSR") performance relative to a capital market peer group. This TSR modifier can increase or decrease the award by 20%, although the TSR modifier cannot cause the award to exceed the maximum of 200%.

Summary of Stock Awards Outstanding

The following table summarizes stock awards as of December 31, 2019, as well as activity during the last year.

	Stock Options / SSARS		Restricted stock		Restricted Stock Units and Performance Stock Units	
	Number of Awards	Weighted Average Exercise Price	Number of Awards	Weighted Average Grant Date Fair Value	Number of Awards	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2018	1,141,686	\$ 15.50	240,174	\$ 17.43	956,614	\$ 23.17
Granted	—	—	—	—	674,059	24.16
Exercised	(497,076)	15.38	—	—	—	—
Vested	—	—	(156,680)	15.81	(356,161)	18.57
Forfeited	(4,089)	19.14	(4,526)	19.14	(135,265)	24.79
Outstanding at December 31, 2019	640,521	\$ 15.56	78,968	\$ 20.05	1,139,247	\$ 24.82
Vested and expected to vest at December 31, 2019 ⁽¹⁾	640,521	\$ 15.56	75,020	\$ 20.05	1,048,862	\$ 24.82
Exercisable at December 31, 2019	570,473	\$ 15.13	—	—	—	\$ —
Unrecognized compensation costs (in millions)		\$ —		\$ —		\$ 13
To be recognized over weighted-average period of years		0.1		0.1		1.5

⁽¹⁾ Expected to vest based upon historical forfeiture rate

The aggregate intrinsic value of the stock options and SSARs represented in the above table is the total pre-tax intrinsic value (the difference between our closing stock price on the last trading day of 2019 and the exercise price, multiplied by the number of in-the-money options and SSARs) that would have been received by the holders had all holders exercised their awards on December 31, 2019. This amount, \$9 million, changes based on the market value of our stock, as reported by the New York Stock Exchange.

The intrinsic value of SSARs exercised in the years ended December 31, 2019, 2018, and 2017 was \$13 million, \$35 million, and \$26 million, respectively. The total fair value of awards vested during the years ended December 31, 2019, 2018 and 2017, was \$11 million, \$8 million and \$7 million, respectively.

Share Repurchase Program

In February 2019, we announced that our Board of Directors authorized a \$600 million share repurchase program. We entered into an accelerated share repurchase (ASR) agreement with Goldman Sachs & Co. LLC to repurchase \$400 million of our common stock. Under the ASR agreement, we received a delivery of approximately 16 million shares at an average price of \$24.43 per share for the entire ASR program.

Additionally, we repurchased approximately nine million shares of our common stock at an average price of \$26.60 per share through market purchases during 2019, thereby using all of the remaining capacity of the \$600 million share repurchase program.

Employee Stock Purchase Plan

Our employee stock purchase plan (“ESPP”) provides our participating employees an opportunity to obtain shares of our common stock at a discount (through payroll deductions over three-month periods). At December 31, 2019, two million shares of common stock were reserved for issuance under the ESPP provisions.

14. OTHER OPERATING AND NON-OPERATING INCOME (EXPENSE)

Other operating income (expense)

The major components of “Other operating credits and charges, net” in the Consolidated Statements of Income for the years ended December 31 are reflected in the table below and described in the paragraphs following the table:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
Reorganization charges	\$ (5)	\$ (10)	\$ —
Insurance and environment cost recoveries	9	8	—
Facility curtailment charges	(7)	—	—
Adjustment to product-related warranty reserves	4	8	(5)
Gain (loss) on sale of long-lived assets	(1)	—	2
Other	(1)	(4)	—
	<u>\$ (1)</u>	<u>\$ 2</u>	<u>\$ (3)</u>

During 2019, we recognized a \$4 million gain related to the reduction of product-related warranty reserves associated with CanExel® products and a gain of \$9 million related to insurance recoveries on property damage. We also recognized \$(5) million of severance and other charges related to certain reorganizations within the corporate offices, and \$(7) million of severance and other charges associated with our curtailment of an OSB mill in British Columbia, Canada.

During 2018, we recognized a gain of \$8 million related to the settlement of environmental costs to be paid by a third party associated with a non-operating site, and a gain of \$8 million related to the reduction of product-related warranty reserves associated with CanExel® products. We also recognized \$(10) million of severance and other charges related to certain reorganizations within the corporate offices and \$(5) million related to property damage sustained.

During 2017, we recognized \$(5) million of losses related to an increase in product-related warranty reserves associated with CanExel® products sold in specific geographic locations and for a specific time period. We also recognized a gain of \$2 million on the sale of manufacturing facilities no longer used.

Non-operating income (expense)

Non-operating income (expense) is comprised of the following components:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
Interest expense	\$ (18)	\$ (19)	\$ (20)
Amortization of debt charges	(2)	(1)	(1)
Capitalized interest	1	4	2
Interest expense, net of capitalized interest	(19)	(16)	(19)
Interest income	9	18	10
Gain on securities	—	1	—
SERP market adjustments	1	(1)	1
Investment income	10	18	11
Net periodic pension cost, excluding service cost	(3)	(4)	(10)
Foreign currency losses	(5)	—	(4)
Gain on acquisition of controlling interest	14	—	—
Other non-operating income	6	(4)	(14)
Total non-operating income (expense)	\$ (3)	\$ (2)	\$ (23)

15. IMPAIRMENT OF LONG-LIVED ASSETS

We review the carrying values of long-lived assets to be held and used for impairment whenever events or changes in circumstances indicate possible impairment. An impairment loss is recognized in "Impairment of long-lived assets" in Consolidated Statements of Income when a long-lived asset's carrying value is not recoverable (given assumptions on housing starts and growth rates) and exceeds estimated fair value.

During 2019, we recorded \$92 million in pre-tax impairment charges of our non-operating and operating long-lived assets. Included within these impairment charges are \$47 million related to non-operating assets located at Val-d'Or and St Michel, Quebec, Canada; Cook, Minnesota; and Silsbee, Texas; and \$39 million related to an EWP facility producing LSL and OSB and \$5 million related to a Siding facility that we expect to sell. These impairment charges reflect changes to anticipated usage of these facilities driven by market changes and improved operating efficiencies across our remaining facilities.

During 2018, we recorded an impairment of long-lived assets of \$11 million associated with a facility that is anticipated to be sold.

During 2017, we recorded an impairment of long-lived assets of \$9 million. This loss primarily related to a loss of \$5 million associated with a facility that was previously held for sale and a loss of \$4 million associated with manufacturing equipment, which is no longer being used.

16. COMMITMENTS AND CONTINGENCIES

We maintain reserves for various contingent liabilities as follows:

Dollar amounts in millions	December 31,	
	2019	2018
Environmental reserves	\$ 10	\$ 11
Other reserves	—	—
Total contingencies	10	11
Current portion	(2)	(2)
Long-term portion	\$ 8	\$ 9

Estimates of our loss contingencies are based on various assumptions and judgments. Due to the numerous uncertainties and variables associated with these assumptions and judgments, both the precision and reliability of the resulting estimates of the related contingencies are subject to substantial uncertainties. We regularly monitor our estimated exposure to contingencies and, as additional information becomes known, may change our estimates significantly. While no estimate of the range of any such change can be made at this time, the amount that we may ultimately pay in connection with these matters could materially exceed, in either the near term or the longer term, the amounts accrued to date. Our estimates of our loss contingencies do not reflect potential future recoveries from insurance carriers except to the extent that recovery may, from time to time, be deemed probable as a result of an insurer's agreement to payment terms.

Environmental Proceedings

We are involved in a number of environmental proceedings and activities and may be wholly or partially responsible for known or unknown contamination existing at a number of other sites at which we have conducted operations or disposed of wastes. Based on the information currently available, management believes that any fines, penalties or other costs or losses resulting from these matters should not have a material effect on our financial position, results of operations, cash flows or liquidity.

We maintain a reserve for undiscounted estimated environmental loss contingencies. This reserve is primarily for estimated future costs of remediation of hazardous or toxic substances at numerous sites currently or previously owned by the Company. Our estimates of our environmental loss contingencies are based on various assumptions and judgments, the specific nature of which varies considering the particular facts and circumstances surrounding each environmental loss contingency. These estimates typically reflect assumptions and judgments as to the probable nature, magnitude and timing of required investigation, remediation and/or monitoring activities and the probable cost of these activities, and in some cases reflect assumptions and judgments as to the obligation or willingness and ability of third parties to bear a proportionate or allocated share of the cost of these activities. Due to the numerous uncertainties and variables associated with these assumptions and judgments, and the effects of changes in governmental regulation and environmental technologies, both the precision and reliability of the resulting estimates of the related contingencies are subject to substantial uncertainties. We regularly monitor our estimated exposure to environmental loss contingencies and, as additional information becomes known, may change our estimates significantly. However, no estimate of the range of any such change can be made at this time.

We consider the financial condition of third parties subject to the cost-sharing arrangements discussed above in determining the amounts to be reflected in our environmental reserves. In addition, we are a party to clean-up activities at two additional sites for which we do not believe that the failure of a third party to discharge its allocated responsibility would significantly increase our financial responsibility based on the manner in which financial responsibility has been, or is expected to be, allocated.

Our estimates of our environmental loss contingencies do not reflect potential future recoveries from insurance carriers except to the extent that recovery may, from time to time, be deemed probable.

The activity in our reserve for estimated environmental loss contingency reserves for the last two years is summarized in the following table.

Dollar amounts in millions	Year ended December 31,	
	2019	2018
Beginning balance	\$ 11	\$ 15
Adjusted to expense (income) during the year	1	(2)
Payments made	(1)	(2)
Translation	—	—
Ending balance	\$ 10	\$ 11

During 2019 and 2018, we adjusted our reserves at several sites to reflect current estimates of remediation costs and environmental settlements.

Other Proceedings

We and our subsidiaries are parties to other legal proceedings in the ordinary course of business. Based on the information currently available, management believes that the resolution of such proceedings should not have a material adverse effect on our financial position, results of operations, cash flows, or liquidity.

Self-Insurance

We are primarily self-insured for workers' compensation and employee health care liability costs. Self-insurance liabilities for workers' compensation are determined based upon a valuation performed by an actuarial firm. The estimate of future workers' compensation liabilities incorporates loss development and an estimate associated with incurred but not yet reported claims. These claims are discounted. Self-insurance liabilities for employee health costs are determined actuarially based upon claims filed and estimated claims incurred but not yet reported. These claims are not discounted.

Indemnities and Guarantees

We are a party to contracts in which we agree to indemnify third parties for certain liabilities that arise out of or relate to the subject matter of the contract. In some cases, this indemnity extends to related liabilities arising out of the negligence of the indemnified parties, but usually excludes any liabilities caused by gross negligence or willful misconduct of the indemnified parties. We cannot estimate the potential amount of future payments under these agreements until events arise that would trigger the liability.

Additionally, in connection with certain sales of assets and divestitures of businesses, we have agreed to indemnify the buyer and related parties for certain losses or liabilities incurred by the buyer or such related parties with respect to (1) the representations and warranties made to the buyer by us in connection with the sales and (2) liabilities related to the pre-closing operations of the assets sold. Indemnities related to pre-closing operations generally include environmental liabilities, tax liabilities, and other liabilities not assumed by the buyer.

Indemnities related to the pre-closing operations of sold assets typically do not represent added liabilities for us, but simply serve to protect the buyer from potential liability associated with the obligations that existed (known and unknown) at the time of the sale. We record accruals for those pre-closing obligations that are considered probable and estimable. We have not accrued any additional amounts as a result of the indemnity agreements summarized below, as we believe the fair value of the guarantees is not material.

- In connection with various sales of our timberlands, we have agreed to indemnify various buyers with respect to losses resulting from breaches of limited representations and warranties contained in these

agreements. These indemnities generally are capped at a maximum potential liability and have an unspecified duration.

- In connection with the sale by LP Canada Pulp Ltd (LPCP) of its pulp mill in Chetwynd, BC, Canada, to Tembec, Ltd in October 2002, we provided an indemnity of unspecified duration provided by LPCP for liabilities arising out of pre-closing operations. These indemnities, which do not extend to environmental liabilities, are capped at CAD\$15 million in the aggregate.
- In connection with the mill exchange by LP Canada of its non-operating OSB mill in Chambord, Quebec, to Norbord in November 2016, we provided an indemnity for liabilities arising out of pre-closing operations. These indemnities are capped at CAD\$5 million in aggregate.

We also have various other indemnities that are individually and in the aggregate immaterial.

We record a liability related to specific indemnification when future payment is probable, and the amount is estimable.

17. PRODUCT WARRANTIES

We offer warranties on the sale of most of our products and record an accrual for estimated future claims. Such accruals are based upon historical experience and management's estimate of the level of future claims. The activity in warranty reserves for the last three years is summarized in the following table.

Dollar amounts in millions	Year ended December 31,	
	2019	2018
Beginning balance	\$ 14	\$ 25
Accrued to expense during the year	1	1
Accrued/ (credited) to other operating credits and charges	(4)	(8)
Accrued to discontinued operations	—	5
Foreign currency translation	—	—
Payments made	(3)	(9)
Total warranty reserves	8	14
Current portion of warranty reserves	(2)	(3)
Long term portion of warranty reserves	\$ 6	\$ 11

The current portion of the warranty reserve is included in "Accounts payable and accrued liabilities," and the long-term portion is included in "Other long-term liabilities" on our Consolidated Balance Sheets.

We changed the warranty reserves related to CanExel® products sold in certain geographic areas for a specific time period, reducing our warranty reserve by \$4 million and \$8 million in 2019 and 2018, respectively. The changes to the reserve reflected revised estimates of future claims.

We increased the warranty reserves related to discontinued composite decking products by \$5 million for the year ended December 31, 2018. The additional reserves reflected revised estimates of future claim payments based upon an increase in decking warranty claims.

We believe that the warranty reserve balances at December 31, 2019, are adequate to cover future warranty payments. However, it is possible that additional charges may be required.

18. RETIREMENT PLANS AND POST-RETIREMENT BENEFITS

We sponsor various defined benefit pension plans and defined contribution retirement plans that provide retirement benefits to substantially all of our employees. Most regularly scheduled employees are eligible to participate in these plans except those covered by a collective bargaining agreement unless the collective bargaining agreement explicitly allows for participation in our plans. We contribute to a multiemployer plan for certain employees covered by collective bargaining agreements. We also provide other post-retirement benefits consisting primarily of healthcare benefits to certain retirees who meet age and service requirements.

Defined Benefit Pension Plans

Pension benefits are earned generally based upon years of service and compensation during active employment. Contributions to the qualified defined benefit pension plans are based on actuarial calculations of amounts to cover current service costs and amortization of prior service costs over periods ranging up to 20 years. We contribute additional funds as necessary to maintain desired funding levels.

Benefit accruals under our most significant plan, which account for approximately 80% of the assets and 82% of the benefit obligations in the tables below, had been credited at the rate of 4% of eligible compensation with an interest credit based upon the 30-year U.S. Treasury rate. The Company discontinued providing contribution credits effective January 1, 2010, to this plan. The remaining defined benefit pension plans in Canada use a variety of benefit formulas, and we discontinued providing contribution credits effective January 1, 2020.

We also maintained a Supplemental Executive Retirement Plan (SERP), an unfunded, non-qualified defined benefit plan intended to provide supplemental retirement benefits to certain executives. Benefits were generally based on compensation in the years immediately preceding normal retirement. As of December 31, 2019, we have no active participants in the SERP plan.

The projected benefit obligation is the actuarial present value of benefits attributable to employee service rendered to date, including the effects of estimated salary increases. The following table details information regarding our pension plans at December 31:

Dollar amounts in millions	2019	2018
Change in benefit obligation:		
Beginning of year balance	\$ 297	\$ 346
Service cost	3	3
Interest cost	12	11
Actuarial loss (gain)	24	(25)
Curtailement	—	(1)
Foreign exchange rate changes	2	(5)
Benefits paid	(26)	(32)
End of year balance	<u>\$ 312</u>	<u>\$ 297</u>
Change in assets (fair value):		
Beginning of year balance	\$ 275	\$ 266
Actual return on plan assets	39	(7)
Employer contribution	4	53
Foreign exchange rate changes	3	(5)
Benefits paid	(26)	(32)
End of year balance	<u>\$ 294</u>	<u>\$ 275</u>
Plan assets less than benefit obligations	<u>\$ (18)</u>	<u>\$ (22)</u>
Amounts included in the balance sheet:		
Non-current pension assets, included in "Other assets"	\$ 5	\$ 5
Current pension liabilities, included in "Accounts payable and accrued liabilities"	—	(3)
Non-current pension liabilities, included in "Other long-term liabilities"	(23)	(23)
Net amount recognized	<u>\$ (18)</u>	<u>\$ (22)</u>

The pretax amounts recognized in accumulated comprehensive loss were as follows:

Dollar amounts in millions	Actuarial losses	Prior service cost	Total
December 31, 2017	\$ (128)	\$ (8)	\$ (136)
Other comprehensive income (loss) before reclassifications	4	—	4
Amounts reclassified from accumulated comprehensive loss	8	1	8
December 31, 2018	(116)	(7)	(123)
Other comprehensive income (loss) before reclassifications	—	—	—
Amounts reclassified from accumulated comprehensive loss	5	(1)	4
December 31, 2019	<u>\$ (111)</u>	<u>\$ (8)</u>	<u>\$ (119)</u>

Weighted-average assumptions used to calculate our benefit obligations at December 31:

	2019	2018
Discount rate:		
U.S.	3.1%	4.2%
Canada	3.0%	3.8%
SERP	NA	2.9%
Rate of compensation increase:		
U.S.	NA	NA
Canada	3.5%	3.5%
SERP	NA	3.0%

Benefit obligations by plan category are as follows:

Dollar amounts in millions	2019			
	U.S.	Canada	SERP	Total
Fair value of plan assets	\$ 236	\$ 58	\$ —	\$ 294
Benefit obligation	258	54	—	312
Funded Status	\$ (22)	\$ 4	\$ —	\$ (18)
	2018			
	U.S.	Canada	SERP	Total
Fair value of plan assets	\$ 222	\$ 52	\$ —	\$ 275
Benefit obligation	245	49	3	297
Funded Status	\$ (22)	\$ 3	\$ (3)	\$ (22)

The amount of accumulated other comprehensive income that is expected to be amortized as expense during 2020 is \$5 million and \$1 million of net actuarial loss and prior service cost, respectively.

The benefits expected to be paid from the benefit plans, which reflect expected future service, are as follows:

Dollar amounts in millions	
Year	
2020	\$ 20
2021	21
2022	20
2023	20
2024	20
2025– 2029	94

These estimated benefit payments are based upon assumptions about future events. Actual benefit payments may vary significantly from these estimates.

The following table sets forth the net periodic pension cost for our defined benefit pension plans. The components of our net periodic pension costs consisted of the following:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
Service cost	\$ 3	\$ 3	\$ 5
Other components of net periodic pension cost:			
Interest cost	12	11	13
Expected return on plan assets	(14)	(14)	(13)
Amortization of prior service cost and net transition asset	1	1	1
Amortization of net actuarial loss	5	6	6
Net periodic pension cost before loss due to settlement	\$ 6	\$ 7	\$ 11
Loss due to settlement	—	—	3
Total net periodic pension cost	\$ 6	\$ 7	\$ 14
Net periodic pension cost included in cost of sales	\$ 2	\$ 2	\$ 4
Net periodic pension cost included in selling, general, and administrative expenses	1	1	1
Net periodic pension cost included in other non-operating items	3	4	9
	\$ 6	\$ 7	\$ 14

Weighted-average assumptions used to calculate our net periodic pension costs for the year ended December 31:

	2019	2018	2017
Discount rate:			
U.S.	4.2%	3.5%	4.0%
Canada	3.8%	3.3%	3.7%
SERP	NA	4.0%	2.7%
Expected return on plan assets:			
U.S.	5.8%	5.8%	5.8%
Canada	3.4%	4.1%	3.8%
SERP	NA	NA	NA
Rate of compensation increase:			
U.S.	NA	NA	NA
Canada	3.5%	3.5%	3.5%
SERP	NA	N/A	3.0%

The expected long-term rate of return on plan assets reflects the weighted-average expected long-term rates of return for the broad categories of investments currently held in the plans (adjusted for expected changes), based on historical rates of return for each broad category, as well as factors that may constrain or enhance returns in the broad categories in the future. The expected long-term rate of return on plan assets is adjusted when there are fundamental changes in expected returns in one or more broad asset categories, and when the weighted-average mix of assets in the plans changes significantly.

Asset allocation targets are established based upon the long-term returns and volatility characteristics of the investment classes and recognize the benefits of diversification and the profits of the plans' liabilities. The actual and target allocations at the measurement dates are as follows:

Asset category	Target Allocation 2019	Actual Allocation	
		2019	2018
<i>U.S. Plans</i>			
Equity securities	40%	40%	26%
Debt securities	40%	40%	52%
Multi-Strategy Funds	20%	20%	22%
Total Allocation for U.S. Plans	100%	100%	100%
<i>Non-U.S. Plans</i>			
Debt securities	90%	90%	90%
Multi-Strategy Funds	10%	10%	10%
Total Allocation for Non-U.S. Plans	100%	100%	100%

Our investment policies for the defined benefit pension plans provide target asset allocations by broad categories of investment and ranges of acceptable allocations. These policies are set by an administrative committee with the goal of maximizing long-term investment returns within acceptable levels of volatility and risk. Our U.S. plans include hedge funds and real return investment strategies to increase returns and reduce volatility. Our plans do not currently invest directly in derivative securities, although such investments may be considered in the future to increase returns and/or reduce volatility. To the extent the expected return on plan assets varies from the actual return, an actuarial gain or loss results.

The fair value of our pension plan assets and fair value asset categories and the level of inputs as defined in Note 4 at December 31, 2019 and December 31, 2018, are as follows:

Dollar amounts in millions

December 31, 2019

Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value
Equity investment funds:					
Domestic stock funds	\$ 54	\$ 54	\$ —	\$ —	\$ —
International stock funds	40	40	—	—	—
Fixed-income investment funds:					
Domestic bond funds	93	15	—	—	78
International bond funds	52	—	20	—	32
Multi-strategy funds	53	47	—	—	6
Cash & cash equivalents	2	—	2	—	—
Total	\$ 294	\$ 156	\$ 22	\$ —	\$ 116

December 31, 2018

Asset Category	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Net Asset Value
Equity investment funds:					
Domestic stock funds	\$ 30	\$ 22	\$ —	\$ —	\$ 8
International stock funds	27	13	—	—	14
Fixed-income investment funds:					
Domestic bond funds	116	27	—	—	89
International bond funds	47	—	27	—	20
Multi-strategy funds	53	35	—	—	18
Cash & cash equivalents	2	—	2	—	—
Total	\$ 275	\$ 97	\$ 29	\$ —	\$ 149

Due to the lack of observable market quotations on multi-strategy funds, we evaluate our structure and current market estimates of fair value, including fair value estimates from the funds that rely exclusively on Level 3 inputs. These inputs include those that are based on expected cash flow streams and property values, including assessments of overall market liquidity. The valuations are subject to uncertainties that are difficult to predict.

The following table summarizes assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the period.

Dollar amounts in millions	Multi-Strategy Funds	
Balance at January 1, 2018	\$	13
Total unrealized gains		—
Contribution (redemption)		—
Management fees		—
Balance at December 31, 2018	\$	13
Total unrealized gains	\$	—
Contribution (redemption)		(13)
Management fees		—
Balance at December 31, 2019	\$	—

Defined Contribution Plans

We also sponsor defined contribution plans in the U.S. and Canada. In the U.S., these plans are primarily 401(k) plans for hourly and salaried employees that allow for pre-tax employee deferrals and a company match of up to 5% of an employee's eligible wages (subject to certain limits). Under the profit-sharing feature of these plans, we may elect to contribute a discretionary amount as a percentage of eligible wages. Included in the assets of the 401(k) and profit-sharing plans are 1 million shares of LP common stock that represented approximately 7% of the total market value of plan assets at December 31, 2019.

In Canada, we sponsor both defined contribution plans and Registered Retirement Savings Plans for hourly and salaried employees that allow for employee tax deferrals. We provide a base contribution of 3% of eligible earnings and match 50% of an employee's deferrals up to a maximum of 3% of each employee's eligible earnings (subject to certain limits). Expenses related to defined contribution plans and the Registered Retirement Savings Plans were \$10 million in 2019, 2018 and 2017.

Other Benefit Plans

We have several plans that provide post-retirement benefits other than pensions, primarily for salaried employees in the U.S. and certain groups of Canadian employees. The funded status at December 31, 2019 and 2018, was \$7 million and \$9 million, respectively. The net expense related to these plans was not significant in 2019 or 2018.

Effective August 16, 2004, we adopted the Louisiana-Pacific Corporation 2004 Executive Deferred Compensation Plan (the Deferred Compensation Plan). Pursuant to the Deferred Compensation Plan, participants are eligible to defer up to 90% of their base salary and annual cash incentives that exceed the limitation as set forth by the I.R.S. and receive as 5% match on their contributions. Each Deferred Compensation Plan participant is fully vested in all employee deferred compensation and earnings credited associated with employee contributions. Employer contributions and associated earnings vest over periods, not exceeding five years. The liability under the Deferred Compensation Plan amounted to \$2 million and \$1 million at December 31, 2019 and 2018, respectively, and is included in "Other long-term liabilities" on our Consolidated Balance Sheets.

19. ACCUMULATED COMPREHENSIVE INCOME

Accumulated comprehensive income includes cumulative translation adjustments, unrealized gains (losses) on certain financial instruments and pension and post-retirement adjustments. Other comprehensive income activity, net of tax, is provided in the following table:

	Year Ended December 31,		
	2019	2018	2017
Pension			
Balance at beginning of period	\$ (93)	\$ (84)	\$ (93)
Other comprehensive income before reclassifications	—	3	2
Amounts reclassified from accumulated other comprehensive loss to income ¹	4	6	6
Total other comprehensive income	4	9	9
Reclassification of certain effects due to tax law changes ²	—	(17)	—
Balance at end of period	(89)	(93)	(84)
Translation Adjustments			
Balance at beginning of period	(57)	(40)	(46)
Translation adjustments	(10)	(17)	7
Balance at end of period	(67)	(57)	(40)
Other			
Balance at beginning of period	4	2	2
Other comprehensive income before reclassifications	—	—	—
Amounts reclassified from accumulated other comprehensive loss to income	(1)	1	—
Total other comprehensive income	(1)	1	—
Reclassification of certain effects due to tax law changes ²	—	1	—
Balance at end of period	3	4	2
Accumulated other comprehensive loss, end of period	\$ (153)	\$ (146)	\$ (122)

¹ Amounts of actuarial loss and prior service cost are components of net periodic benefit cost. See note 18 above for additional details.

² We reclassified certain tax effects from tax law changes of \$16 million from "Accumulated other comprehensive loss" to "Retained earnings" on our Consolidated Balance Sheet in accordance with ASU 2018-02, which we adopted in 2018.

Foreign currency translation adjustments exclude income tax expense (benefit) given that these adjustments arise out of the translation of assets into the reporting currency that is separate from the taxable income and is deemed to be reinvested for an indefinite period of time. The pension adjustments included an income tax provision of \$1 million, \$3 million and \$5 million in 2019, 2018 and 2017, respectively.

20. SEGMENT INFORMATION

We operate in four segments: Siding, OSB, EWP, and South America. Our business units have been aggregated into these four segments based upon the similarity of economic characteristics, customers, and distribution methods. Our results of operations are summarized below for each of these segments separately as well as for the "other" category, which comprises other products that are not individually significant.

We evaluate the performance of our business segments based on net sales and Adjusted EBITDA. Accordingly, our chief operating decision maker evaluates performance and allocates resources based primarily on net sales and Adjusted EBITDA for our business segments. Adjusted EBITDA is a non-GAAP financial measure and is defined as earnings from continuing operations before interest expense, income taxes, depreciation and amortization, and exclude stock-based compensation expense, impairment of long-lived assets, other operating credits and charges, net, loss on early debt extinguishment, investment income and other non-operating items. During the fourth quarter of 2019, we changed our measure of segment profit information to Adjusted EBITDA which reflects the information that our chief operating decision maker uses to evaluate performance and allocates resources to the segments. Accordingly, we have provided Adjusted EBITDA of each segment for all prior periods presented.

The Siding segment consists of LP SmartSide® trim and siding, LP CanExel® prefinished siding, as well as LP Outdoor Building Solutions® innovative products for premium outdoor buildings.

The OSB segment manufactures and distributes OSB structural panel products in the U.S. and Canada. Our OSB structural panel products include LP OSB, LP TechShield® radiant barrier, LP TopNotch® sub-flooring, LP Legacy® super tough, moisture-resistant sub-flooring and LP FlameBlock® fire-rated sheathing.

The EWP segment consists of LP SolidStart® I-Joist (IJ), Laminated Veneer Lumber (LVL), Laminated Strand Lumber (LSL), and other related products. This segment also includes the sales of I-Joist and LVL products produced by our joint venture and sales of plywood produced as a by-product of the LVL production process. During 2019, certain timber operations were reclassified from Other to EWP, and we have reclassified a significant portion of our unallocated expenses to the business segments.

Our South America segment manufactures and distributes OSB structural panel and siding products in South America and certain export markets. This segment has manufacturing operations in two countries, Chile and Brazil, and operates sales offices in Chile, Brazil, Peru, Columbia, and Argentina.

Information about our product segments is as follows:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
NET SALES BY BUSINESS SEGMENT			
Siding	\$ 963	\$ 942	\$ 884
OSB	777	1,305	1,303
EWP	396	409	384
South America	159	161	155
Other products	20	11	12
Intersegment Sales	(5)	—	(4)
Total sales	\$ 2,310	\$ 2,828	\$ 2,734
PROFIT BY SEGMENT			
Net income	\$ (10)	\$ 395	\$ 390
Add (deduct):			
Loss from noncontrolling interest	5	—	—
Loss from discontinued operations	—	4	1
Income from continuing operations attributed to LP	(5)	399	391
Provision for income taxes	(13)	122	119

Depreciation and amortization	122	120	123
Stock-based compensation	9	8	10
Impairment of long-lived assets	92	11	9
Other operating credits and charges, net	1	(2)	3
Interest expense, net	9	(2)	9
Non-operating items	(6)	4	14
Adjusted EBITDA	\$ 209	\$ 660	\$ 678
Siding	\$ 177	\$ 202	\$ 192
OSB	10	425	459
EWP	26	26	23
South America	34	40	33
Other	(11)	(8)	(6)
Corporate	(27)	(25)	(23)
ADJUSTED EBITDA	\$ 209	\$ 660	\$ 678

	Year ended December 31,		
	2019	2018	2017
DEPRECIATION AND AMORTIZATION			
Siding	\$ 37	\$ 32	\$ 31
OSB	59	58	62
EWP	16	16	18
South America	9	9	9
Other products	2	1	1
Non-segment related	—	3	2
Total depreciation and amortization	<u>\$ 123</u>	<u>\$ 120</u>	<u>\$ 123</u>

CAPITAL EXPENDITURES

Siding	\$ 88	\$ 117	\$ 63
OSB	46	55	58
EWP	6	10	6
South America	7	28	18
Other products	12	1	1
Non-segment related	4	3	3
Total capital expenditures	<u>\$ 163</u>	<u>\$ 214</u>	<u>\$ 149</u>

Information concerning identifiable assets by segment is as follows:

Dollar amounts in millions	December 31,	
	2019	2018
IDENTIFIABLE ASSETS		
Siding	\$ 537	\$ 487
OSB	558	579
EWP	146	183
South America	109	114
Other products	16	3
Non-segment related	469	1,148
Total assets	<u>\$ 1,835</u>	<u>\$ 2,514</u>

Non-segment related assets include cash and cash equivalents, short-term and long-term investments, corporate assets, and other items.

Information concerning our geographic segments is as follows:

Dollar amounts in millions	Year ended December 31,		
	2019	2018	2017
GEOGRAPHIC LOCATIONS			
<i>Total Sales—Point of origin</i>			
U.S.	\$ 1,968	\$ 2,409	\$ 2,307
Canada	653	861	704
South America	178	174	165
Intercompany sales	(489)	(616)	(442)
Total Sales	\$ 2,310	\$ 2,828	\$ 2,734
<i>Operating profit (loss)</i>			
U.S.	\$ 95	\$ 475	\$ 462
Canada	(17)	138	167
South America	25	31	24
Other operating credits and charges, net and gain (loss) on sales of and impairments of long-lived assets	(93)	(9)	(12)
General corporate expense, loss on early debt extinguishment, other income (expense) and interest, net	(33)	(114)	(131)
	(23)	521	510
Provision for income taxes	13	(122)	(119)
Income from continuing operations	\$ (10)	\$ 399	\$ 391
Loss attributed to noncontrolling interest	5	—	—
Incoming from continuing operations attributed to LP	\$ (5)	\$ 399	\$ 391
IDENTIFIABLE TANGIBLE LONG LIVED ASSETS			
U.S.	\$ 570	\$ 542	\$ 533
Canada	390	408	336
South America	74	82	69
Total assets	\$ 1,034	\$ 1,032	\$ 938

Interim Financial Results (unaudited)

The tables below present summarized unaudited quarterly results of operations for the years ended December 31, 2019 and 2018. Management believes that all necessary adjustments have been included in the amounts stated below for a fair presentation of the results of operations for the periods presented when read in conjunction with the Company's Consolidated Financial Statements for the years ended December 31, 2019 and 2018. Results of operations for a particular quarter are not necessarily indicative of results of operations for an annual period and are not predictive of future periods.

(Dollars in millions, except per share)	1ST QTR		2ND QTR		3RD QTR		4TH QTR	
	2019	2018	2019	2018	2019	2018	2019	2018
QUARTERLY DATA								
Net sales	\$ 582	\$ 691	\$ 588	\$ 811	\$ 603	\$ 737	\$ 537	\$ 589
Income from continuing operations before income taxes	\$ 34	\$ 125	\$ 19	\$ 215	\$ 3	\$ 167	\$ (78)	\$ 18
Income from continuing operations	\$ 26	\$ 95	\$ 15	\$ 163	\$ 1	\$ 124	\$ (52)	\$ 17
Net income	\$ 26	\$ 91	\$ 16	\$ 163	\$ 1	\$ 124	\$ (52)	\$ 17
Net income attributable to LP	\$ 27	\$ 91	\$ 17	\$ 163	\$ 2	\$ 124	\$ (51)	\$ 17
Income from continuing operations per share—basic	\$ 0.20	\$ 0.66	\$ 0.14	\$ 1.13	\$ 0.02	\$ 0.87	\$ (0.44)	\$ 0.12
Income from continuing operations per share—diluted	\$ 0.20	\$ 0.65	\$ 0.14	\$ 1.11	\$ 0.02	\$ 0.86	\$ (0.44)	\$ 0.12
Net income per share—basic	\$ 0.20	\$ 0.63	\$ 0.14	\$ 1.13	\$ 0.02	\$ 0.87	\$ (0.44)	\$ 0.12
Net income per share—diluted	\$ 0.20	\$ 0.62	\$ 0.14	\$ 1.11	\$ 0.02	\$ 0.86	\$ (0.44)	\$ 0.12
Cash dividends per share	\$ 0.135	\$ 0.130	\$ 0.135	\$ 0.130	\$ 0.135	\$ 0.130	\$ 0.135	\$ 0.130
SALES BY SEGMENT:								
Siding	\$ 236	\$ 227	\$ 238	\$ 262	\$ 259	\$ 241	\$ 230	\$ 213
OSB	208	313	199	387	197	349	172	255
EWP	90	106	107	113	105	110	93	80
South America	45	42	40	45	36	35	38	39
Other	4	3	5	4	7	2	4	2
Intersegment sales	(2)	—	(2)	—	(1)	—	—	—
Total net sales	\$ 581	\$ 691	\$ 587	\$ 811	\$ 603	\$ 737	\$ 537	\$ 589
Net income	\$ 26	\$ 91	\$ 15	\$ 163	\$ 1	\$ 124	\$ (52)	\$ 17
Add (deduct):								
Loss from noncontrolling interest	1	—	2	—	1	—	1	—
Loss from discontinued operations	—	4	—	—	—	—	—	—
Income from continuing operations attributed to LP	27	95	17	163	2	124	(51)	17
Provision for income taxes	7	30	3	51	3	42	(26)	—
Depreciation and amortization	31	31	29	30	29	31	33	28
Stock-based compensation	2	2	3	2	2	2	2	1
Impairment of long-lived assets	1	(1)	—	—	5	—	86	11
Other operating credits and charges, net	2	—	(3)	(5)	3	(6)	(1)	9
Interest expense, net	(1)	1	3	—	4	(2)	3	(1)
Non-operating items	(11)	1	1	1	1	2	3	—
Adjusted EBITDA	\$ 58	\$ 159	\$ 53	\$ 242	\$ 49	\$ 193	\$ 49	\$ 65
ADJUSTED EBITDA								
Siding	\$ 42	\$ 45	\$ 46	\$ 63	\$ 47	\$ 60	\$ 42	\$ 34
OSB	8	105	(3)	163	(1)	123	6	34
EWP	7	5	10	11	6	10	3	—
South America	10	11	9	12	7	9	8	8
Other	(2)	(2)	(2)	(2)	(4)	(3)	(3)	(1)
Corporate	(7)	(5)	(7)	(5)	(6)	(5)	(7)	(10)
Total Adjusted EBITDA	\$ 58	\$ 159	\$ 53	\$ 242	\$ 49	\$ 194	\$ 49	\$ 65

See Notes 14 and 15 for further discussion on the other operating charges and credits, net, and the impairments of long-lived assets mentioned above.

ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

ITEM 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

As of December 31, 2019, our Chief Executive Officer and Chief Financial Officer carried out, with the participation of the Company's Disclosure Practices Committee and the Company's management, an evaluation of the effectiveness of our disclosure controls and procedures, as defined in Rule 13a-15(e) promulgated under the Exchange Act. Based upon this evaluation, the Chief Executive Officer and Chief Financial Officer have concluded that, as of December 31, 2019, our disclosure controls and procedures were effective.

Changes in Internal Control over Financial Reporting

There were no changes in our internal control over financial reporting that occurred during our most recently completed fiscal quarter that has materially affected or is reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rule 13a-15(f) under the Exchange Act. Our management conducted an assessment of our internal control over financial reporting based on the framework established by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control-Integrated Framework (2013)*. Based on this assessment, our management has concluded that, as of December 31, 2019, the Company's internal control over financial reporting was effective. Our independent registered public accounting firm, Deloitte & Touche LLP, has audited our Consolidated Financial Statements for the year ended December 31, 2019, and has issued an attestation report on the Company's internal control over financial reporting, as stated in their report included herein.

The certifications of our Chief Executive Officer and Chief Financial Officer required under Section 302 of the Sarbanes-Oxley Act of 2002 (the Sarbanes-Oxley Act) have been filed as Exhibits 31.1 and 31.2 to this annual report on Form 10-K

ITEM 9B. Other Information

None.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Stockholders and the Board of Directors of Louisiana-Pacific Corporation

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Louisiana-Pacific Corporation and subsidiaries (the “Company”) as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control - Integrated Framework (2013)* issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB) the consolidated financial statements as of and for the year ended December 31, 2019, of the Company and our report dated February 13, 2020, expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Company’s management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying *Management’s Report on Internal Control over Financial Reporting*. Our responsibility is to express an opinion on the Company’s internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the US federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company’s internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company’s assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Deloitte & Touche LLP

Nashville, Tennessee
February 13, 2020

PART III

ITEM 10. *Directors, Executive Officers, and Corporate Governance*

Directors

Information regarding our directors is incorporated herein by reference to the material included under the caption "Election of Directors" in our Definitive Proxy Statement for our 2020 Annual Meeting of Stockholders (which we expect to file with the SEC within 120 days after the end of the registrant's 2019 fiscal year) (2020 Proxy Statement).

Executive Officers

Information regarding our executive officers is incorporated herein by reference to the material included under the caption "Executive Officers" in our 2020 Proxy Statement.

Section 16(a) Compliance

Information regarding compliance with Section 16(a) of the Securities Exchange Act of 1934 is incorporated herein by reference to the material included under the caption "Section 16(a) Beneficial Ownership Reporting Compliance" in our 2020 Proxy Statement.

Audit Committee

Information regarding our Finance and Audit Committee is incorporated herein by reference to the material included under the captions "Board and Committee Meetings" and "Finance and Audit Committee" in our 2020 Proxy Statement.

Corporate Governance Documents

We have adopted a Code of Business Conduct and Ethics and a Financial Leadership Code of Ethics applicable to our principal executive officer, principal financial officer, and principal accounting officer. Each of these documents, as well as the charters of the Nominating and Corporate Governance Committee, Finance and Audit Committee, Environmental, and Quality and Compliance Committee, and Compensation Committee are available on our website at www.lpcorp.com on the "Investor Relations" tab under the caption "Corporate Governance." The information provided on our website is not a part of this annual report on Form 10-K and therefore is not incorporated herein by reference.

ITEM 11. *Executive Compensation*

Information regarding executive compensation is incorporated herein by reference to the material under the captions "Compensation of Executive Officers" and "Directors' Compensation" in our 2020 Proxy Statement. Information regarding our Compensation Committee is incorporated herein by reference to the material under the captions "Compensation Committee Interlocks and Insider Participation" and "Compensation Committee Report" in our 2020 Proxy Statement.

ITEM 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters*

Information regarding security ownership of certain beneficial owners and management and securities authorized for issuance under our existing equity compensation plans and arrangements is incorporated herein by reference to the material under the captions "Holders of Common Stock" and "Equity Compensation Plan Information" in the 2020 Proxy Statement.

ITEM 13. *Certain Relationships and Related Transactions, and Director Independence*

There are no transactions of the type required to be disclosed by Item 404(a) of Regulation S-K.

Information regarding transactions with related persons and director independence is incorporated herein by reference to the material under the captions "Nominees," "Continuing Directors," "Principles of Corporate Governance," and "Related Person Transactions" in the 2020 Proxy Statement.

ITEM 14. *Principal Accounting Fees and Services*

Information regarding fees and services provided by our principal accountant and the LP Finance Audit Committee's pre-approval policies and procedures relating thereto is incorporated herein by reference to the material under the caption "Pre-Approval of Audit and Permissible Non-Audit Services of Independent Registered Public Accounting Firm" in the 2020 Proxy Statement. The charter for the Finance and Audit Committee is disclosed on our website at www.lpcorp.com. The information provided on our website is not a part of this annual report on Form 10-K and therefore is not incorporated herein by reference.

PART IV

ITEM 15. Exhibits, Financial Statement Schedules

A. Financial Statements and Financial Statement Schedules

The following financial statements of LP are included in this annual report on Form 10-K:

Consolidated Balance Sheets—December 31, 2019, and 2018.

Consolidated Statements of Income—years ended December 31, 2019, 2018, and 2017.

Consolidated Statements of Comprehensive Income—years ended December 31, 2019, 2018 and 2017.

Consolidated Statements of Cash Flows—years ended December 31, 2019, 2018, 2017.

Consolidated Statements of Stockholders' Equity—years ended December 31, 2019, 2018 and 2017.

Notes to the Consolidated Financial Statements.

Report of Independent Registered Public Accounting Firm.

Interim Financial Results (unaudited).

No other financial statement schedules are required to be filed.

B. Exhibits

The exhibits filed as part of this annual report on Form 10-K or incorporated by reference herein are listed below. Each management contract or compensatory plan or arrangement is identified by an asterisk (*).

Each prior LP filing, which contains an exhibit incorporated by reference herein, is filed under SEC File No. 001-07107.

Exhibit Number	Exhibit
3.1	<u>Restated Certificate of Incorporation of LP. Incorporated herein by reference to Exhibit 3.1 to LP's Annual Report on Form 10-K for the year ended December 31, 2007.</u>
3.1 (a)	<u>Amended Certificate of Designation of Series A Junior Participating Cumulative Preferred Stock. Incorporated herein by reference to Exhibit 3.3 to LP's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009.</u>
3.2	<u>Bylaws of LP. Incorporated herein by reference to Exhibit 3.1 to LP's Current Report on Form 8-K, filed on August 4, 2015.</u>
4.2	<u>Indenture, dated as of September 14, 2016, between LP and The Bank of New York Mellon Trust Company, N.A., as trustee, including form of 4.875% Senior Note due 2024. Incorporated herein by reference to Exhibit 4.1 to LP's Current Report on Form 8-K, filed on September 14, 2016.</u>
4.4	<u>Description of Securities</u>
10.1(a)	<u>First Amended and Restated Credit Agreement, dated as of June 27, 2019, among Louisiana-Pacific Corporation, as borrower, certain subsidiaries of the borrower from time to time party thereto, as guarantors, American AgCredit, PCA, as administrative agent and sole lead arranger, CoBank, ACB, as L/C Issuer and lenders party thereto. Incorporated herein by reference to Exhibit 10.1 to LP's Current Report on Form 8-K, filed on June 28, 2019.</u>
10.1(b)	<u>Amended and Restated Credit Agreement, dated as of June 27, 2019, among Louisiana-Pacific Corporation and American AgCredit, PCA. Incorporated herein by reference to Exhibit 10.2 to LP's Current Report on Form 8-K, filed on June 28, 2019.</u>

- 10.2 [1992 Non-Employee Director Stock Option Plan \(Amended and Restated as of May 8, 2009\). Incorporated herein by reference to Exhibit 10.10 to LP's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009. *](#)
- 10.3 [Amended and Restated 1997 Incentive Stock Award Plan. Incorporated herein by reference to Appendix A to LP's Definitive Proxy Statement on Schedule 14A, filed on March 23, 2009. *](#)
- 10.5 [Annual Cash Incentive Award Plan, Amended and Restated as of February 12, 2009. Incorporated herein by reference to Appendix B to LP's Definitive Proxy Statement on Schedule 14A, filed on March 23, 2009. *](#)
- 10.6 [2004 Executive Deferred Compensation Plan, Amended and Restated, Effective January 1, 2009. Incorporated herein by reference to Exhibit 10.13 to LP's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011. *](#)
- 10.7 [2008 Supplemental Executive Retirement Plan, Amended and Restated, Effective January 1, 2008. Incorporated herein by reference to Exhibit 10.14 to LP's Quarterly Report on Form 10-Q for the quarter ended June 30, 2011. *](#)
- 10.8(a) [2013 Omnibus Stock Award Plan, Effective May 3, 2013. Incorporated herein by reference to Annex A to LP's Definitive Proxy Statement on Schedule 14A, filed on March 20, 2013. *](#)
- 10.8(b) [Amendment No 1 to Louisiana-Pacific Corporation 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.26 LP's Annual Report on Form 10-K for the year ended December 31, 2017.*](#)
- 10.9 [Form of Stock Appreciation Rights Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated by reference to Exhibit 10.19 to LP's Annual Report on Form 10-K for the year ended December 31, 2015.*](#)
- 10.10 [Form of Restricted Stock Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated by reference to Exhibit 10.20 to LP's Annual Report on Form 10-K for the year ended December 31, 2015.*](#)
- 10.11 [Form of Restricted Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated by reference to Exhibit 10.21 to LP's Annual Report on Form 10-K for the year ended December 31, 2015.*](#)
- 10.12 [Form of Restricted Stock Unit Award Agreement with certain retirement provisions under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.22 to LP's Annual Report on Form 10-K for the year ended December 31, 2016. *](#)
- 10.13 [Form of Performance Shares Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.23 to LP's Annual Report on Form 10-K for the year ended December 31, 2016. *](#)
- 10.14 [Form of Performance Shares Award Agreement with certain retirement provisions under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.24 to LP's Annual Report on Form 10-K for the year ended December 31, 2016. *](#)
- 10.15 [Form of Stock Appreciation Rights Award Agreement with certain retirement provisions under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.25 to LP's Annual Report on Form 10-K for the year ended December 31, 2016.](#)
- 10.16 [Form of Restricted Stock Unit Award Agreement for directors under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.29 to LP's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017.*](#)

- 10.17 [Form of Change of Control Employment Agreement. Incorporated herein by reference to Exhibit 10.26 to LP's Current Report on Form 8-K, filed on March 4, 2015.](#)
- 10.18 [Form of Note Prepayment Agreement among LP, LP Pinewood SPV, LLC and Wells Fargo Bank National Association. Incorporated herein by reference to Exhibit 10.1 to LP's Current Report on Form 8-K, filed on August 26, 2016.](#)
- 10.19 [Form of Restricted Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan with certain prorated vesting. Incorporated herein by reference to Exhibit 10.24 to LP's Annual Report on Form 10-K for the year ended December 31, 2017.*](#)
- 10.20 [Form of Performance Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan with certain prorated vesting. Incorporated herein by reference to Exhibit 10.25 to LP's Annual Report on Form 10-K for the year ended December 31, 2017.*](#)
- 10.21 [Non-Employee Directors Compensation Plan. Incorporated herein by reference to Exhibit 10.1 to LP's Quarterly Report filed on Form 10-Q for the quarter ended September 30, 2018.](#)
- 10.22 [Form of Restricted Stock Unit Award agreement for directors under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.2 to LP's Quarterly Report filed on Form 10-Q for the quarter ended September 30, 2018.](#)
- 10.23 [Retirement Agreement with Ms. Sallie B. Bailey. Incorporated herein by reference to Exhibit 10.2 to LP's Quarterly Report filed on Form 10-Q for the quarter ended June 30, 2018.*](#)
- 10.24 [Form of Performance Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.30 to LP's Annual Report on Form 10-K for the year ended December 31, 2018.](#)
- 10.25 [Louisiana-Pacific Corporation 2019 Employee Stock Purchase Plan. Incorporated herein by reference to Annex A to LP's Definitive Proxy Statement on Schedule 14A, filed on March 26, 2019.*](#)
- 10.26 [Form of Severance Agreement between Louisiana-Pacific Corporation and Chief Executive Officer. Incorporated herein by reference to Exhibit 10.1 to LP's Current Report on Form 8-K, filed on May 14, 2019.*](#)
- 10.27 [Form of Severance Agreement between Louisiana-Pacific Corporation and Certain Officers other than Chief Executive Officer. Incorporated herein by reference to Exhibit 10.2 to LP's Current Report on Form 8-K, filed on May 14, 2019.*](#)
- 10.28 [Form of Performance Shares Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.3 to LP's Current Report on Form 8-K, filed on May 14, 2019.*](#)
- 10.29 [Form of Restricted Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.4 to LP's Current Report on Form 8-K, filed on May 14, 2019.*](#)
- 10.30 [Form of Restricted Stock Unit Award Agreement with certain prorated vesting under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.5 to LP's Current Report on Form 8-K, filed on May 14, 2019.*](#)
- 10.31 [Form of Restricted Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan with retirement provisions. Incorporated herein by reference to Exhibit 10.2 to LP's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019.*](#)
- 10.32 [Form of Restricted Stock Unit Award Agreement under the 2013 Omnibus Stock Award Plan. Incorporated herein by reference to Exhibit 10.3 to LP's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019.*](#)

- 10.33 [Separation Agreement with Mr. Michael E. Kinney. Incorporated herein by reference to Exhibit 10.1 to LP's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019.*](#)
- 21 [List of LP's subsidiaries.](#)
- 23 [Consent of Deloitte & Touche LLP.](#)
- 31.1 [Certification of Chief Executive Officer pursuant to Rule 13a-14\(a\) under the Securities Exchange Act of 1934.](#)
- 31.2 [Certification of Chief Financial Officer pursuant to Rule 13a-14\(a\) under the Securities Exchange Act of 1934.](#)
- 32 [Certifications pursuant to §906 of the Sarbanes-Oxley Act of 2002.](#)

ITEM 16. Form 10-K Summary

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, Louisiana-Pacific Corporation, a Delaware corporation (the “registrant”), has duly caused this annual report on Form 10-K to be signed on its behalf by the undersigned, thereunto duly authorized.

Date: February 13, 2020

LOUISIANA-PACIFIC CORPORATION
(Registrant)

/s/ ALAN J.M. HAUGHIE

Alan J.M. Haughie
*Executive Vice President and
Chief Financial Officer*

Pursuant to the requirements of the Securities Exchange Act of 1934, this annual report on Form 10-K has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>Date</u>	<u>Signature and Title</u>
February 13, 2020	/s/ W. BRADLEY SOUTHERN <hr/> W. Bradley Southern <i>Chief Executive Officer, Director</i> <i>(Principal Executive Officer)</i>
February 13, 2020	/s/ ALAN J.M. HAUGHIE <hr/> Alan J.M. Haughie <i>Executive Vice President and Chief Financial Officer</i> <i>(Principal Financial Officer)</i>
February 13, 2020	/s/ DEREK N. DOYLE <hr/> Derek N. Doyle <i>Vice President, Controller and Chief Accounting Officer</i> <i>(Principal Accounting Officer)</i>
February 13, 2020	/s/ E. GARY COOK <hr/> E. Gary Cook <i>Chairman of the Board</i>
February 13, 2020	/s/ TRACY EMBREE <hr/> Tracy Embree <i>Director</i>
February 13, 2020	/s/ LIZANNE C. GOTTUNG <hr/> Lizanne C. Gottung <i>Director</i>
February 13, 2020	/s/ STEPHEN E. MACADAM <hr/> Stephen E. Macadam <i>Director</i>
February 13, 2020	/s/ OZEY K. HORTON, Jr. <hr/> Ozey K. Horton <i>Director</i>
February 13, 2020	/s/ DUSTAN E. MCCOY <hr/> Dustan E. McCoy <i>Director</i>
February 13, 2020	/s/ KURT M. LANDGRAF <hr/> Kurt M. Landgraf <i>Director</i>
February 13, 2020	/s/ F. NICHOLAS GRASBERGER III <hr/> F. NICHOLAS GRASBERGER III <i>Director</i>

**DESCRIPTION OF CAPITAL STOCK
OF LOUISIANA-PACIFIC CORPORATION**

As of December 31, 2019, Louisiana-Pacific Corporation (“LP,” “we,” “us” and “our”) had one class of securities registered under Section 12 of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), common stock, par value \$1 per share (the “Common Stock”).

The following description is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to the actual terms and provisions contained in our Restated Certificate of Incorporation (the “Certificate of Incorporation”) and our Bylaws (the “Bylaws”), each of which is incorporated by reference as an exhibit to our Annual Report on Form 10-K of which this Exhibit 4.[4] is a part. We encourage you to read our Certificate of Incorporation, our Bylaws and the applicable provisions of the General Corporation Law of the State of Delaware (“DGCL”) for additional information.

Description of Capital Stock

Authorized Shares of Capital Stock

Our authorized capital stock consists of 200,000,000 shares of Common Stock and 15,000,000 shares of preferred stock, par value \$1 per share (the “Preferred Stock”). As of December 31, 2019, 129,665,899 shares of Common Stock were issued and outstanding and no shares of Preferred Stock were issued and outstanding.

Common Stock

Our Common Stock is listed on the New York Stock Exchange under the symbol “LPX.”

Subject to the restrictions described below, the holders of our Common Stock are entitled to receive dividends from funds legally available as, if and when declared by our board of directors, and are entitled upon our liquidation, dissolution or winding up to receive pro rata our net assets after satisfaction in full of the prior rights of our creditors and holders of any Preferred Stock.

Except as otherwise provided by law, the Certificate of Incorporation or the Bylaws, and subject to the voting rights of our Preferred Stock of any series that may be outstanding from time to time, the holders of Common Stock are entitled to one vote on each matter submitted to a vote at a meeting of stockholders for each share of Common Stock held of record by such holder on the date fixed by our board of directors as the record date for such meeting of stockholders. The holders of Common Stock do not have cumulative voting rights. The holders of Common Stock do not have any preferential, subscription or preemptive rights to subscribe to or purchase any new or additional issue of shares of any class of stock or of securities convertible into our stock or any conversion rights with respect to any of our securities. Our Common Stock is not subject to redemption.

Preferred Stock

Our Certificate of Incorporation authorizes our board of directors to provide for the issuance of shares of Preferred Stock in one or more series and to determine, with respect to any series of Preferred Stock, the terms and rights of the series, including, without limitation, the following:

The designation of and number of shares constituting such series;

The dividend rate of such series, the conditions and dates upon which such dividends shall be payable, the preference or relation which such dividends shall bear to the dividends payable on any other class or classes or of any other series of capital stock, and whether such dividends shall be cumulative or noncumulative;

Whether the shares of such series shall be subject to redemption, and, if made subject to such redemption, the times, prices and other terms and conditions of such redemption;

The terms and amount of any sinking fund provided for the purchase or redemption of the shares of such series;

Whether or not the shares of such series shall be convertible into or exchangeable for shares of any other class or classes or of any other series of any class or classes of our capital stock, and, if provision be made for conversion or exchange, the times, prices, rates, adjustments, and other terms and conditions of such conversion or exchange;

The extent, if any, to which the holders of the shares of such series shall be entitled to vote as a class or otherwise with respect to the election of the directors or otherwise;

The restrictions, if any, on the issue or reissue of any additional Preferred Stock;

The rights of the holders of the shares of such series upon the dissolution of, or upon the distribution of assets of, L.P.

Purposes and Effects of Certain Provisions of the DGCL and Our Certificate of Incorporation and Bylaws

General

Our Certificate of Incorporation and Bylaws contain provisions that could make more difficult the acquisition of control of LP by means of a tender offer, open market purchases, a proxy contest or otherwise. A description of these provisions is set forth below.

Preferred Stock

We believe that the availability of the Preferred Stock under our Certificate of Incorporation will provide us with flexibility in structuring possible future financings and acquisitions and in meeting other corporate needs which might arise. Having these authorized shares available for issuance will allow us to issue shares of Preferred Stock without the expense and delay of a special stockholders' meeting. The authorized shares of Preferred Stock, as well as shares of Common Stock, will be available for issuance without further action by our stockholders, unless action is required by applicable law or the rules of any stock exchange on which our securities may be listed. Our board of directors has the power, subject to applicable law, to issue series of Preferred Stock, that could, depending on the terms of the series, impede the completion of a merger, tender offer or other takeover attempt. For instance, subject to applicable law, series of Preferred Stock might impede a business combination by including class voting rights which would enable the holder or holders of such series to block a proposed transaction. Our board of directors could issue Preferred Stock having terms which could discourage an acquisition attempt or other transaction that some, or a majority, of the stockholders might believe to be in their best interests or in which stockholders might receive a premium for their stock over the then prevailing market price of the stock.

Classified Board of Directors; Removable Only for Cause

Our Bylaws divide our board of directors into three classes of directors, with each class serving staggered, three-year terms. The number of directors may not be less than three and is currently nine, but may be increased or decreased by vote of a majority of the board of directors. In addition, our directors may be removed from office only for cause and only by the affirmative vote of the holders of at least 75% of our Common Stock. Notwithstanding the foregoing, whenever the holders of any one or more series of our Preferred Stock shall have the right, voting separately as a class, to elect one or more directors, the provisions described in this paragraph shall not apply with respect to the director or directors elected by such holders of Preferred Stock.

The classification of our board of directors means that, unless directors are removed for cause, it could require at least two annual meetings of stockholders for a majority of stockholders to make a change of control of the board of directors, because only a portion of the directors will be elected at each meeting. A significant effect of a classified board of directors may be to deter hostile takeover attempts, because an acquiror could experience delay in replacing a majority of the directors. A classified board of directors also makes it more difficult for stockholders to effect a change of control of the board of directors, even if such a change of control were to be sought due to dissatisfaction with the performance our directors.

Supermajority Voting for Amending the Bylaws

The DGCL provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or bylaws, unless the corporation's certificate of incorporation or bylaws, as the case may be, requires a greater percentage. Our board of directors is expressly authorized to adopt, amend or repeal bylaws of LP by a vote of two-thirds of the entire board. At any annual or special meeting of stockholders, the stockholders may adopt additional

bylaws and may amend or repeal bylaws, whether or not adopted by them, provided that the affirmative vote of the holders of at least 75% of the Common Stock shall be required for any such adoption of additional bylaws, amendment or repeal.

Supermajority Approval of Merger, Consolidation or Other Business Combination

In addition, any merger, consolidation or recapitalization, or the sale or exchange of all or substantially all the assets of LP or any issuance of voting securities of LP (other than pursuant to employee benefit plans), shall require the affirmative vote of the holders of at least 75% of the then-outstanding shares of our Common Stock if a Person (as defined below) is then directly or indirectly the beneficial owner of 20% or more of the Common Stock; provided that such 75% voting requirement shall not be applicable with respect to any such transaction if:

- Such Person acquired its Common Stock in a cash tender offer for all outstanding Common Stock;
- Such Person has no interest, direct or indirect, in such transaction other than solely as a holder of Common Stock so that such Person receives no extra or special benefit not shared on a pro rata basis by all holders of Common Stock;
- As a result of such transaction, the holders of Common Stock, other than such Person, will receive consideration for their Common Stock (in the same form and of the same kind as the consideration paid by such Person in acquiring the initial 20% of the Common Stock acquired by it) having a fair market value per share at least equal to the highest per share price (appropriately adjusted for stock splits, stock dividends and like distributions) paid by such Person for any shares of Common Stock acquired by it within the two-year period prior to such transaction; or
- Such transaction was approved by two-thirds of our entire board of directors.

For the purposes of this provision, the term (i) "Person" shall have the meaning given that term under Section 2(2) of the Securities Act of 1933 and Section 13(g)(3) of the Exchange Act as in effect on March 8, 1983, and (ii) "beneficial owner" shall have the meaning given that term under Rule 13d-3 of the general rules and regulations under the Exchange Act as in effect on March 8, 1983. The affirmative vote of the holders of at least 75% of Common Stock is required to amend or repeal this restriction.

Limitation of Director Liability

Our Certificate of Incorporation limits the liability of our directors to us and our stockholders to the fullest extent permitted by Delaware law. Specifically, a director will not be personally liable for monetary damages for breach of his or her fiduciary duty as a director, except for liability for:

- any breach of the director's duty of loyalty to us or our stockholders;
- acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- violations under Section 174 of the DGCL, which relates to unlawful payments of dividends or unlawful stock repurchases or redemptions; or
- any transaction from which the director derived an improper personal benefit.

These provisions in our Certificate of Incorporation may have the effect of reducing the likelihood of derivative litigation against our directors and may discourage or deter stockholders or management from bringing a lawsuit against our directors for breach of their duty of care, even though such an action, if successful, might otherwise have benefited us and our stockholders. These provisions do not limit or affect a stockholder's ability to seek and obtain relief under federal securities laws.

No Stockholder Action by Written Consent

Our Certificate of Incorporation provides that any action required or permitted to be taken at any annual or special meeting of stockholders may be taken only at a duly called annual or special meeting of stockholders and may not be effected by a written consent of stockholders in lieu of a meeting of stockholders. This prevents stockholders from initiating or effecting any action by written consent, thereby limiting the ability of stockholders to take actions opposed by our board of directors. The affirmative vote of at least 75% of the holders of Common Stock is required to amend or repeal this restriction.

Special Meetings of Stockholders

Our Bylaws provide that special meetings of stockholders may be called only by the chairman of our board of directors or pursuant to a resolution of the board of directors and shall be called by the chairman of the board of directors at the request in writing of a majority of the board of directors. Business transacted at a special meeting of the stockholders shall be confined to the purpose or purposes of the meeting as stated in the notice of the meeting.

Advanced Notice of Stockholders Proposals or Nominations

Our Bylaws require that any stockholder proposals or nominations for election to our board of directors must meet specific advance notice requirements and procedures, which make it more difficult for our stockholders to make proposals or director nominations.

Section 203 of the DGCL

We are subject to Section 203 of the DGCL. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years following the date the person became an interested stockholder, unless the “business combination” or the transaction in which the person became an interested stockholder is approved in a prescribed manner. Generally, a “business combination” includes a merger, asset or stock sale, or other transaction resulting in a financial benefit to the interested stockholder. Generally, an “interested stockholder” is a person who, together with affiliates and associates, owns or within three years prior to the determination of interested stockholder status, did own, 15% or more of a corporation’s voting stock. The existence of this provision may have an anti-takeover effect with respect to transactions not approved in advance by the board of directors, including discouraging attempts that might result in a premium over the market price for the shares of Common Stock held by stockholders.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Computershare Trust Company, N.A.

Domestic Subsidiaries

Ketchikan Pulp Company

Entekra Holding, LLC

Foreign Subsidiaries

Louisiana-Pacific Canada Sales ULC

Louisiana-Pacific Canada Holdings Ltd.

Louisiana-Pacific Canada Ltd.

Louisiana-Pacific South America S.A.

Louisiana-Pacific Chile S.A.

Louisiana-Pacific del Perú S.A.C.

LP Brasil OSB Industria E. Comercio S.A.

Louisiana-Pacific Argentina S.R.L.

Louisiana-Pacific Colombia S.A.S.

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-228608, 333-159737, 333-156144, 333-153080, 333-118269, 333-118245, 333-88076, 333-53715, 333-87775, 333-87803, 333-188447, 333-110243, and 333-49106 on Forms S-8 and Registration Statement No. 333-161050 and 333-73157 on Form S-3 of our reports dated February 13, 2020, relating to the consolidated financial statements of Louisiana-Pacific Corporation and subsidiaries (the “Company”), and the effectiveness of the Company’s internal control over financial reporting, appearing in this Annual Report on Form 10-K of Louisiana-Pacific Corporation for the year ended December 31, 2019.

/s/ Deloitte & Touche LLP

Nashville, Tennessee
February 13, 2020

CERTIFICATIONS

I, W. Bradley Southern, certify that:

1. I have reviewed this annual report on Form 10-K of Louisiana-Pacific Corporation;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

- a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
- b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
- c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
- d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

- a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 13, 2020

/S/ W. BRADLEY SOUTHERN

W. Bradley Southern
Chief Executive Officer

CERTIFICATION

I, Alan J.M. Haughie , certify that:

1. I have reviewed this annual report on Form 10-K of Louisiana-Pacific Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent function):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 13, 2020

/s/ ALAN J.M. HAUGHIE

Alan J.M. Haughie
Executive Vice President and Chief Financial Officer

LOUISIANA-PACIFIC CORPORATION
411 Union Street, Suite 2000
Nashville, TN 37219-1700
(615)986-5600

February 13, 2020

Securities and Exchange Commission
Judiciary Plaza
450 Fifth Street, N.W.
Washington, D.C. 20549

Re: Certification Pursuant to § 906 of the Sarbanes-Oxley Act of 2002

Ladies and Gentlemen:

Pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, in connection with the filing of the annual report on Form 10-K of Louisiana-Pacific Corporation (the "Company") for the fiscal year ended December 31, 2019, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

/s/ W. BRADLEY SOUTHERN

Name: W. Bradley Southern
Title: Chief Executive Officer

/s/ ALAN J.M. HAUGHIE

Name: Alan J.M. Haughie
Title: Executive Vice President and Chief Financial Officer

A signed original of this written statement required by Section 906 has been provided to Louisiana-Pacific Corporation and will be retained by Louisiana-Pacific Corporation and furnished to the Securities and Exchange Commission or its staff upon request.