B | RILEY Advisory Services

DECEMBER 2022

Monitor

Building Materials

VOLUME 367

AMPLE SUPPLY BUT WANING DEMAND

SLUGGISH HOUSING

High mortgage rates continue to negatively impact the residential construction market

INVENTORY BLOAT

High production levels and purchasing activity over the past year have resulted in a saturated softwood market

FALLING IN LINE

In line with softwoods, which have experienced a bear market for several months, hardwoods have succumbed to similar pricing softness - and similar ills - in recent months

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Trend Tracker - Inventory

	Lumber	Building Materials
NOLVs	Decreasing ▼	Mixed ▲▼
Sales Trends	Mixed ▲▼	Mixed ▲▼
Gross Margin	Decreasing ▼	Mixed ▲▼
Inventory	Mixed ▲▼	Mixed ▲▼

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

NOLVS

- **Lumber:** Amid higher interest rates and bloated inventories, declines in both demand and lumber prices have led to decreases in NOLVs compared to last year and early 2022.
- **Building materials:** Similar issues have plagued the building materials market, including lower demand and the sell-through of higher-cost inventory in a declining price environment. However, strong demand related to high backlogs in certain building sectors, such as infrastructure, improved NOLVs in other cases.

SALES TRENDS

Sales trends were positive in early and mid-2022 amid buoyant demand and high material prices but have generally cooled more recently. Higher interest rates have negatively impacted the housing market, but building activity remains relatively healthy in some other sectors, particularly the non-residential and non-building segments.

GROSS MARGIN

- **Lumber:** Market prices have declined relatively steadily since the second quarter, and companies have generally exhibited margin compression, particularly when selling through higher-cost inventory purchased in 2021 and early 2022.
- **Building materials:** Similar issues have plagued the building materials market, with higher-cost inventory being sold in a declining price environment. However, price increases have been more readily accepted by customers in some cases, preserving gross margin in certain instances.

INVENTORY

In many cases, declining market prices have contributed to declining inventory levels on a dollar basis. However, in other situations, slowing demand currently and aggressive purchasing in prior months have led to inventory buildups.

PRICING

- **Lumber:** Higher mortgage rates have led to a slowdown in residential construction activity, which, combined with aggressive purchasing and mill production in prior months and persistent fuel surcharges currently deterring would-be purchasers, have led to a buildup of lumber supplies and downward pricing pressure for much of the second half of 2022.
- **Building materials:** Supply chain disruptions allowed for the pass-through of price increases in some instances. However, like lumber, over-inventoried positions due to increased production and aggressive purchasing, combined with waning demand, have resulted in downward pricing pressure in other cases.

Trend Tracker - M&E

	Woodworking/Sawmills/ Furniture
Used Pricing	Consistent ━
Used Trade Movement	Consistent ━
OEM Pricing	Consistent ━
Technology Advancement	Consistent ━
Auction Activity	Consistent ━

- **Used Pricing:** Lower market prices for lumber in 2022 have not yet had a significant impact on used sawmill equipment pricing. In the used woodworking machinery market, the secondary market has been relatively flat, with a recent trend of subsiding demand for high-production, late model CNC machinery. The onshoring movement of furniture manufacturing has also stalled, leading to pricing constraints on related machinery.

- **Used Trade Movement:** Used trade movement has remained fairly steady during the second half of 2022. Though demand for used equipment has risen, supplies have been limited in the market, with any equipment that did hit the market being sold quickly.

- **OEM Pricing:** During the prior monitor, rising raw material and labor costs spurred increases in OEM pricing; since then, pricing has begun to stabilize, especially in the U.S. and Europe. However, Asian machinery continues to put pressure on OEM pricing, especially with regard to European manufacturers. Imports from China and Taiwan appear to be increasing.

- **Technology Advancement:** Consistent with recent trends, many companies continue to spend investment dollars to automate with upgraded CNC controls and software, as well as more affordable 3D prototyping, to maximize efficiency returns.

Overview

According to the U.S. Census Bureau, the seasonally adjusted annual rate for privately owned housing starts reached 1.44 million units in September 2022, 8.1% below the revised August estimate of 1.57 million units and 7.7% below the September 2021 rate of 1.56 million.

September's rate represented the lowest level in over two years, highlighting the ongoing impact of the Federal Reserve's heightened interest rates on the housing market. Additionally, factors such as building material bottlenecks, mortgage rates being at 20-year highs, and unbridled inflation continue to weigh on the industry.

The Federal Open Market Committee decided to raise the federal funds rate by an additional 75 basis points in early November. The federal funds rate is expected to finish out the year somewhere in the mid-4% range and could peak to around 4.75% in 2023, according to the U.S. Central Bank's own predictions. Multiple sources indicate that early November's 30-year fixed-rate mortgage increased to its highest level since 2002.

Softwood lumber prices declined relatively steadily since the summer before flattening in October amid production curtailments. Overall, production curtailments and cautious purchasing in recent months began to offer lumber sellers a bit of leverage in pricing at the beginning of the fourth quarter, but prices remain depressed amid general market pessimism.

The U.S. Department of Commerce issued its final third administrative review of Canadian softwood lumber duties in August. The move reduced duties on Canadian softwood lumber into the United States from 17.99% to 8.59% (which includes 3.83% in countervailing duties and 4.76% in anti-dumping duties), lower than the initial third administrative review that would have set the tariffs at 11.64%. The Department of Commerce increased tariffs to 17.99% in November 2021 based on its findings that Canadian lumber subsidies create an unfair marketplace. The National Association of Home Builders, which has opposed the tariffs, views the recent reduction as a positive step for U.S. homebuilding; however, it maintains that complete elimination of these tariffs is key to lowering home prices and strengthening its relationship with Canadian lumber producers.

KEY FACTORS

In response to the Federal Reserve raising its policy interest rate, the 30-year fixed-rate mortgage jumped to its highest level since 2002, negatively impacting residential activity.

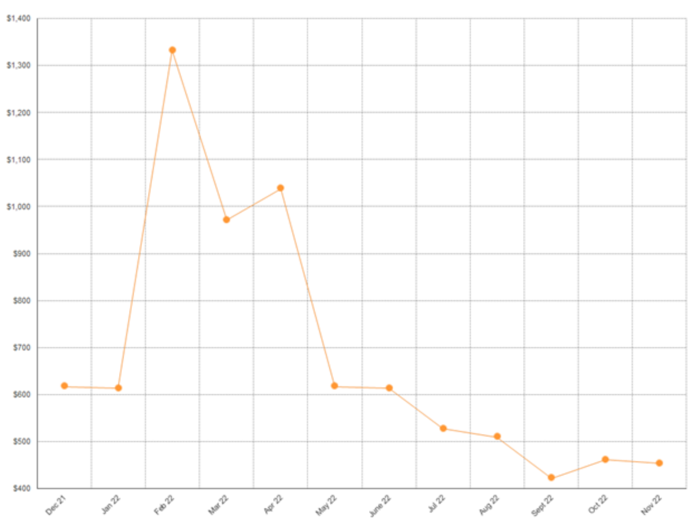
Amid falling demand for home starts, lumber prices have declined relatively steadily since the summer, though production curtailments have begun to stem the downfall more recently.

Softwood Lumber and Panels

Softwood lumber and panels are produced from gymnosperm trees, such as Pine and Spruce, and are typically used for structural building purposes, as well as millwork. Upward pricing trends characterized the market in late 2021 and early 2022, as demand was relatively buoyant amid a healthy construction market and the impending spring season, which traditionally ushers in the beginning of peak building activity. However, any thoughts of a repeat of 2021's record highs dissipated once the second quarter of 2022 took shape, as cautious buying from distributors, lower levels of new construction and re-modeling projects, higher interest rates, and a cooled housing market drove down prices.

The second half of 2022 began somewhat promising with an initial modest uptick in prices in July; however, cautious attitudes again beset the market, particularly with interest and mortgage rates steadily rising and skepticism building regarding the general economy, which contributed to gradual declines in softwood prices. Also contributing to the decline in prices were fuel surcharges that dissuaded purchases. In addition, mills were flush with inventory due to ramped up lumber production in 2021 and earlier in 2022, leading to supply catching up to demand; in response, mills have curtailed production in an effort to stem the tide of soft pricing. These factors have more recently been coupled with typical building season slowness due to the approaching winter. The second half of 2022 saw buying slow as companies have sought leaner inventory positions, which, combined with the aforementioned factors, resulted in composite lumber declining 25% from July through October.

1 Softwood Lumber Futures - Price per MBF



Appraisal trends have generally been negative in the second half of 2022. With most appraisals comparing to periods from a year ago or from early 2022, when prices were more favorable, the downward trend in NOLVs was not surprising. Mills have tried to mitigate downtime through more log harvesting and purchasing, but production efficiencies that were maximized during prior appraisals from high demand have waned. When coupled with falling prices, these factors have led to compressed margins. Distributors have also experienced severe margin compression compared to prior appraisals due to the aforementioned market price declines. Companies that stocked up in 2021 and early 2022 have been left with high-cost inventories that ultimately have been selling into a falling price environment, leading to margin compression and decreases in NOLVs. In addition, companies have been sitting on more excess inventory due to higher purchasing levels in a high-demand environment last year.

Softwood panel pricing traditionally follows a similar trajectory to that of framing lumber. Consistent with softwood lumber, panel pricing exhibited a downward trajectory, despite a modest uptick in July, that has continued throughout 2022. Cautiousness continued to be a theme, and buying was modest at best, contributing to generally decreased prices, with composite panel prices declining approximately 20% between July and October.

Hardwood Lumber

Hardwood lumber is used in a number of manufacturing settings, including interior building products such as flooring, cabinets, panels, and doors, as well as musical instruments, furniture, boats, truck trailer flooring, pallets, and other industrial applications. Although the market for hardwoods is tied to domestic housing demand and remodel activity, downstream applications in homebuilding, as well as hardwood lumber's more diverse uses in other industries and its export outlets, have historically provided some additional protections against sharp changes in pricing, but recent market conditions have bucked that trend.

The North American housing market remains a significant driver of demand for most hardwood species, and as these indicators continue to reflect a soft and declining environment, the hardwood industry finds itself in a period of declining prices, as supply levels are generally outpacing demand heading into 2023. After a sustained run of robust demand that boosted prices, demand from new construction has dwindled and mills are finding a more competitive pricing environment. Even in lumber product sectors that are maintaining relatively stable demand, such as truck trailer flooring and pallet manufacturing, lumber inventory in the yards has increased, as some of the supply chain challenges from earlier in the year have subsided. As most mills have ramped up production and increased output over the last two years, the relatively rapid decline in demand will likely lead to production curtailments in the fourth quarter of 2022 and into the first half of 2023.

The repair/remodel market has held up better than new construction, helping to avoid a steeper decline in pricing. Although spending in this sector will continue to increase as a percentage of overall residential construction spending, it likely will not be enough to correct the current imbalance in supply and demand. The repair/remodel market faces the same challenges of new construction in high interest rates, declining home sales, and increasing costs of labor and materials. Despite firmer orders in cabinet and flooring manufacturing, lumber inventories at these manufacturing locations are ample. The concern going forward will be any further contraction in existing home sale prices, which will dampen incentives for larger remodel projects that typically include high-cost hardwood lumber products. While lumber products producers continue to work through the 2022 backlog, the strength of the 2023 order file remains unclear.

As noted previously, foreign demand for hardwood lumber is a critical component in the supply chain and generally an outlet to buoy prices. However, most recent data shows exports of hardwood lumber down over 10% in September from August numbers and total exports down 19% in Q3 from Q2. Despite the declines, overall export figures reflect an improvement over the prior year, but current trends indicate challenges going forward. Vietnam remains a key market for flooring and furniture manufacturing, but demand there remains stifled due to weaker sales into North America. Demand and consumption from China has also declined in recent months, as China continues to battle recent COVID outbreaks, which have led to declining spending and a slowdown in the housing market. The European market has not fared much better, as high fuel costs and potential shortages are sapping consumer demand.

Appraisal results remained strong through the first half of 2022, but going forward, there will be risks that should be monitored. As pricing begins to decline across a variety of species, many will be working through higher-cost inventory from earlier in 2022 and late 2021, which could lead to margin compression. Further, manufacturers and distributors of hardwood products have spent much of the past two years purchasing as much inventory as possible to feed demand; as that demand cycle reverses, the result will be slowing inventory turns and rising levels of excess inventory. Heading into 2023, values within hardwood lumber inventory appraisals will likely decline compared to 2021 and early 2022.

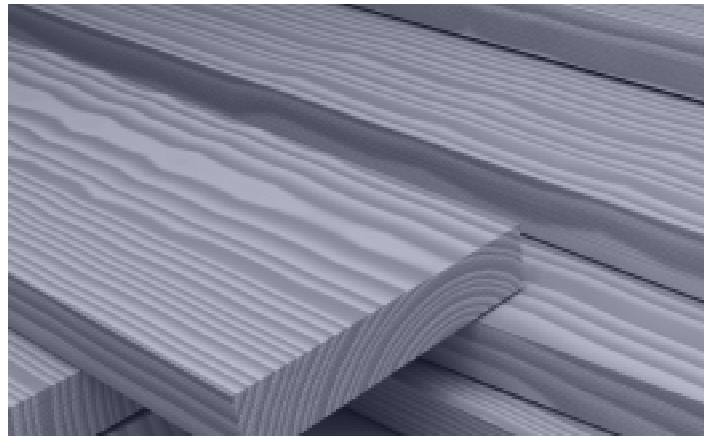
Lumber and Woodworking Equipment

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.

Stability in the sawmill and lumber production machinery industry continues, despite a modest increase in new machinery, especially in the Southeastern U.S. Activity surrounding closures, consolidations, and restructurings amongst producers and wholesalers appears to be minimal at present. Consistent with recent trends, 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. B. Riley continues to monitor liquidations in the sawmill and furniture manufacturing spaces, and this trend does not seem to have changed substantially during 2022 compared to prior years.

In 2021, B. Riley witnessed an increase in economic activity, combined with high lumber prices, caused demand for good quality used equipment to increase in a market without a corresponding increase in available equipment. This led to values for used equipment holding steady or in some cases increasing. Softwood mill equipment fared better than hardwood mill equipment due to its primary use in the building materials market.

In 2022, lumber prices have declined. Higher mortgage rates have caused new home sales to slow, which has led to increased lumber inventories and decreased prices. Combined with the ever-increasing potential for an economic recession, this has caused uncertainty in the market. Used equipment values must be closely monitored, despite not showing significant fluctuations at the present time.



The woodworking and furniture manufacturing industries have enjoyed modest growth in recent years due to the improved housing market and an increase in disposable income, which have also led to increasing demand for customized furniture. As a result, 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. Demand for domestically produced furniture manufacturing equipment is likely to continue to struggle due in large part to an increase of imported products, which impacts the prices of used machinery in the secondary market. Consistent with the prior monitor, B. Riley 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, vintage machinery seeing a more exaggerated decrease in values.

Monitor Information

The *Building Materials Monitor* relates information covering most building projects, including industry trends, market pricing, and their relation to our valuation process. B. Riley Advisory Services 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 B. Riley Advisory Services Business Development Officer. The information contained herein is based on a composite of B. Riley Advisory Services' 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. B. Riley Advisory Services does not make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information contained in this issue. Neither B. Riley Advisory Services 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.

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Experience

LIQUIDATIONS

B. Riley Wholesale & Industrial Solutions 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, B. Riley Advisory Services 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 U.S., 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 U.S.
- One of the world's leading manufacturers of windows and doors.
- 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 high-end 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, B. Riley Advisory Services maintains contacts within the building materials and lumber and woodworking equipment industries that we utilize for insight and perspective on recovery values. B. Riley Advisory Services is a subsidiary of B. Riley Financial, Inc., whose affiliate B. Riley Securities, is nationally recognized for its highly ranked proprietary equity research.

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