



2020 Indiana Forest Products Price Report and Trend Analysis

Spring Survey



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Survey Procedures and Response

Data are collected twice a year, but log prices change constantly. Standard appraisal techniques by those familiar with local market conditions should be used to obtain estimates of current market values for stands of timber or a large quantity of logs. Please note, because of the small number of mills reporting logging costs, “stumpage prices” estimated by deducting the average logging and hauling costs (Table 4) from delivered log prices must be interpreted with extreme caution and are meant to serve only as a guide. Actual stumpage values you may be offered depend on many variables such as access, terrain, time of year, etc. For more information regarding standing timber pricing, there is an annual survey of Indiana private consulting foresters available in the Indiana Woodland Steward, inwoodlands.org.

Data for this survey were obtained by a direct mail and email survey to a variety of forest-product industries, including sawmills, veneer mills, concentration yards, and independent log buyers. Only firms operating in Indiana were included. The survey was conducted and analyzed by the Indiana DNR Division of Forestry (DoF). The prices reported are for logs delivered to the log yards of the reporting mills or concentration yards. Thus, prices reported may include logs shipped from other states (e.g., black cherry veneer logs from Pennsylvania and New York).

The survey was mailed to 16 firms and emailed to 30 firms. It is estimated these companies produce close to 90% of the state’s roundwood production. Electronic reminders, follow-up phone calls, and additional mailings encouraged responses.

A total of 12 firms reported some useful data. Only three mills reported production data in board feet, two over 10 MMBF and one under. Total board-foot production reported for 2019 was 37 MMBF. The figure for 2018 was 30 MMBF, compared to 57 MMBF for 2017, and 70 MMBF for 2016. The largest single-mill production reported was 20 MMBF. These annual levels are not comparable because they do not represent a statistical estimate of total production.

The price statistics by species and grade don’t include data from small custom mills, because most do not purchase logs, or they pay a fixed price for all species and grades of pallet-grade logs. They are, however, the primary source of data on the cost of custom sawing and pallet logs. The custom sawing costs reported in Table 4 do not reflect the operating cost of large mills.

Hardwood Market Comments¹

The coronavirus pandemic unsettled virtually every domestic and export market for hardwood lumber the last several months. In most years, domestic demand slows in July. This is partially influenced by shutdowns for annual maintenance projects and inventory around the Independence Day holiday. Vacations have a large impact on business in July, as well. Perhaps most important, consumer spending during summer is focused more on outdoor activities and less on interior projects. However, business has not slowed this particular July as it commonly does. Most U.S. markets are busier now than in May and June because the economy has been reopened, even if by fits and starts. Additionally, favorable trends in new and remodeling residential construction along with rebounding housing sales are stimulating demand for finished goods. Positive impacts have been posted for flooring, cabinets, moulding, and furnishings. All of this said, demand is not robust, and neither are all markets participating in the upturn. The wooden pallet and container industry is still working through supply surpluses, and new business with China has been greatly reduced since the end of May.

¹ Comments sourced from Hardwood Review Weekly and Hardwood Market Report

Premium Species

Reportedly, sharp reductions in alcohol sales to the global bar and restaurant industry have lowered demand for white oak barrels and staves, and therefore high quality white oak logs. The difference in white oak log availability has enabled mills in some areas of the region to increase production of this species. Drying operations are readily absorbing Fas&1f output and asking for more. The common grades are more challenging to move than Fas&1f, though most mills are finding sufficient outlets at prices grouped around the listings.

Like other wood products used in homes, sales of oak strip flooring are increasing after the easing of COVID-19 restrictions. A preference shift toward red oak has occurred and currently is tempering improvements in white oak flooring sales. Manufacturers in this region have ample raw material inventories for near term use. However, some are increasing green purchases due to the upturn in business and the possibility that sawmill output will be inadequate in the months ahead. Additionally, truck trailer flooring plants that have been out of lumber markets are gradually returning.

Walnut is moving at a decent pace domestically. Prices are firm for the upper grades and steady for #1C and #2A.

Sawmills and downstream sales operations report challenging market conditions for ash. There are relatively few substantial outlets for this species in the domestic marketplace, and a high percentage of exports goes to China, where business is slow.

Sawmills and yards that routinely process cherry are reeling from large contractions in Chinese purchases the last two years. Notably, order placements dropped sharply in June. Sawmills and drying operations are trying to minimize cherry output. Comparatively speaking, kiln dried lumber inventories may not be sizable, yet supplies still exceed demand.

Cabinet sales are gaining traction alongside improving new home construction and remodeling. Hard maple is among the leading species used in cabinets. Residential flooring factories are limiting purchases of this species proportionately with consumer demand for hard maple flooring.

Soft maple has lost market share in the cabinet sector during 2020. Usage by case goods and upholstered furniture manufacturers is also down for the year as a result of the pandemic. This set of market conditions has impacted business for certain grade/thickness combinations more than others.

After a business upturn in late winter that carried far into spring, exports of red oak to China lost momentum. Reportedly, the downturn in purchasing is a result of high inventories in given Chinese markets. Prices for red oak pressed into these market areas are under pressure; some U.S. exporters are participating in this business. However, many other mills and yards are not, mainly because red oak inventories are manageable, and domestic business has improved. Reported kiln dried activity includes some lower numbers, but most information is near the listings and is otherwise within the ranges. Green red oak is moving in all grades, though Fas&1f and #1C are selling more readily than #2A&3A, despite increased purchasing by flooring plants.

Other Species

Demand for tulip poplar is trending higher in the U.S. and in certain export markets, including Vietnam. However, weak Chinese business is dampening the impacts of improvements elsewhere.

Weakness in the pallet sector, perhaps more than any other market, is constraining hardwood production. Pallet sales are improving, as is demand for pallet lumber and cants. However, markets are still overrun with supply. Crosstie shipments from sawmills moderated during the second quarter this year from what otherwise might have occurred. Hardwood production decreased in April, cratered in May, and has not gathered much momentum since.

Still, inventories at treating facilities are higher now than during the last several years. Most treaters are controlling purchase volumes but making few adjustments to prices.

Table 1. Hardwood lumber prices, dollars per 1,000 board feet (MBF), 1-inch-thick (4/4) Appalachian market area unless otherwise indicated. Source: *Hardwood Market Report*, P.O. Box 2633, Memphis, TN 38088-2633

Lumber/Grade	Jan 2016	July 2016	Jan 2017	July 2017	Jan 2018	July 2018	Jan 2019	July 2019	Jan 2020
Ash									
FAS + Prem.	1,085	950	960	1,050	1,110	1285	1130	970	800
No. 1C	685	585	565	660	750	900	740	590	440
No. 2A	455	375	320	370	420	540	425	380	315
Basswood									
FAS + Prem.	775	795	765	765	735	735	710	685	675
No. 1C	465	460	440	440	400	400	390	370	350
No. 2A	245	245	215	215	195	205	215	205	205
Beech									
FAS	555	545	560	560	560	575	575	610	460
No. 1C	460	460	460	435	420	435	435	465	415
No. 2A	360	350	340	285	275	290	290	320	310
Cottonwood (Southern)									
FAS	765	780	780	780	780	780	780	780	780
No. 1C	545	560	560	560	575	575	575	575	575
No. 2A	260	260	260	260	260	260	260	260	260
Cherry (North Central)									
FAS + Prem.	1,265	1,210	1,210	1,420	1,595	1815	1370	1170	1060
No. 1C	825	775	775	770	1,025	1200	820	630	525
No. 2A	475	405	405	450	570	685	430	330	320
Hickory									
FAS + Prem.	830	820	820	840	920	960	865	850	800
No. 1C	545	535	525	535	610	630	560	545	500
No. 2A	425	415	385	395	450	450	415	415	400
Hard Maple (unselected)									
FAS + Prem.	1,305	1,300	1,150	1,070	1,195	1210	1190	1190	1150
No. 1C	850	840	730	730	890	960	960	960	885
No. 2A	495	485	405	425	500	610	630	620	580
Soft Maple (unselected)									
FAS + Prem.	1,210	1,250	1,250	1,230	1,175	1150	1110	1165	1225
No. 1C	825	870	840	830	770	770	775	800	815
No. 2A	460	480	430	400	400	400	415	440	425
White Oak (plain)									
FAS + Prem.	1,440	1,570	1,715	1,615	1,675	1800	1700	1675	1650
No. 1C	710	790	960	975	1,030	1140	1000	910	700
No. 2A	470	480	535	525	570	660	630	590	520
Red Oak (plain)									
FAS + Prem.	1,040	1,030	1,160	1,080	1,190	1145	990	750	675
No. 1C	610	665	785	795	885	845	675	550	510
No. 2A	485	500	540	530	575	665	625	545	475

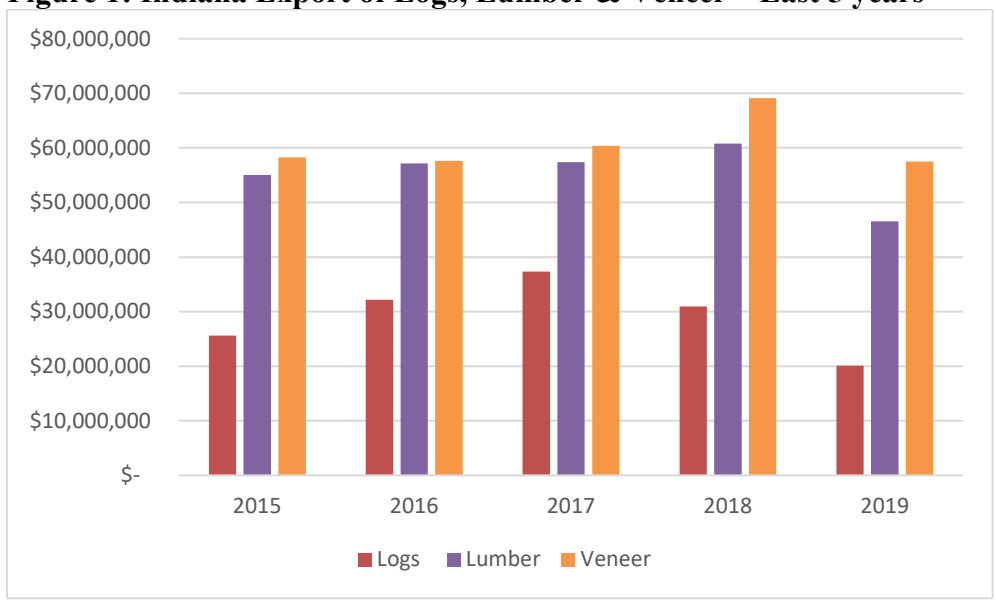
Table 1 continued

Lumber/Grade	Jan 2016	July 2016	Jan 2017	July 2017	Jan 2018	July 2018	Jan 2019	July 2019	Jan 2020
Yellow Poplar									
FAS + Prem.	830	830	830	830	830	840	880	905	775
No. 1C	515	475	435	435	435	455	495	515	380
No. 2A	365	335	275	265	275	335	395	430	315
Sycamore (Southern plain)									
FAS	455	455	455	455	460	460	460	460	460
No. 1C	435	435	435	435	440	440	440	440	440
No. 2A	375	375	360	360	360	360	360	360	360
Black Walnut									
FAS	2,425	2,515	2,515	2,600	3,000	3,025	2,800	2,315	2,175
No. 1C	1,270	1,270	1,270	1,400	1,750	1,960	1,775	1,300	1,175
No. 2A	730	715	715	765	1,060	1,235	1,075	510	465

Exports

Indiana’s export of hardwood products continues to be an important part of overall hardwood sales. According to data from the U.S. Census Bureau, log exports declined, primarily to Asia and China specifically, due mainly to tariffs imposed as part of U.S.–China trade dispute and an overall slowdown in Chinese economic growth. Lumber and veneer exports also decreased as markets for wood products overseas showed decreases in demand overall and specifically in China. In 2019, Indiana exported about \$20 million of logs, \$46.5 million of lumber and almost \$57.5 million of veneer.

Figure 1: Indiana Export of Logs, Lumber & Veneer – Last 5 years



Data from the U.S. Census Bureau⁽¹⁾

Delivered Sawlog Prices

The number of mills reporting delivered sawlog prices continues to decrease, affecting the statistical significance of the data (Table 2). Please remember this as you read through the data. Sawlog prices for all species were down compared to the 2019 spring report, the exceptions being very moderate increases in maple and strong increase in white oak. Black walnut prices were down 7.5% across all grades. White oak log prices increased 28.4% across all grades. Overall, log prices were almost 3% lower than what was reported for the 2019 spring report.

Premium Species

White oak sawlog prices were up across all grades. Upper grades saw the most significant increases of 47% on both Prime and #1 grade logs. #2 grade logs increased 8.2% while #3 grade logs increased 11.3%. Demand from overseas buyers for white oak logs continues to support these increases, and white oak has been one of the relatively few hot spots in export markets. Stave log demand has been impacted by COVID-19 shutdowns impacting bar demand for barrel products.

Demand for black walnut sawlogs has been steady and strong in export markets, even setting records for exports to China in April and May, according to The Hardwood Review. Standard deviation for domestic walnut logs was high across all grades especially in #2 grade logs, where reported prices ranged from 300 to 1,000 MBF.

Red oak sawlog prices were significantly lower across all grades, compared to the 2019 spring report. Prime, #1 and #2 grade logs were especially hit with decreases averaging 18.5% and #3 grade logs down just slightly by 2.3%. Red oak was one of the species most affected by the trade war because China has been a major source of demand for the species.

Black cherry sawlog prices were 16% lower across all grades. Only #3 grade logs showed a small increase of 5.5%. The species continues to be out of favor in Chinese markets.

Hard maple sawlog prices were relatively stable compared to the 2019 spring report. Across all grades, prices rose just under 2%. Soft maple performed similarly across the grades, showing a slight gain of 3%. However, this relative balance was the result of strong increases for Prime and #1 grade logs, which rose 20% and 9.3%, respectively, and strong decreases for #2 and #3 grade logs which sank 11.1% and 6.2% respectively.

Other Hardwood Species

Ash log sales showed decreases across all grade categories except the lowest. The average log price across all grades decreased 8.5% compared to in 2019. With such a high percentage of ash affected by the emerald ash borer, most remaining ash standing timber's quality is poor.

Tulip poplar sawlog prices performed similar to ash with all grades lower except #3 grade logs. The average decrease in log prices for this species decreased 8.6% compared to in 2019. Tulip was especially hit by the trade war in that it was assigned tariffs both entering China and returning to the U.S. as finished goods.

Softwood Logs

Four mills reported pine sawlog prices compared to two in 2019. Average prices rose from 205 to 279 per MBF. There were no mills reporting red cedar log pricing this year.

Table 2. Prices paid for delivered sawlogs by Indiana sawmills (March 2020)

Species/Grade	March-20 Range (\$/MBF)	No. Responses		Mean (s.e.) ¹		Median		Change (%)	
		Mar-19	Mar-20	Mar-19	Mar-20	Mar-19	Mar-20	Mean	Median
				(\$/MBF)		(\$/MBF)			
White Ash									
Prime	500-550	2	3	650	517	650	500	-20.5	-23.1
				50.00	16.77				
No. 1	390-500	4	4	473	435	470	425	-8.0	-9.6
				60.60	25.33				
No. 2	300-400	4	4	368	330.00	375	310	-10.3	-17.3
				19.74	23.80				
No. 3	250-320	3	4	267	280	300	275	4.9	-8.3
				60.09	17.80				
Beech									
Prime	250-300	2	3	300	283	300	300	-5.7	0.0
				0.00	16.69				
No. 1	250-300	3	3	317	283	300	300	-10.7	0.0
				16.67	16.67				
No. 2	250-300	3	3	317	283	300	300	-10.7	0.0
				16.67	16.67				
No. 3	250-320	3	3	250	290	250	300	16.0	20.0
				100.00	20.82				
Cherry									
Prime	500-600	3	3	667	533	700	500	-20.1	-28.6
				88.19	33.33				
No. 1	400-500	6	4	608	450	650	450	-26.0	-30.8
				55.40	28.87				
No. 2	300-430	6	4	467	358	450	350	-23.3	-22.2
				51.10	33.76				
No. 3	250-320	4	3	275	290	300	300	5.5	0.0
				43.30	20.82				
Hickory									
Prime	500-550	3	4	500	525	500	525	5.0	5.0
				57.74	14.43				
No. 1	400-450	6	4	465	423	445	420	-9.0	-5.6
				42.33	13.15				
No. 2	300-400	6	4	407	348	395	345	-14.5	-12.7
				30.18	27.50				
No. 3	250-320	4	4	275	280	300	275	1.8	-8.3
				43.30	17.80				

Table 2 continued

Species/Grade	March-20 Range (\$/MBF)	No. Responses		Mean (s.e.) ¹		Median		Change (%)	
		Mar-19	Mar-20	Mar-19	Mar-20	Mar-19	Mar-20	Mean	Median
				(\$/MBF)		(\$/MBF)			
Hard Maple									
Prime	600-800	3	4	733	725	800	750	-1.1	-6.3
				66.67	47.87				
No. 1	500-700	6	5	600	600	600	600	0.0	0.0
				57.74	31.62				
No. 2	300-500	6	4	458	425	400	450	-7.2	12.5
				52.31	47.82				
No. 3	250-400	4	4	275	318	300	310	15.6	3.3
				43.30	31.19				
Soft Maple									
Prime	400-800	3	3	500	600	500	600	20.0	20.0
				57.74	115.47				
No. 1	320-700	6	4	428	468	375	425	9.3	13.3
				51.34	86.93				
No. 2	250-500	6	4	380	338	325	300	-11.1	-7.7
				55.78	55.43				
No. 3	250-400	4	4	325	305	325	285	-6.2	-12.3
				72.17	35.71				
White Oak									
Prime	1000-2850	2	4	1100	1613	11	1300	46.6	11,718.2
				100.00	420.50				
No. 1	600-2250	5	5	740	1090	800	800	47.3	0.0
				60.00	296.82				
No. 2	300-1000	5	6	535	579	500	538	8.2	7.6
				35.00	101.33				
No. 3	250-400	3	5	300	334	350	320	11.3	-8.6
				76.38	29.29				
Red Oak									
Prime	450-600	2	3	600	517	600	500	-13.8	-16.7
				0.00	44.10				
No. 1	300-500	5	4	514	413	500	425	-19.6	-15.0
				37.36	47.70				
No. 2	240-400	5	4	430	335	400	350	-22.1	-12.5
				33.91	39.48				
No. 3	250-320	3	4	300	293	350	300	-2.3	-14.3
				76.38	14.93				

Table 2 continued

Species/Grade	March-20 Range (\$/MBF)	No. Responses		Mean (s.e.) ¹		Median		Change (%)	
		Mar-19	Mar-20	Mar-19	Mar-20	Mar-19	Mar-20	Mean	Median
				(\$/MBF)		(\$/MBF)			
Tulip Poplar									
Prime	450-600	4	4	575	513	575	500	-10.8	-13.0
				32.27	31.46				
No. 1	400-500	7	4	493	425	500	400	-13.8	-20.0
				33.50	25.00				
No. 2	250-350	6	4	375	313	375	325	-16.5	-13.3
				42.33	23.94				
No. 3	250-320	4	4	275	293	300	300	6.5	0.0
				43.30	14.93				
Black Walnut									
Prime	1750-2000	1	3	2000	1833	2000	1750	-8.4	-12.5
				0.00	83.33				
No. 1	1100-1500	4	4	1250	1400	1200	1500	12.0	25.0
				150.00	100.00				
No. 2	300-1000	4	4	913	750	825	850	-17.9	3.0
				135.98	165.83				
No. 3	250-600	4	3	463	390	500	320	-15.8	-36.0
				114.34	106.93				
Softwood									
Pine	200-380	2	4	205	279	205	268	36.1	30.7
				145.00	40.39				
Red cedar	N/A	2	0	375	N/A	375	N/A	N/A	N/A
				25.00	N/A				

Low Grade / Residue Products

The change in prices paid for or received for various raw-wood products between the spring 2019 report and the current report are shown in Table 3. Once again, note that the number of responses used to generate the data is low. These are lower-quality and sometimes smaller logs purchased in batches of random species to be sawn into cants or chipped. The cants are re-sawn into boards used for pallets, blocking, dunnage or other industrial applications that have a strong market. Some mills restrict purchases to specific species or exclude specific species, depending on the markets they sell to. Low-grade or industrial markets continue to be a staple of the market. In many cases, low-grade industrial products have been able to stay steady or rise a little in price when grade lumber markets have suffered.

The price for pallet and cant logs per MBF decreased by 25%. Only one producer reported low-grade logs by the ton, \$50/ton. Chip pricing decreased slightly per ton. Average pricing for sawdust by the cubic yard decreased slightly while the median remains unchanged.

Until about the 1970s, sawdust, chips, and bark would have been burned or landfilled by many mills. They now have many more uses. Sawdust can be used to make pellets, burned as a heating source, or used as animal bedding.

Wood chips are produced primarily from slabs sawn off of debarked logs and are used in mulch, wood pellets, fuel, and animal bedding. The decline in the pulp and paper industry threatens this market. Bark used for landscape mulch is now a large market. In some facilities, all or some portion of these byproducts are used to fire efficient low-emission boilers to heat dry kilns year-round and heat facilities in the winter. Attempts have been made to cogenerate electricity at mills, standalone generating plants, and biofuel facilities. Success has been limited by the low cost of electricity purchased off of the grid, the below-cost price received if sold into the grid, and the high cost to produce biofuels.

Table 3. Prices of miscellaneous products reported by Indiana mills (March 2020), free on board (fob) the producing mill

Product	No. Responses	Range	Mean		Median	
		Mar-20	Mar-19	Mar-20	Mar-19	Mar-20
Pallet logs, \$/MBF	5	150-320	318	255	430	250
Pallet logs, \$/ton	1	50	0	50	0	50
Pulpwood, \$/ton	0	N/A	0	0	0	0
Pulp chips, \$/ton	5	12-33	22	21	20	18
Sawdust, \$/ton	1	6	35	6	35	6
Sawdust, \$/cu. yd.	3	6-12	8	6	6	6
Bark, \$/ton	1	6	5	6	5	6
Bark, \$/cu. yd.	4	3-10	5	6	5	6
Mixed, \$/ton	0	N/A	0	0	0	0
Mixed, \$/cu. yd.	0	N/A	0	0	0	0

Custom Costs

Costs of custom services decreased from the spring report in the area of sawing (per/MBF). The cost of diesel fuel usually plays a large role in logging costs as well as sale layout, topography, access, and costs to close out sales by implementing Best Management Practices (BMPs). Fuel prices have been lower than in recent years. Custom sawing costs were reported to be slightly higher at \$300/MBF, a decrease from \$325 in the spring of 2019. There were very few surveys returned with custom cost reports and as stated in the 2019 report, the figures for combined logging and hauling are low as compared to those generally known in the industry.

Table 4. Custom costs reported by Indiana mills (March 2020)

Product	No. Responses	Mar-20 Range	Mean		Median	
			Mar-19	Mar-20	Mar-19	Mar-20
Sawing (\$/MBF)	1	300	325	300	325	300
Sawing (\$/hour)	1	180	0	180	0	180
Logging (\$/MBF)	2	150	175	150	175	150
Hauling (\$/MBF)	2	40-65	100	53	100	53
Distance (miles)	2	40-65	75	53	75	53
\$/MBF/mile	0	0	0	0	0	0

Timber Price Index

The delivered log prices collected in the Indiana Forest Products Price Survey are used to calculate the delivered log value of typical stands of timber. This provides trend-line information that can be used to monitor long-term prices for timber. The species and log quality weights used to calculate the index are described in previous editions of this report, available at

<https://ag.purdue.edu/fnr/Pages/extforestsprice.aspx>. The weights are based primarily on the 1967 Forest Survey of Indiana with changes made to remove basswood, cottonwood, elm, black oak and sycamore in 2014. Relative weights of species comprising an average and quality stand can be found in Table 5.

Table 5. Species composition of the Indiana timber price index for an average and a quality stand

Species	Average Stand	Quality Stand
<i>Veneer Species:</i>	(%)	(%)
White oak	18.0	24.9
Red oak	20.2	23.7
Hard maple	12.9	16.6
Yellow poplar	10.1	10.7
Black walnut	7.2	5.9
<i>Non-veneer species:</i>		
White ash	7.8	3.7
Beech	7.5	3.7
Black cherry	1.1	3.7
Hickory	6.3	3.7
Soft maple	9.0	3.7

The nominal (not deflated) price (columns three and six in Table 7) is a weighted average of the delivered log prices reported in the price survey. The price indexes [columns (4) and (7)] are the series of nominal prices divided by the price in 1957, the base year, multiplied by 100. Thus, the index is the percentage of the 1957 price. For example, the average price in 2020 for the average stand was 952.8% of the 1957 price. The index for a quality stand increased from 865.8% to 1,012.3%.

The real prices [columns (5) and (8)] are the nominal prices deflated by the producer price index for finished goods, with 1982 as the base year [Table 6, column (2)]. The real price series represents the purchasing power of dollars based on a 1982 market basket of finished producer goods. It is this real price trend that is important for evaluating long-term investments like timber and the log input cost of mills. Receiving a rate of return less than the inflation rate means that the timber owner is losing purchasing power, a negative real rate of return.

Note that each year the previous year's number is recalculated using the producer price index for finished goods for the entire year. The price index used for the current year is the last one reported for the month when the analysis is conducted, which was April this year. The index increased slightly from 2.20 for 2019 to 1.86 as of April 2020. Inflation in the 1% to 2% range is generally considered a sign of a healthy, growing economy.

Average Stand

The nominal weighted average price for a stand of average quality increased from \$546 in 2019 to \$567.80 this year (Table 6, column 3 and Figure 2). Again, this series is based on delivered log prices, not stumpage prices.

The deflated, or real price decreased from \$270.16 in 2019 to \$305.28 this year. The new equation for the trend line for the 1957 to 2020 period is:

$$\text{Avg. Stand Real Price} = 201.61 + 1.64 \times T, \text{ where,}$$

$$T = 1 \text{ for } 1957, 2 \text{ for } 1958 \dots 64 \text{ for } 2020$$

The average annual compound rate of interest required to take the linear trend line from \$200 in 1957 to \$305.28 in 2020 is 65%. Compare the trend line with the real price line in Figure 2.

Quality Stand

The nominal weighted average price for a high-quality stand increased from \$621.50 in 2019 to \$726.70 this year. (Table 6, column six and Figure 3). The average real price series for a high-quality stand increased from \$307.50 in 2019 to \$390.07 this year.

The average annual compound rate of increase for the trend line is 0.88% per year (Figure 3). The equation for the trend line is:

$$\text{Quality Stand Real Price} = 251.1 + 3.02 \times T, \text{ where}$$

$$T = 1 \text{ for } 1957, 2 \text{ for } 1958 \dots 64 \text{ for } 2020$$

Again, compare the yellow trend line with the gray real price line in Figure 3.

Implications

The extent to which holding a stand of timber increases purchasing power depends on when you take ownership and when you liquidate. The 64-year period used in this analysis is much longer than the typical length of ownership. The rate of increase in the trend line doesn't include the return resulting from increase in volume per acre by physical growth, nor the potential increase in unit price as trees get larger in diameter and increase in quality. Maximizing these increases in value requires timber management.

Table 6. Weighted average actual price, price index and deflated price for an average and quality stand of timber in Indiana, 1973-2020

Year	Producer Price Index	Average Stand			Quality Stand		
		Nominal Price	Index Number	Real Price 1	Nominal Price	Index Number	Real Price 1
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		(\$/MBF)		(\$/MBF)	(\$/MBF)		(\$/MBF)
1973	0.46	120.9	202.8	265.1	150.1	209.1	329.3
1974	0.53	146.3	245.4	278.1	185.2	258.0	352.1
1975	0.58	136.8	229.5	235.0	183.1	255.0	314.5
1976	0.61	144.8	243.0	238.2	189.0	263.3	310.9
1977	0.65	154.3	258.9	238.4	205.7	286.6	318.0
1978	0.70	193.8	325.3	277.7	256.3	357.0	367.2
1979	0.78	215.2	361.1	277.4	284.9	396.9	367.1
1980	0.88	225.2	377.9	255.9	345.6	481.5	392.8
1981	0.96	224.3	376.4	233.4	316.1	440.4	329.0
1982	1.00	213.7	358.5	213.7	308.5	429.7	308.5
1983	1.02	222.7	373.6	219.2	327.6	456.3	322.4
1984	1.04	253.2	424.9	244.2	359.4	500.6	346.6
1985	1.05	223.9	375.8	213.9	301.6	420.1	288.0
1986	1.03	241.5	405.2	234.0	349.2	486.5	338.4
1987	1.05	273.5	459.0	259.5	370.0	515.5	351.1
1988	1.08	281.5	472.3	260.6	386.2	538.0	357.6
1989	1.14	308.1	517.0	271.2	456.0	635.2	401.4
1990	1.19	311.8	523.3	261.6	447.2	622.9	375.1
1991	1.22	289.0	484.9	237.5	405.1	564.3	332.8
1992	1.23	318.1	533.8	258.2	470.8	655.9	382.2
1993	1.25	383.3	643.1	307.4	553.6	771.2	443.9
1994	1.26	394.7	662.2	314.5	570.2	794.3	454.3
1995	1.28	379.9	637.4	297.0	504.2	702.3	394.2
1996	1.31	364.9	612.4	277.9	562.0	782.9	428.0
1997	1.32	384.4	645.0	291.6	499.6	695.9	379.1
1998	1.31	418.9	702.9	320.5	557.9	777.1	426.8
1999	1.33	417.8	701.1	314.2	589.4	821.1	443.2
2000	1.38	465.1	780.4	337.0	701.7	977.5	508.5
2001	1.41	423.8	711.1	301.2	607.0	845.6	431.4
2002	1.39	442.8	743.1	318.8	629.6	877.1	453.3
2003	1.43	467.9	785.1	326.5	635.0	884.6	443.1
2004	1.49	489.6	821.5	329.7	703.9	980.5	474.0
2005	1.56	491.0	823.8	315.3	703.4	979.8	451.8
2006	1.60	496.0	832.3	309.3	731.5	1019.1	456.1
2007	1.67	462.1	775.5	277.4	630.6	878.4	378.5
2008	1.77	484.0	812.1	273.3	732.9	1020.9	413.8
2009	1.73	393.1	659.7	227.9	576.7	803.3	334.3

Table 6 continued

Year	Producer Price Index	Average Stand			Quality Stand		
		Nominal Price	Index Number	Real Price 1	Nominal Price	Index Number	Real Price 1
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		(\$/MBF)		(\$/MBF)	(\$/MBF)		(\$/MBF)
2010	1.80	451.8	758.1	251.3	659.7	919.0	366.9
2011	1.91	428.3	718.7	224.8	620.2	864.0	325.6
2012	1.94	418.1	701.5	215.3	548.1	763.6	282.3
2013	1.98	496.5	833.1	250.6	755.5	1052.4	381.4
2014	2.01	575.1	965.0	286.8	825.9	1150.5	411.9
2015	1.93	535.1	897.9	277.7	722.9	1007.0	375.1
2016	1.82	559.0	938.1	306.5	822.7	1146.0	451.0
2017	1.91	519.7	872.1	271.7	783.3	1091.1	409.5
2018	2.00	606.7	1018.0	303.3	841.3	1172.0	420.7
2019	2.02	546.0	916.2	270.2	621.5	865.8	307.5
2020	1.86	567.8	952.8	305.28	726.7	1012.3	390.7

Figure 2. Average stand of timber: nominal, deflated, and trend-line price series, 1957-2020.

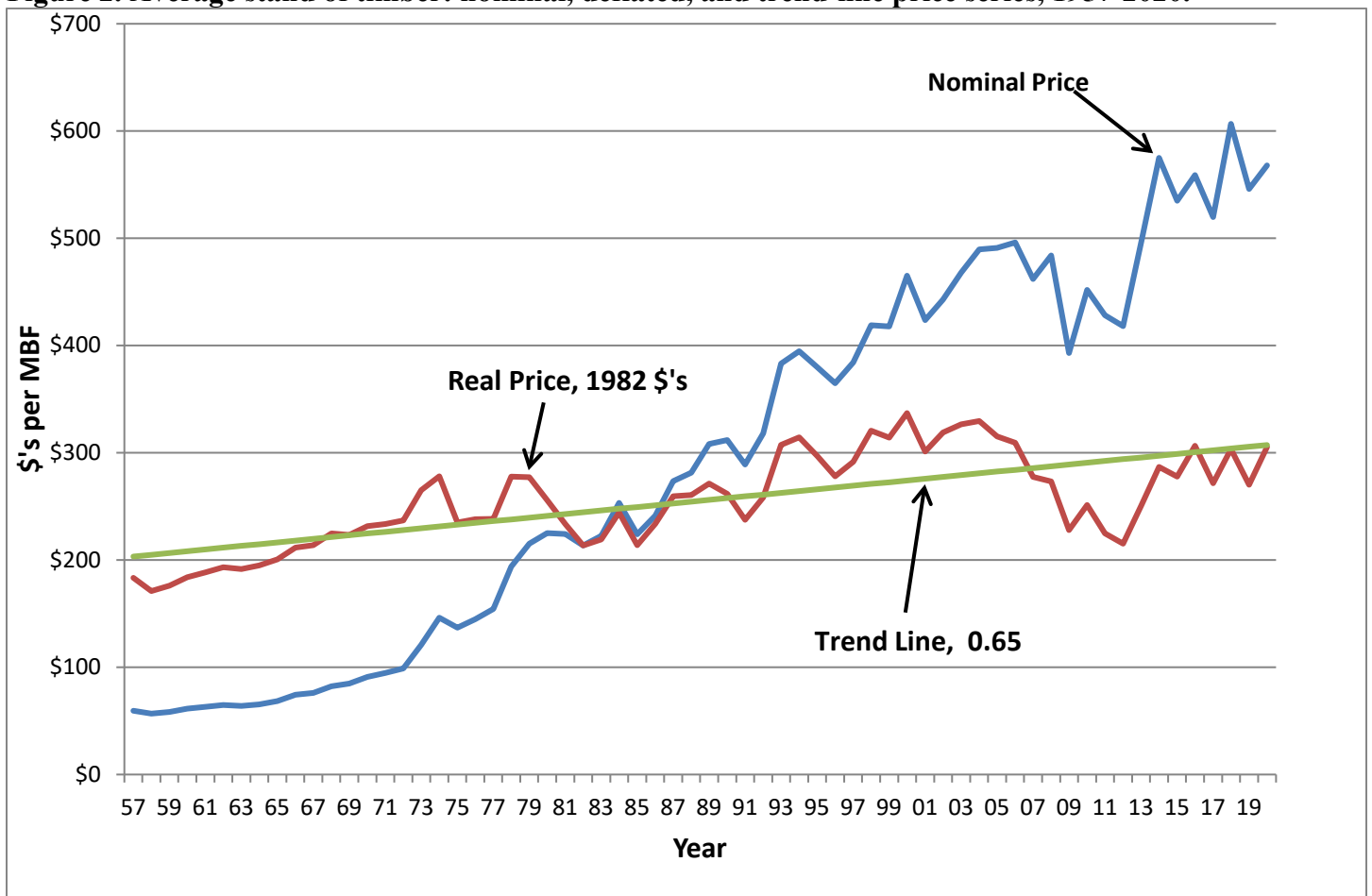


Figure 3. Quality stand of timber: nominal, deflated, and trend-line price series 1957-2020.

