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Department of
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Forest Service

Northeastern
Research Station

Research Note NE-368



Bulletin of Hardwood Market Statistics: First Half - 98

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Abstract

Provides current and historical information on primary and secondary hardwood products, production, prices, international trade, and employment.

Introduction

Data contained in this bulletin are intended to provide a general overview of recent trends in the hardwood market for use by hardwood-related industries, forest managers, the academic community, and the general public. The statistics presented in this bulletin are not inclusive. Specific series were selected on the basis of their availability and completeness, and were derived from a variety of sources. Questions about data collection procedures should be directed to the issuing agency or organization.

The import and export data for hardwood logs, lumber, veneer, and plywood reported here are reproduced in their entirety as received from the U.S. Department of Commerce, Bureau of the Census. Reporting errors have occurred in the

past due to coding and computing program errors and changes in tariff systems. For information on these errors, see Luppold (1995). Readers interested in export and import data are encouraged to reference additional sources when evaluating international trade statistics. For additional information on the international trade series presented here, please contact Bruce Hansen at 304-431-2739.

Readers interested in price data for specific subregions of the domestic hardwood market are encouraged to contact state forestry officials for information on local market conditions.

Your input is critical in helping us make this bulletin more useful. We welcome comments or suggestions on additional data series to include or different breakdowns of the data currently reported. Copies of this bulletin are free upon request. Send your comments and requests to David M. Emanuel at the address below.

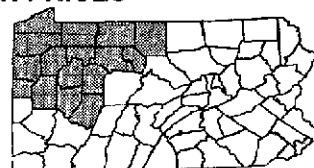
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Tables Included in This Series of Reports and Frequency of Update

Number	Title	Frequency of update
Hardwood Stumpage, Log, and Lumber Prices		
1	Average hardwood stumpage prices in northwestern Pennsylvania, 1993-98	Quarterly
2	Average hardwood stumpage prices in Missouri, statewide, 1993-98	Quarterly
3	Average hardwood stumpage prices in Maine, statewide, 1992-97	Yearly
4	Average hardwood stumpage prices in the northern and delta and river regions of Mississippi, 1993-98	Bi-monthly
5	Average hardwood stumpage prices in Ohio, statewide, 1993-98	Bi-annual
6	Average hardwood mill prices of grade 1 logs in northwestern Pennsylvania, 1993-98	Quarterly
7	Average hardwood mill prices of grade 1 logs in Missouri, statewide, 1993-98	Quarterly
8	Average hardwood mill prices of grade 1 logs in eastern Tennessee, 1993-98	Quarterly
9	Average hardwood mill prices in the northern and delta and river regions of Mississippi, 1993-98	Bi-monthly
10	Average hardwood mill prices of red oak logs in Ohio, statewide, 1993-98	Bi-annual
11	Air-dried hardwood lumber prices, 1993-98	Quarterly
12	Kiln-dried hardwood lumber prices, 1993-98	Quarterly
Hardwood Product Prices, Production, and Employment		
13	Producer price indexes for selected wood industries, 1993-98	Quarterly
14	Value of domestic wood furniture shipments and wood furniture imports, 1991-96	Yearly
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International Hardwood Product Trade		
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27	Volume and value of U.S. exports of nonconiferous chips, by region, 1993-98	Quarterly

HARDWOOD STUMPAGE, LOG, AND LUMBER PRICES

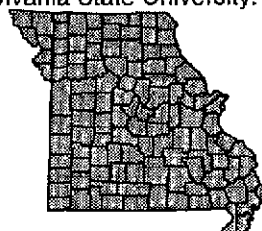
Table 1.--Average hardwood stumpage prices in northwestern Pennsylvania, 1993-98
(Dollars/Mbf, International 1/4" scale)



Year/quarter	Red oak	White oak	Black cherry	Hard maple	Soft maple	Yellow-poplar
1993	479	235	748	194	114	93
1994	519	243	891	221	136	119
1995	499	232	813	190	123	128
1996	487	227	790	195	110	112
1997/1	483	206	817	217	130	125
1997/2	508	228	933	278	163	142
1997/3	498	228	1077	302	168	128
1997/4	565	244	1085	389	191	127
1997 avg.	514	227	978	297	163	131
1998/1	502	230	1084	340	185	126
1998/2	528	225	1020	271	158	123
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---

Source: Cooperative Extension Service, U.S. Department of Agriculture, The Pennsylvania State University.

Table 2.--Average hardwood stumpage prices in Missouri, statewide, 1993-98
(Dollars/Mbf, International 1/4" scale)

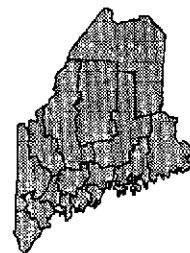


Year/quarter	Red oak	White oak	Ash	Hard maple	Soft maple	Mixed hardwoods
1993	116	113	140	75	67	76
1994	154	144	158	50	90	104
1995	175	142	129	NA	NA	94
1996	146	151	185	NA	NA	114
1997/1	150	140	50	195	90	50
1997/2	155	160	NA	180	95	75
1997/3	175	135	60	NA	NA	120
1997/4	180	150	170	335	290	100
1997 avg.	165	146	NA	NA	NA	86
1998/1	200	150	140	NA	270	140
1998/2	160	155	NA	NA	NA	140
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---

NA - Not available.

Source: Missouri Department of Conservation, Forestry Division.

Table 3.--Average hardwood stumpage prices in Maine, statewide, 1992-97
(Dollars/Mbf, International 1/4" scale)



Year	Oak	Yellow birch	White ash	Hard maple	Soft maple
1992	162	71	109	72	45
1993	176	73	121	91	54
1994	219	96	118	103	53
1995	241	99	126	115	56
1996	257	109	130	136	63
1997	244	113	126	159	77

Source: Management and Utilization Division, Maine Forest Service.

Table 4.--Average hardwood stumpage prices in the northern and delta and river regions of Mississippi, 1993-98
(Dollars/Mbf, Doyle scale)



Year	North		Delta and River	
	Oak	Mixed hardwoods	Oak	Mixed hardwoods
1993	218	126	323	124
1994	214	138	306	128
1995	220	143	292	138
1996	225	147	317	128
1997:				
Jan-Feb	223	147	294	135
Mar-Apr	246	179	275	138
May-Jun	192	168	NA	138
Jul-Aug	227	176	268	141
Sep-Oct	280	194	352	143
Nov-Dec	310	201	360	140
1997 average	246	178	NA	139
1998:		----	--	
Jan-Feb	320	190	375	149
Mar-Apr	312	212	360	158
May-Jun	295	201	352	176
Jul-Aug	---	---	---	---
Sep-Oct	---	---	---	---
Nov-Dec	---	---	---	---
1998 average	---	---	---	---

NA - Not available.

Source: Cooperative Extension Service, Mississippi State University, Mississippi State.

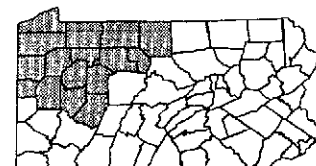
**Table 5.--Average hardwood stumpage prices in Ohio,
statewide, 1993-98**
(Dollars/Mbf, Doyle scale)



Year/season	White oak	Red oak	Cherry	Yellow-poplar
1993/spring	303	341	402	209
1993/fall	318	419	552	207
1994/spring	324	374	442	213
1994/fall	347	443	636	225
1995/spring	340	415	525	210
1995/fall	295	350	410	180
1996/spring	310	350	425	170
1996/fall	395	420	585	190
1997/spring	295	335	430	180
1997/fall	320	365	485	180
1998/spring	305	335	470	195
1998/fall	---	---	---	---

Source: Ohio Agricultural Statistics Service, Columbus, OH.

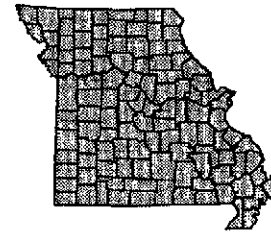
**Table 6.--Average hardwood mill prices of grade 1 logs in
northwestern Pennsylvania, 1993-98**
(Dollars/Mbf, International 1/4" scale)



Year/quarter	Red oak	White oak	Black cherry	Hard maple	Soft maple	Yellow-poplar
1993	490	334	629	356	219	172
1994	555	483	710	352	232	756
1995	560	366	734	343	193	174
1996	504	370	654	343	205	195
1997/1	465	322	624	352	214	153
1997/2	521	399	684	424	226	179
1997/3	462	329	615	355	253	156
1997/4	617	385	884	517	335	223
1997 avg.	516	359	702	412	257	178
1998/1	717	417	1275	638	408	282
1998/2	607	319	939	428	297	181
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---

Source: Cooperative Extension Service, U.S. Department of Agriculture, The Pennsylvania State University.

Table 7.--Average hardwood mill prices of grade 1 logs in Missouri, statewide, 1993-98
(Dollars/Mbf, International 1/4" scale)



Year/quarter	Red oak	White oak	Cherry	Ash	Soft maple	Black walnut
1993	NA	NA	NA	NA	NA	NA
1994	362	332	422	295	252	543
1995	362	315	383	284	225	609
1996	340	315	398	253	254	484
1997/1	365	350	385	305	330	435
1997/2	440	435	500	370	410	585
1997/3	480	435	590	425	440	745
1997/4	495	475	600	405	410	680
1997 avg.	445	424	519	376	398	611
1998/1	460	400	515	380	410	590
1998/2	370	320	345	295	320	370
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---

NA - Not available.

Source: Missouri Department of Conservation, Forestry Division.

Table 8.--Average hardwood mill prices of grade 1 logs in eastern Tennessee, 1993-98
(Dollars/Mbf, Doyle scale)



Year/quarter	Red oak	White oak	Walnut	Ash	Hard maple	Yellow-poplar
1993	725	669	450	525	325	288
1994	775	700	500	563	375	338
1995	775	700	500	588	363	363
1996	713	638	500	550	350	325
1997/1	713	663	500	550	400	350
1997/2	713	663	500	550	400	350
1997/3	713	663	500	550	400	350
1997/4	713	663	500	550	400	350
1997 avg.	713	663	500	550	400	350
1998/1	713	663	500	550	400	350
1998/2	713	663	500	550	400	350
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---

Source: The Tennessee Division of Forestry, Utilization Section.

Table 9.--Average hardwood mill prices in the northern and delta and river regions of Mississippi, 1993-98
(Dollars/Mbf, Doyle scale)



Year	North		Delta and River	
	Oak	Mixed hardwoods	Oak	Mixed hardwoods
1993	329	232	372	203
1994	314	224	392	188
1995	306	212	414	214
1996	306	212	414	214
1997:				
Jan-Feb	312	221	400	220
Mar-Apr	310	228	405	220
May-Jun	300	218	397	225
Jul-Aug	296	221	370	229
Sep-Oct	350	240	426	236
Nov-Dec	390	270	420	230
1997 avg.	326	233	403	227
1998:				
Jan-Feb	380	283	455	237
Mar-Apr	385	280	448	240
May-Jun	370	275	400	245
Jul-Aug	---	---	---	---
Sep-Oct	---	---	---	---
Nov-Dec	---	---	---	---
1998 avg.	---	---	---	---

Source: Cooperative Extension Service, Mississippi State University.

Table 10.--Average hardwood mill prices of red oak logs in Ohio, statewide, 1993-1998
(Dollars/Mbf, Doyle scale)



Year/season	Average all grades	Grade 1 16 inches	Grade 1	Grade 2	Grade 3
1993/spring	459	753	494	267	139
1993/fall	468	788	524	296	154
1994/spring	460	731	461	284	150
1994/fall	472	884	546	305	157
1995/spring	450	800	510	290	125
1995/fall	475	780	470	280	130
1996/spring	425	690	460	255	135
1996/fall	520	855	540	295	140
1997/spring	470	795	515	305	145
1997/fall	440	745	430	245	145
1998/spring	470	740	420	275	165
1998/fall	---	---	---	---	---

Source: Ohio Agricultural Statistics Service, Columbus, OH.

Table 11.--Air-dried hardwood lumber prices, 1993-98
(Dollars/Mbf)

Year/quarter	4/4 Appalachian red oak 1C	4/4 Poplar 1C	4/4 Cherry 1C	4/4 Northern hard maple 1C	4/4 Northern soft maple 1C
1993	789	384	960	725	475
1994	800	425	1040	731	561
1995	728	370	979	699	524
1996	705	349	845	698	493
1997/1	710	390	855	770	530
1997/2	740	435	885	820	590
1997/3	740	435	885	820	620
1997/4	740	435	885	820	620
1997 avg.	733	424	878	808	590
1998/1	775	425	940	860	620
1998/2	775	410	1045	860	620
1998/3	---	---	---	---	---
1998/4	---	---	---	---	---
1998 avg.	---	---	---	---	---

Source: By permission from the Hardwood Market Report, Memphis, TN.

Table 12.--Kiln-dried hardwood lumber prices, 1993-98
(Dollars/Mbf)

Year/quarter	4/4 Appalachian red oak 1C	4/4 Poplar 1C	4/4 Cherry 1C	4/4 Northern hard maple 1C	4/4 Northern soft maple 1C
1993	1043	579	1457	987	NA
1994	1043	579	1457	987	775
1995	957	515	1315	958	719
1996	996	499	1068	984	686
1997/1	955-1100	575-625	1055-1195	1050-1140	735-785
1997/2	975-1120	560-610	1055-1195	1095-1185	790-840
1997/3	965-1120	555-605	1065-1205	1095-1185	815-865
1997/4	995-1140	550-600	1100-1240	1095-1185	790-840
1997 avg.	1063	587	1131	1123	792
1998/1	995-1140	535-585	1180-1320	1085-1175	790-840
1998/2	1020-1155	510-560	1395-1535	1085-1175	770-820
1998/3	---	---	---	---	---
1998/4	---	---	---	---	---
1998 avg.	---	---	---	---	---

NA - Not available.

Source: Weekly Hardwood Review, Charlotte, NC.

HARDWOOD PRODUCT PRICES, PRODUCTION, AND EMPLOYMENT

Table 13.--Producer price indexes for selected wood industries, 1993-98
(1982=100)

Year/ quarter	Hardwood lumber	Hardwood dimension	Wood kitchen cabinets	Wood household furniture	Upholstered wood household furniture	Wood office furniture	All commodities
1993	163.3	162.1	135.1	143.9	128.9	141.3	118.9
1994	168.3	170.2	140.7	150.2	134.3	145.6	120.4
1995	167.0	173.8	146.5	155.2	137.0	149.6	124.7
1996	163.9	173.1	150.4	158.3	140.0	153.5	127.7
1997/1	169.8	175.9	152.6	160.0	141.0	158.3	128.5
1997/2	173.1	178.8	153.6	160.5	141.6	160.9	127.2
1997/3	175.8	179.4	154.2	160.9	141.9	161.1	127.2
1997/4	177.8	179.8	155.2	161.3	142.2	162.1	127.5
1997 avg.	174.1	178.5	153.9	160.7	141.7	160.6	127.6
1998/1	179.6	180.8	156.2	162.7	142.7	163.0	125.0
1998/2	179.7	180.5	156.8	163.6	143.2	163.8	124.9
1998/3	---	---	---	---	---	---	---
1998/4	---	---	---	---	---	---	---
1998 avg.	---	---	---	---	---	---	---

Source: Producer Price Indexes, U.S. Department of Labor, Bureau of Labor Statistics.

Table 14.--Value of domestic wood furniture shipments and wood furniture imports, 1991-96
(Millions of dollars)

Year	Value of ¹ domestic wood furniture shipments (actual \$)	Value of ² domestic wood furniture shipments (1982 \$)	Value of ³ wood furniture imports (actual \$, c.i.f.)	Value of wood ² furniture imports (1982 \$, c.i.f.)	Ratio of ⁴ imports to domestic production
1991	7980	5894	2713	2004	.34
1992	7976r	5751r	2884	2079	.33
1993	8398r	5836r	3380	2349	.36
1994	9251r	6159r	4050	2696	.41
1995	9281r	5980r	4451	2868	.44
1996	9723 ⁵	6142	4970	3140	.51

r - revised figure.

¹ Source: U.S. Department of Commerce, International Trade Administration.

² Deflated by wood household furniture price index listed in Table 13.

³ Source: U.S. Department of Commerce, Bureau of the Census.

⁴ Developed from columns 1 and 3.

⁵ Estimated.

**Table 15.--Production of oak strip flooring,
1992-97**

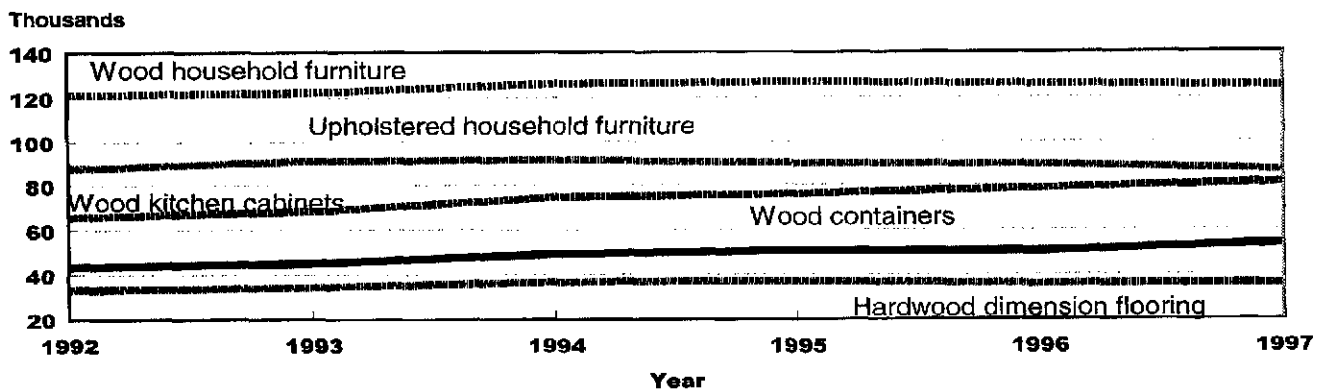
Year	Oak strip flooring (M feet)
1992	222,573
1993	265,858
1994	307,689
1995	330,212
1996	367,465
1997	416,618

Source: National Oak Flooring Manufacturers Association statistics.

**Table 16.--Employment in selected wood-using industries, 1993-98
(Thousands)**

Year/quarter	Wood containers (SIC 244)	Upholstered household furniture (SIC 2512)	Wood household furniture (SIC 2511)	Wood kitchen cabinets (SIC 2434)	Hardwood dimension and flooring (SIC 2426)
1993	45.2	91.3	122.4	68.6	34.5
1994	49.3	91.7	127.3	74.7	36.7
1995	50.5	90.0	126.9	76.0	37.0
1996	50.4	89.4	126.0	78.5	35.9
1997/1	52.5	86.3	126.4	78.7	35.5
1997/2	53.9	86.6	126.3	80.8	35.6
1997/3	54.4	85.5	123.4	82.0	36.3
1997/4	54.0	88.3	124.5	82.7	36.5
1997 avg.	53.7	86.7	125.2	81.0	36.0
1998/1	53.4	88.9	125.1	82.5	36.5
1998/2	53.3	89.4	126.4	84.6	36.7
1998/3	---	---	---	---	---
1998/4	---	---	---	---	---
1998 avg.	---	---	---	---	---

Source: U.S. Department of Labor.



Employment in selected wood-using industries, 1992-1997.

INTERNATIONAL HARDWOOD PRODUCT TRADE

Table 17.--International exchange rate, foreign currency per U.S. dollar, 1992-1997

Year/qtr.	Belgium (franc)	Canada (dollar)	China (yuan)	France (franc)	Germany (mark)	Hong Kong (H.K. \$)	Indonesia (rupiah)	Italy (lira)
1992	32.149	1.2087	5.5146	5.2938	1.5616	7.7406	2029.92	1232.4
1993	34.597	1.2901	5.7620	5.6633	1.6533	7.7356	2087.10	1573.7
1994	33.456	1.3656	8.6187	5.5520	1.6228	7.7284	2160.67	1612.4
1995	29.480	1.3724	8.000	4.9915	1.4331	7.7358	2248.61	1629.6
1996/1	30.186	1.3691	8.320	5.0351	1.4685	7.7323	2318.17	1573.2
1996/2	31.283	1.3645	8.328	5.1581	1.5223	7.7363	2344.08	1555.3
1996/3	30.843	1.3700	8.309	5.0939	1.4979	7.7350	2350.33	1521.2
1996/4	31.534	1.3503	8.299	5.1750	1.5305	7.7333	2346.68	1522.2
1996 avg.	30.962	1.3635	8.314	5.1155	1.5048	7.7343	2339.82	1543.0
1997/1	34.202	1.3585	8.295	5.5971	1.6586	7.7440	2403.27	1638.9
1997/2	35.353	1.3861	NA	5.7782	1.7138	7.7447	2437.23	1690.1
1997/3	NA	NA	NA	NA	NA	NA	NA	NA
1997/4	NA	NA	NA	NA	NA	NA	NA	NA
1997 avg.	35.774	1.3846	8.290	5.8367	1.7341	7.7421	2902.38	1703.1

Year/qtr.	Japan (yen)	Malaysia (ringgit)	Mexico (peso)	Singapore (S.dollar)	So.Korea (won)	Spain (pesetas)	Turkey (liras)	U.K. (pound)
1992	126.65	2.5474	3.09	1.6290	780.65	102.38	6872.42	0.570
1993	111.20	2.5741	3.12	1.6158	802.67	127.26	NA	0.667
1994	102.21	2.6242	3.38	1.5274	803.44	133.96	NA	0.653
1995	94.06	2.5044	6.42	1.4174	771.27	124.69	45845.1	0.634
1996/1	105.79	2.5480	7.53	1.4144	782.93	123.70	64399	0.653
1996/2	107.59	2.5012	7.48	1.4084	786.18	127.51	76499	0.656
1996/3	108.94	2.4952	7.56	1.4121	817.11	126.57	85587	0.643
1996/4	112.79	2.5186	7.84	1.4052	831.58	128.87	99136	0.611
1996 avg.	108.78	2.5158	7.60	1.4100	804.45	126.66	81405	0.641
1997/1	121.22	2.4852	7.86	1.4204	870.98	140.21	118697	0.614
1997/2	119.57	2.5074	7.92	1.4348	891.70	144.72	137685	0.612
1997/3	NA	NA	NA	NA	NA	NA	NA	NA
1997/4	NA	NA	NA	NA	NA	NA	NA	NA
1997 avg.	120.99	2.8132	7.91	1.4848	951.29	146.41	151865	0.612

NA - Not available.

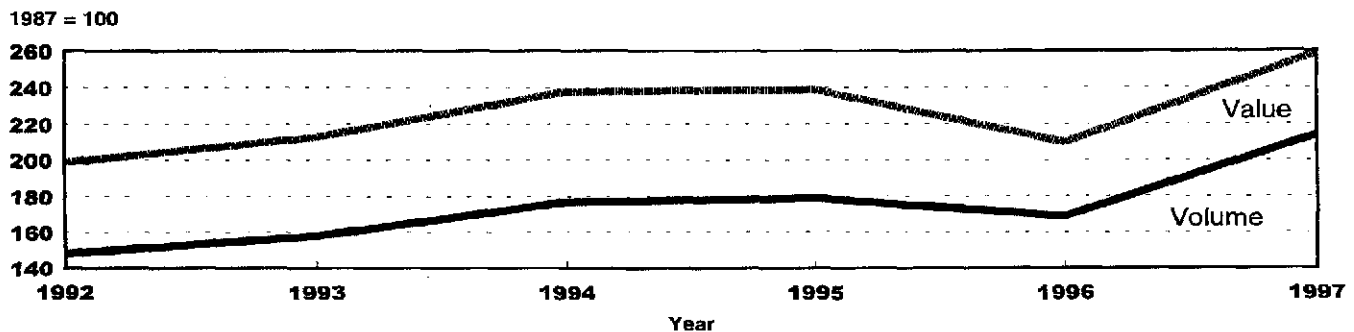
Source: International Monetary Fund.

Table 18.—Volume and value of U.S. hardwood log exports, by region, 1993-98
(Cubic meters and thousands of dollars, f.a.s.)

Year/qtr.	Canada		Central & South America and Caribbean		Western Europe	
	Volume	Value	Volume	Value	Volume	Value
1993	616,313	73,627	11,884	5,082	160,865	72,603
1994	710,078	89,685	18,546	6,686	209,276	88,937
1995	769,115	98,818	9,924	4,249	175,673	77,016
1996	731,598	86,852	10,897	4,022	139,267	57,415
1997/1	275,578	31,127	3,040	1,279	47,187	20,914
1997/2	187,933	24,904	2,693	969	52,769	22,421
1997/3	252,288	30,418	6,351	2,666	24,379	11,283
1997/4	257,549	32,648	7,024	2,890	57,045	20,234
Total 1997	973,348	119,098	19,108	7,803	181,380	74,850
1998/1	265,868	35,401	5,299	2,185	65,358	28,887
1998/2	246,898	33,042	3,570	1,428	50,320	22,616
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	278,393	99,937	3,132	10,066	1,070,587	252,253
1994	250,545	94,285	5,573	2,225	1,194,018	281,819
1995	254,395	101,376	2,127	701	1,211,234	282,159
1996	263,746	99,784	759	301	1,146,627	248,373
1997/1	86,043	32,884	411	147	412,259	86,352
1997/2	97,587	37,831	1,540	177	342,522	86,302
1997/3	23,832	8,894	232	51	307,082	53,312
1997/4	63,554	24,333	558	189	385,730	80,295
Total 1997	271,016	103,944	2,741	565	1,447,593	306,260
1998/1	72,618	28,699	458	82	409,601	95,253
1998/2	55,857	22,257	684	165	357,329	79,508
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



Volume and value index of all U.S. hardwood log exports, 1992-1997.

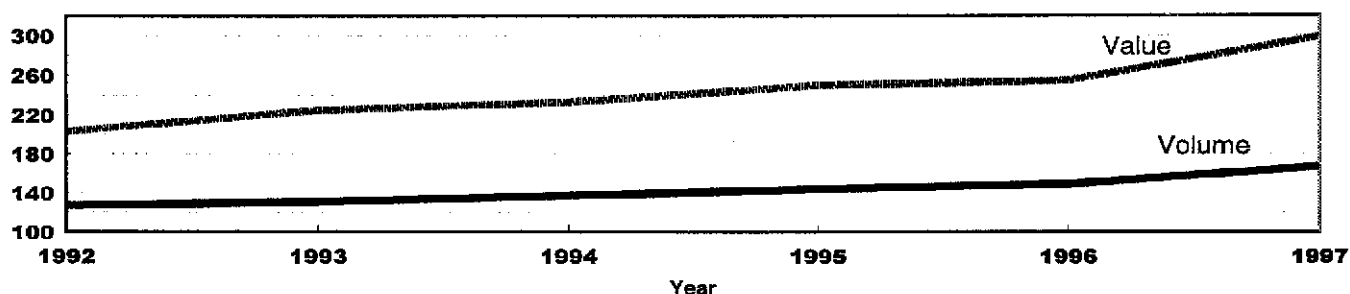
Table 19.—Volume and value of U.S. hardwood lumber exports, by region, 1993-98
(Cubic meters and thousands of dollars, f.a.s.)

Year/qtr.	Canada		Central & South America and Caribbean		Western Europe	
	Volume	Value	Volume	Value	Volume	Value
1993	702,640	236,565	124,624	49,493	726,776	429,784
1994	762,734	253,617	141,505	55,540	745,828	436,218
1995	792,871	257,536	162,041	60,576	738,626	458,409
1996	826,421	261,974	189,335	72,827	729,924	460,988
1997/1	245,712	83,395	41,120	15,886	224,652	140,718
1997/2	236,442	86,507	46,027	18,381	258,639	153,192
1997/3	211,867	82,039	46,808	18,777	228,278	140,878
1997/4	208,030	79,603	44,802	18,493	207,274	131,477
Total 1997	902,051	331,544	178,757	71,538	918,843	566,264
1998/1	217,023	79,855	45,025	18,238	236,800	145,353
1998/2	203,633	76,035	56,496	22,062	221,604	137,138
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	641,792	322,400	51,095	28,518	2,246,927	1,066,755
1994	640,686	333,592	51,023	28,694	2,341,776	1,107,659
1995	715,575	380,197	57,127	30,089	2,466,240	1,186,811
1996	736,854	377,847	65,541	35,119	2,548,075	1,208,754
1997/1	190,799	100,353	16,177	8,468	718,460	348,820
1997/2	225,438	115,533	21,630	11,852	788,176	385,464
1997/3	209,376	106,756	21,163	12,343	717,492	360,793
1997/4	162,407	85,697	16,296	10,625	638,809	325,895
Total 1997	788,020	408,338	75,266	43,287	2,862,937	1,420,971
1998/1	125,086	62,844	14,445	8,779	638,379	315,069
1998/2	129,759	62,852	15,475	8,738	626,967	306,825
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.

1987 = 100



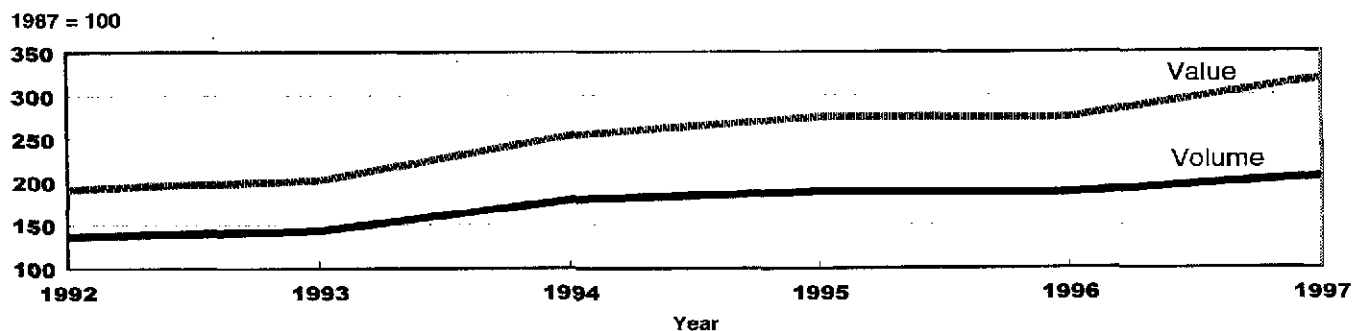
Volume and value index of all U.S. hardwood lumber exports, 1992-1997.

Table 20.--Volume and value of U.S. hardwood veneer exports, by region, 1993-98
(Million square meters and thousands of dollars, f.a.s.)

Year/qtr.	Canada		Central & South America and Caribbean		Western Europe	
	Volume	Value	Volume	Value	Volume	Value
1993	25.0	28,719	9.0	12,312	106.7	129,095
1994	31.5	41,836	9.2	11,674	128.8	160,231
1995	33.6	42,405	9.1	12,053	141.4	182,733
1996	40.3	55,014	7.9	10,722	140.5	175,426
1997/1	12.0	16,367	1.9	2,654	37.1	46,739
1997/2	13.1	18,013	5.5	5,179	37.1	48,215
1997/3	12.0	17,304	2.2	3,137	30.1	44,431
1997/4	14.8	21,350	2.4	3,485	39.3	51,399
Total 1997	52.0	73,034	12.1	14,456	143.6	190,785
1998/1	16.5	23,026	2.3	3,250	32.8	43,944
1998/2	15.5	22,176	2.1	2,942	36.0	47,448
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	37.3	48,175	5.8	7,296	183.7	225,595
1994	53.0	61,390	7.8	9,289	230.2	284,423
1995	45.7	56,694	11.3	13,864	241.2	307,749
1996	41.7	54,490	9.8	12,353	240.2	308,008
1997/1	12.9	16,798	1.8	2,249	65.8	84,807
1997/2	12.2	19,525	3.9	4,520	71.9	95,452
1997/3	10.3	16,253	2.5	3,041	57.1	84,166
1997/4	10.0	13,989	2.1	2,771	68.7	92,993
Total 1997	45.4	66,564	10.3	12,580	263.5	357,418
1998/1	7.8	10,224	1.4	1,775	60.9	82,219
1998/2	10.9	14,616	2.4	3,134	67.0	90,316
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



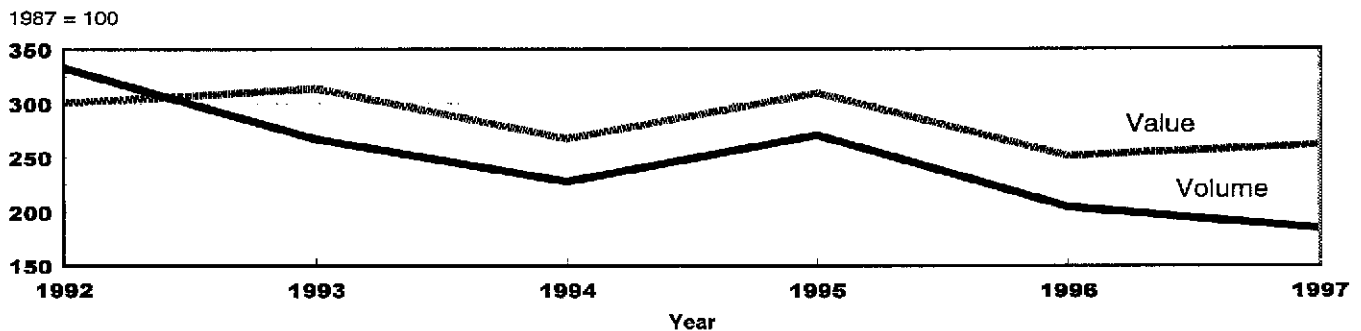
Volume and value index of all U.S. hardwood veneer exports, 1992-1997.

Table 21.--Volume and value of U.S. hardwood plywood exports, by region, 1993-98
(Cubic meters and thousands of dollars, f.a.s.)

Year/qtr.	Canada		Central & South America and Caribbean		Western Europe	
	Volume	Value	Volume	Value	Volume	Value
1993	55,747	19,041	31,302	8,172	21,583	8,678
1994	57,720	17,082	38,323	10,780	2,590	2,152
1995	80,503	23,657	28,036	8,623	5,563	3,901
1996	68,628	23,946	26,678	8,478	1,154	611
1997/1	16,957	6,494	5,537	2,023	190	99
1997/2	14,537	5,795	5,056	1,953	526	145
1997/3	12,439	6,107	7,425	2,228	3,818	982
1997/4	15,567	5,534	5,599	2,093	979	278
Total 1997	59,500	23,930	23,617	8,298	5,513	1,505
1998/1	17,495	5,963	4,693	1,594	484	127
1998/2	16,126	5,427	4,244	1,731	261	83
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	31,685	9,369	560	363	140,877	45,621
1994	19,884	8,471	1,415	408	119,932	38,896
1995	28,464	8,693	657	256	143,223	45,133
1996	9,418	3,078	2,389	442	108,267	36,558
1997/1	1,229	546	477	96	24,390	9,259
1997/2	2,472	1,378	96	22	22,687	9,293
1997/3	2,424	1,347	450	141	26,556	10,805
1997/4	1,607	757	165	29	23,917	8,691
Total 1997	7,732	4,028	1,188	288	97,550	38,049
1998/1	1,148	522	241	56	24,061	8,263
1998/2	1,588	874	208	48	22,427	8,164
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



Volume and value index of all U.S. hardwood plywood exports, 1992-1997.

Table 22.--Volume and value of U.S. hardwood log imports, by region, 1993-98
(Cubic meters and thousands of dollars, c.i.f.)

Year/qtr.	Canada		Central & South America and Caribbean		Africa	
	Volume	Value	Volume	Value	Volume	Value
1993	14,604	2,143	690	476	1,409	540
1994	26,081	3,947	1,236	505	1,661	567
1995	40,913	7,218	346	89	957	413
1996	56,333	10,153	591	158	0	0
1997/1	44,491	6,016	908	340	104	65
1997/2	47,164	6,015	1,099	384	173	150
1997/3	44,359	5,847	1,330	295	315	215
1997/4	51,842	6,832	414	217	263	268
Total 1997	187,856	24,710	3,751	1,235	855	698
1998/1	64,309	10,734	1,109	300	427	59
1998/2	46,886	7,442	1,323	440	200	69
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia and Pacific Ocean		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	2,012	1,106	908	573	19,623	4,837
1994	2,377	1,309	588	487	31,943	6,813
1995	1,818	3,719	1,003	572	45,037	12,014
1996	283	147	1,607	627	58,814	11,084
1997/1	138	178	326	512	45,967	7,112
1997/2	244	64	1,414	404	50,094	7,017
1997/3	135	100	952	409	47,091	6,865
1997/4	118	56	1,123	162	53,760	7,535
Total 1997	635	398	3,815	1,487	196,912	28,529
1998/1	112	23	588	376	66,545	11,492
1998/2	76	99	637	423	49,122	8,472
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.

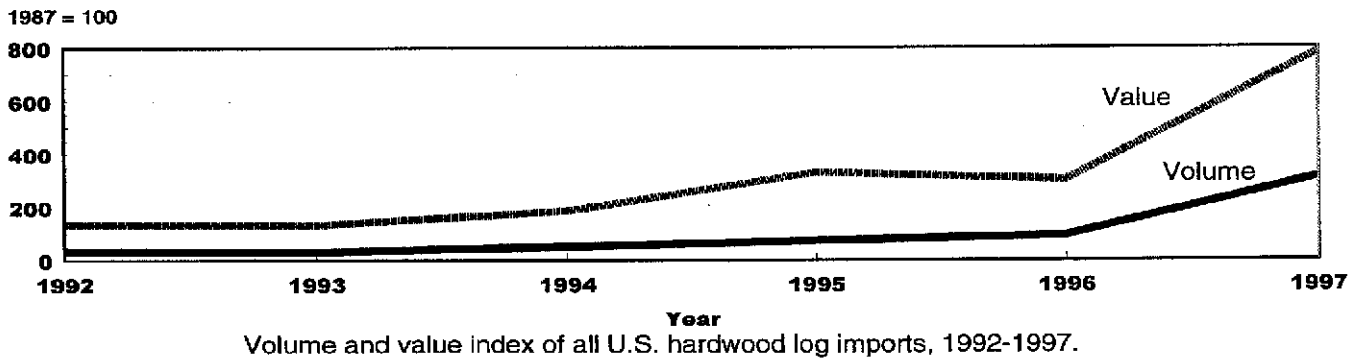


Table 23.--Volume and value of U.S. hardwood lumber imports, by region, 1993-98
(Cubic meters and thousands of dollars, c.i.f.)

Year/qtr.	Canada		Central & South America and Caribbean		Africa	
	Volume	Value	Volume	Value	Volume	Value
1993	481,186	110,490	185,746	86,367	5,583	3,924
1994	549,342	130,835	220,647	111,143	12,859	5,820
1995	496,266	117,122	249,044	133,422	11,074	7,936
1996	547,729	132,162	220,355	119,595	26,683	11,927
1997/1	146,885	37,103	47,762	27,976	4,923	2,955
1997/2	185,518	46,250	48,483	22,483	7,237	4,112
1997/3	172,064	45,435	60,114	27,284	7,403	4,815
1997/4	205,969	47,364	58,599	36,407	9,408	4,426
Total 1997	710,436	176,154	214,958	114,149	28,971	16,309
1998/1	208,294	49,766	54,899	35,277	6,969	3,915
1998/2	221,396	52,030	51,824	24,425	10,194	5,411
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia and Pacific Ocean		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	74,578	48,549	7,372	3,790	754,465	253,117
1994	96,014	65,670	12,587	6,177	891,449	319,651
1995	91,396	67,649	15,263	4,202	863,043	330,329
1996	100,228	62,501	15,010	4,784	910,005	330,968
1997/1	30,682	18,428	1,598	796	231,850	87,259
1997/2	26,441	19,578	11,021	1,023	278,700	93,447
1997/3	29,757	22,477	3,676	1,066	273,014	101,078
1997/4	24,487	19,193	2,380	1,189	300,843	108,579
Total 1997	111,367	79,676	18,675	4,075	1,084,407	390,363
1998/1	23,711	17,380	1,490	1,093	295,363	107,432
1998/2	22,006	16,125	1,812	874	307,232	98,865
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.

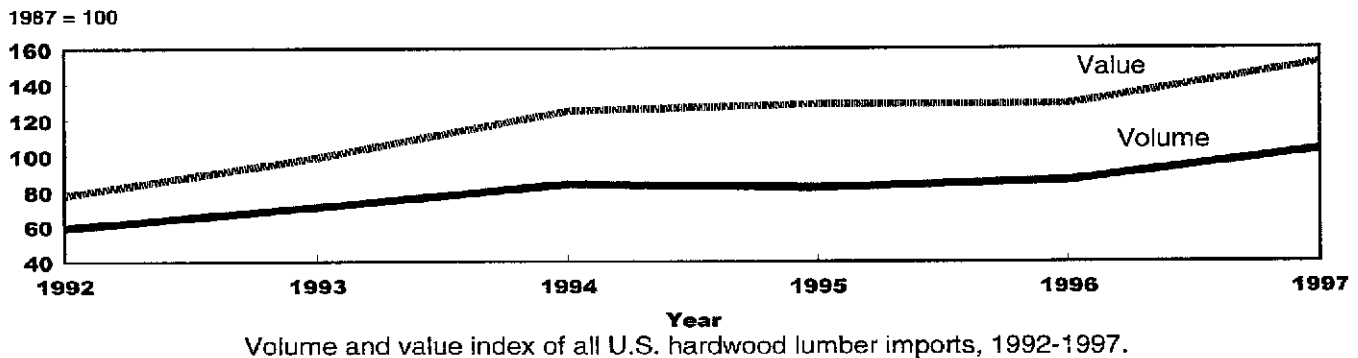
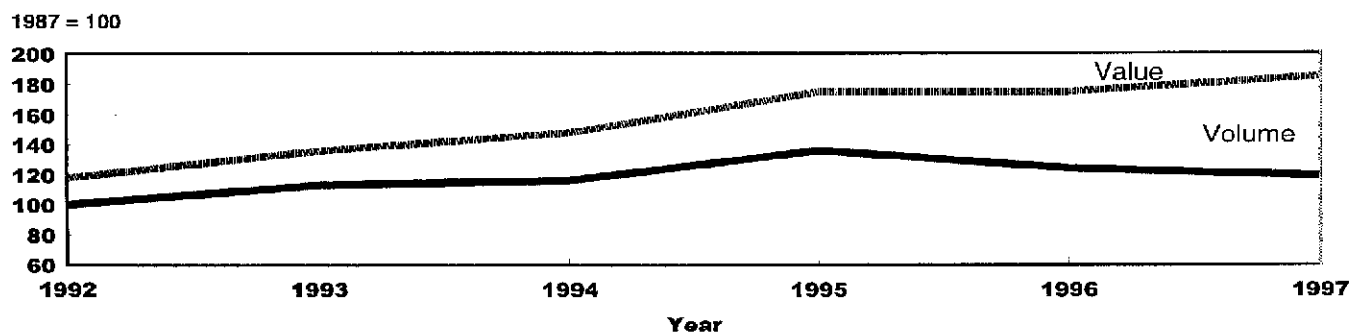


Table 24.--Volume and value of U.S. hardwood veneer imports, by region, 1993-98
(Million square meters and thousands of dollars, c.i.f.)

Year/qtr.	Canada		Central & South America and Caribbean		Africa	
	Volume	Value	Volume	Value	Volume	Value
1993	107.6	111,860	42.1	48,057	3.6	4,677
1994	113.4	129,789	38.5	40,882	3.4	6,346
1995	110.2	143,695	53.5	51,534	10.6	13,999
1996	110.6	153,306	47.3	49,948	15.9	17,516
1997/1	33.6	43,619	7.9	10,551	3.2	3,648
1997/2	29.0	42,019	7.9	11,531	2.7	3,479
1997/3	26.6	39,639	9.2	11,544	2.8	3,734
1997/4	26.6	37,993	9.7	12,278	4.0	4,508
Total 1997	115.9	163,271	34.8	45,904	12.7	15,369
1998/1	30.3	41,602	7.9	10,069	3.3	5,530
1998/2	32.7	43,463	11.3	14,592	3.6	5,352
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia and Pacific Ocean		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	14.7	16,509	8.9	25,013	176.9	206,117
1994	11.0	13,797	14.1	33,304	180.8	224,117
1995	25.0	25,354	12.8	30,822	212.1	265,399
1996	10.3	12,662	10.4	31,544	194.5	264,975
1997/1	2.4	2,601	2.8	8,602	50.0	69,020
1997/2	1.8	3,063	4.1	11,530	45.6	71,623
1997/3	2.5	3,625	2.5	9,012	43.8	67,554
1997/4	2.1	3,049	3.5	14,255	45.9	72,083
Total 1997	8.9	12,338	13.0	43,399	185.3	280,281
1998/1	1.6	2,806	4.9	9,028	48.0	69,034
1998/2	4.3	4,118	4.4	13,051	56.3	80,576
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



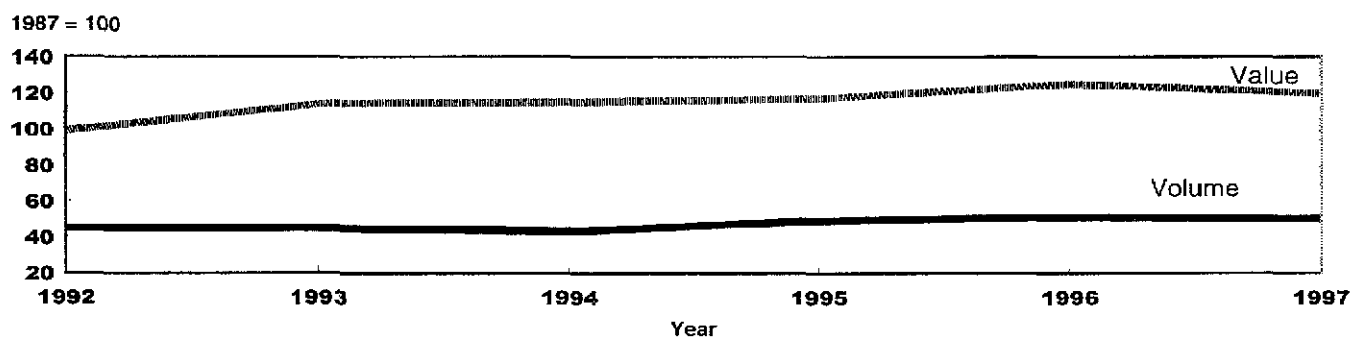
Volume and value index of all U.S. hardwood veneer imports, 1992-1997.

Table 25.--Volume and value of U.S. hardwood plywood imports, by region, 1993-98
(Cubic meters and thousands of dollars, c.i.f.)

Year/qtr.	Canada		Central & South America and Caribbean		Africa	
	Volume	Value	Volume	Value	Volume	Value
1993	123,456	60,060	298,495	115,885	258	141
1994	156,969	71,209	366,644	140,830	405	196
1995	179,327	82,083	361,577	147,184	0	0
1996	214,509	93,196	347,185	145,442	1,689	627
1997/1	64,913	29,605	88,638	36,970	0	0
1997/2	71,565	31,196	91,056	34,481	0	0
1997/3	60,527	27,678	86,164	36,888	0	0
1997/4	56,281	28,468	84,190	32,305	152	114
Total 1997	253,286	116,947	350,048	140,644	152	114
1998/1	70,164	34,134	56,078	21,861	0	0
1998/2	73,239	35,642	45,485	18,111	853	531
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Year/qtr.	Asia and Pacific Ocean		All other		Total	
	Volume	Value	Volume	Value	Volume	Value
1993	1,056,320	534,010	55,409	28,393	1,533,938	738,487
1994	833,992	493,756	89,245	39,568	1,447,255	745,561
1995	992,080	473,331	131,124	53,535	1,664,108	756,133
1996	1,001,738	501,683	179,202	64,933	1,744,323	805,879
1997/1	235,987	105,210	25,310	12,677	414,848	184,461
1997/2	217,614	111,072	49,038	20,519	429,273	197,267
1997/3	249,504	120,231	47,737	17,511	443,932	202,307
1997/4	220,165	107,775	58,282	19,923	419,070	188,586
Total 1997	923,270	444,287	180,367	70,629	1,707,123	772,622
1998/1	274,872	122,479	40,150	19,092	441,260	197,567
1998/2	286,252	109,310	66,668	29,521	472,497	193,114
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



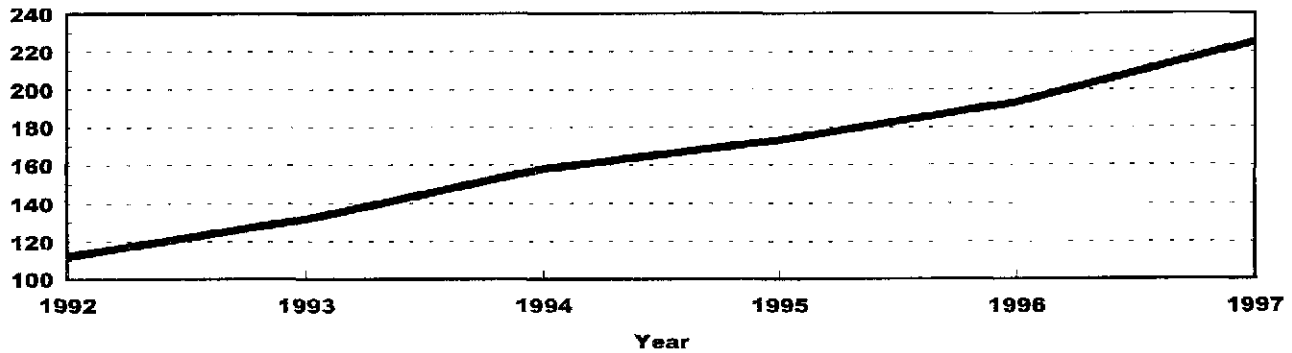
Volume and value index of all U.S. hardwood plywood imports, 1992-1997.

Table 26.--Value of U.S. wood furniture imports, by region, 1993-98
(Thousands of dollars, c.i.f.)

Year/qtr.	Canada	Caribbean, South, and Central America	Europe	Asia, Middle east, and Pacific	All other	Total
1993	563,326	301,397	755,104	1,751,680	9,488	3,380,993
1994	753,590	347,697	941,112	1,993,394	14,546	4,050,338
1995	899,350	411,731	1,042,945	2,080,382	16,600	4,451,004
1996	1,159,725	507,665	1,074,415	2,199,756	28,093	4,969,654
1997/1	313,458	137,874	268,768	533,172	5,895	1,259,166
1997/2	358,443	149,249	294,870	580,527	6,942	1,390,031
1997/3	378,405	163,114	306,172	646,181	6,689	1,500,562
1997/4	410,070	179,032	320,596	698,329	7,804	1,615,831
Total 1997	1,460,3777	629,273	1,190,400	2,458,208	27,331	5,765,590
1998/1	415,769	163,799	307,983	632,234	8,429	1,528,215
1998/2	448,229	174,475	349,130	713,403	8,629	1,693,863
1998/3	---	---	---	---	---	---
1998/4	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---

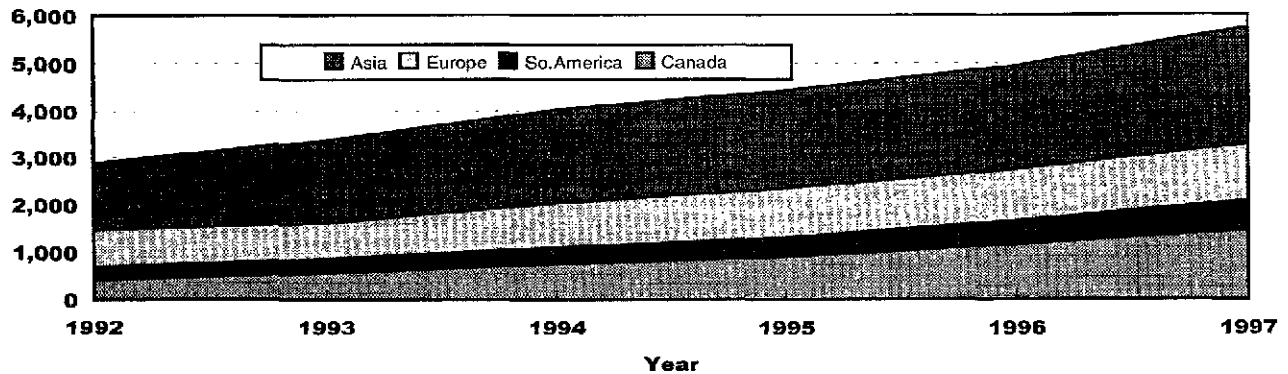
Source: U.S. Department of Commerce, Bureau of the Census.

1987 = 100



Value index of U.S. furniture imports, 1992-1997

Millions of dollars



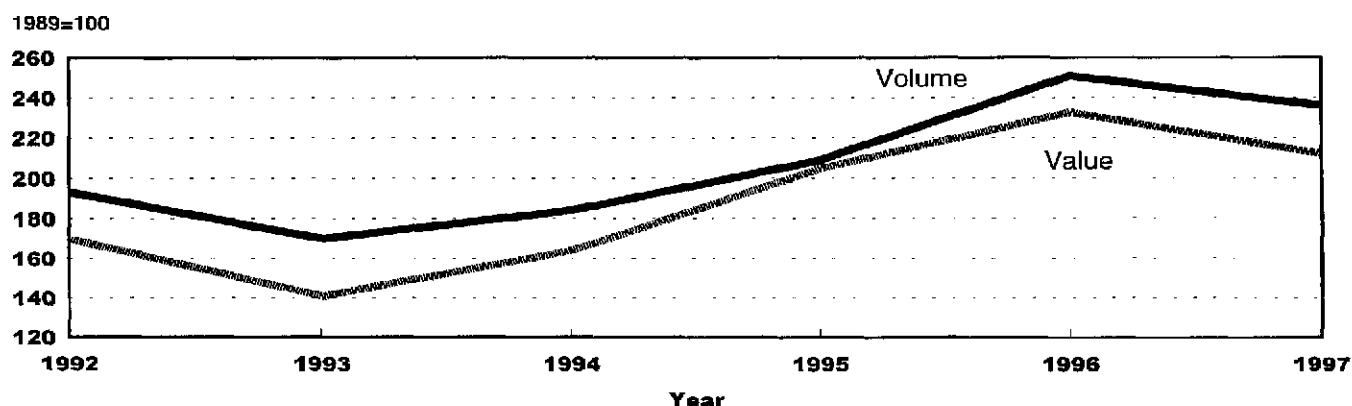
Value of U.S. furniture imports, by region, 1992-1997.

Table 27.--Volume and value of U.S. exports of nonconiferous chips, by region, 1993-98
(Tons and thousands of dollars, f.a.s.)

Year/qtr.	Western Europe		Canada		Japan		Mexico	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
1993	23,023	1,943	170,143	6,676	2,454,629	199,244	87	6
1994	728	923	248,845	9,562	2,649,198	230,564	1,442	60
1995	NA	1,218	284,126	12,007	3,031,485	299,663	18	20
1996	312	106	210,320	8,641	3,845,584	344,898	35	18
1997/1	3	5	71,998	2,849	908,131	78,321	3	11
1997/2	313	36	66,303	2,241	1,013,493	84,020	74	13
1997/3	255	32	89,365	3,075	976,480	89,267	18	34
1997/4	1,182	101	67,145	2,355	789,306	68,585	12	4
Total 1997	1,753	174	294,811	10,520	3,687,410	320,192	107	62
1998/1	934	82	71,272	2,370	1,014,437	87,784	0	0
1998/2	1,605	268	50,233	1,637	890,562	82,480	0	0
1998/3	---	---	---	---	---	---	---	---
1998/4	---	---	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---	---	---

Year/qtr.	Taiwan		South Korea		All other		Total	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
1993	22	26	254,808	18,867	4,432	2,129	2,907,144	228,892
1994	0	0	248,635	23,763	1,824	177	3,150,672	265,050
1995	0	0	256,462	17,394	5,084	1,305	3,579,398	331,607
1996	61,268	6,127	176,047	17,599	8,045	331	4,301,611	377,718
1997/1	0	0	7,411	1,304	52	11	987,598	82,501
1997/2	0	0	22,591	2,259	851	118	1,103,625	88,686
1997/3	0	0	27,421	5,093	1,171	344	1,094,710	97,845
1997/4	0	0	1,384	2,551	6,481	475	865,510	74,071
Total 1997	0	0	58,807	11,207	8,555	947	4,051,443	343,103
1998/1	0	0	26,173	2,683	2,934	784	1,115,750	93,702
1998/2	0	0	0	0	254	171	942,654	84,557
1998/3	---	---	---	---	---	---	---	---
1998/4	---	---	---	---	---	---	---	---
Total 1998	---	---	---	---	---	---	---	---

Source: U.S. Department of Commerce, Bureau of the Census.



Volume and value index of all U.S. exports of nonconiferous chips, 1992-1997.

Definition of Terms

c.i.f. (Cost, Insurance, Freight) - The term is used for shipment to designated overseas port of import. The seller quotes a price for the goods, including insurance, all transportation, and miscellaneous charges to the point of debarkation from vessel or aircraft.

f.a.s. (Free Alongside a Ship at designated U.S. port of export) - The seller quotes a price that includes charges for delivery of the goods alongside a vessel at the port. The seller handles the cost of unloading and wharfage. Loading, ocean transportation, and insurance are the buyer's responsibility.

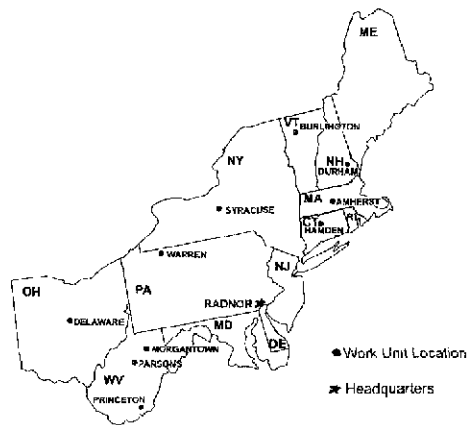
Useful Conversion Factors

1 MBF (lumber) = 2.36 cubic meters
1 MBF* (logs - FAO) = 4.53 cubic meters
1 MBF** (logs - Doyle scale) = 4.59 cubic meters
1 MBF** (logs - International 1/4" rule) = 3.48 cubic meters
1 MBF** (logs - Scribner) = 3.90 cubic meters
1 cubic meter = 35.32 cubic feet
1 ton = 2000 lbs.
1 metric ton = 2204.623 lbs.

- * Factor used by the Food and Agricultural Organization of the United Nations.
- ** Approximation based on 16-foot log with a 15-inch diameter at the top end inside bark. Actual conversion will depend on the distribution of logs under consideration.

Literature Cited

Luppold, William G. 1995. Causes and remedies for errors in international forest products trade data: Examples from the hardwood trade statistics. *Forest Science*. 41(2): 278-283.



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