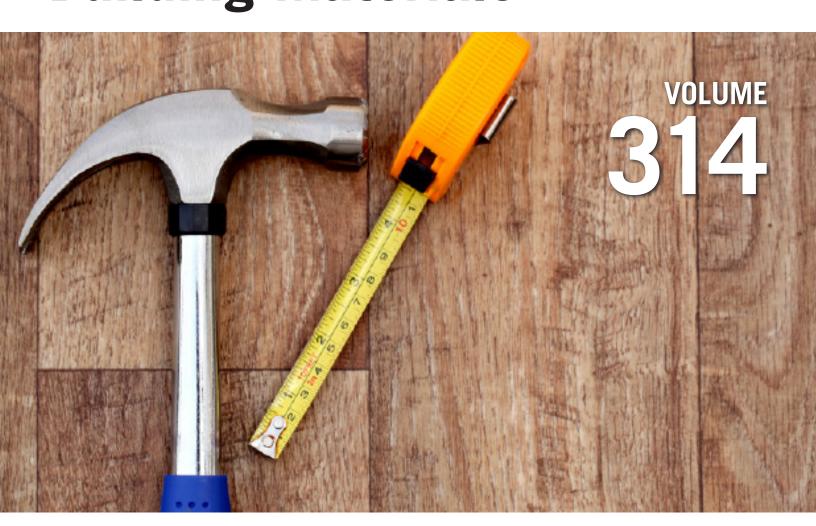
GREAT AMERICAN GROUP



Monitor Molding Materials



A YEAR OF STAGNATION

DOMESTIC DEMAND

Consistently disappointing domestic construction activity has kept demand low for most building supplies

PRODUCTION CURTAILMENTS

Strategically reduced outputs have varying levels of success in keeping prices buoyant

EXPORT PROBLEMS

Lack of overseas demand results in softness in the hardwood market

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MONITOR BUILDING MATERIALS GREATAMERICAN.COM DECEMBER 2019 800-45-GREAT **314**

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Deals are a moving target. A constantly shifting mix of people, numbers and timing. We're here to simplify this process for you. Our experts are dedicated to tracking down and flushing out the values you need even on the most complex deals, so you can leverage our hard-won knowledge to close the deal.

Trend Tracker - Inventory

	Lumber	Building Materials
NOLVs	Mixed 🔷	Mixed 🔷
Sales Trends	Mixed 	Increasing
Gross Margin	Mixed 	Mixed
Inventory	Mixed 🔷	Increasing A

NOLVS

- Lumber: Fluctuations in market activity led to varying sales trends for lumber producers and distributors. Changing market prices resulted in a variety of gross margin implications.
- **Building materials:** Vendor price changes created both positive and negative impacts on gross margins, depending on the product. Storm activity improved domestic sales in recent months, but overall demand remains somewhat flat.

SALES TRENDS

- Lumber: Low domestic construction activity resulted in sales declines in certain cases, while merger and acquisition activity improved sales in other engagements.
- Building materials: Recent storm activity has provided some upward momentum for items such as roofing.

GROSS MARGIN

Lumber: In many cases, commodity softwood market prices have declined more quickly than selling prices to customers, positively impacting margins. Gross margins for hardwood lumber engagements have generally been adversely impacted by tariffs.

	Market Prices		
	Three Months	Year	
Softwood	Increasing 	Increasing ▲	
Hardwood	Decreasing ▼	Decreasing ▼	

Building materials: In certain cases, such as wallboard, price reductions from vendors have resulted in improved margins. Conversely, vendor prices increased for products such as shingles, negatively impacting margins.

INVENTORY

- **Lumber:** Low demand on the market limited inventory purchases in many cases, but certain companies sought to take advantage of low pricing with opportunistic buys.
- **Building materials:** Recent increases in storm activity have spurred a higher level of purchases.

PRICING

- **Softwoods:** Prices are currently higher versus the prior year and prior quarter due to particularly bearish markets during the comparative periods. Production curtailments have been the primary factor in higher prices on the market as demand remains subdued.
- **Hardwoods:** Hardwood pricing has primarily been depressed due to ongoing trade tensions, which have caused precipituous declines in export markets and led to an oversupply domestically, particularly for lowergrade items.

Trend Tracker - M&E

	Woodworking/Sawmills/ Furniture
Used Pricing	Consistent —
Used Trade Movement	Consistent —
OEM Pricing	Decreasing ▼
Technology Advancement	Consistent —
Auction Activity	Consistent —



- Used Pricing: Sawmill and lumber production machinery and operations continue to see modest growth, but the private equity investments of the past several years have seemed to have subsided. Longer OEM lead times have helped to maintain used equipment pricing for late-model equipment. Growth in the secondary market for late-model CNC equipement seems to have slowed, as has the furniture manufacturing onshoring movement.
- **Used Trade Movement:** Equipment movement in the secondary marketplace has flattened out over the second half of 2019, driven by a reduction in the number of auctions of sawmill and woodworking operations and private treaty liquidation sales.
- **OEM Pricing:** With the investement of new machinery into the lumber production sector softening, OEM pricing may see a retraction. The increase in Asian, particularly Taiwanese, machinery continues to negatively affect OEM pricing on European manufacturers.
- Technology Advancement: Technology and automation are consistent. Some of the efficiency returns are being seen with emerging 3D prototyping technologies as they become affordable across most levels of business.



Overview

In June 2019, building material prices remained depressed in the midst of cautious buying throughout the industry. Despite the start of the traditional building season, purchasing levels remained low. While pricing gained some upward momentum in subsequent months, an underlying wariness still prevails.

Various mill curtailments in the spring and summer set the stage for price increases in the following weeks, but demand has remained flat to slightly down. Lumber production continues to fall, as producers have sought to tighten supplies in a soft market.

Dodge Data & Analytics (Dodge) reported that overall construction starts were down 4% year-over-year through October 2019. While non-building construction remains a bright spot for the industry, residential construction declined 6% and non-residential construction declined 7%.

The flattening out of building activity in 2019 has had a significant impact on most building materials. Supplies have outpaced demand for much of 2019 for both softwood and hardwood markets.

With demand lackluster, selective production curtailments have been strategically employed by many producers of wood products, to varying degrees of success. On the softwood side, reduced inventories have catalyzed modest price increases in the second half of the year.

Other markets have not had the same level of success in drumming up price increases. The softwood panel market has suffered a lack of traditional building demand, and although a few storms in September and October created some upward momentum, the market remains soft.

On the hardwood side, an export market in disarray has eroded pricing domestically. With the continued trade war waged between the United States and many of its most powerful trade partners, a rebound in foreign demand, necessary for any bullish pricing momentum, seems unlikely without a meaningful agreement to alleviate current tensions.

KEY FACTORS

Low demand continues to plague the market, as new construction remains soft in the U.S.

Production curtailments have been moderately effective at times in keeping building material prices buoyant, but a sustained upward pricing trajectory is unlikely amidst prevailing market conditions.



Softwood Lumber

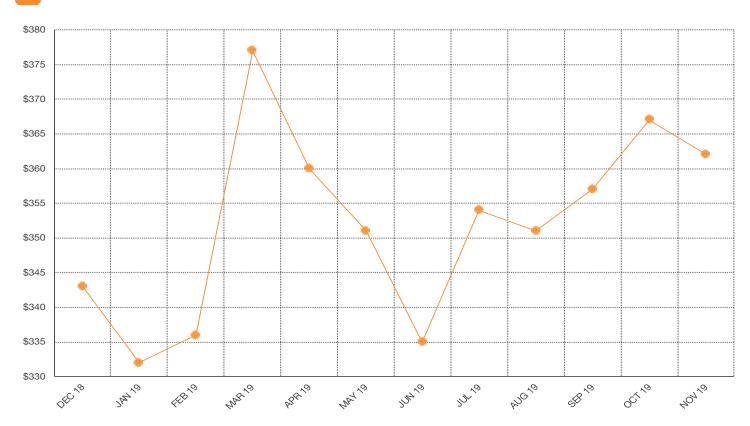
Softwood lumber, including genuses such as Spruce, Pine, Fir, and Cedar, is typically used for structural building purposes, as well as millwork. Market prices for many lumber products rose in the beginning of the summer as various mill curtailments drove inventories lower on the market. Despite certain stoppages, the run-up in prices was derailed in some cases by inclement weather conditions.

After major production reductions in Western Canada, which included a permanent mill closure, Western and Eastern Spruce, Pine, and Fir future and spot prices rose. However, flooding in Texas and along the Gulf Coast exacerbated already low demand levels on the market, keeping prices in check. These delayed projects would later result in improved demand in September and October.

An additional run-up in prices was experienced shortly thereafter with further curtailments amongst several mills in British Columbia. This second round of curtailments was more substantial, creating a bullish market for Western Spruce, Pine, and Fir products in July. According to *Random Lengths*, futures pricing rose \$100 per thousand board feet (mbf) over an eight-day period, as purchasers scrambled to accurately assess market dynamics. Amidst the chaos, the *Random Lengths* Framing Lumber Composite Price rose \$19 per mbf in one week, the most substantial gain since May 2018.

The push and pull of low demand versus successive production curtailments has characterized the market since prices peaked in March. According to *Random Lengths*, lumber production declined 4.8% year-over-year for the first six months of the year in North America. With production curtailments remaining the go-to manuever for mills looking to drive prices higher throughout the second half, a similar story will likely take shape once full-year results are released. However, this strategy remains a short-term fix in a market plagued by an underlying lack of demand.

1 Softwood Lumber - Price per MBF



Softwood Panels

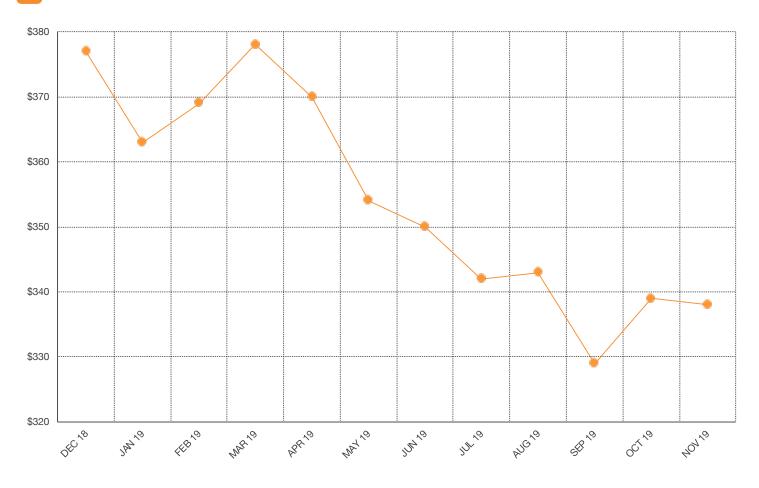
Softwood panel pricing traditionally follows a similar trajectory to that of framing lumber. As can be seen in the graph below, prices have remained low through much of the second half of the year, and any run-ups in pricing have been subdued even in comparison to modest gains demonstrated by softwood lumber.

At the time of the prior Building Materials Monitor in June 2019, a combination of high levels of inventory on the market and low demand resulted in a bearish outlook on the market. Unfortunately for many producers, the traditional building season failed to spur much of any upward momentum in subsequent months.

Pricing gained some short-term momentum with the formation of Hurricane Dorian in late August. The storm is regarded as the worst natural disaster in the history of the Bahamas. On the mainland, impact from the storm was felt from Florida up the East Coast to Massachusetts. Cleanup and rebuilding efforts in September and early October spurred price increases for panel products such as plywood in affected areas.

Despite the brief run-up in pricing, the panel market remains soft heading into 2020. Despite producers curtailing production and transitioning production to less common items, inventories continue to outpace demand.

Softwood Panels - Price per MBF



Hardwood Lumber

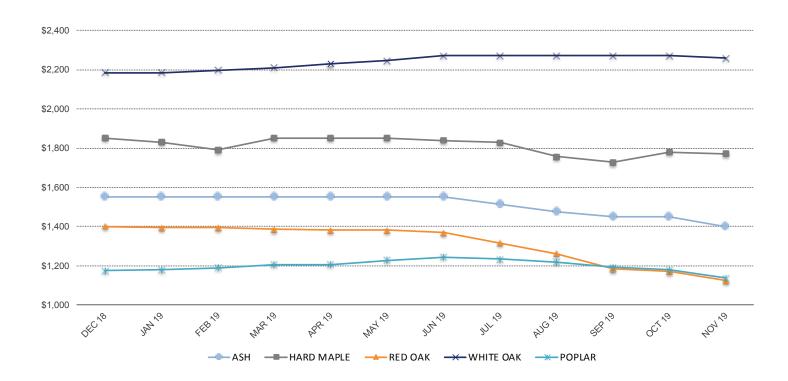
Hardwood lumber pricing historically exhibits a lower level of volatility as compared to softwood lumber. However, the market segment is not immune to fluctuations, as can be seen in the graph below. In recent months, the industry has experienced a significant decline in export momentum but solid domestic demand.

Consistent with GA's prior *Building Materials Monitor* released in June, uneasiness on the export market resulted in a downward pricing trajectory for hardwoods. Volatile international trade environments have persisted over the past year, creating a level of tumult on the hardwood market, particularly for exporters. According to the USDA Foreign Agricultural Service's annual report on China released in September 2019, the level of imported hardwood into China is projected to decline substantially through the rest of 2019 and into 2020. The report indicates that log imports are forecast to decline 10%

Kiln-Dried Hardwood - Price per MBF

from 2018's totals, while lumber imports are projected to fall 15%. The United States represents approximately 8% of logs and 19% of hardwood lumber imported into China. The disappointing status of hardwood exports from the U.S. is not limited to China. Canada and Mexico are also major trade partners that are projected to consume a far lower level of U.S. exports than in years past. The poor export market has resulted in an oversupply domestically, especially for lower-grade Red Oak.

Similar to the softwood market, supply and demand dynamics have created a bearish market over the second half of 2019. Inventories remain more than sufficient to satisfy current demands, particularly overseas. The escalating trade war with China has exposed the domestic hardwood market's reliance on the Chinese economy, specifically for Red Oak, Ash, and Poplar. While domestic demand remains relatively healthy, it is far from booming, and it is likely that significant positive developments with international trade partners will be necessary to pull the nose up in 2020.





Lumber and Woodworking Equipment

The machinery and equipment involved in woodworking can be divided into two main categories: furniture manufacturing and lumber production. While both industries are tangentially related to both the residential and commercial construction industry, both categories respond differently regarding elasticities.

The sawmill and lumber production machinery industry has been relatively stable, seeing a modest increase in new machinery as private equity firms began their investment into this market to take advantage of the sustained relative health of housing and commercial construction markets. This investment has bolstered secondary pricing of used machinery, as lead times from OEMs have become longer.

The most recent IBISWorld report states that the woodworking machinery industry continues to be in a position for 2.0% growth during the next five years. Additionally, the overall number of sawmill and wood production enterprises has declined at an annualized rate of 0.2% over the last five years, reflecting a consolidation trend. Employment has increased at an annualized rate of 1.6% and revenue at a rate of 2.4% during the same period. Activity surrounding closures, consolidations, and restructurings within producers and wholesalers appears to be stagnant at present. Although less frequent, most of the closures have been single-location operations, which cannot operate with the economies of scale of larger operations and comprise the majority of industry participants. Through 2019, GA has continued to monitor liquidations in the sawmill and furniture manufacturing spaces, and activity has remained flat since 2018.

GA notes a slight reduction in hardwood mill auctions throughout 2019, although machinery values are holding steady. There have been minimal pinewood mill auctions, as these mills have been faring better than the hardwood mills



recently. The current dealer market is exhibiting a reduction in values for hardwood mill machinery.

The woodworking and furniture manufacturing industries have enjoyed modest growth in recent years primarily due to relative health in the housing market and an increase in disposable income. During this time, the furniture industry has seen an increasing demand for customized furniture. Woodworking and furniture manufacturers are investing in automated smart woodworking machinery to respond to quick-changing customer demands with shorter product changeovers while maintaining efficiencies. These equipment changes are also needed to remain competitive with foreign import products. According to a recent IBISWorld report on Household Furniture Manufacturing in the U.S., the recent growth trend is expected to turn, and revenues are forecasted to decline by an annualized rate of 0.3% over the next five years. This trend is due mainly to an increase of imported products, which will reach an estimated 56% of the domestic market in the next five years. These factors relate directly to the prices of used machinery in the secondary market. This year has seen a reduction in values and frequency of auction events throughout the year. The desirability window for used machinery has narrowed to the five-year range, with older and vintage machinery seeing a more exaggerated decrease in values.

Building Materials Reference Sheet

SOFTWOOD LUMBER AND PANEL PRICING (\$ PER MBF)

	Year-Over- Year Change	Quarter- Over-Quarter Change
Average Softwood Framing Lumber (\$330 to \$380/mbf)	6.9%	1.0%
OSB (\$220 to \$275/mbf)	(13.2%)	3.6%
Pine Plywood (\$460 to \$560/mbf)	(9.8%)	0.2%

HARDWOOD LUMBER PRICING - GREEN - FAS GRADE (\$ PER MBF)

	Year-Over- Year Change	Quarter- Over-Quarter Change
Red Oak (\$730 to \$970/mbf)	(21.5%)	(3.9%)
White Oak (\$1,640 to \$1,740/mbf)	(2.5%)	(1.8%)
Ash (\$900 to \$1,140/mbf)	(21.1%)	(4.1%)
Poplar (\$830 to \$945/mbf)	0.3%	(4.7%)
Hard Maple (\$1,280 to \$1,450/mbf)	(7.1%)	(1.5%)

HARDWOOD LUMBER PRICING - KILN-DRIED - FAS GRADE (\$ PER MBF)

	Year-Over- Year Change	Quarter- Over-Quarter Change
Red Oak (\$1,125 to \$1,430/mbf)	(21.1%)	(6.7%)
White Oak (\$2,180 to \$2,270/mbf)	2.4%	(0.6%)
Ash (\$1,400 to \$1,550/mbf)	(9.7%)	(4.0%)
Poplar (\$1,130 to \$1,250/mbf)	(3.2)%	(5.0%)
Hard Maple (\$1,725 to \$1,855/mbf)	(5.0%)	1.0%

Monitor Information

The Building Materials Monitor relates information covering most building projects, including industry trends, market pricing, and their relation to our valuation process. GA internally tracks recovery ranges for specialty and exotic hardwoods and softwoods, building product retailers and wholesale distributors, and specialty building products, but we are mindful to adhere to your request for a simple reference document. Should you need any further information or wish to discuss recovery ranges for a particular segment, please feel free to contact your GA Business Development Officer.

The information contained herein is based on a composite of GA's industry expertise, contact with industry personnel, liquidation and appraisal experience, and data compiled from a variety of well-respected industry publications and sources believed to be reliable. GA does not make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this issue. Neither GA nor any of its representatives shall be liable for use of any of the information in this issue or any errors therein or omissions therefrom.



Experience

LIQUIDATIONS

GA has been involved in the liquidation of three National Home Centers building products locations, the liquidation of inventory and fixed assets across eight North Pacific Building Materials distribution centers, and the auctions of various woodworking companies, including Woodworking IVA, The Truss Company, Lux Cabinetry, LLC, and Graeber's Lumber & Millwork.

APPRAISALS

In addition, GA has worked with and appraised numerous manufacturers and distributors within the building materials, lumber, and woodworking industries. While our clients remain confidential, they range in scale from smaller, more specialized regional businesses to major global and national industry leaders, and include the following sampling of companies:

- The nation's largest supplier of building materials for home building, as well as professional and contract builders.
- One of the largest roofing products distributors in the United States, with locations throughout the country and sales exceeding \$2 billion annually.
- Global leaders in home fixtures and plumbing products, including faucets, sinks, toilets, and bath tubs, with presence in over 40 countries.
- Leading manufacturers of HVAC systems, serving residential, light commercial, and commercial applications, with annual sales exceeding \$1 billion.
- The largest publicly-traded roofing distributor in the U.S.
- One of the nation's largest producers of OSB, siding, and engineered wood products.
- The largest independent distributor of wallboard, acoustical, and other specialty building materials in the United States.

- One of the world's leading manufacturers of windows and
- Regional sawmills, log processors, and producers of green and kiln-dried lumber.
- Manufacturers and distributors of fasteners and bolts used in light and heavy construction.
- Suppliers of iron and wood building components utilized in stair construction.
- Specialty producers of custom interior wood doors for the education, commercial, health care, institutional, and hospitality industries.
- A leading distributor of roofing materials, with 60 distribution facilities nationwide.
- A manufacturer and distributor of exterior residential building products, primarily servicing professional contractors.
- Distributors of exotic imported hardwoods utilized in highend building projects.
- Independent building material and plumbing product retailers and wholesalers, each serving distinct regional customer bases.
- A diversified holding company operating in the building materials supply industry, with a focus on more specialized supply services.
- A manufacturer and distributor of metal roofing and accessories for residential, light commercial, and agricultural applications.
- Various companies' woodworking machinery and equipment, including producers of dimensional lumber, hardwood lumber, plywood, and fiberboard.

In addition to our vast liquidation and appraisal experience, GA maintains contacts within the building materials and lumber and woodworking equipment industries that we utilize for insight and perspective on recovery values. GA is a subsidiary of B. Riley Financial, Inc., whose affiliate B. Riley FBR, is nationally recognized for its highly ranked proprietary equity research.



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About Great American Group

Great American Group is a leading provider of asset disposition solutions and valuation and appraisal services to a wide range of retail, wholesale, and industrial clients, as well as lenders, capital providers, private equity investors, and professional services firms. In addition to the *Building Materials Monitor*, GA also provides clients with industry expertise in the form of monitors for the chemicals and plastics, metals, and food sectors, among many others. For more information, please visit

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