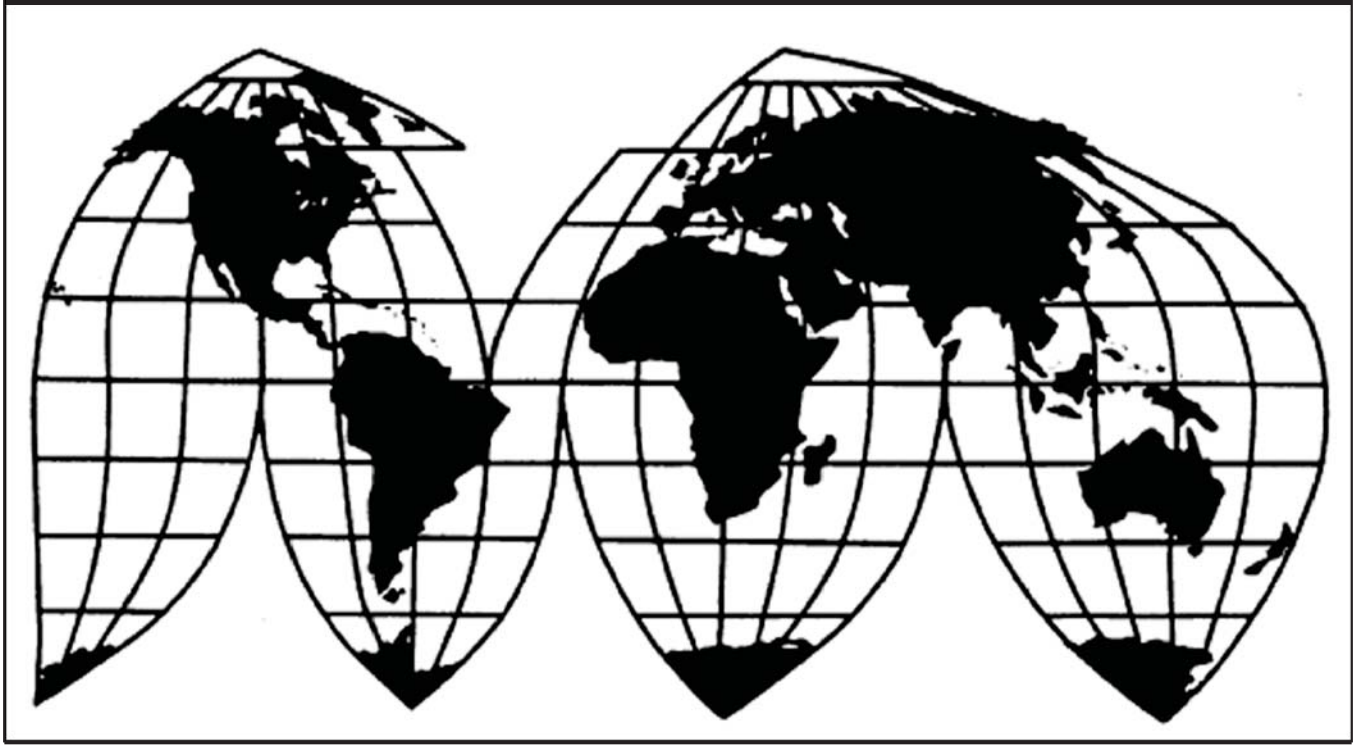
Hardwood Plywood from China

Investigation Nos. 701-TA-565 and 731-TA-1341 (Preliminary)

Publication 4661 **January 2017**

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

COMMISSIONERS

Irving A. Williamson, Chairman
David S. Johanson, Vice Chairman
Dean A. Pinkert
Meredith M. Broadbent
F. Scott Kieff
Rhonda K. Schmidtlein

Catherine DeFilippo
Director of Operations

Staff assigned

Mary Messer, Investigator
Drew Dushkes, Investigator
Vincent Honnold, Industry Analyst
Diana Friedman, Industry Analyst
Saad Ahmad, Economist
Mary Klir, Accountant
Russell Duncan, Statistician
Carolyn Holmes, Statistical Assistant
Benjamin Allen, Attorney
Douglas Corkran, Supervisory Investigator

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

U.S. International Trade Commission

Washington, DC 20436
www.usitc.gov

Hardwood Plywood from China

Investigation Nos. 701-TA-565 and 731-TA-1341 (Preliminary)

Publication 4661

January 2017

CONTENTS

CONTENTS

CONTENTS

CONTENTS

Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks. ***

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-565 and 731-TA-1341 (Preliminary)

Hardwood Plywood from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of hardwood plywood from China, provided for in subheadings 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV") and to be subsidized by the government of China.

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in section 207.21 of the Commission's rules, upon notice from the Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under sections 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under sections 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations.

[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(f)).

BACKGROUND

On November 18, 2016, the Coalition for Fair Trade of Hardwood Plywood and its individual members[2] filed a petition with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV and subsidized imports of hardwood plywood from China. Accordingly, effective November 18, 2016, the Commission, pursuant to sections 703(a) and 733(a) of the Act (19 U.S.C. 1671b(a) and 1673b(a)), instituted countervailing duty investigation No. 701-TA-565 and antidumping duty investigation No. 731-TA-1341 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of November 28, 2016 (81 FR 85639). The conference was held in Washington, DC, on December 9, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

[2] Columbia Forest Products, Greensboro, North Carolina; Commonwealth Plywood Inc., Whitehall, New York; Murphy Plywood Co., Eugene, Oregon; Roseburg Forest Products Co., Roseburg, Oregon; States Industries, Inc., Eugene, Oregon; and Timber Products Company, Springfield, Oregon.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of hardwood plywood from China that are allegedly sold in the United States at less than fair value and allegedly subsidized by the government of China.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

The Coalition for Fair Trade in Hardwood Plywood filed the petitions in these investigations on November 18, 2016. The coalition consists of Columbia Forest Products, Commonwealth Plywood Inc., Murphy Plywood, Roseburg Forest Products Co., States Industries Inc., and Timber Products Company (collectively "petitioners"), all of which are domestic producers of hardwood plywood. Representatives appeared at the staff conference accompanied by counsel and submitted a postconference brief.

Two respondent groups participated actively in these investigations. Representatives and counsel for producers and exporters of subject merchandise that are members of the China National Forest Products Industry Association ("Chinese producers")[3] appeared at the conference and submitted a postconference brief, as did representatives and counsel for the American Alliance for Hardwood Plywood ("AAHP"), a coalition of importers of hardwood and decorative plywood.

U.S. industry data are based on the questionnaire responses of nine firms, accounting for nearly all U.S. production of hardwood plywood in 2015. U.S. import data are based on

[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001-04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States, 2*0 CIT 353, 354-55 (1996). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[2] *American Lamb Co*., 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

[3] The China National Forest Products Industry Association did not itself enter an appearance.

questionnaire responses from 63 U.S. importers, accounting for the vast majority of total subject imports from China. The Commission received responses to its questionnaires from 54 producers of subject merchandise and 39 resellers accounting for approximately half of all production of subject merchandise from China and approximately 90 percent of all U.S. imports of subject merchandise in 2015.[4]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[5] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[6] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[7]

The decision regarding the appropriate domestic like product(s) in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[8] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[9] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[10] Although the Commission must accept

---

[4] Confidential Report, Memorandum INV-OO-124 (Dec. 23, 2016) ("CR") at I-5, IV-1, and VII-3, Public Report ("PR") at I-3-4, IV-1, and VII-3. These 39 resellers are comprised of trading companies, which are not producers of hardwood plywood. Chinese Producers' Postconference Br. at 13.

[5] 19 U.S.C. § 1677(4)(A).

[6] 19 U.S.C. § 1677(4)(A).

[7] 19 U.S.C. § 1677(10).

[8] *See*, *e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Department of Commerce*, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); *Nippon Steel Corp. v. United States*, 19 CIT 450, 455 (1995); *Torrington Co. v. United States*, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. *See Nippon*, 19 CIT at 455 n.4; *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[9] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[10] *See*, *e.g.*, *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49*; see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like (Continued…)

Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value,[11] the Commission determines what domestic product is like the imported articles Commerce has identified.[12]

A. Scope Definition

In its notices of initiation, Commerce defined the imported merchandise within the scope of these investigations as follows:

> hardwood and decorative plywood, and certain veneered panels as described below. For purposes of this proceeding, hardwood and decorative plywood is defined as a generally flat, multilayered plywood or other veneered panel, consisting of two or more layers or plies of wood veneers and a core, with the face and/or back veneer made of non-coniferous wood (hardwood) or bamboo. The veneers, along with the core may be glued or otherwise bonded together. Hardwood and decorative plywood may include products that meet the American National Standard for Hardwood and Decorative Plywood, ANSI/HPVA HP-1-2016 (including any revisions to that standard).
>
> For purposes of this investigation a "veneer" is a slice of wood regardless of thickness which is cut, sliced or sawed from a log, bolt, or flitch. The face and back veneers are the outermost veneer of wood on either side of the core irrespective of additional surface coatings or covers as described below.
>
> The core of hardwood and decorative plywood consists of the layer or layers of one or more material(s) that are situated between the face and back veneers. The core may be composed of a range of materials, including but not limited to hardwood, softwood, particleboard, or medium density fiberboard ("MDF").

(…Continued)
product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[11] *See*, *e.g.*, *USEC, Inc. v. United States*, 34 Fed. App'x 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States,* 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[12] *Hosiden Corp. v. Advanced Display Mfrs.,* 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

All hardwood plywood is included within the scope of this investigation regardless of whether or not the face and/or back veneers are surface coated or covered and whether or not such surface coating(s) or covers obscures the grain, textures, or markings of the wood. Examples of surface coatings and covers include, but are not limited to: ultra-violet light cured polyurethanes; oil or oil-modified or water based polyurethanes; wax; epoxy-ester finishes; moisture-cured urethanes; paints; stains; paper; aluminum; high pressure laminate; MDF; medium density overlay ("MDO"); and phenolic film. Additionally, the face veneer of hardwood plywood may be sanded; smoothed or given a "distressed" appearance through such methods as hand-scraping or wire brushing. All hardwood plywood is included within the scope even if it is trimmed; cut-to size; notched; punched; drilled; or has underwent other forms of minor processing.

All hardwood and decorative plywood is included within the scope of this investigation, without regard to dimension (overall thickness, thickness of face veneer, thickness of back veneer, thickness of core, thickness of inner veneers, width, or length). However, the most common panel sizes of hardwood and decorative plywood are 1219 x 1829 {millimeters} mm (48 x 72 inches), 1219 x 2438 mm (48 x 96 inches), and 1219 x 3048 mm (48 x 120 inches).

Subject merchandise also includes hardwood and decorative plywood that has been further processed in a third country, including but not limited to trimming, cutting, notching, punching, drilling, or any other processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope product.

The scope of the investigation excludes the following items: (1) structural plywood (also known as "industrial plywood" or "industrial panels") that is manufactured to meet U.S. Products Standard PS 1-09, PS 2-09, or PS 2-10 for Structural Plywood (including any revisions to that standard or any substantially equivalent international standard intended for structural plywood), and which has both a face and a back veneer of coniferous wood; (2) products which have a face and back veneer of cork; (3) multilayered wood flooring, as described in the antidumping duty and countervailing duty orders on Multilayered Wood Flooring from the People's Republic of China, Import Administration, International Trade Administration. *See Multilayered Wood Flooring from the People's Republic of China,* 76 FR 76,690 (Dec. 8, 2011) (*amended final determination of sales at less than fair value and antidumping duty order)*, and *Multilayered Wood Flooring from the People's Republic of*

China, 76 FR 76.693 (Dec. 8, 2011) (*countervailing duty order)*, *as amended* by *Multilayered Wood Flooring from the People's Republic of China: Amended Antidumping and Countervailing Duty Orders, 77 FR 5,484 (Feb. 3, 2012)*; (4) multilayered wood flooring with a face veneer of bamboo or composed entirely of bamboo; (5) plywood which has a shape or design other than a flat panel, with the exception of any minor processing described above; and (6) products made entirely from bamboo and adhesives (also known as "solid bamboo").[13]

Hardwood plywood is a wood panel product made from gluing two or more layers of wood veneer to a core which may itself be composed of veneers or other type of wood material such as medium density fiberboard ("MDF"), particleboard, lumber, or oriented strand board. The outer ply or face veneer is typically the identifying species for the hardwood plywood product and is the side of the product that will be visible in most uses. Several hardwood species are used in hardwood plywood manufacture including oak, birch, maple, poplar, and cherry. However, hardwood plywood includes plywood that may have a face veneer and/or other layers of veneer of any softwood species, so long as either the face or back veneer is of a hardwood species. The distinguishing characteristic of hardwood plywood products is that they are used in interior and non-structural applications.[14] Hardwood plywood is manufactured in a variety of thicknesses and dimensions.[15]

Hardwood plywood products can be characterized by species, quality of veneer, thickness, number of plies, type of core (veneer, particleboard, MDF, or other), and the type of adhesive used in the manufacturing process. Grades of hardwood plywood are determined by criteria such as number and size of knots, visible decay, splits or insect holes, surface roughness, and other defects. Grades are assigned to both the face and back veneer. Plywood with a higher face grade is used in applications where appearance is a primary consideration. Most hardwood plywood produced in the United States is graded according to a consensus-based voluntary standard developed by the Hardwood Plywood and Veneer Association ("HPVA").[16]

---

[13] *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 81 Fed. Reg. 91125, 91130 (Dec. 16, 2016); *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Countervailing Duty Investigation,* 81 Fed. Reg. 91131, 91135 (Dec. 16, 2016).

[14] CR at I-13, PR at I-11.

[15] CR at I-13, PR at I-11. The most common thicknesses range from 1/8 inch (3.2 mm) to 1 inch (25.4 mm), depending upon customer requirements and the intended end use. The most common panel dimensions are 48 inches by 72 inches (1219 mm x 1829 mm), 48 inches by 96 inches (1219 mm x 2438 mm), and 48 inches by 120 inches (1219 mm x 3048 mm), but hardwood plywood is also sold in smaller and larger sheet sizes. *Id.*

[16] CR at I-14, PR at I-11-12. The HPVA is a trade association representing the domestic hardwood plywood industry. Conference Tr. at 43 (Howlett). The highest and clearest grades of hardwood plywood carry an "AA" or "A" face grade, followed by "B," "C," "D," and "E" as more knots, blemishes or other defects are considered in the grading process. The HPVA standard also assigns back

(Continued…)

B. Arguments of the Parties

Petitioners assert that there have been no significant changes with respect to characteristics and uses of hardwood plywood since the 2013 investigations of hardwood plywood from China and that the Commission should again define a single domestic like product coextensive with the scope of the investigations.[17] Respondents agree with the definition of the domestic like product proposed by the petitioners.[18]

C. Analysis

Based on the record in the preliminary phase of these investigations, we define a single domestic like product, consisting of hardwood plywood corresponding to the scope of the investigations.

Physical Characteristics and Uses. All hardwood plywood consists of two or more layers of wood veneer glued to a core. The outer ply, or face veneer, is made from various hardwood species and is the part of the product that will generally be visible. Hardwood plywood is used in a range of interior applications, most often when moisture is not an issue.[19]

Manufacturing Facilities, Production Processes and Employees. Production of all hardwood plywood begins with debarking logs of a size and quality suitable for peeling or slicing to make veneer. Veneers are either rotary cut, using a lathe that spins a log against a blade at high speed, or are sliced or sawed from lumber, flitches, or blocks of wood. The veneers are then cut into variable lengths and widths, graded, sorted by quality, and dried. Face veneers are often, but not always, produced at a separate facility or by a different company than the manufacturer of hardwood plywood.[20]

Hardwood plywood is made by one of two processes. Some producers employ a "one-step" process which is a fully automated, continuous system from the log to the finished

---

(…Continued)
veneers numerical grades from "1" to "4," and certain other letter grades to internal veneers. However, not all hardwood plywood sold in the United States conforms to the HPVA standard. *Id.*

[17] Petition at 19; Petitioners' Postconference Br. at 4; Conference Tr. at 13 (Brightbill). In the Commission's 2013 investigations, it defined a single domestic like product that was coextensive with Commerce's scope in those investigations. *Hardwood Plywood from* China, Inv. Nos. 701-TA-490 and 731-TA-1204 (Final), USITC Pub. 4434 (Nov. 2013) ("USITC Pub. 4434") at 8-9. Petitioners point to the Commission's findings in the 2013 investigations that all hardwood plywood products share the same physical characteristics; that all are used in a range of interior applications; that all are manufactured in the same facilities; that all are sold through the same channels of distribution; that specific applications may require specific thicknesses, sizes, and grades; and that producers and customer perceptions recognized differences in the species of hardwood, as well as thickness, size, and grade. Petition at 19.

[18] Postconference Brief of the American Alliance for Hardwood Plywood ("AAHP Postconference Br.") at 7; Chinese Producers' Postconference Br. at 2; Conference Tr. at 16-17 (Grimson). Respondents reserved the right to comment further on the domestic like product definition in any final phase of these investigations. AAHP Postconference Br. at 7; Chinese Producers' Postconference Br. at 2.

[19] CR at I-13-14, PR at I-11.

[20] CR at I-15-16, PR at I-12.

product. In this process, face and back veneers are glued and pressed at the same time as the core veneers. Other producers use a "two-step" process which combines face and back veneers with a "core" or "platform" that is manufactured separately.[21]

Prior to pressing, the face and core veneers are dried, sorted for defects, repaired or patched, taped or stitched to make larger sheets from smaller pieces, and trimmed. Veneers are stacked with their grain in alternating directions in order to provide strength and stability to the finished product. Depending on the manufacturing process, a cold press may be used to bind several plies of veneer together prior to being hot pressed to glue the veneers together.[22] After pressing and trimming, panels are sanded and, in some cases, finished depending on the end use.[23]

Channels of Distribution. Hardwood plywood is sold predominantly to distributors, with the remainder sold directly to end users.[24]

Interchangeability. Petitioners state that hardwood plywood is sold on the basis of grade, type of core, overall panel thickness, and face species.[25] Grades A and B tend to be used in visually important areas, while lower grades are often used as shelves and in the backs of cabinets.[26]

Producer and Customer Perceptions. There are different grades of hardwood plywood. As observed above, most hardwood plywood produced in the United States is graded according to the consensus-based voluntary HPVA standard.[27] Hardwood plywood can be characterized by species, veneer quality, thickness, number of plies, type of core, and the type of adhesive used in the manufacturing process.[28]

Price. The record indicates that the price of hardwood plywood is a function of the quality or grade of the veneer and the composition of the core.[29]

Based on the foregoing information, and in light of the absence of any contrary argument, we define a single domestic like product, consisting of hardwood plywood corresponding to the scope of the investigations.

---

[21] CR at I-16, PR at I-12-13.

[22] CR at I-16, PR at I-13.

[23] CR at I-17, PR at I-13. Finishing can involve some degree of texturing for a particular appearance, grooving, and/or staining or coloring. Typical finishes include ultraviolet light cured polyurethanes, oil or oil-modified or water based polyurethanes, wax, epoxy-ester finishes, and moisture-cured urethanes.

[24] CR/PR at Table II-1.

[25] CR at II-14, PR at II-10.

[26] CR at II-1, PR at II-1.

[27] CR at I-14, PR at I-11. The record indicates that customers may also have proprietary grades. Conference Tr. at 56 (Kaplan).

[28] CR at I-14, PR at I-11.

[29] *See* Conference Tr. at 100 (Lynch); 198 (Israel).

IV. Domestic Industry

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[30] In defining the domestic industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to Section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[31] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[32] No party has argued for the exclusion of any producer.[33]

Petitioner *** imported subject merchandise during the period of investigation.[34] Consequently, *** is a related party. Domestic producer *** states that its subsidiary *** imported subject merchandise from China.[35] We infer that control would exist by virtue of a parent/subsidiary relationship, which would make *** a related party.[36] We find that domestic producer *** that purchased subject imports is not a related party.[37]

---

[30] 19 U.S.C. § 1677(4)(A).

[31] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem.,* 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[32] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[33] *See* Petitions, vol. I at 19-20; Petitioners' Postconference Br. at 5; Conference Tr. at 16-17 (Grimson).

[34] CR at III-22, PR at III-16, CR/PR at Table III-15.

[35] CR/PR at Table III-2.

[36] *See* 19 U.S.C. § 1677(4)(B)(ii)(I).

[37] Domestic producer *** purchased subject imports from China, but did not directly import such merchandise. CR at III-24, PR at III-16, CR/PR at Table III-16. The Commission has previously (Continued…)

We next examine whether appropriate circumstances exist to exclude either of the related parties from the domestic industry.

****.* ***, a ***, accounted for *** percent of domestic production of hardwood plywood in 2015.[38] It is the *** largest domestic producer of hardwood plywood. *** imported subject merchandise from China throughout the period of investigation. It imported *** square feet in 2013, *** square feet in 2014, and *** square feet in 2015. It imported *** square feet in January-September ("interim") 2015 and *** square feet in interim 2016.[39] The ratio of its subject imports to production was *** percent in 2013, *** percent in 2014, and *** percent in 2015. It was *** percent in interim 2015 and *** percent in interim 2016.[40] Consequently, its principal interest appears to be in domestic production.[41] No party has argued for its exclusion from the domestic industry. We find that appropriate circumstances do not exist to exclude *** from the domestic industry as a related party.

*****. In 2015, *** accounted for *** percent of domestic hardwood plywood production. It was the *** largest of the nine reporting producers. It *** the petition.[42] *** did not import subject merchandise directly.[43] Its subsidiary, ***, did not respond to the importers' questionnaire. Because the record does not indicate that *** control of an importer of subject merchandise affected its domestic production operations, and because no party seeks its exclusion, we find that appropriate circumstances do not exist to exclude it from the domestic industry as a related party.

In light of the recommended definition of the domestic like product, we define the domestic industry to include all U.S. producers of hardwood plywood.

(…Continued)
concluded that a purchaser may be treated as a related party if it controls large volumes of subject imports. The Commission has found such control to exist when the domestic producer was responsible for a predominant proportion of an importer's purchases and these purchases were substantial. *See Iron Construction Castings from Brazil, Canada, and China,* Inv. Nos. 701-TA-249 and 731-TA-262, 263, and 265 (Fourth Review), USITC Pub. 4655 at 11 (Dec. 2016).

In these investigations, although *** purchased subject imports throughout the period of investigation, those purchases were small on an annual basis. *Compare* CR/PR at Table III-16 *with* CR/PR at Table IV-2. In view of the fact that *** was not responsible for a predominant proportion of an importers' purchases and did not engage in substantial purchases of subject imports, we find that it is not a related party.

[38] CR/PR at Table III-1.

[39] CR/PR at Table III-15.

[40] CR/PR at Table III-15.

[41] CR/PR at Table VI-2. Its operating income margin was *** percent in 2013, *** percent in 2014, and *** percent in 2015. It was *** percent in interim 2015 and *** percent in interim 2016; in every period except interim 2016, its operating performance *** the industry average. *Id.*

[42] CR/PR at Table III-1. *** operating performance was *** the industry average in interim 2016 and *** it during each full year and interim 2015. CR/PR at Table VI-2.

[43] It did purchase subject merchandise throughout the period of investigation, although its purchases were *** than its domestic production. CR/PR at Table III-16. *** purchased subject merchandise through four different importers, ***. CR at III-24, PR at III-16.

V. Negligible Imports

Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible.[44]

Negligibility is not an issue in these investigations. U.S. imports from China were well above the pertinent 3 percent negligibility threshold.[45]

VI. Reasonable Indication of Material Injury by Reason of Subject Imports

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[46] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[47] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[48] In assessing whether there is a reasonable indication that the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[49] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[50]

---

[44] 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)).

[45] CR at IV-8-9, PR at IV-7-8, CR/PR at Table IV-3. U.S. imports from China, as measured by questionnaire responses, accounted for 50.8 percent of total imports of hardwood plywood by quantity from October 2015 to September 2016, the most recent 12-month period prior to filing of the petition for which such data are available. CR at IV-9, PR at IV-7; CR/PR at Table IV-3. U.S. imports from China as measured by official import statistics accounted for 57.2 percent of total U.S. imports of hardwood plywood by quantity from November 2015 to October 2016, the most recent 12-month period preceding the filing of the petitions. CR at IV-9, PR at IV-8.

[46] 19 U.S.C. §§ 1671b(a), 1673b(a). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of reasonable indication of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[47] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... {a}nd explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[48] 19 U.S.C. § 1677(7)(A).

[49] 19 U.S.C. § 1677(7)(C)(iii).

[50] 19 U.S.C. § 1677(7)(C)(iii).

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured by reason of" unfairly traded imports,[51] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[52] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[53]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[54] In performing its examination, however, the Commission need not isolate

---

[51] 19 U.S.C. §§ 1671b(a), 1673b(a).

[52] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[53] The Federal Circuit, in addressing the causation standard of the statute, has observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than fair value meets the causation requirement." *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was re-affirmed in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), in which the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[54] Uruguay Round Agreements Act Statement of Administrative Action (SAA), H.R. Rep. 103-316, Vol. I at 851-52 (1994) ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

the injury caused by other factors from injury caused by unfairly traded imports.[55] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[56] It is clear that the existence of injury caused by other factors does not compel a negative determination.[57]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[58] [59] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[60]

---

[55] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n* , 266 F.3d at 1345. ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e*., it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

[56] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[57] *See Nippon*, 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[58] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 792 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[59] Commissioners Pinkert and Kieff do not join this paragraph or the following three paragraphs. They point out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when analyzing present material injury, to consider a particular issue with respect to the role of nonsubject imports, without reliance upon presumptions or rigid formulas. The Court has not prescribed a specific method of exposition for this consideration. *Mittal Steel* explains as follows:

(Continued…)

The Federal Circuit's decisions in *Gerald Metals*, *Bratsk,* and *Mittal Steel* all involved cases in which the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[61] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record 'to show that the harm occurred 'by reason of' the LTFV imports,'" and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[62] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals*, *Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[63]

(…Continued)

> What *Bratsk* held is that "where commodity products are at issue and fairly traded, price competitive, non-subject imports are in the market," the Commission would not fulfill its obligation to consider an important aspect of the problem if it failed to consider whether non-subject or non-LTFV imports would have replaced LTFV subject imports during the period of investigation without a continuing benefit to the domestic industry. 444 F.3d at 1369. Under those circumstances, *Bratsk* requires the Commission to consider whether replacement of the LTFV subject imports might have occurred during the period of investigation, and it requires the Commission to provide an explanation of its conclusion with respect to that factor.

542 F.3d at 878.

[60] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

[61] *Mittal Steel*, 542 F.3d at 875-79.

[62] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

[63] To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in the final phase of investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on (Continued…)

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[64] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[65]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is a reasonable indication of material injury by reason of subject imports.

1. Demand Conditions

U.S. demand for hardwood plywood depends on the demand for U.S.-produced downstream products in which it is used, including kitchen cabinets, fixtures, underlayment, recreational vehicles, manufactured homes, and furniture.[66] Cabinets are a particularly important end use, with a large number of both producers and importers reporting that their hardwood plywood is intended for this purpose.[67] Most producers and a high number of importers indicated that the market was subject to business cycles or distinctive conditions of competition, including a strong seasonal component.[68] Most U.S. producers and a plurality of importers reported an increase in U.S. demand for hardwood plywood since 2013.[69] Firms reporting an increase cited improvements in the national economy, housing starts, non-housing construction, and increases in spending on repair and remodeling activities.[70]

The largest known end use for domestically produced hardwood plywood in 2015 was the manufacture of cabinets (49.6 percent of sales), followed by architectural use (*** percent)

(…Continued)
capacity, production, and shipments of the product under investigation in the major source countries that export to the United States. The Commission plans to continue utilizing published or requested information in the final phase of investigations in which there are substantial levels of nonsubject imports.

[64] We provide in our respective discussions of volume, price effects, and impact a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[65] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

[66] CR at II-7, PR at II-5.

[67] CR at II-7, PR at II-5.

[68] CR at II-10, PR at II-8. Four producers noted that demand follows a seasonal cycle, building up from January to a mid-year high in June, slowing down in the summer, and then trailing off in the last quarter. *Id.*

[69] CR at II-9, PR at II-7, CR/PR at Table II-3.

[70] CR at II-9, PR at II-7.

and furniture (11.0 percent).[71] Almost half of subject import sales in 2015 (47.1 percent) were for miscellaneous and unknown end uses (47.1 percent) followed by end use in underlayment (32.0 percent), and cabinets (11.8 percent).[72]

Demand as measured by apparent U.S. consumption increased throughout the period of investigation. It was 3.1 billion square feet in 2013, 3.3 billion square feet in 2014, and 3.5 billion square feet in 2015. It was 2.7 billion square feet in interim 2015 and 2.9 billion square feet in interim 2016.[73]

2. Supply Conditions

The domestic industry was the smallest supplier to the U.S. market throughout the period of investigation. Its market share declined from 23.1 percent in 2013 to 22.1 percent in 2014, and then to 19.9 percent in 2015, for an overall decline of 3.2 percentage points. Its market share was lower in interim 2016, at 18.3 percent, than in interim 2015, at 20.5 percent.[74]

Subject imports were the second largest source of supply to the U.S. market throughout the period of investigation.[75] Subject import market share increased from 37.5 percent in 2013 to 37.9 percent in 2014 and 39.2 percent in 2015, for an overall increase of 1.7 percentage

[71] CR at III-19, PR at III-14, CR/PR at Table III-13. Other reported end uses include store/retail fixtures (6.4 percent), recreational vehicles and mobile homes (3.6 percent), and miscellaneous and unknown uses (*** percent). *Id.*

[72] CR at IV-21, PR at IV-19, CR/PR at Table IV-9. Other known end uses include architectural use (1.1 percent), furniture (1.7 percent), store/retail fixtures (3.3 percent), and recreational vehicles and mobile homes (3.1 percent). *Id.*

[73] CR/PR at Table IV-10.

[74] CR/PR at Table IV-10.

[75] Import data in these investigations are derived from importer questionnaire responses, rather than official import statistics. Respondents argue that official Commerce statistics were overstated with regard to subject merchandise, as they believe that six HTS statistical reporting numbers listed in Commerce's scope definition refer exclusively to wood flooring, which is both excluded from the scope of these investigations and subject to antidumping and countervailing duty orders. Staff analyzed *** for the HTS statistical reporting numbers provided in Commerce's scope, including the six disputed HTS statistical reporting numbers cited by respondents, and found that those six numbers contained approximately 85 percent "dutied" imports, while the remainder of the HTS statistical reporting numbers contained only about 15 percent "dutied" imports, indicating that a large proportion of imports entering under those six HTS statistical reporting numbers are subject to existing antidumping duty orders and outside the scope of these investigations. In light of the above, we have decided that importer questionnaire responses provide the most representative data in the record concerning subject import volumes; although we recognized that they may slightly understate total volumes and values. *See* CR at I-5 n.6, IV-1 n.1-2, PR at I-4 n.6, IV-1 n.1-2, CR/PR at Appx. D (reporting adjusted official Commerce statistics).

points.[76] Subject imports' market share was higher in interim 2016, at 40.6 percent, than in interim 2015, at 38.4 percent.[77]

Nonsubject imports were the largest source of supply to the U.S. market throughout the period of investigation. The market share of nonsubject imports increased from 39.4 percent in 2013 to 40.0 percent in 2014 and 40.9 percent in 2015, for an overall increase of 1.5 percentage points. Nonsubject imports' market share was 41.1 percent in both interim 2015 and interim 2016.[78] Leading nonsubject sources of hardwood plywood include Brazil, Canada, Ecuador, Indonesia, Malaysia, Russia, Taiwan, and Vietnam.[79]

3. Substitutability and Other Conditions

Market participants expressed disparate views as to the degree of interchangeability between subject imports and the domestic like product. The majority of U.S. importers responding to the Commission's questionnaire reported that subject and domestic hardwood plywood are at least sometimes interchangeable, while a smaller number reported they are never interchangeable.[80] On the other hand, the majority of responding U.S. producers indicated that subject imports and the domestic like product are always interchangeable.[81]

A number of factors influence purchasing decisions, including species, grade, and thickness of the face veneer; core composition; overall panel thickness; and end use.[82] As discussed further below, petitioners argue that subject imports and the domestic like product are substitutable and compete directly with each other.[83] Respondents contend that there is limited substitutability and attenuated competition between subject imports and the domestic like product.[84]

The record indicates that the domestic like product and subject imports are similar in several respects. Domestic producers and U.S. importers shipped virtually every combination of face veneer species and grades.[85] Subject imports and the domestic like product are sold in

---

[76] We observe that subject imports from China were subject to provisional duties from April 29, 2013 until November 25, 2013, while the 2013 investigations were ongoing before the Commission and Commerce. *See Hardwood and Decorative Plywood from the People's Republic of China: Antidumping Duty Investigation*, 78 Fed. Reg. 25946, 25953 (May 3, 2013) (dated April 29, 2013); *Hardwood Plywood from China: Determinations*, 78 Fed. Reg. 76857, 76857 (Dec. 19, 2013) (transmitted to Commerce Nov. 25, 2013).

[77] CR/PR at Table IV-10.

[78] CR/PR at Table IV-10.

[79] CR at II-6, PR at II-5, CR/PR at Table D-1.

[80] CR/PR at Table II-4.

[81] CR/PR at Table II-4.

[82] *See* Petitioners' Postconference Br. at 10-12; AAHP Postconference Br. at 19-30; Chinese Producers' Postconference Br.at 3-6.

[83] Petitioners' Postconference Br. at 10-12.

[84] AAHP Postconference' Br. at 19-30; Chinese Producers' Postconference Br. at 4-5, 9.

[85] CR at III-17, IV-17, PR at III-12, IV-15, CR/PR at Tables III-12, IV-8. Substantial quantities of both the domestic like product and subject imports are sold in grades B and C. Approximately two-thirds of U.S. producers' commercial shipments of hardwood plywood during 2015 were grade B (31.9 (Continued…)

the United States in every category of overall plywood thickness, ranging from less than 6.5 mm in thickness to greater than or equal to 20.0 mm in thickness.[86]

There are also distinctions between the domestic like product and the subject imports. The overwhelming majority of domestic producers' commercial shipments of hardwood plywood since 2013 had a face veneer that was greater than or equal to 0.5 mm in thickness.[87] By contrast, although the face veneer of subject importers' U.S. commercial shipments ranged in thickness from less than 0.4 mm to more than 0.6 mm, the overwhelming majority of those shipments had a face veneer less than 0.4 mm in thickness.[88] The plywood core used by domestic producers often differs from the core used by subject imports. The cores of domestically produced hardwood plywood are predominantly composed of softwood, although *** of domestic producers' commercial shipments use a hardwood core.[89] The cores of subject imports are predominantly composed of hardwood.[90]

Petitioners assert that there is substantial overlap between subject imports and the domestic like product with regard to face veneer species and grade and that both domestic producers and subject producers make every dimension and thickness of hardwood plywood.[91]

(…Continued)
percent) or grade C (33.1 percent), while approximately one-third of U.S. importers' commercial shipments of hardwood plywood during 2015 were grade C (29.3 percent) and grade B (8.0 percent). A majority of subject imports and an appreciable share of domestically produced product use a birch face veneer. The share of U.S. producers' 2015 U.S. commercial shipments that had a birch face veneer was 20.7 percent, while the share of U.S. importers' 2015 U.S. commercial shipments from China that had a birch face veneer was 64.1 percent. CR at III-17-18, IV-17, PR at III-12, IV-15, CR/PR at Tables III-12, IV-8.

[86] CR at III-14, IV-12, PR at III-9, IV-10, CR/PR at Tables III-9, IV-5. A majority of the domestic like product and an appreciable share of subject imports are between 6.5 and 19.99 mm in overall thickness. In 2015, 76.3 percent of U.S. producers' U.S. commercial shipments were between 6.5 and 19.99 mm in overall thickness, while 45.2 percent of U.S. importers' U.S. commercial shipments were between the same range of thicknesses. *Id.*

[87] CR at III-12, PR at III-8, CR/PR at Table III-8.

[88] CR at IV-10, PR at IV-8-9, CR/PR at Table IV-4.

[89] CR at III-15, PR at III-10, CR/PR at Table III-10.

[90] CR at IV-14, PR at IV-12, CR/PR at Table IV-6.

[91] Petitioners' Postconference Br. at 10-18. Petitioners assert that the overlap in face veneer species is understated as plywood with a face veneer of birch is interchangeable for plywood with a face veneer of maple. *See id.* at 13-14. They assert that producers are not constrained by species as domestic and subject producers can import logs to make plywood with a face veneer of any species. *See id.* at 14.

With respect to grade, petitioners contend that different countries use different grading systems and that some producers use proprietary grades. *Id.* at 15. They contend and that there is some fluidity in grading. *Id.* S*ee* Conference Tr. at 56 (Kaplan) (indicating that subject import grade B-2 may be equivalent to domestic grade A). According to petitioners, hardwood plywood graded as "other" represents buyer-specified proprietary grades that also compete with domestic production which encompasses every grade. *Id.* at 14-16. Petitioners point to the increase in imports of out-of-scope ready-to-assemble cabinets from China as evidence of the extent to which subject imports compete across grades in the cabinet segment. *See* Petitions, vol. I, at 27.

They assert that competition between subject imports and the domestic like product is not influenced by differences in veneer thickness, core composition, and other factors.[92]

Respondents argue that substitutability is limited by face veneer species, face veneer grade, face veneer thickness, core composition, and overall panel thickness.[93] They contend that although producers of the subject merchandise in China have greater access to birch, they produce less high-grade veneer than the domestic industry because birch logs in China are smaller than the logs used in domestically produced hardwood plywood.[94] According to respondents, the thinner face veneer thickness below 0.4 mm distinguishes subject imports from the thicker face veneers of domestically produced hardwood plywood.[95] Respondents argue that the softwood cores used in the domestic like product further limit substitutability, as hardwood plywood with a softwood core is not suitable for lamination.[96] According to respondents, subject imports are concentrated in overall thicknesses of 5.2 mm and below.[97]

We find based on the record in the preliminary phase of these investigations that subject imports and the domestic like product are moderately substitutable. We further find that price is an important factor in purchasing decisions, but that quality is also an important consideration.[98] We will closely examine the issue of substitutability in the final phase of these investigations. We invite the parties in their draft questionnaire comments to suggest approaches for asking purchasers about the distinctions among hardwood plywood products that they consider to be important in purchasing decisions.[99]

---

[92] Petitioners' Postconference Br. at 18-25. Petitioners further argue that competition between subject imports and the domestic like product is not influenced by flatness, panel strength, tolerance for moisture content, and glue. *Id.* at 24-25.

[93] *See* AAHP Postconference Br. at 19-30.

[94] AAHP Postconference Br. at 26-27. Respondents assert that grade tends to decline toward the center of a log and that smaller logs consequently produce less high-grade veneer. *Id.*

[95] AAHP Postconference Br. at 21, 29; Chinese Producers' Postconference Br. at 5. Respondents contend that this is a result of different production processes employed by subject and domestic producers, which prevent domestic producers from applying veneers thinner than 0.4 mm to a core. AAHP Postconference Br. at 28-29.

[96] AAHP Postconference Br. at 23. Respondents contend that hardwood plywood with a softwood core is not as uniform as hardwood plywood with a hardwood core and that the lack of uniformity cannot be totally masked by a thick face veneer. *Id.*

[97] AAHP Postconference Br. at 24-25. Respondents assert that the majority of this volume consists of underlayment grade plywood, which is certified and marked so as to make it unusable for any other purpose. They further contend that no domestic product is similarly marked or certified. *Id.*

[98] CR at II-12-13, PR at II-9. Purchasers responding to the lost sales and lost revenue allegations most frequently identified quality and price as the two factors that were most pertinent to purchasing decisions. *Id.*

[99] We also will seek additional information regarding the use of domestic or subject hardwood plywood to serve specific functions within the cabinetry segment of the market.

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[100]

The volume of subject imports increased over the period of investigation from 1.1 billion square feet in 2013 to 1.3 billion square feet in 2014 and 1.4 billion square feet in 2015.[101] The volume of subject imports was higher in interim 2016, at 1.2 billion square feet, than in interim 2015, at 1.0 billion square feet.[102] As noted above, subject import market share increased from 37.5 percent in 2013 to 37.9 percent in 2014 and 39.2 percent in 2015.[103] It was higher in interim 2016, at 40.6 percent, than in interim 2015, at 38.4 percent.[104]

Subject imports increased their market share at the expense of the domestic industry. Subject import market share rose from 37.5 percent in 2013 to 39.2 percent in 2015 and was 40.6 percent in interim 2016 as compared to 38.4 percent in interim 2015. By contrast, domestic industry market share decreased from 23.1 percent in 2013 to 19.9 percent in 2015 and was 18.3 percent in interim 2016 as compare to 38.4 percent in interim 2015. Nonsubject imports also gained market share.[105] The ratio of subject imports to U.S. production increased from 2013 to 2015 and was higher in interim 2016 than in interim 2015; as a share of total U.S. production, subject imports ranged from a low of 154.0 percent in 2013 to a high of 221.3 percent in interim 2016.[106]

In light of the foregoing, we find that the volume of subject imports and the increase in that volume are significant in both absolute terms and relative to production and consumption.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of subject imports, the Commission shall consider whether –

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and

---

[100] 19 U.S.C. § 1677(7)(C)(i).

[101] CR/PR at Table IV-10. Respondents argue that the increase in subject import volume is a function of demand trends in the market segments where their use is most prevalent. AAHP Postconference Br. at 34; Chinese Producers' Postconference Br. at 10. We will examine application-specific demand trends in any final phase of these investigations, and invite party comments regarding this issue when receiving the Commission's draft questionnaires.

[102] CR/PR at Table IV-10.

[103] CR/PR at Table IV-10.

[104] CR/PR at Table IV-10.

[105] CR/PR at Table IV-10.

[106] CR at IV-10, PR at IV-8, CR/PR at Table IV-2.

(II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[107]

The Commission collected quarterly pricing data on six pricing products.[108] Six U.S. producers and 38 importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products in each quarter. Pricing data reported by these firms accounted for approximately 9.2 percent of U.S. producers' shipments of hardwood plywood and 38.2 percent of U.S. shipments of subject imports from China in 2015.[109]

The pricing data show that the subject imports undersold the domestic like product in all 90 quarterly price comparisons.[110] The margins of underselling were high and increased

[107] 19 U.S.C. § 1677(7)(C)(ii).

[108] The six pricing products are as follows:

Product 1.-- 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 2.-- 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Product 3.-- 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 4.-- 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Maple face (whether plain or rotary sliced), face Grade B or substantially equivalent, Maple back (whether plain or rotary sliced), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 5.-- 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Product 6.-- 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether plain or rotary sliced), face Grade C or substantially equivalent, back face of Birch or other, Grade 2/3 or substantially equivalent, veneer core, unfinished.

[109] CR at V-5, PR at V-4.

[110] CR at V-19, PR at V-13.

over the period of investigation for all pricing products except one.[111] The margins ranged from 12.5 percent to 56.1 percent, with an average margin of underselling of 35.5 percent.[112]

The record indicates that the availability of lower-priced subject imports influenced some purchasing decisions. In response to the Commission's survey regarding domestic producers' allegations of lost sales and lost revenue, eight of 12 responding purchasers reported that they shifted purchases from domestically produced hardwood plywood to subject imports since 2013.[113] Seven of these eight purchasers reported that subject import prices were lower than those for the domestic like product and that price was a primary reason for the decision to purchase subject imports.[114] Moreover, as previously discussed, while the subject imports were underselling the domestic like product, the subject imports were gaining market share at the domestic industry's expense.

Given the high frequency of underselling and the fact that price is an important factor in purchasing decisions and influenced some purchasers to increase purchases of subject imports, we find the underselling to be significant for the purposes of these preliminary determinations.

We do not find that subject imports depressed domestic producers' prices to a significant degree, because the record does not contain evidence that price declines predominated during the period of investigation. The pricing data indicate that between the first quarter of 2013 and the third quarter of 2016 prices for domestically produced products increased for four pricing products and decreased for two pricing products.[115] We also do not find that subject imports prevented price increases for the domestic like product that otherwise would have occurred to a significant degree. The domestic industry's ratio of cost of goods sold ("COGS") to net sales fluctuated within a narrow band over the period of investigation, and the observed increases did not rise to a level of significance.[116]

On the basis of the record in the preliminary phase of these investigations, we find that there was significant underselling of the domestic like product by subject imports. The record indicates that the lower prices of subject imports led to some additional purchases of such imports and the market share of the subject imports increased at the expense of the domestic industry.

---

[111] CR/PR at Tables V-3-8. The margin for pricing product 6 decreased over the period of investigation. *Id.* at Table V-8.

[112] CR/PR at Table V-10. In the final phase of these investigations we intend to examine the extent to which the magnitude of the margins of underselling may reflect differences in characteristics and applications of the domestic like product and subject imports.

[113] CR at V-20, PR at V-14.

[114] CR at V-20-21, PR at V-14. We observe that the total volume purchasers reported shifting to subject imports was 45,047 square feet. CR at V-21, PR at V-14, CR/PR at Table V-12.

[115] CR at V-18, PR at V-12, CR/PR at Tables V-3-8. Over the period of investigation, domestic prices increased for four pricing products, by *** percent and decreased for two pricing products, by *** percent. *Id.*

[116] CR/PR at Table VI-1. Domestic producers' ratio of COGS to net sales decreased from 88.8 percent in 2013 to 88.5 percent in 2014, and then increased to 90.0 percent in 2015. It was 90.0 percent in interim 2015 and 90.5 percent in interim 2016. *Id.*

E. Impact of the Subject Imports[117]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[118]

Notwithstanding the increase in apparent U.S. consumption throughout the period of investigation, most indicators of the domestic industry's performance – including several pertaining to output – suffered declines. The domestic industry's market share fell and its operating performance was modest and also decreased during the period.

The domestic industry's production declined overall from 2013 to 2015, increasing from 732.4 million square feet in 2013 to 749.7 million square feet in 2014, and then decreasing to 712.7 million square feet in 2015; production was 564.8 million square feet in interim 2015 and 540.5 million square feet in interim 2016.[119] The domestic industry's capacity remained stable at roughly 1.4 billion square feet from 2013 to 2015 and 1.1 billion square feet in interim 2015 and interim 2016.[120] Its capacity utilization declined slightly overall, increasing from 51.1 percent in 2013 to 52.2 percent in 2014, and then decreasing to 49.7 percent in 2015.[121] Its capacity utilization was 51.1 percent in interim 2015 and 49.0 percent in interim 2016.[122] The domestic industry's U.S. shipments declined from 2013 to 2015, increasing from 707.9 million square feet in 2013 to 726.9 million square feet in 2014, and then decreasing to 700.6 million square feet in 2015.[123] Its shipments were lower in interim 2016, at 535.1 million square feet, than in interim 2015, at 559.5 million square feet.[124] As discussed above, the domestic industry's market share declined from 23.1 percent in 2013 to 22.1 percent in 2014 and 19.9 percent in 2015. It was lower in interim 2016, at 18.3 percent, than in interim 2015, at 20.5 percent.[125] Domestic producers' end-of-period inventories were higher in 2015 than in 2013, increasing from 36.4 million square feet in 2013 to 42.0 million square feet in 2014, and then

[117] In its notice initiating the antidumping duty investigation on hardwood plywood from China, Commerce reported estimated antidumping duty margins ranging from 104.06 to 114.72 percent. 81 Fed. Reg. 91125.

[118] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[119] CR/PR at Table III-5.

[120] CR/PR at Table III-4.

[121] CR/PR at Table III-4.

[122] CR/PR at Table III-4.

[123] CR/PR at Table IV-10.

[124] CR/PR at Table IV-10.

[125] CR/PR at Table IV-10.

decreasing to 41.4 million square feet in 2015.[126] End-of-period inventories were 38.4 million square feet in interim 2015 and 39.2 million square feet in interim 2016.[127]

Employment-related data showed mixed trends. The number of production and related workers ("PRWs"), hours worked, total hours worked, total and hourly wages, and unit labor costs all increased from 2013 to 2015, while productivity declined over the same period.[128] By contrast, the number of PRWs, total hours worked, hours worked per PRW, and wages paid were all lower in interim 2016 than in interim 2015, while hourly wages and productivity were higher and unit labor costs remained stable.[129]

The domestic industry's sales revenue increased from 2013 to 2014, declined from 2014 to 2015, and was lower in interim 2016 than interim 2015. The industry's COGS displayed similar trends throughout the period of investigation, as did selling, general, and administrative expenses from 2013 to 2015. Both gross profit and operating income increased from 2013 to 2014, declined from 2014 to 2015, and were lower in interim 2016 than interim 2015; net income also followed a similar trend.[130] The industry's ratio of operating income to net sales fell throughout the period, declining from 4.3 percent in 2013 to 4.2 percent in 2014 and 2.5 percent in 2015; it was 2.8 percent in interim 2015 and 1.8 percent in interim 2016.[131] The

[126] CR/PR at Table III-14.

[127] CR/PR at Table III-14.

[128] CR/PR at Table III-17. The domestic industry's number of PRWs increased from 2,300 in 2013 to 2,399 in 2014, and then declined to 2,391 in 2015. Total hours worked increased from 4.90 million hours in 2013 to 5.18 million in 2014 and 5.22 million in 2015. Hours worked per PRW increased from 2,128 in 2013 to 2,160 in 2014 and 2,185 in 2015. Wages paid increased from $89.1 million in 2013 to $96.3 million in 2014 and $101.5 million in 2015. Hourly wages increased from $18.20 in 2013 to $18.57 in 2014 and $19.43 in 2015. Productivity declined from 139.9 square feet per hour in 2013 to 135.7 square feet per hour in 2014 and 128.0 square feet per hour in 2015. Unit labor costs increased from $0.13 per square foot in 2013 to $0.14 per square foot in 2014 and $0.15 per square foot in 2015. *Id.*

[129] CR/PR at Table III-17. The number of PRWs was 2,291 in interim 2015 and 2,168 in interim 2016. Total hours worked were 4.1 million in interim 2015 and 3.9 million in interim 2016. Hours worked per PRW were 1,791 in interim 2015 and 1,785 in interim 2016. Wages paid were $78.9 million in interim 2015 and $77.1 million in interim 2016. Hourly wages were $19.24 in interim 2015 and $19.91 in interim 2016. Productivity was 129.6 square feet per hour in interim 2015 and 131.5 square feet per hour in interim 2016. Unit labor costs were $0.15 dollars per square feet in both interim 2015 and interim 2016. *Id.*

[130] CR/PR at Table VI-1. Gross profit improved from $92.2 million in 2013 to $98.7 million in 2014, and then declined to $82.5 million in 2015; it was $66.2 million in interim 2015 and it was $59.3 million in interim 2016. Operating income improved from $35.7 million in 2013 to $36.1 million in 2014, and then declined to $21.0 million in 2015; it was $18.5 million in interim 2015 and it was $11.2 million in interim 2016. Net income improved from $33.2 million in 2013 to $34.2 million in 2014 and then declined to $17.9 million in 2015; it was $17.0 million in interim 2015 and $10.4 million in interim 2016. *Id.*

[131] CR/PR at Table VI-1. The ratio of net income to sales was nearly identical throughout the period. *Id.*

domestic industry's capital expenditures increased from 2013 to 2015, while capital expenditures were lower in interim 2016 than in interim 2015.[132]

For the purposes of these preliminary determinations, we find that subject imports had a significant impact on the domestic industry. Despite increasing demand, the domestic industry was not able to increase output during the investigation; instead, the domestic industry suffered declines in production and U.S. shipments and lost market share. Subject imports pervasively undersold the domestic like product and increased their market share at the expense of the domestic industry. As a result of the lost market share, the domestic industry's output and revenues were lower than they would have been otherwise, resulting in reductions in gross profit, operating income, and net income from 2014 to 2015 and between interim periods.

We have also examined the role of nonsubject imports.[133] We observe that the domestic industry lost market share to both subject imports and nonsubject imports.[134] Nonsubject imports therefore cannot by themselves explain the magnitude of the loss of the domestic industry's market share during the period of investigation.

VII. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of subject imports of hardwood plywood from China that are allegedly subsidized and sold in the United States at less than fair value.

[132] CR/PR at Table VI-4. Capital expenditures decreased from $18.1 million in 2013 to $15.2 million in 2014, and then increased to $21.9 million in 2015. They were $14.8 million in interim 2015 and $13.2 million in interim 2016. *Id.*

[133] For purposes of the considerations required by *Bratsk/Mittal*, Commissioners Pinkert and Kieff note that nonsubject imports were a significant factor in the U.S. market during the period of investigation. They invite the parties, in any final phase investigations, to comment on the proper application of *Bratsk/Mittal*.

[134] *See* CR/PR at Table IV-10. The domestic industry's market share declined by 3.2 percent from 2013 to 2015; its market share was 2.2 percent lower in interim 2016 than in interim 2015. Subject imports' market share increased by 1.7 percent from 2013 to 2015; their market share was 2.2 percent higher in interim 2016 than in interim 2015. Nonsubject imports' market share increased by 1.5 percent from 2013 to 2015; their market share was the same in both interim 2015 and 2016. *Id.*

PART I: INTRODUCTION

BACKGROUND

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Columbia Forest Products ("Columbia Forest Products"), Greensboro, North Carolina; Commonwealth Plywood Inc. ("Commonwealth Plywood"), Whitehall, New York; Murphy Plywood Co. ("Murphy Plywood"), Eugene, Oregon; Roseburg Forest Products Co. ("Roseburg Forest Products"), Roseburg, Oregon; States Industries, Inc. ("States Industries"), Eugene, Oregon; and Timber Products Company ("Timber Products"), Springfield, Oregon, combined as the Coalition for Fair Trade of Hardwood Plywood, on November 18, 2016, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of certain hardwood plywood products ("hardwood plywood")[1] from China. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
November 18, 2016	Petition filed with Commerce and the Commission; institution of Commission investigations (81 FR 85639, November 28, 2016)
December 8, 2016	Commerce's notice of AD initiation (81 FR 91125, December 16, 2016); Commerce's notice of CVD initiation (81 FR 91131, December 16, 2016)
December 9, 2016	Commission's conference
December 30, 2016	Commission's vote
January 3, 2017	Commission's determinations
January 10, 2017	Commission's views

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

[1] See the section entitled "The Subject Merchandise" in *Part I* of this report for a complete description of the merchandise subject to these investigations.

[2] Pertinent *Federal Register* notices are referenced in appendix A, and may be found at the Commission's website (www.usitc.gov).

[3] A list of witnesses appearing at the conference is presented in appendix B of this report.

shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

> *(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.*

Organization of report

Part I of this report presents information on the subject merchandise, alleged subsidy and dumping margins, and domestic like product. *Part II* of this report presents information on conditions of competition and other relevant economic factors. *Part III* presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. *Part VI* presents information on the financial experience of U.S. producers. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

MARKET SUMMARY

Hardwood plywood generally is used in the manufacturing of furniture, cabinetry, wall paneling, and similar products. The leading U.S. producers of hardwood plywood are ***, while leading producers of hardwood plywood outside the United States include *** of China. The leading U.S. importers of hardwood plywood from China are ***. The primary nonsubject sources of hardwood plywood imports are Canada, Indonesia, Malaysia, and Russia, with *** as the leading importer.

Apparent U.S. consumption of hardwood plywood totaled approximately 3.5 billion square feet ($2.0 billion) in 2015. Currently, nine firms are known to produce hardwood plywood in the United States. U.S. producers' U.S. shipments of hardwood plywood totaled 700.6 million square feet ($865.3 million) in 2015, and accounted for 19.9 percent of apparent U.S. consumption by quantity and 43.5 percent by value. U.S. imports from China totaled 1.4 billion square feet ($660.1 million) in 2015 and accounted for 39.2 percent of apparent U.S. consumption by quantity and 33.2 percent by value. U.S. imports from nonsubject sources totaled 1.4 billion square feet ($465.7 million) in 2015 and accounted for 40.9 percent of apparent U.S. consumption by quantity and 23.4 percent by value.

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on the questionnaire responses of nine firms that staff believes accounted for nearly all U.S. production of hardwood plywood during 2015. U.S. import data are based on the questionnaire responses of 63 importers that accounted for approximately 82 percent of imports from China, 62 percent of imports from other sources, and 72 percent of imports from all sources.[6] [7] Foreign industry data are based on the questionnaire responses of 54 producers and 39 resellers that staff believes accounted for approximately half of all production of hardwood plywood in China[8] and approximately 87 percent of all U.S.-bound exports of hardwood plywood from China in 2015.

---

[6] American Alliance for Hardwood Plywood ("AAHP") and Chinese respondents argue that the Commission should rely on importer questionnaire responses for its import dataset. AAHP respondents' postconference brief, pp. 30-32 and Chinese respondents' postconference brief, p. 7. Respondents provided the Commission with six HTS statistical reporting numbers listed in Commerce's scope definition that they believed refer exclusively to wood flooring, which is both excluded from the scope of these investigations and potentially subject to duty orders as a result of the multilayered wood flooring investigations of 2011, as evidence that official Commerce statistics are overstated with regards to the subject merchandise. Petitioners argue that the Commission should include all of the "primarily entered under" HTS statistical reporting numbers included in Commerce's initiation notice, as these statistical reporting numbers were reviewed and approved by both Commerce and U.S. Customs and Border Protection. Petitioners also argue that the six HTS statistical reporting numbers that reference wood flooring are included on the U.S. Department of Agriculture, Foreign Agriculture Service's list of commodity codes that it defines as hardwood plywood. Counsel for petitioners, email message to USITC staff, December 16, 2016. Staff analyzed *** for both the six HTS statistical reporting numbers that made reference to wood flooring as well as the HTS statistical reporting numbers provided in Commerce's scope definition minus the aforementioned six disputed digits and found the following:

- The HTS statistical reporting numbers excluding the six disputed provisions contained approximately 15 percent "dutied" imports.
- The wood flooring HTS statistical reporting numbers contained approximately 85 percent "dutied" imports.

In light of the above, importer questionnaire responses appear to be the most representative import dataset, albeit slightly understating total volumes and values. See footnotes 1 and 2 in Part IV of this report for further details and appendix D of this report for adjusted official Commerce statistics.

[7] Coverage calculations are based on official Commerce statistics using the HTS statistical reporting numbers provided in Commerce's scope definition minus the six disputed digits.

[8] The Commission's coverage estimate is based ***. *** foreign producer questionnaire response, section II-6. Chinese respondents argue that the Commission's foreign producer questionnaire responses account for virtually all production of hardwood plywood in China eligible to be exported to the United States. For more details, see footnote 7 in Part VII of this report.

PREVIOUS AND RELATED INVESTIGATIONS

Hardwood plywood has been the subject of two prior Commission 332 and title VII investigations. In 2013, the Commission conducted a countervailing duty investigation and an antidumping duty investigation on *Hardwood Plywood from China* (Inv. Nos. 701-TA-490 and 731-TA-1204).[9] In these 2013 investigations, the Commission determined that a U.S. industry was not materially injured or threatened with material injury by reason of subject imports.[10]

Hardwood plywood was also subject to a Section 332 investigation in 2007-08, *Wood Flooring and Hardwood Plywood: Competitive Conditions Affecting the U.S. Industries* (Inv. No. 332-487).[11]

In 2011, the Commission conducted related investigations[12] on *Multilayered Wood Flooring from China* (Inv. Nos. 701-TA-476 and 731-TA-1179).[13] In these 2011 investigations, the Commission determined the domestic industry producing multilayered wood flooring was materially injured by reason of subject imports from China.[14]

NATURE AND EXTENT OF ALLEGED SUBSIDIES AND SALES AT LTFV

Alleged subsidies

On December 16, 2016, Commerce published a notice in the *Federal Register* of the initiation of its countervailing duty investigation on hardwood plywood from China.[15] Commerce identified the following government programs in China:[16]

1. Provision of Inputs for Less than Adequate Remuneration
    - Provision of Electricity for Less than Adequate Remuneration

---

[9] *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013.

[10] Ibid., p. 30

[11] *Wood Flooring and Hardwood Plywood: Competitive Conditions Affecting the U.S. Industries, Inv. No. 332-487*, USITC Publication 4032, August 2008.

[12] Merchandise covered under the scope of the multilayered wood flooring investigations may enter the United States under HTS statistical reporting numbers included in Commerce's scope definition for this current hardwood plywood proceeding. See footnote 6 in Part I of this report for further details.

[13] *Multilayered Wood Flooring from China, Inv. Nos. 701-TA-476 and 731-TA-1179 (Final)*, USITC Publication 4278, November 2011.

[14] Ibid., p. 36. Chairman Deanna Tanner Okun and Commissioner Daniel R. Pearson dissented, determining that the domestic industry producing multilayered wood flooring was neither materially injured nor threatened with material injury by reason of subject import from China. Ibid., p. 57.

[15] *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Countervailing Duty Investigation*, 81 FR 91131, December 16, 2016.

[16] *Hardwood Plywood from the People's Republic of China: Enforcement and Compliance Office of AD/CVD Operations Countervailing Duty Investigation Initiation Checklist*, December 8, 2016.

- Provision of Water for Less than Adequate Remuneration

2. Provision of Land for Less than Adequate Remuneration
    - Land-Use Rights for Less than Adequate Remuneration
    - Land to State-Owned Enterprises for Less than Adequate Remuneration
3. Loan Programs
    - Policy Loans to the Hardwood Plywood Industry
    - Preferential Loans for State-Owned Enterprises
    - Loan and Interest Subsidies Provided Pursuant to the Northeast Revitalization Program
4. Grant Programs
    - Interest Loan Subsidies for the Forestry Industry
    - Foreign Trade Development Fund Grants
    - Export Assistance Grants
    - Export Interest Subsidies
    - Sub-Central Government Subsidies for Development of Famous Brands and China World Top Brands
    - Funds for Outward Expansion of Industries in Guangdong Province
    - Provincial Fund for Fiscal and Technological Innovation
    - State Key Technology Renovation Fund
    - Shandong Province's Special Fund for the Establishment of Key Enterprise Technology Centers
    - Shandong Province's Environmental Protection Industry Research and Development Funds
    - Funds of Guangdong Province to Support the Adoption of E-Commerce by Foreign Trade Enterprises
    - Waste Water Treatment Subsidies
    - Technology to Improve Trade Research and Development Fund
5. Tax Benefit Programs
    - Income Tax Reductions under Article 28 of the Enterprise Income Tax
    - Tax Offsets for Research and Development under the Enterprise Income Tax
    - Preferential Income Tax Policy for Enterprises in the Northeast Region
    - Forgiveness of Tax Arrears for Enterprises Located in the Old Industrial Bases of Northeast China
    - Income Tax Credits for Domestically-Owned Companies Purchasing Domestically-Produced Equipment
6. Support for Foreign-Invested Enterprises
    - Income Tax Benefits for Foreign-Invested Enterprises Based on Geographic Locations
    - Local Income Tax Exemption and Reduction Programs for "Productive" Foreign-Invested Enterprises
    - Tax Offsets for Research and Development by Foreign-Invested Enterprises

- Income Tax Reductions for Export-Oriented Foreign-Invested Enterprises

7. Value-Added Tax Programs
    - Value-Added Tax and Import Duty Exemptions for Use of Imported Equipment
    - Value-Added Tax Rebate Exemptions on Foreign-Invested Enterprise Purchases of Chinese-Made Equipment

Alleged sales at LTFV

On December 16, 2016, Commerce published a notice in the *Federal Register* of the initiation of its antidumping duty investigation on hardwood plywood from China.[17] Commerce has initiated an antidumping duty investigation based on estimated dumping margins of 104.06 to 114.72 percent for hardwood plywood from China.

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of this proceeding as follows:

> *The merchandise subject to this investigation is hardwood and decorative plywood, and certain veneered panels as described below. For purposes of this proceeding, hardwood and decorative plywood is defined as a generally flat, multilayered plywood or other veneered panel, consisting of two or more layers or plies of wood veneers and a core, with the face and/or back veneer made of non-coniferous wood (hardwood) or bamboo. The veneers, along with the core may be glued or otherwise bonded together. Hardwood and decorative plywood may include products that meet the American National Standard for Hardwood and Decorative Plywood, ANSI/HPVA HP-1-2016 (including any revisions to that standard).*
>
> *For purposes of this investigation a "veneer" is a slice of wood regardless of thickness which is cut, sliced or sawed from a log, bolt, or flitch. The face and back veneers are the outermost veneer of wood on either side of the core irrespective of additional surface coatings or covers as described below.*

[17] *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 81 FR 91125, December 16, 2016.

The core of hardwood and decorative plywood consists of the layer or layers of one or more material(s) that are situated between the face and back veneers. The core may be composed of a range of materials, including but not limited to hardwood, softwood, particleboard, or medium-density fiberboard ("MDF").

All hardwood plywood is included within the scope of this investigation regardless of whether or not the face and/or back veneers are surface coated or covered and whether or not such surface coating(s) or covers obscures the grain, textures, or markings of the wood. Examples of surface coatings and covers include, but are not limited to: ultra-violet light cured polyurethanes; oil or oil-modified or water based polyurethanes; wax; epoxy-ester finishes; moisture-cured urethanes; paints; stains; paper; aluminum; high pressure laminate; MDF; medium density overlay ("MDO"); and phenolic film. Additionally, the face veneer of hardwood plywood may be sanded; smoothed or given a "distressed" appearance through such methods as hand-scraping or wire brushing. All hardwood plywood is included within the scope even if it is trimmed; cut-to-size; notched; punched; drilled; or has underwent other forms of minor processing.

All hardwood and decorative plywood is included within the scope of this investigation, without regard to dimension (overall thickness, thickness of face veneer, thickness of back veneer, thickness of core, thickness of inner veneers, width, or length). However, the most common panel sizes of hardwood and decorative plywood are 1219 x 1829 mm (48 x 72 inches), 1219 x 2438 mm (48 x 96 inches), and 1219 x 3048 mm (48 x 120 inches).

Subject merchandise also includes hardwood and decorative plywood that has been further processed in a third country, including but not limited to trimming, cutting, notching, punching, drilling, or any other processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope product.

The scope of the investigation excludes the following items: (1) structural plywood (also known as "industrial plywood" or "industrial panels") that is manufactured to meet U.S. ProductsStandard PS 1-09, PS 2-09, or PS 2-10 for Structural Plywood (including any revisions to that standard or any substantially equivalent international standard intended for structural plywood), and which has both a face and a back veneer of coniferous wood; (2) products which have a face and back veneer of cork; (3) multilayered wood flooring, as described in the antidumping duty and countervailing duty orders on Multilayered Wood Flooring from the

People's Republic of China, Import Administration, International Trade Administration. See Multilayered Wood Flooring from the People's Republic of China, 76 FR 76,690 (Dec. 8, 2011) (amended final determination of sales at less than fair value and antidumping duty order), and Multilayered Wood Flooring from the People's Republic of China, 76 FR 76.693 (Dec. 8, 2011) (countervailing duty order), as amended by Multilayered Wood Flooring from the People's Republic of China: Amended Antidumping and Countervailing Duty Orders, 77 FR 5,484 (Feb.3, 2012); (4) multilayered wood flooring with a face veneer of bamboo or composed entirely of bamboo; (5) plywood which has a shape or design other than a flat panel, with the exception of any minor processing described above; and (6) products made entirely from bamboo and adhesives (also known as "solid bamboo").

Imports of hardwood plywood are primarily entered under the following Harmonized Tariff Schedule of the United States (HTSUS) subheadings: 4412.10.0500; 4412.31.0520; 4412.31.0540; 4412.31.0560; 4412.31.2510; 4412.31.2520; 4412.31.4040; 4412.31.4050; 4412.31.4060; 4412.31.4075; 4412.31.4080; 4412.31.5125; 4412.31.5135; 4412.31.5155; 4412.31.5165; 4412.31.5175; 4412.31.6000; 4412.31.9100; 4412.32.0520; 4412.32.0540; 4412.32.0565; 4412.32.0570; 4412.32.2510; 4412.32.2525; 4412.32.2530; 4412.32.3125; 4412.32.3135; 4412.32.3155; 4412.32.3165; 4412.32.3175; 4412.32.3185; 4412.32.5600; 4412.94.1030; 4412.94.1050; 4412.94.3105; 4412.94.3111; 4412.94.3121; 4412.94.3131; 4412.94.3141; 4412.94.3160; 4412.94.3161; 4412.94.3171; 4412.94.3175; 4412.94.4100; 4412.99.0600; 4412.99.1020; 4412.99.1030; 4412.99.1040; 4412.99.3110; 4412.99.3120; 4412.99.3130; 4412.99.3140; 4412.99.3150; 4412.99.3160; 4412.99.3170; 4412.99.4100; 4412.99.5115; and 4412.99.5710.

Imports of hardwood plywood may also enter under HTSUS subheadings 4412.39.1000; 4412.39.3000; 4412.39.4011; 4412.39.4012; 4412.39.4019; 4412.39.4031; 4412.39.4032; 4412.39.4039; 4412.39.4051; 4412.39.4052; 4412.39.4059; 4412.39.4061; 4412.39.4062; 4412.39.4069; 4412.39.5010; 4412.39.5030; 4412.39.5050; 4412.99.6000; 4412.99.7000; 4412.99.8000; 4412.99.9000; 4412.10.9000; 4412.94.5100; 4412.94.9500; and 4412.99.9500. While

the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of this investigation is dispositive.[18]

Tariff treatment

Based upon the scope set forth by the Department of Commerce, information available to the Commission indicates that the merchandise subject to these investigations is primarily imported under the following provisions of the 2016 HTS.[19] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

4412.10	Plywood, veneered panels, and similar laminated wood, of bamboo (general rates of duty free or 8 percent ad valorem).
4412.31[20]	Other plywood {not of bamboo}, consisting solely of sheets of wood, each ply not exceeding 6 mm in thickness; with at least one outer ply of tropical wood (general rates of duty free or 8 percent ad valorem).
4412.32[21]	Other plywood {not of bamboo or in 4412.31} consisting solely of sheets of wood, each ply not exceeding 6 mm in thickness; with at least one outer ply of nonconiferous wood (general rates of duty free, 5.1 percent, or 8 percent ad valorem)
4412.39	Other plywood {not of bamboo or in 4412.31-4412.32} consisting solely of sheets of wood, each ply not exceeding 6 mm in thickness; with both outer plies of coniferous wood (general rates of duty free, 3.4 percent, 5.1 percent, or 8percent ad valorem).
4412.94	Blockboard, laminboard and battenboard (general rates of duty free, 3.4 percent, 5.1 percent, or 8 percent ad valorem).

[18] *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, 81 FR 91125, December 16, 2016 and *Certain Hardwood Plywood Products from the People's Republic of China: Initiation of Countervailing Duty Investigation*, 81 FR 91131, December 16, 2016.

[19] Respondents dispute the petitioners' use of import data based on HTS statistical reporting numbers 4412.31.4075, 4412.31.5125, 4412.32.0565, 4412.32.2525, 4412.32.3125, and 4412.94.3105. AAHP respondents' postconference brief, pp. 32-33 and Exhibit 1.

[20] Changes to the HTS statistical reporting numbers in this subheading are scheduled to take effect beginning January 1, 2017.

[21] Changes to the HTS statistical reporting numbers in this subheading are scheduled to take effect beginning January 1, 2017.

4412.99 Other {plywood, veneered panels and similar laminated wood} (general rates of duty free, 3.4 percent, 5.1 percent, or 8 percent ad valorem).

THE PRODUCT

Description and applications[22]

Hardwood and decorative plywood (hardwood plywood) is a wood panel product made from gluing two or more layers of wood veneer to a core which may itself be composed of veneers or other type of wood material such as medium density fiberboard ("MDF"), particleboard, lumber, or oriented strand board ("OSB"). The outer ply or face veneer is typically the identifying species for the hardwood plywood product and is the side of the product that will be visible in most uses. A wide variety of hardwood species is used in hardwood plywood manufacture including oak, birch, maple, poplar, and cherry. However, hardwood plywood includes plywood that may have a face veneer and/or other layers of veneer of softwood species. The distinguishing characteristic of hardwood plywood products is that they are used in interior and non-structural applications.

Hardwood plywood is manufactured in a variety of thicknesses, with the most common ranging from 1/8 inch (3.2 mm) to 1 inch (25.4 mm), depending upon customer requirements and the intended end-use. The most common panel dimensions are 48 inches by 72 inches (1219 x 1829 mm), 48 inches by 96 inches (1219 x 2438 mm), and 48 inches by 120 inches (1219 x 3048 mm), but hardwood plywood is also sold in smaller and larger sheet sizes.[23]

Hardwood plywood is commonly used in furniture, kitchen cabinets, architectural woodwork, wall paneling, manufactured homes, and recreational vehicles ("RVs"). The product is almost always used in interior applications where moisture exposure is not an issue, although some hardwood plywood is made specifically for marine applications. Hardwood plywood is also used in some construction-related applications where structural strength and moisture resistance is not a requirement, such as for providing a flat, stable underlayment for a finished flooring product.

Hardwood plywood products are differentiated by species, quality of veneer, thickness, number of plies, type of core (veneer, particleboard, MDF, or other), and the type of adhesive used in the manufacturing process. Grades of hardwood plywood are determined by such things as number and size of knots, visible decay, splits or insect holes, surface roughness, and other defects. Grades are assigned to both the face and back veneer. Plywood with the highest face grades is used in applications where appearance is a primary consideration. Most hardwood plywood produced in the United States is graded according to a consensus-based

[22] Unless otherwise noted, this information is based on *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013, pp. I-9 through I-10.

[23] Petition, pp. 6-7.

voluntary standard developed by the Hardwood Plywood and Veneer Association ("HPVA").[24] The highest and clearest grades of hardwood plywood carry an "AA" or "A" face grade, followed by "B," "C," "D," and "E" as more knots, blemishes or other defects are considered in the grading process. The HPVA standard also assigns back veneers numerical grades from "1" to "4," and certain other letter grades to internal veneers. However, not all hardwood plywood sold in the United States conforms to the HPVA standard.

Manufacturing processes[25]

The production of hardwood plywood begins with the debarking of logs of a size and quality suitable for peeling or slicing to make veneer. Veneer is a thin sheet of wood that has been rotary cut, sliced, or sawed from a log, bolt, or flitch. Veneer quality logs, or peeler logs, are generally of higher quality and value than those used for other wood products, although the quality of veneer from any given log will vary. Approximately half or more of a log peeled for veneer in the United States will yield C grade or below (45 to 60 percent), with the yield of A grade veneer in the range of 9 to 14 percent, and the balance in B grade material.[26] Respondents stated that Chinese hardwood plywood producers primarily peel Chinese birch logs, which have a smaller diameter and consequently yield a much higher percentage of lower grade veneers.[27]

Rotary cut veneer is made using a lathe that spins a log against a blade at very high speed. This makes a continuous layer of thin veneer that is then cut to the desired length and width, typically 50" by 100" in order to produce a finished panel of 48" by 96" (4x8 feet). In 2015, approximately *** percent of U.S. hardwood plywood production was manufactured using rotary-cut veneer.[28] In contrast, sliced or sawed veneers are thin sheets cut from lumber, flitches, or blocks of wood. They are cut into variable lengths and widths depending upon the form and dimension of the wood raw material. Sliced veneer typically has a different grain pattern than rotary-cut veneer and is often utilized to make higher grades and specialty plywood. Whether rotary produced or sliced, veneer is cut to thicknesses ranging from as thin as 0.01 inch (0.25 mm) to greater than 1/4 inch (6.35 mm). Veneer is graded and sorted by quality, then dried prior to use in hardwood plywood manufacturing. Face veneers are often, but not always, produced at a separate facility or by a different company than the manufacturer of hardwood plywood.

---

[24] Hardwood Plywood and Veneer Association (HPVA), American National Standard for Hardwood and Decorative Plywood, ANSI/HPVA HP-1-2016. Petition, p. 8.

[25] Unless otherwise noted, this information is based on *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013, pp. I-10 through I-12.

[26] For birch, the average yield of "A" grade is 12 percent and "C" grade and below is 60 percent; for maple, the average yield of "A" grade is 9 percent and "C" grade and below is 52 percent; and for red oak, the average yield is 14 percent of "A" grade and 45 percent of "C" grade and below.

[27] Conference transcript, p. 125 (Dougherty).

[28] HPVA Annual Statistical Report for Calendar Year 2015.

Some U.S. producers employ a "one-step" process which is a fully automated, continuous system from the log to the finished product. In the "one-step" process, face and back veneers are glued and pressed at the same time as the core veneers. The other prevalent system, referred to as a "two-step" process, combines face and back veneers with a "core" or "platform" that is manufactured separately. Some U.S. producers use the "two-step" process.[29]

In many cases, face veneers that are of a particular species and grade are purchased from other veneer producers and are then glued onto the core material to complete the manufacturing process. Prior to pressing, the face and core veneers are dried, sorted for defects, repaired or patched, taped or stitched to make larger sheets from smaller pieces, and trimmed. The veneers are stacked with their grain in alternating directions in order to provide strength and stability to the finished product. Depending on the manufacturing process, a cold press may be used to fabricate the several plies of veneer together prior to being hot pressed to glue the veneers together. The thickness and number of plies depends upon the product.

After pressing and trimming, panels are sanded and, in some cases, finished depending on the end-use. Finishing can involve some degree of texturing for a particular appearance, grooving, and/or staining or coloring. Typical finishes include ultra-violet light cured polyurethanes, oil or oil-modified or water-based polyurethanes, wax, epoxy-ester finishes, and moisture-cured urethanes.[30] The process will vary somewhat if a core of composite wood (e.g., MDF or particleboard) or other material is used. In the U.S. industry, in 2015, veneer cores were used in approximately *** percent of production, MDF cores in *** percent, particleboard in *** percent, and lumber, OSB, or combinations of materials in *** percent.[31] Respondents stated that Chinese hardwood plywood producers primarily use fast-growing species of poplar and eucalyptus for the veneer cores of their hardwood plywood. These two species are harvested from plantations and farms. The logs are relatively small.[32]

The adhesive formulation is a key factor in hardwood plywood manufacturing and performance. Thermosetting adhesives are used to bond the veneer plies and/or core material. Urea-formaldehyde (UF) based resins are the most common type of adhesives used in hardwood plywood manufacture because they are suitable for interior use, have relatively fast cure times, and do not bleed color through the plies. Currently, under California law, formaldehyde emissions from hardwood plywood and other wood panel products sold in that state are regulated under what is commonly called the CARB rule.[33] Similar Federal regulations restricting formaldehyde emissions from hardwood plywood and other wood products are currently in the rule-making process and will likely take effect within the next year.[34] To meet

---

[29] Petition, p. 10.

[30] Petition, p. 8.

[31] HPVA Annual Statistical Report for Calendar Year 2015.

[32] Conference transcript, pp. 123-124 (Dougherty).

[33] CARB is an acronym for California Air Resources Board. The relevant rule is an airborne toxic control measure (ATCM) promulgated to reduce formaldehyde emissions from composite wood products.

[34] Conference transcript, p. 99 (Howlett).

existing California and prospective Federal regulations limiting formaldehyde emissions, manufacturers have changed the formulation of adhesives through the use of various additives or by using no added UF soy-based alternatives. Another type of adhesive formulated with phenol-formaldehyde (PF) resins emits less formaldehyde and is more moisture resistant, but PF resins have color disadvantages and are typically used only if the plywood product is made for exterior applications.

Generally, the basic steps in the manufacturing process are similar for both imported and domestic hardwood plywood. The Chinese producers, however, usually use the "two-step" process.[35] Chinese manufacturers use thinner face and back veneers that are laid up moist or wet (in a "wet" process) to prevent splitting or breaking prior to being pressed. Smaller logs are usually utilized to manufacture veneer for the plywood core and the quality of veneer is typically lower. The Chinese product is typically manufactured utilizing more labor and less automation, particularly for repairing defects, preparing veneers, and laying up veneer sheets for pressing.

DOMESTIC LIKE PRODUCT ISSUES

No issues with respect to domestic like product have been raised in these investigations. The petitioners propose defining a single domestic like product, co-extensive with the scope of these investigations.[36] AAHP and Chinese respondents raised no objections regarding petitioners' proposed domestic like product definition in these preliminary phase investigations, but reserved the right to comment further during any final phase investigations.[37] Petitioners propose defining the domestic industry as all U.S. producers of hardwood plywood as defined in the scope.[38] AAHP and Chinese respondents made no comment regarding the domestic industry definition.

[35] Conference transcript, p. 128 (Simon).

[36] Petitioners' postconference brief, p. 4.

[37] AAHP respondents' postconference brief, p. 7 and Chinese respondents' postconference brief, pp. 1-2.

[38] Petitioners' postconference brief, p. 5.

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

Hardwood plywood is used in a variety of mostly indoor applications, particularly home remodeling applications such as kitchen cabinets, fixtures, underlayment, and furniture in recreational vehicles, manufactured homes, and commercial buildings. Domestic producers supply approximately one-fifth of the U.S. market with a few domestic firms accounting for the large majority of U.S. production of hardwood plywood.[1] Imports supply most of the U.S. market, with two-fifths coming from China alone, and two-fifths from other countries including Canada, Indonesia, and Russia.

Hardwood plywood is made from a variety of different wood species, in a variety of thicknesses, and in a variety of different grades (i.e., AA, A, B, C, D, and E). Grades A and B are used in visually important areas, while lower grades are often used as shelves and in the backs of cabinets. U.S.-produced hardwood plywood commonly consists of softwood cores and hardwood face veneers (particularly maple), B/C grades, with a face veneer of 0.5mm or more and an overall thickness of 16mm or more. Imported hardwood plywood commonly consists of hardwood cores and hardwood face veneers (particularly birch or tropical), B/C/D/Other grades, with a face veneer of less than 0.4mm and an overall thickness of less than 6.5mm.

Apparent U.S. consumption of hardwood plywood increased by 15.0 percent during 2013-15 from 3.0 billion to 3.5 billion square feet.[2]

CHANNELS OF DISTRIBUTION

U.S. producers and importers from China sold hardwood plywood mainly to distributors (table II-1). Since 2013, importers of hardwood plywood from nonsubject country Canada have been sold increasingly to end users, and importers of hardwood plywood from other countries were generally sold directly to end users.

[1] The six petitioners' estimated share of U.S.-produced hardwood plywood was around 90 percent during the 2013-15 period (Petition, p. 3).

[2] Apparent U.S. consumption was 7.3 percent higher in January-September 2016 than in January-September 2015.

Table II-1
Hardwood plywood: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2013-15, January-September 2015, and January-September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Share of commercial U.S. shipments (percent)				
U.S. producers: Distributors	84.2	83.4	82.9	82.6	82.5
End users	15.8	16.6	17.1	17.4	17.5
U.S. importers: China: Distributors	82.2	80.8	81.2	81.2	73.6
End users	17.8	19.2	18.8	18.8	26.4
U.S. importers: Canada: Distributors	***	***	***	***	***
End users	***	***	***	***	***
U.S. importers: All other sources: Distributors	37.2	35.7	35.0	34.8	35.0
End users	62.8	64.3	64.9	65.2	65.0

Source: Compiled from data submitted in response to Commission questionnaires.

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling hardwood plywood to all U.S. regions (table II-2). For U.S. producers, 5.5 percent of sales were within 100 miles of their production facility, 60.5 percent were between 101 and 1,000 miles, and 34.0 percent were over 1,000 miles. Importers sold 35.7 percent within 100 miles of their U.S. point of shipment, 56.4 percent between 101 and 1,000 miles, and 7.9 percent over 1,000 miles.

Table II-2
Hardwood plywood: Geographic market areas in the U.S. served by U.S. producers and importers

Region	U.S. producers	Subject importers
	Number of firms	
Northeast	8	34
Midwest	7	39
Southeast	7	41
Central Southwest	7	36
Mountain	6	25
Pacific Coast	6	34
Other[1]	4	10
All regions (except Other)	6	21

[1] All other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of hardwood plywood have the ability to respond to changes in demand with moderate to large changes in the quantity of shipments of U.S.-produced hardwood plywood to the U.S. market. The main contributing factor to this degree of responsiveness of supply is the availability of unused capacity. Factors mitigating responsiveness of supply include limited ability to shift shipments from alternate markets, low inventory levels, and the inability to produce alternate products.

Industry capacity

Domestic capacity remained steady at 1.4 billion square feet during 2013-15.[3] Domestic capacity utilization decreased from 51.1 percent to 49.7 percent from 2013 to 2015 as a result of a decline in U.S. domestic production in 2015. This relatively low level of capacity utilization suggests that U.S. producers may have a substantial ability to increase production of hardwood plywood in response to an increase in prices.[4]

Alternative markets

U.S. producers' exports, as a share of total shipments, decreased from 3.0 percent in 2013 to 1.8 percent in 2015.[5] These low levels of exports indicate that U.S. producers generally have a limited ability to shift shipments between the U.S. market and other markets in response to price changes.

Inventory levels

U.S. producers' inventories as a ratio to total shipments slightly increased from 5.0 percent to 5.8 percent during 2013-15. These inventory levels suggest that U.S. producers may have a limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

---

[3] Domestic capacity was approximately 1.1 billion square feet in both January-September 2015 and January-September 2016.

[4] Petitioners stated that they could quickly meet any demand requirements from the marketplace. Conference transcript, p. 91 (Thompson).

[5] Export shipments as a share of total shipments were 1.7 percent during January-September 2015, and 1.3 percent during January-September 2016.

Production alternatives

Two of nine responding U.S. producers stated that they could switch production from hardwood plywood to other products. U.S. producer *** reported having a limited ability to produce *** on the same equipment and U.S. producer *** reported being able to produce *** with some limitations.

Supply constraints

No responding producer reported it had refused, declined, or was unable to supply hardwood plywood during the period examined although one producer *** commented that it will not lower its price "to meet dumped and subsidized Chinese plywood prices." Petitioners stated that there are no constraints for inputs to increase the capacity at their production facilities.[6]

Subject imports from China[7]

Based on available information, Chinese producers have the ability to respond to changes in demand with moderate to large changes in the quantity of shipments of hardwood plywood to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and existence of alternate markets.

Industry capacity

Chinese producers' capacity to produce hardwood plywood increased from 1.7 billion square feet to 1.8 billion square feet during 2013-15. Capacity utilization fluctuated between 74.2 and 78.6 percent during 2013-15. This suggests that Chinese producers may have some ability to increase production of product in response to an increase in prices.

Alternative markets

Shipments from Chinese producers to markets other than the United States, as a percentage of total shipments, decreased from 14.3 percent in 2013 to 12.3 percent in 2015. As a share of total shipments, shipments from Chinese producers to the home market declined by 7.9 percent from 2013 to 2015, while exports to the U.S. increased by 10.0 percent in the same period. Shipments to non-U.S. markets indicate that Chinese producers may have some ability to shift shipments between other markets and the U.S. market in response to price changes.

---

[6] Conference transcript, p. 92 (Kaplan).

[7] For data on the number of responding foreign firms and their share of U.S. imports from China, please refer to Part I, "Summary Data and Data Sources."

Inventory levels

Relative to total shipments, responding Chinese firms' inventories increased from 5.9 percent in 2013 to 6.6 percent in 2015. These inventory levels suggest that Chinese firms may have a limited ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

All of the responding Chinese producers stated that they are unable to switch production from hardwood plywood to other products.

Nonsubject imports

Nonsubject imports remained steady at 53.0 percent of total U.S. imports in 2013-15. Canada, Brazil, Ecuador, Indonesia, Malaysia, Russia, Taiwan, and Vietnam were among the largest nonsubject sources for U.S. imports of hardwood plywood.

U.S. demand

Based on available information, the overall demand for hardwood plywood is likely to experience moderate changes in response to changes in price. The main contributing factors are the somewhat limited range of substitute products and the moderate cost share of hardwood plywood in most of its end-use products.

End uses

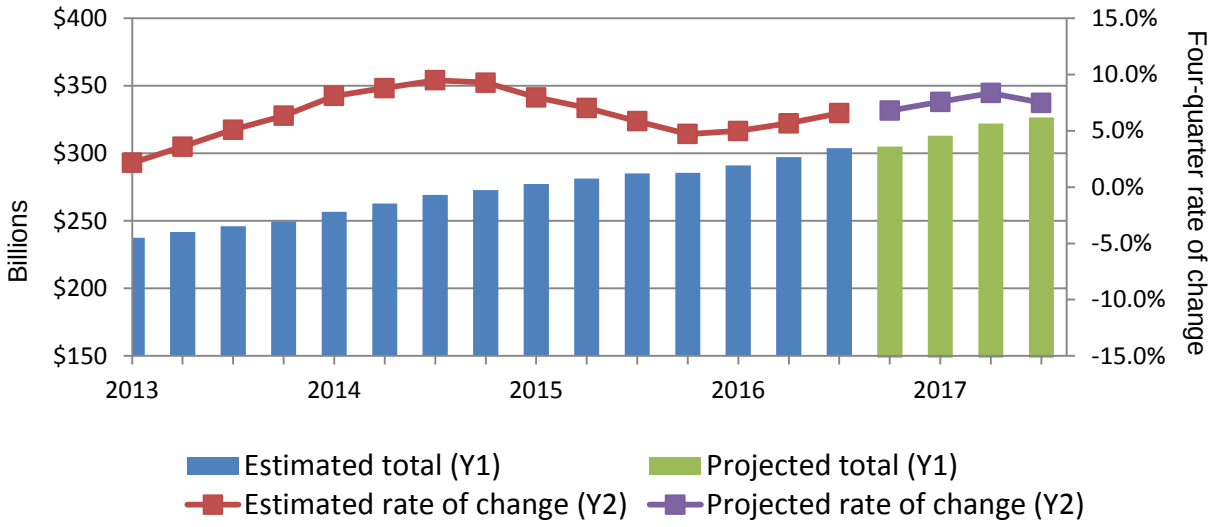
U.S. demand for hardwood plywood depends on the demand for U.S.-produced downstream products in which it is used, including kitchen cabinets, fixtures, underlayment, recreational vehicles (RVs), manufactured homes, and furniture. Cabinets are a particularly important end use with a large number of both producers and importers reporting using hardwood plywood for this purpose.[8]

According to petitioners, demand for hardwood plywood is closely tied to new home construction and remodeling activity. The value of homeowner improvements increased by 17 percent between the first quarter of 2013 and the first quarter of 2015 and increased by 5 percent through the first quarter of 2016 (figure II-1). Remodeling activity is expected to increase by 7.5 percent between the third quarter of 2016 and the third quarter of 2017. New housing starts increased by 18 percent between January 2013 and September 2016 (figure II-2). Shipments of RVs and new manufactured homes have also increased from January 2013 to September 2016 (figure II-3)

[8] Parts III and IV of this report provide details on the intended end use of U.S. commercial shipments for U.S producers and importers respectively.

Figure II-1

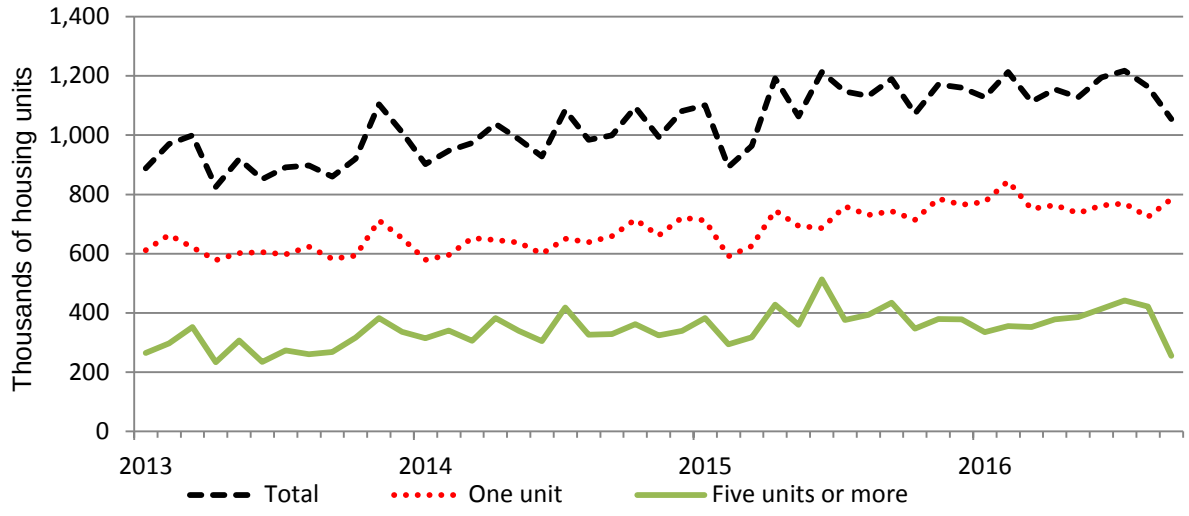
Homeowner improvements: Leading indicator of remodeling activity, four-quarter moving total and rate of change, estimated and projected: quarterly, January 2013-September 2017



Source: Joint Center for Housing Studies of Harvard University.
http://www.jchs.harvard.edu/media/lira/ (retrieved November 28, 2016).

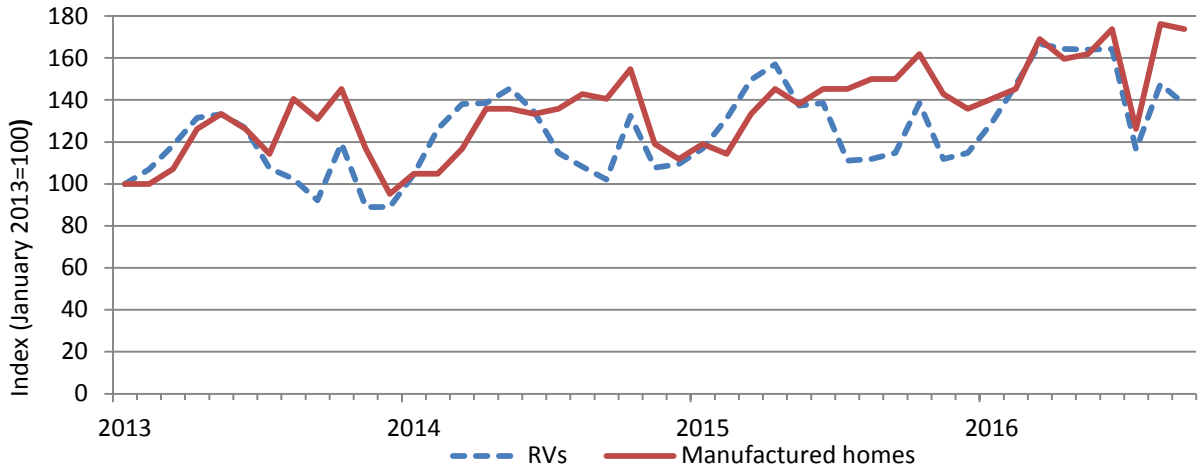
Figure II-2

Housing: Seasonally adjusted new housing starts, monthly, January 2013- September 2016



Source: U.S. Census Bureau. https://www.census.gov/construction/nrc/historical_data/index.html (retrieved November 28, 2016).

Figure II-3
Manufactured homes and RVs: Index of monthly shipments, January 2013-September 2016



Source: Recreational Vehicle Industry Association and U.S. Census Bureau. http://www.rvia.org and http://www.census.gov/data/tables/time-series/econ/mhs/shipments.html (retrieved December 20, 2016).

Demand trends

Most U.S. producers (6 of 8) and a plurality of importers (24 of 56) reported an increase in U.S. demand for hardwood plywood since 2013 (table II-3). Producers reporting increased U.S. demand cited improvements in housing starts, non-housing construction, and increases in spending on repair and remodeling activities. *** reported a decrease in demand and indicated that a strong U.S. dollar had allowed Canadian hardwood producers to be more competitive. Importers reporting increased U.S. demand also cited improvements in the national economy and the overall housing market. Importers reporting a decrease in demand cited higher market competition and currency fluctuations as a major factor in the decline of sales.

Table II-3
Hardwood plywood: Firms' responses regarding U.S. demand and demand outside the United States

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	6	0	1	1
Importers	24	11	9	12
Demand outside the United States				
U.S. producers	2	0	0	3
Importers	3	13	6	7

Source: Compiled from data submitted in response to Commission questionnaires.

Business cycles

Most producers (6 of 8) and many importers (29 of 62) indicated that the market was subject to business cycles or distinctive conditions of competition, including a strong seasonal component in the demand for hardwood plywood. Specifically, four producers noted that demand follows a seasonal path, building up from January to a mid-year high in June, slowing down in the summer, and then trailing off in the last quarter. Two producers also noted that hardwood plywood demand follows new home construction and home remodeling. Importers also reported similar seasonal trends as well as cyclical trends such as general economic conditions. Nine importers reported that the Chinese New Year has a significant effect on their operations. These importers reported that they purchase more to build up inventory in the month or two prior to the Chinese New Year in order to have enough supply to meet the needs of U.S. customers during these few weeks of production shutdown.

*** producers reported changes in conditions of competition; specifically, *** reported that dumped and subsidized Chinese hardwood plywood and furniture had reduced demand for domestic hardwood plywood. U.S. producer *** reported that it was facing increased Canadian competition due to a strong U.S. dollar. Importers reported changes including the improved global economy, declining ocean freight rates from China, higher input costs, and currency fluctuations. One importer reported reduced demand in Puerto Rico because of the island's debt crisis.

Substitute products

Most responding U.S. producers (5 of 6) and importers (45 of 59) reported that there were no substitutes for hardwood plywood. Firms that reported substitutes listed laminate, melamine, particleboard, printed veneer, softwood plywood, and MDF.

Cost share

Hardwood plywood typically accounts for a small to moderate share of the cost of most end-use products in which it is used, although underlayment is a notable exception. U.S. producers and importers reported a wide range of cost shares depending on the end use:

- Underlayment/ Subfloor/ Flooring (80-90 percent)
- Cabinets (10-50 percent)
- RVs (2-45 percent)
- Fixtures (10-35 percent)
- Furniture (10-25 percent)

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported hardwood plywood depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available

information, staff believes that there is a moderate degree of substitutability between U.S. produced hardwood plywood and that imported from China.

Standard grading

All eight producers reported using a standardized grading system with the highest and clearest grades of hardwood plywood carrying an "AA" or "A" face grade, followed by "B," "C," "D," and "E" grades as more knots, blemishes or other defects are detected. Half of the producers noted that the grading included the composition of core materials, but only one producer reported that it also included the thickness of the face veneer. Over half of the importers (39 of 62) also reported using a standardized grading system for their hardwood plywood products. A majority of importers stated that this grading included the composition of core materials (30 of 41 importers) and thickness of face veneer (27 of 41 importers). Two importers mentioned the glue type and the moisture content as other factors in the grading process. Nearly all producers and importers reported that higher grades are more expensive than lower grade products. A substantial majority of importers (40 of 48) also reported that the availability of grades from China has not changed since 2013.

Lead times

U.S. producers reported that the vast majority of their hardwood plywood shipments (98.9 percent) were produced-to-order in 2015, with an average lead time of 7 to 14 days. Importers reported that most (80.3 percent) of their shipments were from U.S. inventories with average lead times of 2 to 65 days. Most of the remaining import sales were produced to order, and had an average lead time of 60 to 180 days.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations were asked to identify the main purchasing factors their firm considered in their purchasing decisions for hardwood plywood.[9] The major purchasing factors identified by most firms include price (reported by 9 firms) and quality (reported by 10 firms). In addition, firms reported availability (3 firms), reliability (2 firms), and one firm each reported innovation and competency, domestic product, type of plywood, a balanced supply chain, and service.

Comparison of U.S.-produced and imported hardwood plywood

As shown in table II-4, most U.S. producers (5 of 8) rated domestic hardwood plywood and imported Chinese product as "always" interchangeable. Most importers (29 of 56) reported

[9] This information is compiled from responses by purchasers identified by Petitioners or other U.S. producers to the lost sales lost revenue allegations. See Part V for additional information.

that domestic product and Chinese product are only "sometimes" interchangeable, and 16 importers reported that they were "never" interchangeable.[10]

Table II-4
Hardwood plywood: Interchangeability between products produced in the United States and in other countries, by country pairs

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting			
	A	F	S	N	A	F	S	N
U.S. vs. China	5	2	1	0	5	6	29	16
U.S. vs. Canada	7	1	0	0	9	13	2	1
U.S. vs. Other	3	3	1	0	1	5	25	8
China. vs. Canada	5	2	0	0	1	5	11	3
China. vs. Other	3	0	1	0	0	5	21	3
Canada. vs. Other	3	0	1	0	0	3	10	2

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

In comparing domestic hardwood plywood to nonsubject Canadian imports, nearly all responding producers indicated that they are "always" interchangeable and most importers reported that they are "frequently" interchangeable. Most responding producers reported that imports from other countries were "always" or "frequently" interchangeable with domestic product, while a majority of importers reported that they were "sometimes" interchangeable.

In comparing Chinese and Canadian imports, a majority of producers indicated that they were "always" interchangeable but the majority of importers indicated that they were "sometimes" interchangeable. Producers also indicated that imports from China were "always" or "frequently" interchangeable with imports from other nonsubject countries, but importers generally found Chinese imports to be only "sometimes" or "never" interchangeable with imports from other countries.

Importers reported that interchangeability between various sources including domestic and Chinese hardwood plywood is limited by the following: thinner face veneers, different core compositions, lower quality veneers, higher moisture content, different glue lines and different panel thicknesses than U.S. hardwood plywood. Some importers noted that Chinese product has thinner veneer faces than domestic product and cannot be suitably used for sanding and finishing needs. They also reported that the core of the Chinese panels makes it difficult to use interchangeably with domestically-produced hardwood plywood.[11] Petitioners, however, state that hardwood plywood is sold on the basis of grade, type of core, overall thickness of the panel, and face species.[12]

[10] The Commission collected extensive data on the physical characteristics, grades, and end uses of domestically produced and imported hardwood plywood. See Parts III and IV of this report.

[11] Conference transcript, p. 129 (Simon)

[12] Conference transcript, p. 56 (Kaplan)

In the kitchen cabinet sector, respondents assert that there is little or no overlap between domestic and Chinese hardwood plywood. Respondents state that they use Chinese plywood exclusively for cabinet interiors and drawer parts, while domestic hardwood plywood is used for all exterior surfaces such as cabinet doors, finished ends, finished backs, and cabinet interiors that need to match the exterior.[13] Petitioners argue that the Chinese product has moved up in terms of grade and is now competitive in the high end of the market, pointing to the growth in imports of Chinese ready-to-assemble cabinets that include high quality faces.[14]

Some importers reported that there are specific characteristics of Chinese hardwood plywood that domestically-produced hardwood plywood does not have. *** reported needing the face veneer to be composed of softwood so that it is compatible with natural or other available lighting in a truck interior as well as being better able to withstand general wear and stress. Another importer *** noted that domestic hardwood plywood has thicker faces and cores with higher thickness tolerance, which makes it an inadequate fit for laminating applications. *** reported that no domestic product is similar to its underlayment panels which are marked with a fastener pattern on the face. *** stated that the domestic industry exited the underlayment market more than 30 years ago and that its imported product is only designed to be covered up by vinyl flooring.

Importers also reported differences between hardwood plywood from other nonsubject countries and U.S.-produced hardwood plywood that limit interchangeability. One importer reported that Indonesian hardwood plywood uses tropical species that are more stable and can make thinner hardwood plywood than that produced in the United States. Other importers reported that Russian veneer grades and size do not match U.S. products, and one importer reported that products from Russia and South America typically are made from different core materials which can affect stability of the panels and its end use. Another importer reported that "South American products are generally perceived to be well built structurally, but are always lacking in consistent face quality."

In addition, producers and importers were asked to assess how often differences other than price were significant in sales of hardwood plywood from the United States, China, Canada or other countries. Most producers (5 of 8) reported that differences other than price between U.S. and Chinese produced hardwood plywood were "sometimes" significant (table II-5).[15]Over half of importers (30 of 55) found that differences other than price between U.S. and Chinese hardwood plywood were "always" a significant factor in their sales. Most producers (5 of 7) stated that differences other than price were "sometimes" or "never" significant for sales of hardwood plywood from other countries when compared to domestic product, but most importers reported that differences other than price were "always" or "frequently" significant.

---

[13] Conference transcript, p. 137 (Weaver).

[14] Conference transcript, p. 45 (Howlett).

[15] *** reported that lead-time and ability to customize sometimes win out over price.

Table II-5

Hardwood plywood: Perceived importance of factors other than price between product produced in the United States and in other countries, by country pairs

Country pair	U.S. producers				U.S. importers			
	A	F	S	N	A	F	S	N
United States vs. China	1	1	5	1	30	12	9	4
United States vs. Canada	0	1	2	5	5	2	11	7
United States vs. Other	0	1	5	1	13	8	10	1
China vs. Canada	0	1	4	1	10	3	5	1
China vs. Other	0	1	2	1	9	6	11	1
Canada vs. Other	0	1	2	1	6	5	2	2

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Importers reported a number of differences other than price between U.S. and Chinese hardwood plywood. Firms noted differences in availability, sizes, veneer thickness, core composition, sanding capability, reliability of grading and veneer quality. Several importers noted that end users would not use Chinese hardwood plywood in the same application as domestic product. Importers also stated that Chinese producers were often more flexible in meeting criteria for panel thickness, dimensions, and minimum order volume requirements. *** reported that thin lower grade plywood is not available domestically, and must be imported from China. *** stated that unlike U.S. product, imports from China were of consistent quality and lacked defects in veneer. *** reported that there was a decline in monthly rejects/return of their products after they switched to Chinese hardwood plywood. *** reported timely deliveries from Chinese producers while *** reported longer lead times and more logistical challenges in dealing with Chinese firms.

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the alleged subsidies and dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of nine firms that accounted for nearly all U.S. production of hardwood plywood during 2015.[1]

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to 21 firms based on information contained in the petitions. Nine firms provided useable data on their production operations,[2] two firms (Pittsburgh Forest Products Co. and Wisconsin Veneer & Plywood, Inc.) responded that they are not U.S. producers of hardwood plywood,[3] and ten firms did not respond to the Commission's questionnaire.[4] Staff believes that the nine firms that provided useable data in response to the Commission's questionnaire represent nearly all U.S. production of hardwood plywood.

Table III-1 lists the nine responding U.S. producers of hardwood plywood, their production locations, positions on the petitions, and shares of reported 2015 production.

[1] According to data published by the Hardwood Plywood & Veneer Association, the responding nine U.S. producers accounted for *** percent of U.S. production of hardwood plywood in 2015. Petitions, exh. I-3.

[2] ***, which accounted for *** percent of reported U.S. production in 2015, provided the requested trade data but did not provide usable employment or financial data.

[3] Pittsburgh Forest Products Co. has not produced hardwood plywood since early 2011. *Hardwood Plywood from China, Investigation Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013, table III-1. The firm, which currently imports hardwood plywood from ***, provided a useable response to the Commission's importer questionnaire in these investigations.

[4] Although Veneer One, Inc. did not provide a response to the Commission's U.S. producer questionnaire, it replied to the Commission's request for information by noting the following: "***."

Table III-1
Hardwood plywood: U.S. producers, their position on the petitions, location of production, and share of reported production, 2015

Firm	Position on petitions	Production location(s)	Share of reported production (percent)
Columbia Forest Products	Support[1]	Chatham, VA Trumann, AR Old Fort, NC Klamath Falls, OR Craigsville, WV Boardman, OR	***
Commonwealth Plywood	Support[1]	Whitehall, NY	***
Darlington Veneer	***	Darlington, SC	***
Flexible Materials	***	Jeffersonville, IN	***
Mt. Baker Products	***	Bellingham, WA	***
Murphy Plywood	Support[1]	Eugene, OR	***
Roseburg Forest Products	Support[1]	Dillard, OR	***
States Industries	Support[1]	Eugene, OR	***
Timber Products	Support[1]	Medford, OR Grants Pass, OR Corinth, MS White City, OR	***
Total			100.0

[1] Petitioner member of the Coalition for Fair Trade of Hardwood Plywood.

Source: Compiled from data submitted in response to Commission questionnaires.

Related and/or affiliated firms

Table III-2 presents information on U.S. producers' ownership and related and/or affiliated firms. Although two U.S. producers (***) are related to firms in ***, none of the responding U.S. producers reported relationships with foreign producers in China. In addition, ***. In addition, as discussed in greater detail below, ***. No party provided any comments regarding related parties.

Table III-2
Hardwood plywood: U.S. producers' ownership, related and/or affiliated firms, since January 2013

* * * * * * *

Changes in operations

Several responding domestic producers reported changes in their operations related to the production of hardwood plywood since January 1, 2013. Details concerning the changes reported are presented in table III-3.

Table III-3
Hardwood plywood: U.S. producers' reported changes in operations, since January 1, 2013

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. The reported data show that the domestic producers' aggregate capacity was relatively stable from 2013 to 2015. Production increased from 2013 to 2014, but declined in 2015. Domestic production declined in 2015 to a level lower than that reported in 2013. Capacity utilization increased from 51.1 percent in 2013 to 52.2 percent in 2014 but fell to 49.7 percent in 2015. Capacity, production, and capacity utilization were lower during the first nine months of 2016 than in the comparable period of 2015.

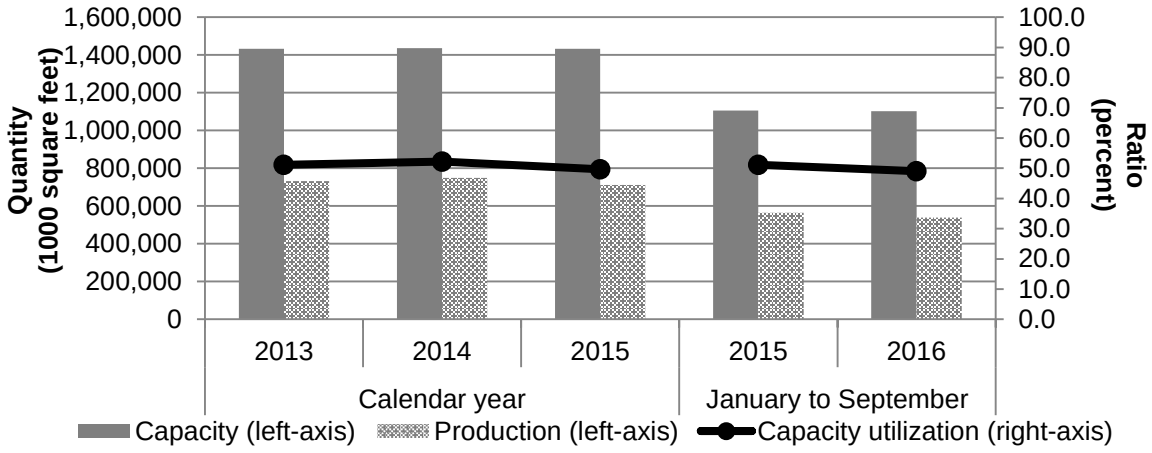
Table III-4
Hardwood plywood: U.S. producers' capacity, production, and capacity utilization, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015[1]	2016
	Capacity (1,000 square feet)				
Columbia Forest Products	***	***	***	***	***
Commonwealth Plywood	***	***	***	***	***
Darlington Veneer	***	***	***	***	***
Flexible Materials	***	***	***	***	***
Mt. Baker Products	***	***	***	***	***
Murphy Plywood	***	***	***	***	***
Roseburg Forest Products	***	***	***	***	***
States Industries	***	***	***	***	***
Timber Products	***	***	***	***	***
Total capacity	1,432,050	1,435,359	1,433,299	1,104,962	1,103,052
	Production (1,000 square feet)				
Columbia Forest Products	***	***	***	***	***
Commonwealth Plywood	***	***	***	***	***
Darlington Veneer	***	***	***	***	***
Flexible Materials	***	***	***	***	***
Mt. Baker Products	***	***	***	***	***
Murphy Plywood	***	***	***	***	***
Roseburg Forest Products	***	***	***	***	***
States Industries	***	***	***	***	***
Timber Products	***	***	***	***	***
Total production	732,401	749,688	712,684	564,795	540,541
	Capacity utilization (percent)				
Columbia Forest Products	***	***	***	***	***
Commonwealth Plywood	***	***	***	***	***
Darlington Veneer	***	***	***	***	***
Flexible Materials	***	***	***	***	***
Mt. Baker Products	***	***	***	***	***
Murphy Plywood	***	***	***	***	***
Roseburg Forest Products	***	***	***	***	***
States Industries	***	***	***	***	***
Timber Products	***	***	***	***	***
Average capacity utilization	51.1	52.2	49.7	51.1	49.0

[1] ***. *** producer questionnaire response, section IV-16. The Commission's 2013 report on hardwood plywood observed that "several producers noted seasonal trends such as high, demand from January-June or July, and slower demand in summer and in November and December." *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013, p. II-9.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure III-1
Hardwood plywood: U.S. producers' capacity, production, and capacity utilization, 2013-15, January to September 2015, and January to September 2016



Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

Presented in table III-5 are data concerning domestic firms' overall facility capacity and production. These data show that *** of domestic firms' U.S. production is in-scope hardwood plywood, whereas *** of production is out-of-scope softwood plywood. *** reported the production of out-of-scope softwood plywood on the same equipment as hardwood plywood.[5] In addition, two responding firms (***) indicated that they were able to switch production from hardwood plywood to other products using the same equipment and labor, despite the fact that neither firm reported production or capacity data for these other products. ***, which accounted for *** percent of domestic production in 2015, reported that ***. ***, which accounted for *** percent of total domestic production of hardwood plywood in 2015, reported that it also produces limited amounts of ***.

[5] ***.

Table III-5
Hardwood plywood: U.S. producers' overall capacity and production on the same equipment as subject production, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
Overall capacity	1,472,625	1,477,212	1,476,335	1,135,920	1,136,548
Production:					
Hardwood plywood	732,401	749,688	712,684	564,795	540,541
Softwood plywood (out-of-scope)	***	***	***	***	***
Total production on same machinery	***	***	***	***	***
	Ratios and shares (percent)				
Overall capacity utilization	***	***	***	***	***
Share of production:					
Hardwood plywood	***	***	***	***	***
Softwood plywood	***	***	***	***	***
Total production on same Machinery	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Producers were asked to define their operating parameters in terms of hours per week and weeks per year and were asked to describe the constraints that set the limits on their production capacity. Their responses are presented in table III-6.

Table III-6
Hardwood plywood: U.S. producers' constraints to capacity and production

* * * * * * *

U.S. PRODUCERS' SHIPMENTS

U.S. producers' U.S. shipments and export shipments

Table III-7 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. commercial shipments accounted for the vast majority (91.6 percent in 2015) of U.S. producers' total shipments. *** reported internal consumption of hardwood plywood and *** reported transfers of hardwood plywood to related firms, which in the aggregate accounted for only 6.6 percent of domestic producers' total shipments in 2015. Domestic producers' exports, which accounted for only 1.8 percent of total shipments in 2015, were reported by *** and were largely destined for Canada.

Reported shipment data show that U.S. producers' U.S. shipments of hardwood plywood in terms of quantity increased from 2013 to 2014, but declined in 2015 to a level below that reported in 2013. U.S. shipments were lower in the first nine months of 2016 than in the comparable period of 2015. Unit values of U.S. shipments varied within only a few cents per square foot, rising from a low of $1.21 per square foot in 2013 to a high of $1.24 per square foot in 2015, before returning to $1.22 per square foot in January-September 2016.

Table III-7
Hardwood plywood: U.S. producers' U.S. shipments, export shipments, and total shipments, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
Commercial U.S. shipments	653,764	673,893	653,256	521,672	494,340
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
Subtotal, U.S. shipments	707,919	726,931	700,634	559,480	535,097
Export shipments	21,605	17,420	12,824	9,887	7,294
Total shipments	729,524	744,351	713,458	569,367	542,391
	Value (1,000 dollars)				
Commercial U.S. shipments	793,816	832,199	808,228	646,753	604,424
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
Subtotal, U.S. shipments	857,267	896,053	865,306	692,716	651,327
Export shipments	26,180	21,760	15,751	12,338	9,167
Total shipments	883,447	917,813	881,057	705,054	660,494
	Unit value (dollars per square foot)				
Commercial U.S. shipments	1.21	1.23	1.24	1.24	1.22
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
Subtotal, U.S. shipments	1.21	1.23	1.24	1.24	1.22
Export shipments	1.21	1.25	1.23	1.25	1.26
Total shipments	1.21	1.23	1.23	1.24	1.22
	Share of quantity (percent)				
Commercial U.S. shipments	89.6	90.5	91.6	91.6	91.1
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
Subtotal, U.S. shipments	97.0	97.7	98.2	98.3	98.7
Export shipments	3.0	2.3	1.8	1.7	1.3
Total shipments	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
Commercial U.S. shipments	89.9	90.7	91.7	91.7	91.5
Internal consumption	***	***	***	***	***
Transfers to related firms	***	***	***	***	***
Subtotal, U.S. shipments	97.0	97.6	98.2	98.3	98.6
Export shipments	3.0	2.4	1.8	1.7	1.4
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Face veneer thickness

Table III-8 presents U.S. producers' U.S. commercial shipments, by face veneer thickness. These data show that the overwhelming majority of U.S. producers' U.S. commercial shipments of hardwood plywood since 2013 have a face veneer that is greater than or equal to 0.5 mm in thickness. Slightly greater than one-half of domestic producers' commercial U.S. shipments of hardwood plywood have a face veneer that is greater than or equal to 0.6 mm in thickness, whereas slightly less than one-half of domestic producers' commercial U.S. shipments have a face veneer that is somewhat thinner at 0.5 mm to 0.59 mm in thickness.[6] Approximately *** percent of domestic producers' commercial U.S. shipments have a face veneer that is 0.4 mm to 0.49 mm in thickness and *** percent of commercial U.S. shipments have a face veneer that is less than 0.4 mm in thickness.

[6] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported that 95.2 percent of all hardwood plywood produced from January to June 2013 had a face veneer thickness of 0.6 mm or greater. *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204*, USITC Publication 4434, November 2013, table D-3. Petitioners note that in recent years, U.S. producers have made limited increases in the quantities of thin-faced veneers that they produce. Petitioners also note that that U.S. producers ***. Petitioners' postconference brief, Exhibit 1, p. 8.

Table III-8
Hardwood plywood: U.S. producers' commercial U.S. shipments by face veneer thickness, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' commercial U.S. shipments.--					
Face veneer: >= 0.6 mm	347,393[1]	366,300	353,102	277,707	261,895
Face veneer: 0.5 mm to 0.59 mm	293,105[2]	293,760	287,021	233,213	223,596
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	***	***	***	***	***
Total commercial U.S. shipments	653,764	673,893	653,256	521,672	494,340
	Share of quantity (percent)				
U.S. producers' commercial U.S. shipments.--					
Face veneer: >= 0.6 mm	53.1[1]	54.4	54.1	53.2	53.0
Face veneer: 0.5 mm to 0.59 mm	44.8[2]	43.6	43.9	44.7	45.2
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

[1] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported producing 330.7 million square feet of hardwood plywood with a veneer thickness of 0.6 mm or above from January to June 2013. This amounted to 95.2 percent of all reported hardwood plywood production during that period. *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204*, USITC Publication 4434, November 2013, table D-3.
[2] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported producing 16.7 million square feet of hardwood plywood with a veneer thickness between 0.5 mm and 0.59 mm from January to June 2013. This amounted to 4.8 percent of all reported hardwood plywood production during that period. Ibid.
[3] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Overall plywood thickness

Table III-9 presents U.S. producers' U.S. commercial shipments, by overall plywood thickness. These data show that slightly greater than one-half of domestic producers' commercial U.S. shipments of hardwood plywood have an overall plywood thickness of 16 mm to 19.99 mm, a range which includes 3/4-inch plywood. Approximately one-fifth of domestic producers' commercial U.S. shipments of hardwood plywood have an overall plywood thickness of 6.5 mm to 15.99 mm, a range which includes 3/8-inch, 1/2-inch, and 5/8-inch plywood, and slightly more than one-fifth of domestic producers' commercial U.S. shipments of hardwood plywood have an overall plywood thickness of less than 6.5 mm, a range which includes 1/4-inch and thinner plywood. Less than two percent of domestic producers' commercial U.S. shipments have an overall plywood thickness of 20 mm or greater, which includes 7/8-inch and thicker plywood.

Table III-9
Hardwood plywood: U.S. producers' commercial U.S. shipments by overall plywood thickness, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' commercial U.S. shipments.--					
Plywood thickness: >=20.0 mm	11,127	10,402	9,223	7,513	7,321
Plywood thickness: 16 mm to 19.99 mm	367,101	381,045	366,673	294,740	273,879
Plywood thickness: 6.5 mm to 15.99 mm	125,980	131,264	131,937	104,867	100,415
Plywood thickness: <6.5 mm	149,556	151,182	145,423	114,552	112,725
Total commercial U.S. shipments	653,764	673,893	653,256	521,672	494,340
	Share of quantity (percent)				
U.S. producers' commercial U.S. shipments.--					
Plywood thickness: >=20.0 mm	1.7	1.5	1.4	1.4	1.5
Plywood thickness: 16 mm to 19.99 mm	56.2	56.5	56.1	56.5	55.4
Plywood thickness: 6.5 mm to 15.99 mm	19.3	19.5	20.2	20.1	20.3
Plywood thickness: <6.5 mm	22.9	22.4	22.3	22.0	22.8
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Core wood type

Table III-10 presents U.S. producers' U.S. commercial shipments, by core wood type. These data show that softwood is the predominant wood type that comprises the core of U.S. producers' hardwood plywood. Hardwood and other material cores each account for almost *** of U.S. producers' U.S. commercial shipments, whereas bamboo *** as core material.[7]

[7] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported producing13.7 million square feet of hardwood plywood with a hardwood core from January to June 2013. This amounted to 3.7 percent of all reported hardwood plywood production during that period. *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204*, USITC Publication 4434, November 2013, table D-1. ***. ***.

Table III-10
Hardwood plywood: U.S. producers' commercial U.S. shipments by core wood type, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' commercial U.S. shipments.--					
Core: Hardwood	***[1]	***	***	***	***
Core: Softwood	268,205[2]	283,087	271,216	214,297	195,609
Core: Bamboo	***	***	***	***	***
Core: Other	***	***	***	***	***
Total commercial U.S. shipments	653,764	673,893	653,256	521,672	494,340
	Share of quantity (percent)				
U.S. producers' commercial U.S. shipments.--					
Core: Hardwood	***[1]	***	***	***	***
Core: Softwood	41.0[2]	42.0	41.5	41.1	39.6
Core: Bamboo	***	***	***	***	***
Core: Other	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

[1] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported producing 13.7 million square feet of hardwood plywood with a hardwood core from January to June 2013. This amounted to 3.7 percent of all reported hardwood plywood production during that period. *Hardwood Plywood from China, Inv. Nos. 701-TA-490 and 731-TA-1204*, USITC Publication 4434, November 2013, table D-1.
[2] In the Commission's 2013 investigations of hardwood plywood from China, U.S. producers reported producing 255.5 million square feet of hardwood plywood with a softwood core from January to June 2013. This amounted to 68.4 percent of all reported hardwood plywood production during that period. Ibid.

Source: Compiled from data submitted in response to Commission questionnaires.

Face veneer wood type

Table III-11 presents U.S. producers' U.S. commercial shipments, by face veneer wood type. These data show that almost all U.S. producers' commercial U.S. shipments of hardwood plywood have a hardwood face veneer.

Table III-11
Hardwood plywood: U.S. producers' commercial U.S. shipments by face veneer wood type, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' commercial U.S. shipments.--					
Face veneer: Hardwood	648,678	668,879	647,845	517,819	487,605
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	653,764	673,893	653,256	521,672	494,340
	Share of quantity (percent)				
U.S. producers' commercial U.S. shipments.--					
Face veneer: Hardwood	99.2	99.3	99.2	99.3	98.6
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Grade and face veneer wood species

Table III-12 presents U.S. producers' U.S. commercial shipments, by grade (per ANSI/HPVA HP-1-2016) and face veneer wood species in 2015. These data show that virtually all combinations of different grades and face veneer wood species were commercially shipped in the United States by the domestic producers.[8] Approximately two-thirds of U.S. producers' commercial U.S. shipments of hardwood plywood during 2015 were grade B (31.9 percent) or grade C (33.1 percent). Also, approximately two-thirds of U.S. producers' commercial U.S. shipments of hardwood plywood during 2015 had a maple face veneer (46.9 percent) or birch face veneer (20.7 percent).

[8] U.S. producers reported *** during 2015.

Table III-12
Hardwood plywood: U.S. producers' commercial U.S. shipments by grade and face veneer wood species, 2015

Item	Grade							
	AA	A	B	C	D	E	Other	All grades
	Quantity (1,000 square feet)							
U.S. producers' commercial U.S. shipments.--								
Face veneer: Birch	***	***	***	***	***	***	***	135,212
Face veneer: Maple	***	***	***	***	***	***	***	306,150
Face veneer: Oak	***	***	***	***	***	***	***	79,408
Face veneer: Walnut	***	***	***	***	***	***	***	11,480
Face veneer: Tropical	***	***	***	***	***	***	***	7,840
Face veneer: Other	***	***	***	***	***	***	***	113,166
Face veneer: Any Species	***	92,380	208,078	216,514	48,791	***	77,548	653,256
	Share of quantity across (percent)							
U.S. producers' commercial U.S. shipments.--								
Face veneer: Birch	***	***	***	***	***	***	***	100.0
Face veneer: Maple	***	***	***	***	***	***	***	100.0
Face veneer: Oak	***	***	***	***	***	***	***	100.0
Face veneer: Walnut	***	***	***	***	***	***	***	100.0
Face veneer: Tropical	***	***	***	***	***	***	***	100.0
Face veneer: Other	***	***	***	***	***	***	***	100.0
Face veneer: Any Species	***	14.1	31.9	33.1	7.5	***	11.9	100.0
	Share of quantity down (percent)							
U.S. producers' commercial U.S. shipments.--								
Face veneer: Birch	***	***	***	***	***	***	***	20.7
Face veneer: Maple	***	***	***	***	***	***	***	46.9
Face veneer: Oak	***	***	***	***	***	***	***	12.2
Face veneer: Walnut	***	***	***	***	***	***	***	1.8
Face veneer: Tropical	***	***	***	***	***	***	***	1.2
Face veneer: Other	***	***	***	***	***	***	***	17.3
Face veneer: Any species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

End use

Table III-13 presents U.S. producers' U.S. commercial shipments, by intended end use (if known) in 2015. These data show that the largest known end use in the U.S. market of domestic producers' hardwood plywood is in the manufacture of cabinets (49.6 percent). Other reported end uses include architectural (*** percent), furniture (11.0 percent), store/retail fixtures (6.4 percent), RV/mobile homes (3.6 percent), and miscellaneous and unknown (*** percent).

Table III-13
Hardwood plywood: U.S. producers' commercial U.S. shipments by intended end use (if known), 2015

Item	Quantity (1,000 square feet)	Share of quantity (percent)
U.S. producers' commercial U.S. shipments.--		
End use: Cabinets	323,775	49.6
End use: Furniture	71,998	11.0
End use: Store/retail fixtures	41,802	6.4
End use: RV/mobile home	23,381	3.6
End use: Architectural work	***	***
End use: Miscellaneous and unknown end use	***	***
Total commercial U.S. shipments	653,256	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

As a supplemental request to the questionnaire, the Commission asked U.S. producers that reported data under the "miscellaneous and unknown" end use category to provide data concerning their U.S. commercial shipments of hardwood plywood for use as flooring underlayment. *** provided a narrative response to the Commission's request for the additional information, but none were able to provide data concerning flooring underlayment. Their narrative responses to this supplemental request follow.

*** indicated that it does not currently make hardwood plywood that is specifically designated for underlayment applications, although it noted that it has done so in the past. It added that even though its product is not specifically designated for underlayment applications, it expects that some of its hardwood plywood ends up being used as underlayment. *** stated that "While we haven't quoted underlayment specifically for some time, we could do so if pricing conditions warranted it."

*** reported that it is unable to track the end use of its plywood with much detail beyond its sales to its *** customers. It added, however, that it produces a substantial amount of thin (***") mid-grade (***) *** panels that it sells to its ***, which ends up being used in an underlayment application. *** noted that

> We used to sell a lot more of this exact panel both through the *** channel as well as the *** channel, but as similar Chinese product (including what is commonly referred to as underlayment) have been dumped into the U.S. market over the last decade, our sales of this category of product have shrunk significantly. We are not asked to quote underlayment specifically, but I am absolutely certain that many of our thin products as

described above end up used in the exact same applications as what is commonly referred to as underlayment and I am also absolutely certain that in a fairly traded market, we would sell significantly more volume of these products. Let me also be clear that we would welcome the opportunity to make these products at prices supported by real market cost inputs.

*** reported that it does not make hardwood plywood that is specifically designated for underlayment applications. However, it indicated that

> …we believe that some quantities of our grade *** domestic hardwood plywood products end up being used in underlayment applications. While we haven't specifically quoted underlayment to customers for some time, we could do so if pricing conditions warranted it.

U.S. PRODUCERS' INVENTORIES

Table III-14 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments. Aggregate data show that inventories of hardwood plywood increased from 2013 to 2014, and remained stable in 2015. Inventories were higher at the end of the third quarter of 2016 than at the comparable point in 2015. U.S. producers' inventories were equivalent to between 5.0 and 5.9 percent of U.S. producers' production, U.S. shipments, and total shipments during 2013-15, January to September 2015 and January to September 2016. At yearend 2015, the inventories held by domestic producers *** together accounted for *** percent of all U.S. producers' end-of-period inventories.

Table III-14
Hardwood plywood: U.S. producers' inventories, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' end-of-period inventories	36,418	41,955	41,376	38,369	39,171
	Ratio (percent)				
Ratio of inventories to.--					
U.S. production	5.0	5.6	5.8	5.1	5.4
U.S. shipments	5.1	5.8	5.9	5.1	5.5
Total shipments	5.0	5.6	5.8	5.1	5.4

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' imports of hardwood plywood are presented in table III-15. As the data show, ***.

Table III-15
Hardwood plywood: U.S. producers' U.S. imports, 2013-15, January to September 2015, and January to September 2016

* * * * * * *

U.S. producers' purchases of hardwood plywood imports are presented in table III-16. As the data show, ***.

Table III-16
Hardwood plywood: U.S. producers' purchases of U.S. imports, 2013-15, January to September 2015, and January to September 2016

* * * * * * *

*** indicated the reason for its purchases of imports as follows: "Wholly-owned subsidiary is an independent distributor of wood products and can purchase from other firms to supply customers' orders." *** noted that the imports it purchased were from the following countries: ***.

*** reported that the reason for its purchases of imports as follows: "***." *** indicated that the following companies were the importers: ***.

*** reported the reason for its purchases of imports as follows: "These products were procured either because of their favorable price point or because they meet specification requirements which could not be achieved by other products. Specifically, *** hardwood plywood platforms were procured due to their low cost and *** birch platforms were procured due to the unique characteristics of that product and customer requirements." *** noted that the following companies were the importers of the items it purchased: ***.

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-17 shows U.S. producers' employment-related data.[9] Combined U.S. producers' employment measured by production and related workers ("PRWs") increased overall from 2013 to 2015, but was lower during the first nine months of 2016 as compared with the first nine months of 2015. Total hours worked, hours worked per PRW, and wages paid followed this same general trend. Productivity showed overall declines during 2013 to 2015 before showing improvement in January to September 2016 relative to January to September 2015. However, hourly wages and unit labor costs showed consistent increases.

Table III-17
Hardwood plywood: U.S. producers' employment related data, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
Production and related workers (PRWs) (number)	2,300	2,399	2,391	2,291	2,168
Total hours worked (1,000 hours)	4,895	5,183	5,224	4,103	3,870
Hours worked per PRW (hours)	2,128	2,160	2,185	1,791	1,785
Wages paid ($1,000)	89,075	96,256	101,489	78,922	77,062
Hourly wages (dollars per hour)	$18.20	$18.57	$19.43(1)	$19.24	$19.91
Productivity (square feet per hour)	139.9	135.7	128.0	129.6	131.5
Unit labor costs (dollars per square feet)	$0.13	$0.14	$0.15	$0.15	$0.15

[1] ***. ***. Additionally, ***. *** producer questionnaire response, section II-2.

Source: Compiled from data submitted in response to Commission questionnaires.

***. The six petitioning U.S. producers specifically pointed out that ***. Petitioners also indicated that *** and ***. In addition, the petitioners also noted that during the fourth quarter of 2016 there have been further negative effects on employment that are not reflected in the industry's compiled employment data. In particular, ***. In addition, petitioners reported that ***.[10]

[9] One firm, ***, did not provide any employment data for these investigations.
[10] Petitioners' postconference brief, exh. 1, pp. 27-28.

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission issued importer questionnaires to 272 firms identified as possible importers of hardwood plywood, as well as to all U.S. producers of hardwood plywood.[1] Usable questionnaire responses were received from 63 companies. The import values reported in Commission questionnaire responses by these 63 firms represent 82.0 percent of U.S. imports from China and 62.1 percent of U.S. imports from other sources in 2015 as reported in the official U.S. import statistics for the primary HTS statistical reporting numbers identified by Commerce in its initiation notice minus the six HTS statistical reporting numbers identified by respondent interested parties as encompassing out-of-scope wood flooring.[2]

The quantity and value of imports presented in this section of the report are compiled from data submitted in response to Commission questionnaires, although these data may be somewhat understated. Official import statistics for the primary HTS statistical reporting numbers identified in Commerce's initiation minus the six wood flooring numbers (HTS statistical reporting numbers 4412.31.4075, 4412.31.5125, 4412.32.0565, 4412.32.2525, 4412.32.3125, and 4412.94.3105) are also presented in appendix D. The reported quantity entry data for official import statistics are in terms of volume (cubic meters), whereas quantity data requested in Commission questionnaires are in terms of area (square feet). A conversion factor of 1 cubic meter equaling 1,046 square feet has historically been used by the Commission in past proceedings and the petitioner believes this conversion factor to be reasonable;

---

[1] The Commission issued questionnaires to those firms for which valid contact information was identified in the petitions, along with additional firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), are leading importers of items imported under the following HTS statistical reporting numbers since 2013: 4412.31.0520; 4412.31.0540; 4412.31.0560; 4412.31.2510; 4412.31.2520; 4412.31.4040; 4412.31.4050; 4412.31.4060; 4412.31.4075; 4412.31.4080; 4412.31.5125; 4412.31.5135; 4412.31.5155; 4412.31.5165; 4412.31.5175; 4412.31.6000; 4412.31.9100; 4412.32.0520; 4412.32.0540; 4412.32.0565; 4412.32.0570; 4412.32.2510; 4412.32.2525; 4412.32.2530; 4412.32.3125; 4412.32.3135; 4412.32.3155; 4412.32.3165; 4412.32.3175; 4412.32.3185; 4412.32.5600; 4412.94.1030; 4412.94.1050; 4412.94.3105; 4412.94.3111; 4412.94.3121; 4412.94.3141; 4412.94.3160; 4412.94.3161; 4412.94.3171; 4412.94.3175; 4412.94.4100; 4412.99.0600; 4412.99.1020; 4412.99.1030; 4412.99.1040; 4412.99.3110; 4412.99.3120; 4412.99.3130; 4412.99.3140; 4412.99.3150; 4412.99.3160; 4412.99.3170; 4412.99.4100; 4412.99.5115; and 4412.99.5710 (the primary HTS statistical reporting numbers originally identified in the petitions). Commerce's initiation of the investigations included two additional HTS statistical reporting numbers in the primary category not previously identified by the petitioners as primary HTS numbers: 4412.10.0500 and 4412.94.3131.

[2] The following six HTS statistical reporting numbers were not used in the calculation of importer questionnaire coverage because the entries under these numbers are believe to include a large amount of merchandise other than hardwood plywood (e.g., multilayered wood flooring): 4412.31.4075, 4412.31.5125, 4412.32.0565, 4412.32.2525, 4412.32.3125, and 4412.94.3105.

however, the petitioner notes that there may be some variance in the conversion value, which is based on one cubic meter of wood that is approximately 0.405 inches in thickness (or 10.3 mm), depending on the number of plies and the ply thickness of the core material as well as the ply thickness of the front and rear veneers.[3] The official import statistics also present particular challenges since the HTS statistical reporting numbers under which hardwood plywood enters the United States also contain items that are unrelated to hardwood plywood. In fact, according to ***, the primary HTS listing minus the six wood flooring numbers contain 15 percent "dutied" imports, and these official import data may, therefore, be somewhat overstated. In addition, the six wood flooring HTS statistical reporting numbers contain approximately 85 percent "dutied" imports.[4]

Table IV-1 lists all responding U.S. importers of hardwood plywood from China and other sources, their locations, and their shares of U.S. imports, in 2015.

[3] Petitioners' postconference brief, exh. 1, p. 1.

[4] Imports entering under the six wood flooring numbers may be subject to antidumping and/or countervailing duties resulting from the Commission's investigations of multilayered wood flooring in 2011. *Multilayered Wood Flooring from China, Inv. Nos. 701-TA-476 and 731-TA-1179 (Final)*, USITC Publication 4278, November 2011.

Table IV-1
Hardwood plywood: U.S. importers, their headquarters, and share of total imports by source, 2015

Firm	Headquarters	Share of imports by source (percent)				
		China	Canada	All other sources	Nonsubject sources	All sources
APEC	Creve Coeur, MO	***	***	***	***	***
APP	Solvang, CA	***	***	***	***	***
Argo	Mandeville, LA	***	***	***	***	***
Best Interiors	Maspeth, NY	***	***	***	***	***
Blue Linx	Atlanta, GA	***	***	***	***	***
Bois Aise	Lévis, QC	***	***	***	***	***
Boise	Boise, ID	***	***	***	***	***
Bridgewell	Portland, OR	***	***	***	***	***
Britt	Miami, FL	***	***	***	***	***
CANUSA	Vancouver, BC	***	***	***	***	***
CCR Leasing	Channelview, TX	***	***	***	***	***
Clarke	Jackson, MS	***	***	***	***	***
CNG	Purchase, NY	***	***	***	***	***
Concannon	Portland, OR	***	***	***	***	***
Darlington Veneer[1]	Darlington, SC	***	***	***	***	***
DVK	Buena Park, CA	***	***	***	***	***
Edensaw	Port Townsend, WA	***	***	***	***	***
El Cerrillo	Ponce, PR	***	***	***	***	***
Elberta	Bainbridge, GA	***	***	***	***	***
Evergreen	Mercer Island, WA	***	***	***	***	***
FEA	Los Angeles, CA	***	***	***	***	***
Ferrmax	Cabo Rojo, PR	***	***	***	***	***
Genesis	Elkhart, IN	***	***	***	***	***
Green Forest	Inverness, FL	***	***	***	***	***
Hampton	Portland, OR	***	***	***	***	***
Holland	Houston, TX	***	***	***	***	***
HSP	Renton, WA	***	***	***	***	***
Ihlo	Center, TX	***	***	***	***	***
IKE	Beaverton, OR	***	***	***	***	***
InterGlobal	Eugene, OR	***	***	***	***	***

Table continued on next page.

Table IV-1–Continued
Hardwood plywood: U.S. importers, their headquarters, and share of total imports by source, 2015

Firm	Headquarters	Share of imports by source (percent)				
		China	Canada	All other sources	Nonsubject sources	All sources
Laminate	Tiffin, OH	***	***	***	***	***
Liberty	Carlsbad, CA	***	***	***	***	***
M & G	Port Jefferson, NY	***	***	***	***	***
Marine Lumber	Tualatin, OR	***	***	***	***	***
Martec	Elizabeth, NJ	***	***	***	***	***
Martinez	San Juan, PR	***	***	***	***	***
Masco	Middlefield, OH	***	***	***	***	***
McCorry	Hong Kong	***	***	***	***	***
Medallion	Lake Oswego, OR	***	***	***	***	***
Mid Continent	Eagan, MN	***	***	***	***	***
MJB	Irving, TX	***	***	***	***	***
Moreland	Sarasota, FL	***	***	***	***	***
Morgan	Morgantown, PA	***	***	***	***	***
Northwest	Tacoma, WA	***	***	***	***	***
Patriot	Greensboro, NC	***	***	***	***	***
Paxton	Renton, WA	***	***	***	***	***
PDC	Houston, TX	***	***	***	***	***
Pittsburgh	McMurray, PA	***	***	***	***	***
Proply	Brampton, ON	***	***	***	***	***
Rain	Arcadia, CA	***	***	***	***	***
Red Tide	Lake Oswego, OR	***	***	***	***	***
Richmond	Glen Allen, VA	***	***	***	***	***
Russin	Montgomery, NY	***	***	***	***	***
Shelter	Portland, OR	***	***	***	***	***
SWS	San Antonio, TX	***	***	***	***	***
Taraca	San Francisco, CA	***	***	***	***	***
Timber Products	Springfield, OR	***	***	***	***	***
Transindo	Walnut, CA	***	***	***	***	***
Tumac	Portland, OR	***	***	***	***	***
Tyr	Portland, OR	***	***	***	***	***
US Ply	Miami Lakes, FL	***	***	***	***	***
Weekes	St. Paul, MN	***	***	***	***	***
Wholesale	Hollywood, FL	***	***	***	***	***
Total		100.0	100.0	100.0	100.0	100.0

[1] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTS

U.S. imports from subject and nonsubject countries

Table IV-2 and figure IV-1 present data for U.S. imports of hardwood plywood. In terms of both quantity and value, subject imports of hardwood plywood from China increased from 2013 to 2015, and were higher in the first nine months of 2016 than in the comparable 2015 period. As a share of the quantity of total imports, subject imports from China increased from 46.6 percent in 2013 to 49.6 percent in 2014, but fell to 47.0 percent in 2015. The share held by subject imports from China was higher in January-September 2016 at 50.4 percent than in the comparable 2015 period at 45.6 percent. The average unit values of subject imports from China, which were higher than those reported for imports from nonsubject countries, remained at $0.41 to $0.42 per square foot throughout all periods.

U.S. imports from all nonsubject sources combined declined from 2013 to 2014, before increasing in 2015 to a level higher than that reported in 2013. U.S. imports from nonsubject countries were lower in the first nine months of 2016 than in the comparable 2015 period. The average unit values of all nonsubject imports ranged from a high of $0.32 per square foot in 2013 to $0.27 per square foot in January-September 2016. According to questionnaire responses, Brazil, Ecuador, Indonesia, Malaysia, Russia, Taiwan, and Vietnam were the largest nonsubject sources for U.S. imports of hardwood plywood. Other reported nonsubject sources for U.S. imports of hardwood plywood include Belgium, Bolivia, Canada, Chile, France, Guyana, Hungary, India, Italy, Japan, Latvia, New Zealand, Paraguay, Peru, Spain, and Thailand.

Table IV-2
Hardwood plywood: U.S. imports, by source, 2013-15, January to September 2015, and January to September 2016

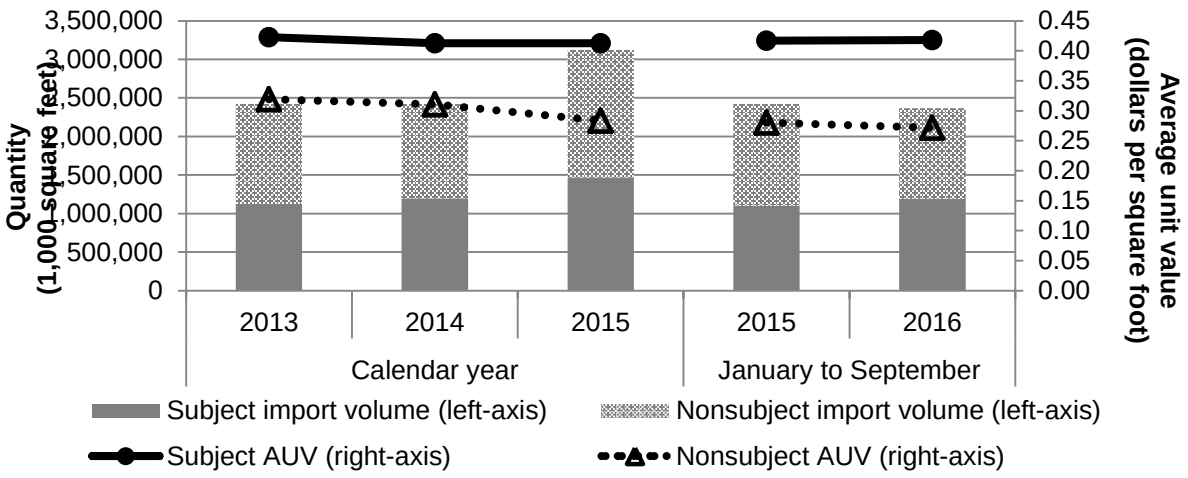
Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. imports from.--China	1,127,863	1,200,027	1,469,889	1,104,555	1,196,235
Nonsubject sources	1,293,505	1,221,816	1,656,488	1,317,316	1,175,607
All sources	2,421,368	2,421,843	3,126,377	2,421,871	2,371,842
	Value (1,000 dollars)				
U.S. imports from.--China	476,852	494,129	606,946	461,037	499,301
Nonsubject sources	412,670	379,864	469,304	368,923	319,584
All sources	889,522	873,993	1,076,250	829,960	818,885
	Unit value (dollars per square foot)				
U.S. imports from.--China	0.42	0.41	0.41	0.42	0.42
Nonsubject sources[1]	0.32	0.31	0.28	0.28	0.27
All sources	0.37	0.36	0.34	0.34	0.35
	Share of quantity (percent)				
U.S. imports from.--China	46.6	49.6	47.0	45.6	50.4
Nonsubject sources	53.4	50.4	53.0	54.4	49.6
All sources	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--China	53.6	56.5	56.4	55.5	61.0
Nonsubject sources	46.4	43.5	43.6	44.5	39.0
All sources	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production (percent)				
U.S. imports from.--China	154.0	160.1	206.2	195.6	221.3
Nonsubject sources	176.6	163.0	232.4	233.2	217.5
All sources	330.6	323.0	438.7	428.8	438.8

[1] ***.

Note.—Coverage for imports of hardwood plywood from nonsubject sources is higher for countries more likely to supply tropical face veneers, including Brazil, Ecuador, Indonesia, and Malaysia, and lower for countries more likely to supply non-tropical face veneers, including Canada and Russia.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-1
Hardwood plywood: U.S. import volumes and prices, 2013-15, January to September 2015, and January to September 2016



Source: Compiled from data submitted in response to Commission questionnaires.

Negligible imports

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[5] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[6]

Table IV-3 presents imports of hardwood plywood by source as a share of total imports. According to importer questionnaire responses received in these preliminary phase investigations, U.S. imports of hardwood plywood from China accounted for 50.8 percent of total reported U.S. imports of hardwood plywood by quantity from October 2015 to September 2016. Based on official Commerce statistics, the quantity of U.S. imports of hardwood plywood

[5] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

[6] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

from China accounted for 57.2 percent of total U.S. imports of hardwood plywood from November 2015 to October 2016.

Table IV-3
Hardwood plywood: U.S. imports, by source, October 2015—September 2016 and November 2015—October 2016

Source	November 2015 through October 2016				October 2015 to September 2016			
	Official import statistics				Questionnaire data			
	U.S. imports (1,000 dollars)	Share of value of U.S. imports (percent)	U.S. imports (est. 1,000 square feet)	Share of quantity of U.S. imports (percent)	U.S. imports (1,000 dollars)	Share of reported value of U.S. imports (percent)	U.S. imports (1,000 square feet)	Share of reported quantity of U.S. imports (percent)
U.S. imports from.--								
China	727,650	49.9	1,615,802	57.2	645,210	60.6	1,561,569	50.8
Nonsubject Sources	729,397	50.1	1,209,479	42.8	419,965	39.4	1,514,779	49.2
All sources	1,457,047	100.0	2,825,282	100.0	1,065,175	100.0	3,076,348	100.0

Source: Compiled from data submitted in response to Commission questionnaires, and official U.S. imports statistics using HTS statistical reporting numbers 4412.31.0520, 4412.31.0540, 4412.31.0560, 4412.31.2510, 4412.31.2520, 4412.31.4040, 4412.31.4050, 4412.31.4060, 4412.31.4080, 4412.31.5135, 4412.31.5155, 4412.31.5165, 4412.31.5175, 4412.31.6000, 4412.31.9100, 4412.32.0520, 4412.32.0540, 4412.32.0570, 4412.32.2510, 4412.32.2530, 4412.32.3135, 4412.32.3155, 4412.32.3165, 4412.32.3175, 4412.32.3185, 4412.32.5600, 4412.94.1030, 4412.94.1050, 4412.94.3121, 4412.94.3141, 4412.94.3160, 4412.94.3161, 4412.94.3171, 4412.94.3175, 4412.94.4100, 4412.99.0600, 4412.99.1020, 4412.99.1030, 4412.99.1040, 4412.99.3110, 4412.99.3120, 4412.99.3130, 4412.99.3140, 4412.99.3150, 4412.99.3160, 4412.99.3170, 4412.99.4100, 4412.99.5115, and 4412.99.5710, accessed December 16, 2016.

Ratio of subject imports to U.S. production

The ratio of subject imports to U.S. production increased from 2013 to 2015 and was higher in the first nine months of 2016 than in the comparable 2015 period (table IV-2). As a share of total U.S. production, U.S. imports from China ranged from a low of 154.0 percent in 2013 to a high of 221.3 percent in January-September 2016.

U.S. COMMERCIAL SHIPMENTS OF IMPORTS

Face veneer thickness

Table IV-4 presents U.S. importers' U.S. commercial shipments, by face veneer thickness. These data show that hardwood plywood from China and from other nonsubject countries have face veneer thicknesses in all categories ranging from less than 0.4 mm in thickness to greater than or equal to 0.6 mm in thickness. However, the overwhelming majority of U.S. commercial shipments of U.S. imports from China since 2013 have a face veneer that is less than 0.4 mm in thickness. Relatively minor amounts of U.S. commercial shipments of U.S. imports from China have face veneers that are thicker. Slightly more than one-half of U.S. commercial shipments of U.S. imports from nonsubject countries have a face veneer that is less

than 0.4 mm in thickness, whereas most of the remaining share of nonsubject country material is comprised of plywood with a thicker face veneer measuring 0.6 mm or more. Approximately ten percent of commercial U.S. shipments of U.S. imports from nonsubject countries have a face veneer that falls in the mid-range of 0.4 mm to 0.59 mm in thickness.

Table IV-4
Hardwood plywood: U.S. importers' commercial U.S. shipments by face veneer thickness, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. importers: China.-- Face veneer: >= 0.6 mm	2,126	7,611	9,641	7,838	4,690
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	1,026,979	1,120,137	1,237,109	942,737	1,064,855
Total commercial U.S. shipments	1,070,896	1,171,477	1,302,110	989,498	1,124,674
	Share of quantity (percent)				
U.S. importers: China.-- Face veneer: >= 0.6 mm	0.2	0.6	0.7	0.8	0.4
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	95.9	95.6	95.0	95.3	94.7
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: Nonsubject sources.-- Face veneer: >= 0.6 mm	484,579	458,445	566,865	436,950	439,890
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	614,209	744,714	727,369	577,102	605,672
Total commercial U.S. shipments	1,198,628	1,310,220	1,430,964	1,114,272	1,193,537
	Share of quantity (percent)				
U.S. importers: Nonsubject sources.-- Face veneer: >= 0.6 mm	40.4	35.0	39.6	39.2	36.9
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	51.2	56.8	50.8	51.8	50.7
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: All sources.-- Face veneer: >= 0.6 mm	486,705	466,056	576,506	444,788	444,580
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49mm	***	***	***	***	***
Face veneer: <0.4 mm	1,641,188	1,864,851	1,964,478	1,519,839	1,670,527
Total commercial U.S. shipments	2,269,524	2,481,697	2,733,074	2,103,770	2,318,211
	Share of quantity (percent)				
U.S. importers: All sources.-- Face veneer: >= 0.6 mm	21.4	18.8	21.1	21.1	19.2
Face veneer: 0.5 mm to 0.59 mm	***	***	***	***	***
Face veneer: 0.4 mm to 0.49 mm	***	***	***	***	***
Face veneer: <0.4 mm	72.3	75.1	71.9	72.2	72.1
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Overall plywood thickness

Table IV-5 presents U.S. importers' U.S. commercial shipments, by overall plywood thickness. These data show that hardwood plywood from China and from other nonsubject countries are sold in the United States in all categories of overall plywood thickness ranging from less than 6.5 mm in thickness to greater than or equal to 20.0 mm in thickness. Slightly more than one-half of U.S. commercial shipments of U.S. imports from China have an overall plywood thickness of less than 6.5 mm, a range which includes 1/4-inch and thinner plywood, whereas the majority of the remaining half have an overall plywood thickness of 6.5 mm to 19.99 mm, a range which includes 3/8-inch, 1/2-inch, 5/8-inch, and 3/4-inch plywood. Lesser amounts of U.S. commercial shipments of U.S. imports from China have an overall plywood thickness of 20.0 mm or greater, which includes 7/8-inch and thicker plywood. The overwhelming majority (84.5 percent in 2015) of U.S. commercial shipments of U.S. imports from nonsubject countries have an overall plywood thickness of less than 6.5 mm, a range which includes 1/4-inch and thinner plywood, with most of the remaining amount having an overall plywood thickness of 6.5 mm to 19.99 mm, a range which includes 3/8-inch, 1/2-inch, 5/8-inch, and 3/4-inch plywood. As was the case with the imports from China, lesser amounts of U.S. commercial shipments of U.S. imports from nonsubject countries have an overall plywood thickness of 20.0 mm or greater, which includes 7/8-inch and thicker plywood.

Table IV-5
Hardwood plywood: U.S. importers' commercial U.S. shipments by overall plywood thickness, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. importers: China.-- Plywood thickness: >=20 mm	2,011	3,120	5,337	3,994	4,481
Plywood thickness: 16 mm to 19.99 mm	251,866	289,623	332,646	257,172	327,481
Plywood thickness: 6.5 mm to 15.99 mm	205,773	230,468	257,070	196,690	221,207
Plywood thickness: <6.5 mm	611,245	648,265	707,057	531,642	571,506
Total commercial U.S. shipments	1,070,895	1,171,476	1,302,110	989,498	1,124,675
	Share of quantity (percent)				
U.S. importers: China.-- Plywood thickness: >=20 mm	0.2	0.3	0.4	0.4	0.4
Plywood thickness: 16 mm to 19.99 mm	23.5	24.7	25.5	26.0	29.1
Plywood thickness: 6.5 mm to 15.99 mm	19.2	19.7	19.7	19.9	19.7
Plywood thickness: <6.5 mm	57.1	55.3	54.3	53.7	50.8
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: Nonsubject sources.-- Plywood thickness: >=20 mm	5,982	6,322	7,071	5,207	8,182
Plywood thickness: 16 mm to 19.99 mm	54,615	51,530	56,760	42,735	52,995
Plywood thickness: 6.5 mm to 15.99 mm	119,072	142,574	158,129	120,774	137,174
Plywood thickness: <6.5 mm	1,018,959	1,109,794	1,209,004	945,556	995,185
Total commercial U.S. shipments	1,198,628	1,310,220	1,430,964	1,114,272	1,193,536
	Share of quantity (percent)				
U.S. importers: Nonsubject sources.-- Plywood thickness: >=20 mm	0.5	0.5	0.5	0.5	0.7
Plywood thickness: 16 mm to 19.99 mm	4.6	3.9	4.0	3.8	4.4
Plywood thickness: 6.5 mm to 15.99 mm	9.9	10.9	11.1	10.8	11.5
Plywood thickness: <6.5 mm	85.0	84.7	84.5	84.9	83.4
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: All sources.-- Plywood thickness: >=20 mm	7,993	9,442	12,408	9,201	12,663
Plywood thickness: 16 mm to 19.99 mm	306,481	341,153	389,406	299,907	380,476
Plywood thickness: 6.5 mm to 15.99 mm	324,845	373,042	415,199	317,464	358,381
Plywood thickness: <6.5 mm	1,630,204	1,758,059	1,916,061	1,477,198	1,566,691
Total commercial U.S. shipments	2,269,523	2,481,696	2,733,074	2,103,770	2,318,211
	Share of quantity (percent)				
U.S. importers: All sources.-- Plywood thickness: >=20 mm	0.4	0.4	0.5	0.4	0.5
Plywood thickness: 16 mm to 19.99 mm	13.5	13.7	14.2	14.3	16.4
Plywood thickness: 6.5 mm to 15.99 mm	14.3	15.0	15.2	15.1	15.5
Plywood thickness: <6.5 mm	71.8	70.8	70.1	70.2	67.6
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Core wood type

Table IV-6 presents U.S. importers' U.S. commercial shipments, by core wood type. These data show that hardwood is the predominant wood type that comprises the core of U.S. importers' hardwood plywood. Softwood and other material cores together account for *** percent of U.S. importers' U.S. commercial shipments, whereas bamboo *** as core material.

Table IV-6
Hardwood plywood: U.S. importers' commercial U.S. shipments by core wood type, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. importers: China.-- Core: Hardwood	1,041,859	1,130,786	1,248,890	951,044	1,084,162
Core: Softwood	***	***	***	***	***
Core: Bamboo	***	***	***	***	***
Core: Other	25,681	33,870	43,654	33,261	33,937
Total commercial U.S. shipments	1,070,896	1,171,477	1,302,111	989,499	1,124,675
	Share of quantity (percent)				
U.S. importers: China.-- Core: Hardwood	97.3	96.5	95.9	96.1	96.4
Core: Softwood	***	***	***	***	***
Core: Bamboo	***	***	***	***	***
Core: Other	2.4	2.9	3.4	3.4	3.0
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: Nonsubject sources.-- Core: Hardwood	1,171,590	1,289,542	1,413,305	1,101,503	1,175,642
Core: Softwood	9,271	8,380	8,147	5,826	8,296
Core: Bamboo	0	0	0	0	0
Core: Other	17,767	12,298	9,511	6,943	9,599
Total commercial U.S. shipments	1,198,628	1,310,220	1,430,963	1,114,272	1,193,537
	Share of quantity (percent)				
U.S. importers: Nonsubject sources.-- Core: Hardwood	97.7	98.4	98.8	98.9	98.5
Core: Softwood	0.8	0.6	0.6	0.5	0.7
Core: Bamboo	0.0	0.0	0.0	0.0	0.0
Core: Other	1.5	0.9	0.7	0.6	0.8
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: All sources.-- Core: Hardwood	2,213,449	2,420,328	2,662,195	2,052,547	2,259,804
Core: Softwood	***	***	***	***	***
Core: Bamboo	***	***	***	***	***
Core: Other	43,448	46,168	53,165	40,204	43,536
Total commercial U.S. shipments	2,269,524	2,481,697	2,733,074	2,103,771	2,318,212
	Share of quantity (percent)				
U.S. importers: All sources.-- Core: Hardwood	97.5	97.5	97.4	97.6	97.5
Core: Softwood	***	***	***	***	***
Core: Bamboo	***	***	***	***	***
Core: Other	1.9	1.9	1.9	1.9	1.9
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Face veneer wood type

Table IV-7 presents U.S. importers' U.S. commercial shipments, by face veneer wood type. These data show that almost all U.S. importers' commercial U.S. shipments of hardwood plywood have a hardwood face veneer.

Table IV-7
Hardwood plywood: U.S. importers' commercial U.S. shipments by face veneer wood type, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. importers: China.-- Face veneer: Hardwood	1,045,307	1,146,704	1,267,549	964,446	1,095,945
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	1,070,896	1,171,477	1,302,110	989,498	1,124,674
	Share of quantity (percent)				
U.S. importers: China.-- Face veneer: Hardwood	97.6	97.9	97.3	97.5	97.4
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: Nonsubject sources.-- Face veneer: Hardwood	1,190,150	1,300,108	1,423,482	1,109,745	1,183,322
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	1,198,628	1,310,220	1,430,963	1,114,272	1,193,537
	Share of quantity (percent)				
U.S. importers: Nonsubject sources.-- Face veneer: Hardwood	99.3	99.2	99.5	99.6	99.1
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)				
U.S. importers: All sources.-- Face veneer: Hardwood	2,235,457	2,446,812	2,691,031	2,074,191	2,279,267
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	2,269,524	2,481,697	2,733,073	2,103,770	2,318,211
	Share of quantity (percent)				
U.S. importers: All sources.-- Face veneer: Hardwood	98.5	98.6	98.5	98.6	98.3
Face veneer: Softwood	***	***	***	***	***
Face veneer: Other	***	***	***	***	***
Total commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Grade and face veneer wood species

Table IV-8 presents U.S. importers' U.S. commercial shipments, by grade (per ANSI/HPVA HP-1-2016) and face veneer wood species in 2015. These data show that virtually all combinations of different grades and face veneer wood species were commercially shipped in the United States by U.S. importers from China and nonsubject countries (with the exception of no reported U.S. shipments of imports of AA grades from China).[7] Approximately two-thirds of commercial U.S. shipments of U.S. imports from China during 2015 were grade C (29.3 percent) or grade D (29.6 percent) and almost two-thirds of commercial U.S. shipments of U.S. imports from China during 2015 had a birch face veneer (64.1 percent). About one-half of commercial U.S. shipments of U.S. imports from nonsubject countries during 2015 were grade B (29.0 percent) or grade C (*** percent) and the overwhelming majority (85.5 percent) of commercial U.S. shipments of U.S. imports from nonsubject countries during 2015 had a tropical face veneer.[8]

[7] U.S. importers from China reported ***. U.S. importers from China and other nonsubject countries reported *** during 2015.

[8] Coverage for imports of hardwood plywood from nonsubject sources is higher for countries more likely to supply tropical face veneers, including Brazil, Ecuador, Indonesia, and Malaysia, and lower for countries more likely to supply non-tropical face veneers, including Canada and Russia.

Table IV-8
Hardwood plywood: U.S. importers' commercial U.S. shipments by grade and face veneer wood species, 2015

Item	Grade							
	AA	A	B	C	D	E	Other	All grades
	Quantity (1,000 square feet)							
U.S. importers: China.-- Face veneer: Birch	***	***	***	***	***	***	***	835,012
Face veneer: Maple	***	***	***	***	***	***	***	28,710
Face veneer: Oak	***	***	***	***	***	***	***	32,631
Face veneer: Walnut	***	***	***	***	***	***	***	843
Face veneer: Tropical	***	***	***	***	***	***	***	141,645
Face veneer: Other	***	***	***	***	***	***	***	263,269
Face veneer: Any species	0	8,301	103,870	381,088	385,225	108,599	315,027	1,302,110
	Share of quantity across (percent)							
U.S. importers: China.-- Face veneer: Birch	***	***	***	***	***	***	***	100.0
Face veneer: Maple	***	***	***	***	***	***	***	100.0
Face veneer: Oak	***	***	***	***	***	***	***	100.0
Face veneer: Walnut	***	***	***	***	***	***	***	100.0
Face veneer: Tropical	***	***	***	***	***	***	***	100.0
Face veneer: Other	***	***	***	***	***	***	***	100.0
Face veneer: Any species	0.0	0.6	8.0	29.3	29.6	8.3	24.2	100.0
	Share of quantity down (percent)							
U.S. importers: China.-- Face veneer: Birch	***	***	***	***	***	***	***	64.1
Face veneer: Maple	***	***	***	***	***	***	***	2.2
Face veneer: Oak	***	***	***	***	***	***	***	2.5
Face veneer: Walnut	***	***	***	***	***	***	***	0.1
Face veneer: Tropical	***	***	***	***	***	***	***	10.9
Face veneer: Other	***	***	***	***	***	***	***	20.2
Face veneer: Any species	0.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table IV-8—Continued
Hardwood plywood: U.S. importers' commercial U.S. shipments by grade and face veneer wood species, 2015

Item	Grade							
	AA	A	B	C	D	E	Other	All grades
	Quantity (1,000 square feet)							
U.S. importers: Nonsubject sources.-- Face veneer: Birch	***	***	***	***	***	***	***	171,857
Face veneer: Maple	***	***	***	***	***	***	***	4,644
Face veneer: Oak	***	***	***	***	***	***	***	9,270
Face veneer: Walnut	***	***	***	***	***	***	***	1,207
Face veneer: Tropical	***	***	***	***	***	***	***	1,223,998
Face veneer: Other	***	***	***	***	***	***	***	19,987
Face veneer: Any species	***	***	415,558	***	***	***	527,876	1,430,963
	Share of quantity across (percent)							
U.S. importers: Nonsubject sources.-- Face veneer: Birch	***	***	***	***	***	***	***	100.0
Face veneer: Maple	***	***	***	***	***	***	***	100.0
Face veneer: Oak	***	***	***	***	***	***	***	100.0
Face veneer: Walnut	***	***	***	***	***	***	***	100.0
Face veneer: Tropical	***	***	***	***	***	***	***	100.0
Face veneer: Other	***	***	***	***	***	***	***	100.0
Face veneer: Any species	***	***	29.0	***	***	***	36.9	100.0
	Share of quantity down (percent)							
U.S. importers: Nonsubject sources.-- Face veneer: Birch	***	***	***	***	***	***	***	12.0
Face veneer: Maple	***	***	***	***	***	***	***	0.3
Face veneer: Oak	***	***	***	***	***	***	***	0.6
Face veneer: Walnut	***	***	***	***	***	***	***	0.1
Face veneer: Tropical	***	***	***	***	***	***	***	85.5
Face veneer: Other	***	***	***	***	***	***	***	1.4
Face veneer: Any species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table IV-8—Continued
Hardwood plywood: U.S. importers' commercial U.S. shipments by grade and face veneer wood species, 2015

Item	Grade							
	AA	A	B	C	D	E	Other	All grades
	Quantity (1,000 square feet)							
U.S. importers: All sources.--								
Face veneer: Birch	***	***	***	***	***	***	***	1,006,869
Face veneer: Maple	***	***	***	***	***	***	***	33,354
Face veneer: Oak	***	***	***	***	***	***	***	41,901
Face veneer: Walnut	***	***	***	***	***	***	***	2,050
Face veneer: Tropical	***	***	***	***	***	***	***	1,365,643
Face veneer: Other	***	***	***	***	***	***	***	283,256
Face veneer: Any species	***	***	519,428	***	***	***	842,903	2,733,073
	Share of quantity across (percent)							
U.S. importers: All sources.--								
Face veneer: Birch	***	***	***	***	***	***	***	100.0
Face veneer: Maple	***	***	***	***	***	***	***	100.0
Face veneer: Oak	***	***	***	***	***	***	***	100.0
Face veneer: Walnut	***	***	***	***	***	***	***	100.0
Face veneer: Tropical	***	***	***	***	***	***	***	100.0
Face veneer: Other	***	***	***	***	***	***	***	100.0
Face veneer: Any species	***	***	19.0	***	***	***	30.8	100.0
	Share of quantity down (percent)							
U.S. importers: All sources.--								
Face veneer: Birch	***	***	***	***	***	***	***	36.8
Face veneer: Maple	***	***	***	***	***	***	***	1.2
Face veneer: Oak	***	***	***	***	***	***	***	1.5
Face veneer: Walnut	***	***	***	***	***	***	***	0.1
Face veneer: Tropical	***	***	***	***	***	***	***	50.0
Face veneer: Other	***	***	***	***	***	***	***	10.4
Face veneer: Any species	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

End use

Table IV-9 presents U.S. importers' U.S. commercial shipments, by intended end use (if known) in 2015. These data show that the largest reported end use category in the U.S. market for importers' hardwood plywood from China is in the "Miscellaneous and unknown end use" category (47.1 percent), whereas the largest known end use category is for flooring underlayment (32.0 percent). Other reported end uses include the manufacture of cabinets (11.8 percent), architectural (1.1 percent), furniture (1.7 percent), store/retail fixtures (3.3 percent), and RV/mobile homes (3.1 percent). The largest known end use in the U.S. market of importers' hardwood plywood from nonsubject countries is in RV/mobile homes (66.5 percent). Other reported end uses include the manufacture of cabinets (3.9 percent), flooring underlayment (3.5 percent), architectural (3.1 percent), furniture (3.0 percent), store/retail fixtures (0.7 percent), and miscellaneous and unknown end uses (19.3 percent).

Table IV-9
Hardwood plywood: U.S. importers' commercial U.S. shipments by intended end use (if known), 2015

Item	China		Nonsubject sources		All sources	
	Quantity (1,000 square feet)	Share of quantity (percent)	Quantity (1,000 square feet)	Share of quantity (percent)	Quantity (1,000 square feet)	Share of quantity (percent)
U.S. importers' commercial U.S. shipments.--						
End use: Cabinets	153,005	11.8	56,406	3.9	209,411	7.7
End use: Furniture	21,848	1.7	43,318	3.0	65,166	2.4
End use: Store/retail fixtures	42,543	3.3	10,121	0.7	52,664	1.9
End use: RV/mobile home	40,036	3.1	951,025	66.5	991,061	36.3
End use: Architectural work	14,918	1.1	44,592	3.1	59,510	2.2
End use: Flooring underlayment	416,609	32.0	49,383	3.5	465,992	17.1
End use: Miscellaneous and unknown end use	613,152	47.1	276,118	19.3	889,270	32.5
Total commercial U.S. shipments	1,302,111	100.0	1,430,963	100.0	2,733,074	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

As a supplemental request to the questionnaire, the Commission requested U.S. importers to provide data concerning their U.S. commercial shipments of hardwood plywood for use as flooring underlayment. Most of the U.S. importers were able to provide data in response to this request and these data are included in a separate line item in table IV-9; however, some were not able to track the use of the hardwood plywood that they import. Specifically, one importer (***), which imported subject and nonsubject hardwood plywood, noted that

> In regards to our import plywood being used for as underlayment, we have no clear data. We don't import a product that is marketed specifically for underpayment. However, we sell a lot of panels to the RV manufacturing industry and many of the floors of travel trailers use imported plywood. Also we sell a portion of our products to

retail stores. Does some of that plywood get used as underlayment, likely. So to summarize we don't import a product that is marketed and designed strictly for underlayment. Although we believe that a small portion of what we import gets used as underlayment.

APPARENT U.S. CONSUMPTION AND MARKET SHARE

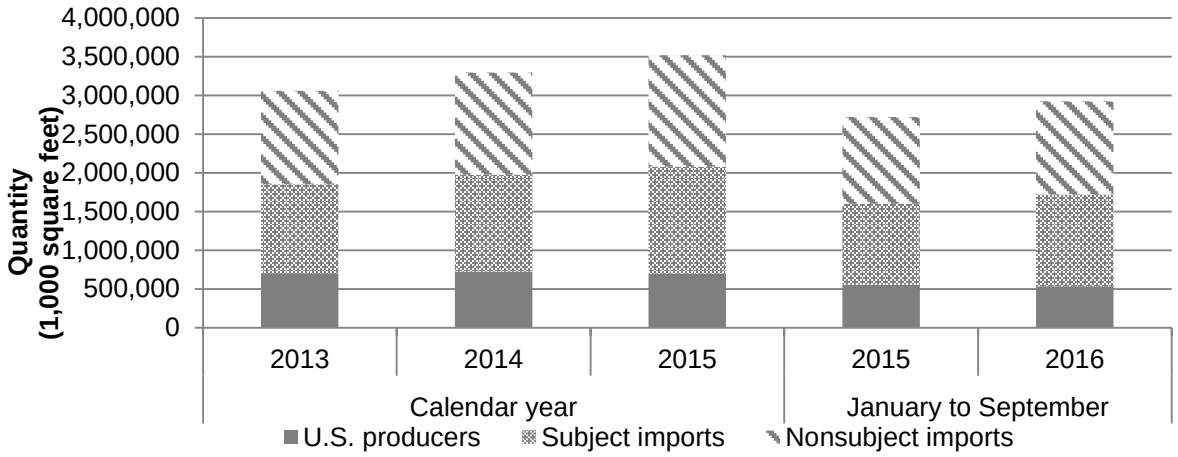
Table IV-10 and figure IV-2 present data on apparent U.S. consumption and market shares of hardwood plywood. These data show that apparent U.S. consumption in terms of quantity increased by 14.9 percent from 2013 to 2015, and was 7.3 percent higher in January-September 2016 than in the comparable period of 2015. Similar trends were reported for apparent U.S. consumption of hardwood plywood in terms of value. The U.S. producers' market share declined in terms of quantity by 3.2 percentage points from 2013 to 2015 and the market share held by the subject imports from China increased by 1.8 percentage points during the same period. The market share held by U.S. producers' in the first nine months of 2016 was 2.2 percentage points lower than that in the first nine months of 2015, whereas the market share held by subject imports from China was 2.3 percentage points higher.

Table IV-10
Hardwood plywood: Apparent U.S. consumption and market shares, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. producers' U.S. shipments	707,919	726,931	700,634	559,480	535,097
U.S. importers' U.S. shipments of imports from.--					
China	1,147,606	1,250,301	1,381,549	1,044,675	1,186,419
Nonsubject sources	1,208,671	1,317,817	1,438,227	1,119,768	1,200,255
All import sources	2,356,277	2,568,118	2,819,776	2,164,443	2,386,674
Apparent U.S. consumption	3,064,196	3,295,049	3,520,410	2,723,923	2,921,771
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	857,267	896,053	865,306	692,716	651,327
U.S. importers' U.S. shipments of imports from.--					
China	548,236	592,089	660,123	505,412	575,404
Nonsubject sources	425,874	435,861	465,727	361,907	375,534
All import sources	974,110	1,027,950	1,125,850	867,319	950,938
Apparent U.S. consumption	1,831,377	1,924,003	1,991,156	1,560,035	1,602,265
	Share of quantity (percent)				
U.S. producers' U.S. shipments	23.1	22.1	19.9	20.5	18.3
U.S. importers' U.S. shipments of imports from.--					
China	37.5	37.9	39.2	38.4	40.6
Nonsubject sources	39.4	40.0	40.9	41.1	41.1
All import sources	76.9	77.9	80.1	79.5	81.7
	Share of value (percent)				
U.S. producers' U.S. shipments	46.8	46.6	43.5	44.4	40.7
U.S. importers' U.S. shipments of imports from.--					
China	29.9	30.8	33.2	32.4	35.9
Nonsubject sources	23.3	22.7	23.4	23.2	23.4
All import sources	53.2	53.4	56.5	55.6	59.3

Source: Compiled from data submitted in response to Commission questionnaires.

Figure IV-2
Hardwood plywood: Apparent U.S. consumption and market shares, 2013-15, January to September 2015, and January to September 2016



Source: Compiled from data submitted in response to Commission questionnaires.

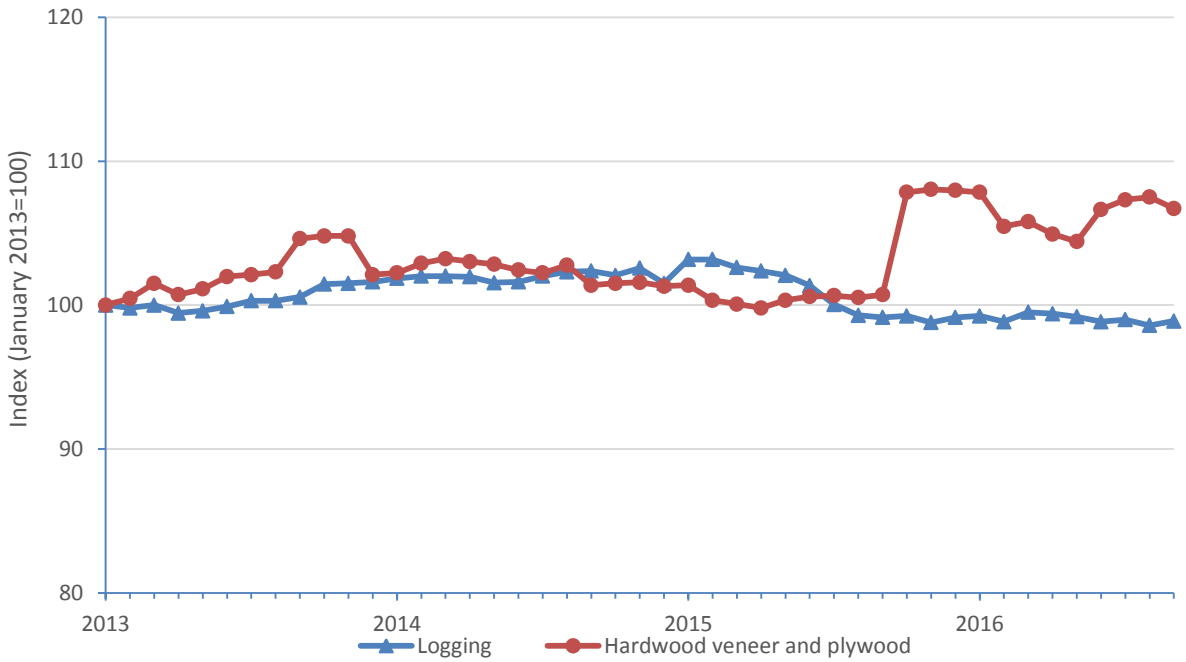
PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

Raw material costs decreased from 81.2 percent of U.S. producers' total cost of goods sold during 2013 to 80.5 percent in 2015. The major raw material costs for hardwood plywood are the hardwood veneer and the other plywoods used in its production. Logging prices decreased slightly by 1.2 percent between January 2013 and September 2016, while hardwood veneer and plywood prices increased by 6.7 percent over same period (figure V-1).

Figure V-1
Logging and hardwood veneer and plywood: Producer price indices, monthly, January 2013-September 2016



Source: Bureau of Labor Statistics, http://data.bls.gov/cgi-bin/dsrv, retrieved November 28, 2016.

U.S. inland transportation costs

All eight responding U.S. producers and 51 of 57 responding importers reported that they typically arrange transportation to their customers. U.S. producers reported inland transportation costs from 4 to 12 percent while most importers had costs of 1 to 10 percent.

PRICING PRACTICES

Pricing methods

All eight responding U.S. producers and 45 of 58 responding importers reported using transaction-by-transaction negotiations to set prices (table V-1). In addition, three U.S. producers and 15 importers used contracts, and two U.S. producers and seven importers used price lists. Eight importers reported using other pricing methods. [1] *** reported internal consumption and transfers to related parties, and *** reported that their methods vary by customer/relationships, project, and volume. Other importers reported cost plus pricing methods and long term agreements.

Table V-1
Hardwood plywood: U.S. producers' and U.S. importers' price setting methods, by number of responding firms[1]

Method	U.S. producers	Importers
Transaction-by-transaction	8	46
Contract	3	16
Set price list	2	7
Other	0	8
Total	8	58

[1]The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported selling the vast majority of their product in spot sales. Importers reported that slightly more than half of their sales were spot sales and most of the remainder were under short-term contracts (table V-2).

Table V-2
Hardwood plywood: U.S. producers' and importers' commercial shipments by type of sale, 2015

Type of sale	U.S. producers	Importers
Long-term contracts	6.7	0.6
Annual contracts	2.2	1.0
Short-term contracts	1.0	42.4
Spot sales	90.2	56.0
Total	100.0	100.0

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to Commission questionnaires.

[1] No U.S. producers reported using other sales methods to sell hardwood plywood.

Sales terms and discounts

Most U.S. producers (6 of 8 responding) typically quote prices on an f.o.b. basis.[2] Most responding importers (35 of 57 responding) typically quote prices on a delivered basis. Four U.S. producers reported total volume discounts, two reported quantity discounts (one of these also reported volume discounts), and three had no discount policy. Most importers (42 of 58 responding) reported no discount policy. Of the 15 importers reporting discounts, 6 offer total volume discounts, 5 offer quantity discounts and 11 firms offer other discounts including price matching, market pricing, rebates to selected customers, discounts given on an account by account basis, discounts negotiated, and early payment discounts.

Two producers each reported sales terms of net 30 days, 1/10 net 30, and 1/10 net 11. One producer each reported 2/10 net 30 and 1/10 net 20. Most responding importers (28 of 50) reported selling net 30 days. Other sales terms commonly reported by importers were net 60, 1/10 net 30, net 10, net 14, net 15, and net 20 days.[3]

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following hardwood plywood products shipped to unrelated U.S. customers during January 2013-September 2016.

Product 1.-- 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished

Product 2.-- 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Product 3.-- 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

---

[2] Three U.S. producers reported selling on a delivered basis (with one of these reporting both f.o.b. and delivered sales).

[3] A number of importers listed more than one sales term.

Product 4.-- 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Maple face (whether plain or rotary sliced), face Grade B or substantially equivalent, Maple back (whether plain or rotary sliced), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 5.-- 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Product 6.-- 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether plain or rotary sliced), face Grade C or substantially equivalent, back face of Birch or other, Grade 2/3 or substantially equivalent, veneer core, unfinished.

Six U.S. producers and thirty-eight importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters. Pricing data reported by these firms accounted for approximately 9.2 percent of U.S. producers' shipments of hardwood plywood and 38.2 percent of U.S. shipments of subject imports from China in 2015.

Price data for products 1-6 are presented in tables V-3 to V-8 and figures V-2 to V-7. Nonsubject country prices for imports from Canada are presented in Appendix E.

Table V-3
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013: Jan.-Mar.	***	***	0.62	14,989,011	***
Apr.-June	0.90	2,591,328	0.70	11,546,357	22.5
July-Sept.	0.92	2,629,352	0.75	10,848,966	18.4
Oct.-Dec.	0.93	2,086,120	0.72	8,662,761	22.0
2014: Jan.-Mar.	0.92	3,344,624	0.65	9,642,511	29.1
Apr.-June	0.93	2,277,616	0.64	11,561,943	31.7
July-Sept.	***	***	0.63	12,442,909	***
Oct.-Dec.	0.94	1,898,128	0.64	11,572,300	32.5
2015: Jan.-Mar.	0.95	2,582,080	0.63	13,364,599	33.3
Apr.-June	0.95	2,450,480	0.62	15,131,053	35.4
July-Sept.	0.96	2,964,024	0.61	13,526,266	36.0
Oct.-Dec.	0.93	2,278,280	0.62	12,700,145	33.9
2016: Jan.-Mar.	0.93	3,033,888	0.61	12,881,846	33.7
Apr.-June	0.91	2,479,728	0.60	12,025,638	34.3
July-Sept.	0.91	2,783,744	0.60	12,179,269	34.1

[1] Product 1: 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-4
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013: Jan.-Mar.	***	***	0.76	4,757,069	***
Apr.-June	1.17	202,400	0.86	4,174,126	26.2
July-Sept.	1.11	295,328	0.87	4,119,368	21.8
Oct.-Dec.	1.12	168,192	0.90	3,141,653	19.8
2014: Jan.-Mar.	1.17	231,232	0.79	3,916,123	32.4
Apr.-June	1.10	178,432	0.75	4,815,682	31.4
July-Sept.	1.15	183,008	0.75	5,035,673	34.7
Oct.-Dec.	1.11	154,976	0.75	4,225,432	32.9
2015: Jan.-Mar.	1.18	260,512	0.73	5,225,131	37.7
Apr.-June	1.18	169,312	0.75	4,899,308	36.3
July-Sept.	***	***	0.76	4,909,220	***
Oct.-Dec.	1.17	101,792	0.74	3,678,448	36.7
2016: Jan.-Mar.	1.12	210,880	0.73	4,975,297	35.1
Apr.-June	1.21	116,768	0.73	5,496,568	39.8
July-Sept.	1.10	214,304	0.72	5,182,251	34.8

[1] Product 2: 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 3[1] and margins of underselling/(overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013:					
Jan.-Mar.	1.05	12,446,968	0.85	23,731,233	19.6
Apr.-June	1.11	9,612,536	0.93	16,197,022	16.2
July-Sept.	1.12	12,060,688	0.98	14,063,732	12.5
Oct.-Dec.	1.14	8,623,048	0.93	13,149,629	18.3
2014:					
Jan.-Mar.	1.14	11,988,680	0.86	15,741,889	24.6
Apr.-June	1.15	9,174,200	0.83	17,902,616	28.1
July-Sept.	1.14	11,888,072	0.82	19,204,321	27.9
Oct.-Dec.	1.15	7,760,864	0.82	17,662,549	28.7
2015:					
Jan.-Mar.	1.16	11,955,437	0.83	20,293,522	28.2
Apr.-June	1.16	8,389,144	0.83	20,483,465	28.3
July-Sept.	1.15	9,318,840	0.82	20,536,076	29.4
Oct.-Dec.	1.14	7,486,128	0.79	20,004,150	31.0
2016:					
Jan.-Mar.	1.15	10,358,232	0.78	21,770,700	31.7
Apr.-June	1.14	7,133,416	0.77	21,198,068	32.6
July-Sept.	1.13	8,178,496	0.75	19,838,670	34.1

[1] Product 3: 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-6
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 4[1] and margins of underselling/ (overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013:					
Jan.-Mar.	0.66	826,048	0.45	590,528	31.7
Apr.-June	0.67	732,504	0.52	364,769	21.5
July-Sept.	0.70	770,296	***	***	***
Oct.-Dec.	0.68	624,736	***	***	***
2014:					
Jan.-Mar.	0.68	762,488	0.42	516,656	38.7
Apr.-June	0.68	771,176	0.35	1,077,808	48.9
July-Sept.	0.67	969,456	0.38	1,103,958	42.6
Oct.-Dec.	0.65	597,200	0.33	947,504	49.5
2015:					
Jan.-Mar.	0.65	848,168	***	***	***
Apr.-June	0.63	825,432	0.42	712,690	33.6
July-Sept.	0.65	784,896	0.36	711,814	45.1
Oct.-Dec.	0.62	660,520	***	***	***
2016:					
Jan.-Mar.	0.65	825,952	0.35	742,094	46.7
Apr.-June	0.63	730,176	***	***	***
July-Sept.	0.65	932,424	***	***	***

[1] Product 4: 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Maple face (whether plain or rotary sliced), face Grade B or substantially equivalent, Maple back (whether plain or rotary sliced), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-7
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 5[1] and margins of underselling/(overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013:					
Jan.-Mar.	1.31	456,288	1.01	6,091,935	22.7
Apr.-June	1.38	352,416	1.12	5,614,165	18.9
July-Sept.	1.48	390,144	1.14	5,078,384	22.8
Oct.-Dec.	1.40	242,048	1.15	4,191,087	17.7
2014:					
Jan.-Mar.	1.44	400,096	0.98	5,985,246	31.9
Apr.-June	1.45	316,640	0.96	7,568,210	34.1
July-Sept.	1.48	379,264	0.93	8,302,565	36.8
Oct.-Dec.	1.43	272,992	0.94	6,749,838	34.3
2015:					
Jan.-Mar.	1.45	382,304	0.88	8,534,748	39.6
Apr.-June	1.44	394,336	0.88	7,593,441	39.0
July-Sept.	1.45	373,888	0.87	7,800,812	39.9
Oct.-Dec.	1.41	263,200	0.83	7,628,178	41.2
2016:					
Jan.-Mar.	1.43	395,392	0.84	8,466,937	41.5
Apr.-June	1.43	371,872	0.83	9,620,641	41.9
July-Sept.	***	***	0.80	9,105,954	***

[1] Product 5: 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Source*:* Compiled from data submitted in response to Commission questionnaires.

Table V-8
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarters, January 2013-September 2016

Period	United States		China		
	Price *(per square foot)*	Quantity *(square feet)*	Price *(per square foot)*	Quantity *(square feet)*	Margin *(percent)*
2013:					
Jan.-Mar.	0.58	1,068,128	0.29	81,992,476	50.7
Apr.-June	0.59	784,776	0.31	74,980,971	47.9
July-Sept.	0.60	743,336	0.33	74,633,536	46.0
Oct.-Dec.	0.59	580,088	0.33	63,621,383	43.7
2014:					
Jan.-Mar.	0.60	699,744	0.32	64,718,634	46.5
Apr.-June	0.59	527,904	0.32	66,796,203	46.5
July-Sept.	0.60	530,816	0.32	78,007,984	47.3
Oct.-Dec.	0.58	572,672	0.31	72,799,163	45.8
2015:					
Jan.-Mar.	0.59	691,664	0.31	72,039,904	46.5
Apr.-June	0.58	1,308,896	0.32	74,964,770	45.5
July-Sept.	0.56	2,728,856	0.32	78,931,557	44.0
Oct.-Dec.	0.57	2,535,072	0.31	81,973,625	46.4
2016:					
Jan.-Mar.	***	***	0.31	81,999,315	45.3
Apr.-June	0.57	2,428,336	0.31	80,713,548	46.1
July-Sept.	***	***	0.31	87,588,647	***

[1] Product 6: 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether plain or rotary sliced), face Grade C or substantially equivalent, back face of Birch or other, Grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-2
Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2013-September 2016

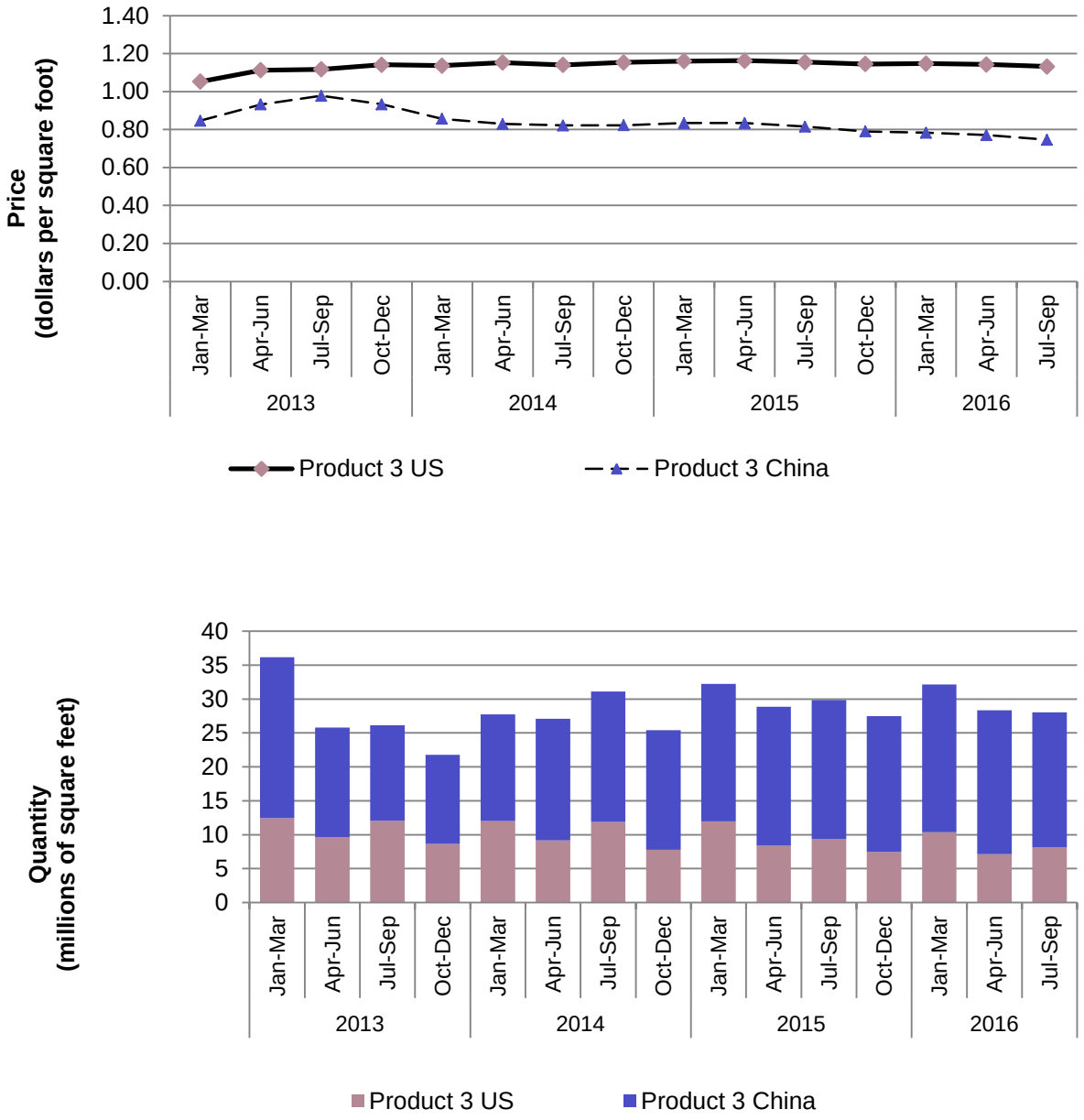
* * * * * * *

Figure V-3
Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2013-September 2016

* * * * * * *

Figure V-4

Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2013-September 2016



Product 3: 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-5

Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2013-September 2016

* * * * * * *

Figure V-6

Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 5, by quarters, January 2013-September 2016

* * * * * * *

Figure V-7

Hardwood plywood: Weighted-average prices and quantities of domestic and imported product 6, by quarters, January 2013-September 2016

* * * * * * *

Price trends

In general, prices increased/decreased during January 2013-September 2016. Table V-9 summarizes the price trends, by country and by product. As shown in the table, domestic prices increased for four pricing products, by 3.3 to 7.6 percent and decreased for the other two products, by 1.6 and 4.0 percent during January 2013-September 2016. Import prices decreased for five products, by 3.0 to 29.7 percent, and increased for one product by 5.9 percent.

Table V-9
Hardwood plywood: Summary of weighted-average f.o.b. prices for products 1-6 from the United States and China, January 2013 -September 2016

Item	Number of quarters	Low price (dollars per square foot)	High price (dollars per square foot)	Change in price over period[1] (percent)
Product 1:				
United States	15	***	0.96	***
China	15	0.60	0.75	(3.0)
Product 2:				
United States	15	***	***	***
China	15	0.72	0.90	(5.2)
Product 3:				
United States	15	1.05	1.16	7.6
China	15	0.75	0.98	(11.8)
Product 4:				
United States	15	0.62	0.70	(1.6)
China	15	***	0.52	***
Product 5:				
United States	15	1.31	1.48	***
China	15	0.80	1.15	(20.7)
Product 6:				
United States	15	***	0.60	***
China	15	0.29	0.33	5.9

[1] Percentage change from the first quarter 2013 to third quarter 2016.

Source: Compiled from data submitted in response to Commission questionnaires.

Price comparisons

As shown in table V-10, prices for hardwood plywood imported from China were below those for U.S.-produced product in all 90 instances (1,789.9 million square feet). Comparisons were available for all six pricing products in all 15 quarters for which prices were collected.

Table V-10
Hardwood plywood: Instances of underselling and the range and average of margins, January 2013-September 2016

Product	Underselling				
	Number of quarters	Quantity (square feet)	Average margin (percent)	Margin Range (percent)	
				Min	Max
Product 1	15	***	***	***	***
Product 2	15	***	***	***	***
Product 3	15	281,777,642	26.1	12.5	34.1
Product 4	15	***	***	***	***
Product 5	15	***	***	***	***
Product 6	15	***	***	***	***
Total, underselling	90	1,789,905,590	35.5	12.5	56.1

Note.—There were no instances of overselling.

Source: Compiled from data submitted in response to Commission questionnaires.

LOST SALES AND LOST REVENUE

The Commission requested U.S. producers of hardwood plywood to report instances where they experienced lost sales or revenue due to competition from imports of hardwood plywood from China since January 2013. Of the eight responding U.S. producers, six reported that they had to reduce prices and two of these reported rolling back announced price increases, and seven firms reported that they had lost sales. Four U.S. producers submitted lost sales and lost revenue allegations. The five responding U.S. producers identified 48 firms where they lost sales or revenue (36 consisting lost sales allegations, and 12 consisting of both types of allegations).

Staff contacted these purchasers to verify these allegations and received responses from 12 purchasers. Responding purchasers reported purchasing 215,592 square feet of hardwood plywood in 2015. During 2015, purchasers purchased 38.3 percent from U.S. producers, 57.1 percent from China, 2.6 percent from all other countries, and 2.0 percent from unknown sources (table V-11). Of the 12 responding purchasers, one reported decreased purchases from domestic producers, three reported increased purchases, five reported no change, and three reported fluctuating purchases.[4]

Table V-11
Hardwood plywood: Purchaser responses regarding purchasing patterns

* * * * * * *

Of the 12 responding purchasers, seven reported that, since 2013, they had purchased imported hardwood plywood from China instead of U.S.-produced product. Seven of these purchasers reported that subject import prices were lower than U.S.-produced product, and all seven of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product.[5] The reported estimated amount these firms purchased from subject imports sources rather than domestic sources was 45,047 square feet (table V-12).

Of the 12 responding purchasers, two reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China (table V-13); two reported that they did not know. The reported estimated price reduction ranged from 10 to 20 percent. In describing the price reductions, the purchaser reporting 10 percent reported that the difference in prices was so great that the price reduction did not lead to increased domestic purchases, and the purchaser reporting 20 percent reported that this occurred when the commodity market was down.

---

[4] One of the 12 responding purchasers indicated that it did not know the source of some of the hardwood plywood that it purchased.

[5] Purchaser *** reported that Chinese prices were not lower and that price was not the reason for switching to Chinese product.

Table V-12
Hardwood plywood: Purchasers' responses to shifting supply sources

* * * * * * *

Table V-13
Hardwood plywood: Purchasers' responses to U.S. producer price reductions

* * * * * * *

Responding U.S. purchasers identified various methods they use in purchasing hardwood plywood, including individual purchase orders (reported by five purchasers), relationship with quality venders, purchase from importers, purchase through a distributor, and orders priced at time of order.

In responding to the lost sales lost revenue survey, some purchasers provided additional information on purchases and the U.S. market for hardwood plywood.

* * * * * * *

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

INTRODUCTION

Eight U.S. producers (Columbia Forest Products, Commonwealth Plywood, Darlington Veneer, Flexible Materials, Murphy Plywood, Roseburg Forest Products, States Industries, and Timber Products) provided financial data on their operations on hardwood plywood.[1] These data are believed to account for the substantial majority of U.S. production of hardwood plywood in 2015.[2] Net sales consisted primarily of commercial; however, five firms reported internal consumption or related party transfers. Combined, non-commercial sales accounted for 7.4 percent of total net sales value from 2013 to September 2016. Non-commercial sales are included but not shown separately in this section of the report.[3]

OPERATIONS ON HARDWOOD PLYWOOD

Income-and-loss data for U.S. producers of hardwood plywood are presented in table VI-1, while selected financial data, by firm, are presented in table VI-2. The reported profitability of the U.S. industry declined in 2015, after remaining relatively stable between 2013 and 2014. The reported aggregate net sales quantity declined by 1.5 percent between 2013 and 2015, while the aggregate net sales value increased by 0.5 percent. Operating costs and expenses (the aggregate cost of goods sold ("COGS") and selling, general, and administrative ("SG&A") expenses, combined) increased by 2.4 percent during the same period. Gross, operating, and net income declined between 2013 and 2015 as a result of the smaller increase in revenue compared to operating costs and expenses.[4]

Net sales quantity, net sales value, and profitability were lower in January-September 2016 than in January-September 2015. The reported aggregate net sales quantity and value were lower by 4.8 and 5.5 percent, respectively. Operating costs and expenses were 4.6 percent lower in January-September 2016 than in January-September 2015. Gross,

---

[1] The producers with fiscal year ends other than December 31 are ***.

[2] *** did not provide any financial data for these investigations. Based on reported shipment data, the firm would represent approximately *** percent of total net sales quantity and *** percent of total net sales value in 2015.

[3] *** reported transfers to related firms, while *** reported internal consumption. All firms reported that non-commercial sales reflect fair market value. Such shipments generally had ***. Emails from ***, December 7, 2016, and ***, December 8, 2016 and December 12, 2016. Part III provides additional details regarding transfers to related firms and internal consumption.

[4] The U.S. industry's financial indicators showed somewhat larger changes and different directional movement from 2014 to 2015 than from 2013 to 2015. From 2014 to 2015, the reported aggregate net sales quantity and value declined by 3.9 and 3.6 percent, respectively, while operating costs and expenses declined by 2.0 percent.

operating, and net income was lower as a result of the larger reduction in revenue compared to operating costs and expenses.

Per square foot revenue improved from 2013 to 2015, but was somewhat lower in January-September 2016 than in January-September 2015.[5] On a per square foot basis, raw material costs increased from 2013 to 2015, and were lower in January-September 2016 than in January-September 2015.[6] Direct labor and other factory costs modestly increased from 2013 to 2015, and were essentially unchanged between the comparable interim periods.[7] In combination, per short ton COGS increased from 2013 to 2015, and was modestly lower in January-September 2016 than in January-September 2015. SG&A expenses modestly increased from 2013 to 2015, as well as between the comparable interim periods. [8]

The aforementioned trends in per square foot revenue and costs are reflected in declines in gross, operating, and net income from 2013 to 2015, and lower gross, operating, and net income in January-September 2016 than in January-September 2015.

As a ratio to net sales, all three components of COGS (raw materials, direct labor, and other factory costs) increased from 2013 to 2015, as well as between the comparable interim periods, by less than one percentage point, which resulted in slight increases in total COGS for the full and partial year periods. SG&A expenses increased as a ratio to net sales from 2013 to 2015, and were higher in January-September 2016 than in January-September 2015.

The aforementioned trends in COGS and SG&A expenses as ratios to net sales resulted in declines in gross, operating, and net income-to-sales from 2013 to 2015, as well as lower gross, operating, and net income-to-sales in January-September 2016 compared to January-September 2015.

---

[5] The net sales value increased by $0.02 per square foot between 2013 and 2014, was stable between 2014 and 2015, and was lower by $0.01 in January-September 2016 compared to January-September 2015.

[6] Raw material costs increased by $0.02 per square foot between 2013 and 2015, and were lower by $0.01 in January-September 2016 compared to January-September 2015.

[7] Direct labor and other factory costs each increased by $0.01 per square foot between 2013 and 2015, and were essentially unchanged in January-September 2016 compared to January-September 2015.

***. Email from ***, December 22, 2016.

[8] Some firms reported increases in SG&A expenses during the period for which data were requested, including ***. According to the firm, ***. Email from ***, December 16, 2016.

Table VI-1
Hardwood plywood: Results of operations of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Fiscal year			January-September	
	2013	2014	2015	2015	2016
Quantity (1,000 square feet)					
Total net sales	681,297	697,905	670,891	536,033	510,461
Value (1,000 dollars)					
Total net sales	821,298	856,322	825,178	660,847	624,331
Cost of goods sold-- Raw materials	591,675	613,163	597,619	480,859	455,220
Direct labor	74,705	79,153	80,641	63,244	61,299
Other factory costs	62,701	65,326	64,430	50,504	48,491
Total COGS	729,081	757,642	742,690	594,607	565,010
Gross profit or (loss)	92,217	98,680	82,488	66,240	59,321
SG&A expense	56,504	62,603	61,490	47,780	48,073
Operating income or (loss)	35,713	36,077	20,998	18,460	11,248
Other income or (expense), net	(2,535)	(1,832)	(3,135)	(1,458)	(837)
Net income or (loss)	33,178	34,245	17,863	17,002	10,411
Depreciation	9,816	14,085	14,199	11,272	11,960
Cash flow	42,994	48,330	32,062	28,274	22,371
Ratio to net sales (percent)					
Cost of goods sold-- Raw materials	72.0	71.6	72.4	72.8	72.9
Direct labor	9.1	9.2	9.8	9.6	9.8
Other factory costs	7.6	7.6	7.8	7.6	7.8
Average COGS	88.8	88.5	90.0	90.0	90.5
Gross profit or (loss)	11.2	11.5	10.0	10.0	9.5
SG&A expense	6.9	7.3	7.5	7.2	7.7
Operating income or (loss)	4.3	4.2	2.5	2.8	1.8
Net income or (loss)	4.0	4.0	2.2	2.6	1.7
Unit value (dollars per square foot)					
Total net sales	1.21	1.23	1.23	1.23	1.22
Cost of goods sold-- Raw materials	0.87	0.88	0.89	0.90	0.89
Direct labor	0.11	0.11	0.12	0.12	0.12
Other factory costs	0.09	0.09	0.10	0.09	0.09
Average COGS	1.07	1.09	1.11	1.11	1.11
Gross profit or (loss)	0.14	0.14	0.12	0.12	0.12
SG&A expense	0.08	0.09	0.09	0.09	0.09
Operating income or (loss)	0.05	0.05	0.03	0.03	0.02
Net income or (loss)	0.05	0.05	0.03	0.03	0.02
Number of firms reporting					
Operating losses	2	1	2	2	3
Net losses	2	1	3	2	3
Data	8	8	8	8	8

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Hardwood plywood: Selected results of operations of U.S. producers, by firm, 2013-15, January-September 2015, and January-September 2016

* * * * * * *

Raw material costs accounted for an average of 80.8 percent of total COGS from 2013 to September 2016, and had a notable impact on the trends in COGS during this time. Log costs comprise the large majority of raw material costs, and conference testimony indicated that in some markets these costs have increased since 2013.[9] Some U.S. producers are vertically integrated and obtain logs from related suppliers, while other firms purchase logs on a spot basis or through short or long-term contracts.[10] [11]

Certain U.S. producers reported relatively greater operating profits as a ratio to net sales compared to the average results for all firms, most notably ***. According to ***.[12]

According to ***.[13]

While the U.S. industry overall reported a decline in profitability from 2013 to 2015, *** reported operating losses throughout all or most of the period for which data were requested. According to ***.[14]

According to ***.[15]

Variance analysis

The variance analysis presented in table VI-3 is based on the data in table VI-1.[16] The analysis shows that the decline in operating income from 2013 to 2015 is primarily attributable to a higher unfavorable net cost/expense variance despite a favorable price variance (costs and expenses increased more than prices). The lower operating income in January-September 2016

---

[9] Conference transcript, pp. 81-83 (Thompson, Lynch, Howlett).

[10] Conference transcript, p. 110 (Thompson, Overgard, Lynch).

[11] *** reported some raw material purchases from related suppliers, primarily for veneer inputs. Most firms reported that such inputs were purchased at fair market value, and all firms *** reported in a manner consistent with their accounting practices in the normal course of business. ***. U.S. producers' questionnaire responses to questions III-7 and III-8.

[12] Email from ***, December 14, 2016.

[13] Email from ***, December 16, 2016.

[14] Email from ***, December 15, 2016.

[15] Email from ***, December 16, 2016.

[16] The Commission's variance analysis is calculated in three parts: sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost variance is calculated as the change in unit price or unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or unit cost. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances.

compared to January-September 2015 is primarily attributable to an unfavorable price variance, although the net cost/expense variance was also unfavorable (prices were lower while costs and expenses were higher).

Table VI-3
Hardwood plywood: Variance analysis on the operations of U.S. producers, 2013-15, and January-September 2015-16

Item	Between fiscal years			January-Sept.
	2013-15	2013-14	2014-15	2015-16
	Value ($1,000)			
Total net sales:				
Price variance	16,424	15,003	2,002	(4,990)
Volume variance	(12,544)	20,021	(33,146)	(31,526)
Total net sales variance	3,880	35,024	(31,144)	(36,516)
Cost of sales:				
Cost variance	(24,745)	(10,788)	(14,374)	1,231
Volume variance	11,136	(17,773)	29,326	28,366
Total cost variance	(13,609)	(28,561)	14,952	29,597
Gross profit variance	(9,729)	6,463	(16,192)	(6,919)
SG&A expenses:				
Expense variance	(5,849)	(4,722)	(1,310)	(2,572)
Volume variance	863	(1,377)	2,423	2,279
Total SG&A variance	(4,986)	(6,099)	1,113	(293)
Operating income variance	(14,715)	364	(15,079)	(7,212)
Summarized as:				
Price variance	16,424	15,003	2,002	(4,990)
Net cost/expense variance	(30,594)	(15,510)	(15,684)	(1,342)
Net volume variance	(545)	871	(1,396)	(881)

Note.--Unfavorable variances are shown in parenthesis; all others are favorable.

Source: Compiled from data submitted in response to Commission questionnaires.

Capital expenditures, total assets, and return on assets

The responding firms' aggregate data on capital expenditures, total assets, and return on assets ("ROA") are shown in table VI-4. All eight firms reported capital expenditure data, and no firms reported research and development ("R&D") expenses. Aggregate capital expenditures increased irregularly from 2013 to 2015, but were lower in January-September 2016 compared to January-September 2015. The majority of reported capital expenditures reflect data reported by ***. According to ***, reported capital expenditures reflect projects meant to sustain current production.[17] According to ***, reported capital expenditures reflect

[17] U.S. producers' questionnaire response of ***, question III-13.

the upgrade and/or replacement of aging and obsolescent dryer equipment.[18] The total assets utilized in the production, warehousing, and sale of hardwood plywood increased from $219.1 million in 2013 to $235.0 million in 2015, and the ROA declined from 16.3 percent in 2013 to 8.9 percent in 2015.[19]

Table VI-4
Hardwood plywood: Capital expenditures, total assets, and return on assets of U.S. producers, 2013-15, January-September 2015, and January-September 2016

Item	Fiscal year			January-September	
	2013	2014	2015	2015	2016
	Value ($1,000)				
Capital expenditures	18,123	15,158	21,853	14,772	13,178
Total assets	219,146	220,355	235,034		
	Percent				
ROA	16.3	16.4	8.9		

Source: Compiled from data submitted in response to Commission questionnaires.

Capital and investment

The Commission requested U.S. producers of hardwood plywood to describe any negative effects of imports of hardwood plywood from the subject countries on their firms' return on investment or the scale of capital investments, as well as any negative effects on their firms' growth, ability to raise capital, or existing development and production efforts. A summary of U.S. producers' responses are shown in table VI-5. Firm-specific responses are provided in Appendix F.

[18] U.S. producers' questionnaire response of ***, question III-13.

[19] The return on assets is calculated as operating income divided by total assets. With respect to a firm's overall operations, the total asset value reflects an aggregation of a number of assets which are generally not product specific. Thus, high-level allocations were generally required in order to report a total asset value for hardwood plywood.

Table VI-5
Hardwood plywood: Negative effects of imports as reported by U.S. producers, by factor

Factor	Firms reporting (number)
Actual negative effects of imports --	
Investment:	7
Cancellation, postponement, or rejection of expansion projects	5
Denial or rejection of investment proposal	2
Reduction in the size of capital investments	4
Return on specific investments negatively impacted	4
Other	6
Growth and development:	6
Rejection of bank loans	1
Lowering of credit rating	0
Problem related to the issue of stocks or bonds	0
Ability to service debt	3
Other	3
Anticipated negative effects of imports:	7

Note—All firms except *** reported that there were actual investment effects, and all firms except *** reported actual effects on growth and development. All firms except *** reported anticipated negative effects.

Source: Compiled from data submitted in response to Commission questionnaires.

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

Section 771(7)(F)(i) of the Act (19 U.S.C. § 1677(7)(F)(i)) provides that—

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

---

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the alleged subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

[2] Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other WTO member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

THE INDUSTRY IN CHINA

Petitioners provided the Commission with the names of 852 firms believed to produce and/or export hardwood plywood from China.[3] Of these 852 firms, the Commission received valid email addresses for 323, to which the Commission issued foreign producers' or exporters' questionnaires.[4] Useable responses to the Commission's questionnaire were received from 93 firms.[5] These firms' exports to the United States accounted for approximately 90 percent of U.S. imports of hardwood plywood from China in 2015.[6] According to estimates requested of the responding Chinese producers, the production of hardwood plywood in China reported in this Part of the report accounts for approximately half of the overall production of hardwood plywood in China.[7] Table VII-1 presents production, export, and shipment data for the responding producers in China.

[3] Petitioners originally submitted the names of 942 firms believed to produce and/or export hardwood plywood from China, 90 of which were duplicates.

[4] These firms were identified through a review of information submitted in the petition and contained in *** records.

[5] 54 firms identified themselves as producers, 46 of which reported exporting subject merchandise to the United States directly since 2013. Thirty-nine firms identified themselves as resellers.

[6] Based on official Commerce statistics minus the six disputed HTS statistical reporting numbers. See Appendix D.

[7] Chinese respondents contend that the 93 responding firms represent virtually all of the production in China production that is able to be exported to the United States. They calculate that of the 942 names provided by petitioners, only 173 are neither duplicates nor nonsubject producers. They assert that of those 173, 106 are compliant with the CARB standards, without which they would be unable to export subject merchandise to the United States. Chinese respondents postconference brief, pp. 12-13 and Exhibit 9.

Table VII-1
Hardwood plywood: Summary data on producers in China, 2015

Firm	Production (1,000 square feet)	Share of reported production (percent)	Exports to the United States (1,000 square feet)	Share of reported exports to the United States (percent)	Total shipments (1,000 square feet)	Share of firm's total shipments exported to the United States (percent)
Anhui Fuyang	***	***	***	***	***	***
Feixian Jinde	***	***	***	***	***	***
Happy Wood	***	***	***	***	***	***
Henan Hongda	***	***	***	***	***	***
International Wood	***	***	***	***	***	***
Jiangsu Shengyang Industrial	***	***	***	***	***	***
Jiangsu Shuren	***	***	***	***	***	***
Jiashan Dalin	***	***	***	***	***	***
Kaochuan Woodwork	***	***	***	***	***	***
Leadwood Industrial	***	***	***	***	***	***
Lin Yi Tian He	***	***	***	***	***	***
Linyi Dahua	***	***	***	***	***	***
Linyi Dongfang Fukai Wood	***	***	***	***	***	***
Linyi Dongfang Jinxin	***	***	***	***	***	***
Linyi Dongfangjuxin	***	***	***	***	***	***
Linyi Evergreen	***	***	***	***	***	***
Linyi Glary	***	***	***	***	***	***
Linyi Hengsheng	***	***	***	***	***	***
Linyi Huasheng Yongbin	***	***	***	***	***	***
Linyi Huayuan	***	***	***	***	***	***
Linyi Huifeng	***	***	***	***	***	***
Linyi Jiahe	***	***	***	***	***	***
Linyi Linhai	***	***	***	***	***	***
Linyi Longxin	***	***	***	***	***	***
Linyi Mingzhu	***	***	***	***	***	***
Linyi Qianfeng	***	***	***	***	***	***
Linyi Sanfortune	***	***	***	***	***	***
Linyi Shixicheng	***	***	***	***	***	***
Linyi Tiancai	***	***	***	***	***	***
Linyi Tuopu Zhixin	***	***	***	***	***	***

Table continued on next page.

Table VII-1—Continued
Hardwood plywood: Summary data on producers in China, 2015

Firm	Production (1,000 square feet)	Share of reported production (percent)	Exports to the United States (1,000 square feet)	Share of reported exports to the United States (percent)	Total shipments (1,000 square feet)	Share of firm's total shipments exported to the United States (percent)
Linyi Wanmei	***	***	***	***	***	***
Luli Group	***	***	***	***	***	***
Pingyi Jinnu	***	***	***	***	***	***
Pizhou Jiangshan	***	***	***	***	***	***
Shandong Anxin	***	***	***	***	***	***
Shandong Dongfang Bayley	***	***	***	***	***	***
Shandong Huaxin Jiasheng	***	***	***	***	***	***
Shandong Jinqiu Wood	***	***	***	***	***	***
Shandong Junxing	***	***	***	***	***	***
Shandong Union	***	***	***	***	***	***
Suining Pengxiang	***	***	***	***	***	***
Suqian Bairun	***	***	***	***	***	***
Suqian Welcomewood	***	***	***	***	***	***
Suzhou Dongsheng	***	***	***	***	***	***
Weifang Hanlin	***	***	***	***	***	***
Xuzhou Carry	***	***	***	***	***	***
Xuzhou Chengxin	***	***	***	***	***	***
Xuzhou Dilun[1]	***	***	***	***	***	***
Xuzhou Jiangyang	***	***	***	***	***	***
Xuzhou Longyuan	***	***	***	***	***	***
Xuzhou Tianshan	***	***	***	***	***	***
Yishui Zelin	***	***	***	***	***	***
Yutai Zezhong	***	***	***	***	***	***
Zhejiang Dehua	***	***	***	***	***	***
Total	1,380,469	100.0	489,109	100.0	1,374,701	35.6

[1] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table VII-2 presents export data for the responding resale exporters in China.

Table VII-2
Hardwood plywood: Summary data on resellers in China, 2015

Firm	Resales exported to the United States (1,000 square feet)	Share of reported resales exported to the United States (percent)
Anhui Hoda	***	***
Celtic	***	***
Cosco Star	***	***
Golder International[1]	***	***
Highland	***	***
Huainan Mengping	***	***
Jiangsu Hanbao	***	***
Jiangsu High Hope	***	***
Jiangsu Top Point	***	***
Lianyungang Yuantai	***	***
Linyi City Shenrui[1]	***	***
Linyi Winning	***	***
Pizhou Dayun	***	***
Qingdao Good Faith	***	***
Qingdao Top	***	***
Shandong Jinhua	***	***
Shandong Jinluda	***	***
Shandong Johnson	***	***
Shandong Qishan	***	***
Shandong Senmanqi	***	***
Shandong Shengdi	***	***
Shanghai Brightwood[1]	***	***
Shanghai Fei Chuan	***	***
Shanghai Futuwood	***	***
Shanghai S&M	***	***
Suqian Hopeway	***	***
Suqian Yaorun[1]	***	***
Suzhou Fengshuwan	***	***
SuZhou Oriental Dragon	***	***
Xuzhou Andefu	***	***

Table continued on next page.

Table VII-2—Continued
Hardwood plywood: Summary data on resellers in China, 2015

Firm	Resales exported to the United States (1,000 square feet)	Share of reported resales exported to the United States (percent)
Xuzhou DNT[2]	***	***
Xuzhou Eastern Huatai	***	***
Xuzhou Hansun	***	***
Xuzhou Huamu	***	***
Xuzhou Pinlin	***	***
Xuzhou Shelter	***	***
Xuzhou Shuiwangxing	***	***
Xuzhou Timber	***	***
Yangzhou Hanov	***	***
Total	724,950	100.0

[1] ***.
[2] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Producers and exporters in China were asked to indicate whether their firm had experienced any plant openings, relocations, expansions, acquisitions, consolidations, closures, or prolonged shutdowns because of strikes or equipment failure; curtailment of production because of shortages of materials or other reasons, including revision of labor agreements; or any other change in the character of their operations or organization relating to the production of hardwood plywood since 2013. Thirteen of the 54 responding producers in China indicated that they had experienced such changes; their responses are presented in table VII-3. No responding resellers in China indicated any changes in operations.

Table VII-3
Hardwood plywood: Reported changes in operations by producers in China, since January 1, 2013

* * * * * * *

Table VII-4 presents aggregate capacity, production, shipments, and inventories data for responding producers in China, as well as export data for responding resale exporters in China. Reported capacity fluctuated, increasing by 2.0 percent from 2013 to 2015. Reported capacity is projected to increase by 2.0 percent from 2015 to 2016 and remain at a similar level in 2017. Reported production fluctuated as well, increasing by 1.7 percent from 2013 to 2015. Based on 2015 data, reported production is projected to increase slightly in calendar year 2016, and decrease slightly in calendar year 2017. Capacity utilization fluctuated from a high of 78.6 percent in 2013 and a low of 74.2 percent in 2014.[8] As a share of producers' total shipments, home market shipments declined by 7.9 percentage points from 2013 to 2015, while exports to the United States increased by 10.0 percentage points and total exports increased by 7.9 percentage points from 2013 to 2015.

[8] Petitioners argue that because new housing starts in China have declined recently, domestic demand in China for hardwood plywood will likely decline as well, leading to an increase in excess capacity in the near future. Petitioners' postconference brief, pp.42-43 and Petition vol. 1, Exhibit I-17. Chinese respondents submitted a graph that shows housing construction in China will remain steady from 2015 to 2016 and increase slightly from 2016 to 2017. Respondents' postconference brief, Exhibit 10.

Table VII-4
Hardwood plywood: Data on the industry in China, 2013-15, January to September 2015, January to September 2016, and projections for calendar years 2016 and 2017

Item	Actual experience					Projections	
	Calendar year			January to September		Calendar year	
	2013	2014[1]	2015[2]	2015	2016	2016	2017
	Quantity (1,000 square feet)						
Capacity	1,725,946	1,689,357	1,759,765	1,330,680	1,359,439	1,794,625	1,797,825
Production	1,357,309	1,252,915	1,380,469	1,038,247	1,074,310	1,393,820	1,359,515
End-of-period inventories	79,283	84,011	90,704	111,430	95,342	96,315	80,441
Shipments:							
Home market shipments:							
Internal consumption/ transfers	190,376	142,302	140,841	102,147	93,089	124,366	126,789
Commercial shipments	619,036	497,618	576,247	418,091	428,897	562,162	595,282
Subtotal, home market shipments[3]	809,412	639,920	717,088	520,238	521,986	686,528	722,071
Export shipments to:							
United States	345,400	439,096	489,109	356,398	409,959	525,167	448,874
All other markets[3]	192,897	169,271	168,504	135,117	137,718	176,546	204,505
Total exports	538,297	608,367	657,613	491,515	547,677	701,713	653,379
Total shipments	1,347,709	1,248,287	1,374,701	1,011,753	1,069,663	1,388,241	1,375,450
	Ratios and shares (percent)						
Capacity utilization	78.6	74.2	78.4	78.0	79.0	77.7	75.6
Inventories/production	5.8	6.7	6.6	8.0	6.7	6.9	5.9
Inventories/total shipments	5.9	6.7	6.6	8.3	6.7	6.9	5.8
Share of shipments:							
Home market shipments:							
Internal consumption/ transfers	14.1	11.4	10.2	10.1	8.7	9.0	9.2
Home market shipments	45.9	39.9	41.9	41.3	40.1	40.5	43.3
Subtotal, home market shipments	60.1	51.3	52.2	51.4	48.8	49.5	52.5
Export shipments to:							
United States	25.6	35.2	35.6	35.2	38.3	37.8	32.6
All other markets	14.3	13.6	12.3	13.4	12.9	12.7	14.9
Total exports	39.9	48.7	47.8	48.6	51.2	50.5	47.5
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Quantity (1,000 square feet)						
Resales exported to the United States	479,935	505,947	724,950	512,936	617,225	819,592	730,723
Total exports to the United States	825,335	945,043	1,214,059	869,334	1,027,184	1,344,759	1,179,597
	Ratios and shares (percent)						
Share of total exports to the United States.--							
Exported by producers	41.8	46.5	40.3	41.0	39.9	39.1	38.1
Exported by resellers	58.2	53.5	59.7	59.0	60.1	60.9	61.9
Adjusted share of total shipments exported to US[4]	61.2	75.7	88.3	85.9	96.0	96.9	85.8

[1] Declines in production- and shipment-related values from 2013 to 2014 are largely due to ***.
[2] Three responding firms, ***, reported beginning production of hardwood plywood in 2015. ***.
[3] Quantities are understated due to the absence of questionnaire responses from producers in China that export to the U.S. market via responding resellers. Chinese respondents' postconference brief, p. 14.
[4] Adjusted U.S. export shares are likely overstated. Commercial home market shipments by responding producers in China are noticeably less than exports to the United States by responding resellers, indicating that responding resellers account for a greater share of hardwood plywood resales in China than responding producers do for hardwood plywood manufacturing industry in China.

Source: Compiled from data submitted in response to Commission questionnaires.

Chinese respondents provided the Commission with additional information on the face veneer thicknesses of their exports of hardwood plywood to the United States. In 2015, ***.[9] Chinese respondents argue that producers in China specialize in thin-veneer products because thin-veneer products require manual labor in order to be produced in commercial quantities, making thin veneers unsuitable for the U.S. industry's more automated manufacturing process.[10] Furthermore, an AAHP respondent witness testified that U.S. producers of hardwood plywood cannot peel veneers thinner than 0.4 mm and apply a dry layup process.[11] [12]

When asked whether they produced products other than hardwood plywood on machinery and equipment used to produce hardwood plywood, *** reported producing ***. Table VII-5 presents responding Chinese producers' overall capacity and production of products on the same machinery used to produce hardwood plywood.

Table VII-5
Hardwood plywood: Overall capacity and production on the same equipment as subject merchandise by producers in China, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
Overall capacity	1,725,946	1,689,357	1,755,765	1,330,680	1,359,439
Production:					
Hardwood plywood	1,357,309	1,252,915	1,380,469	1,038,247	1,074,310
Softwood plywood	***	***	***	***	***
All other products	***	***	***	***	***
Out-of-scope production	4,000	4,000	4,000	3,000	3,000
Total production on same machinery	1,361,309	1,256,915	1,384,469	1,041,247	1,077,310
	Ratios and shares (percent)				
Overall capacity utilization	78.9	74.4	78.9	78.2	79.2
Share of production:					
Hardwood plywood	99.7	99.7	99.7	99.7	99.7
Softwood plywood	***	***	***	***	***
All other products	***	***	***	***	***
Out-of-scope production	0.3	0.3	0.3	0.3	0.3
Total production on same machinery	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

[9] Chinese respondents' postconference brief, p. 4 and Exhibit 4.
[10] Ibid., pp. 4-5.
[11] Conference transcript, p. 129 (Simon).
[12] Petitioners argue that the U.S. domestic industry can and does produce face veneers with a thickness of less than 0.4 mm. Petitioners' postconference brief, p. 23.

Table VII-6 presents data from the Global Trade Atlas for exports from China of hardwood plywood from 2013 to 2015.[13] The United States accounted for the largest share of exports from China in 2015, followed by the United Kingdom, the United Arab Emirates, and Japan.

Table VII-6
Hardwood plywood: Exports from China by destination market, 2013-15

Destination market	Calendar year		
	2013	2014	2015
	Value (1,000 dollars)		
China exports to the United States	1,010,618	1,281,806	1,376,049
China exports to other major destination markets.--			
United Kingdom	304,743	349,686	355,274
United Arab Emirates	204,136	255,871	319,811
Japan	420,953	412,549	312,618
Philippines	159,813	290,811	266,900
Korea	283,431	277,318	251,586
Canada	146,587	175,521	174,827
Saudi Arabia	152,554	185,676	161,921
Belgium	134,198	150,348	131,541
All other destination markets	2,216,666	2,434,119	2,137,168
Total China exports	5,033,698	5,813,705	5,487,696
	Share of value (percent)		
China exports to the United States	20.1	22.0	25.1
China exports to other major destination markets.--			
United Kingdom	6.1	6.0	6.5
United Arab Emirates	4.1	4.4	5.8
Japan	8.4	7.1	5.7
Philippines	3.2	5.0	4.9
Korea	5.6	4.8	4.6
Canada	2.9	3.0	3.2
Saudi Arabia	3.0	3.2	3.0
Belgium	2.7	2.6	2.4
All other destination markets	44.0	41.9	38.9
Total China exports	100.0	100.0	100.0

Note.--Quantity data are not presented because for these subheadings, Chinese customs switched from reporting quantity by area measurement to reporting quantity by weight measurement beginning in 2014.

Source: Official Chinese exports statistics under HTS subheadings 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99 as reported by China Customs in the IHS/GTA database, accessed November 30, 2016.

[13] The trade data presented are compiled from HS subheadings 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99, which contain some out-of-scope merchandise including bamboo plywood, multilayered wood flooring, structural plywood, and wood products with a softwood veneer.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-7 presents data on U.S. importers' reported inventories of hardwood plywood from China and all other sources. With respect to imports from China, inventories decreased by 11.5 percent from 2013 to 2014 before increasing by 22.4 percent from 2014 to 2015. With respect to imports from nonsubject sources, inventories decreased by 27.8 percent from 2013 to 2014 before increasing by 73.7 percent from 2014 to 2015.

Table VII-7
Hardwood plywood: U.S. importers' end-of-period inventories of imports by source, 2013-15, January to September 2015, and January-September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
Imports from China					
Inventories (1,000 square feet)	363,959	322,207	394,354	367,321	385,381
Ratio to U.S. imports (percent)	32.3	26.8	26.8	24.9	24.2
Ratio to U.S. shipments of imports (percent)	31.7	25.8	28.5	26.4	24.4
Ratio to total shipments of imports (percent)	31.6	25.6	28.5	26.3	24.3
Imports from nonsubject sources:					
Inventories (1,000 square feet)	398,069	287,481	499,417	479,779	468,033
Ratio to U.S. imports (percent)	30.8	23.5	30.1	27.3	29.9
Ratio to U.S. shipments of imports (percent)	32.9	21.8	34.7	32.1	29.2
Ratio to total shipments of imports (percent)	32.9	21.8	34.7	32.1	29.2
Imports from all import sources:					
Inventories (1,000 square feet)	762,028	609,688	893,771	847,100	853,414
Ratio to U.S. imports (percent)	31.5	25.2	28.6	26.2	27.0
Ratio to U.S. shipments of imports (percent)	32.3	23.7	31.7	29.4	26.8
Ratio to total shipments of imports (percent)	32.2	23.7	31.6	29.3	26.8

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of hardwood plywood from China after September 30, 2016. Table VII-8 presents U.S. import shipments of hardwood plywood arranged for importation after September 30, 2016. Fifty-five responding importers, including two responding U.S. producers, reported arranging for imports of hardwood plywood from China after September 30, 2016.[14]

[14] The two U.S. producers that reported arranged imports from China in their importer questionnaire response are ***.

Table VII-8
Hardwood plywood: Arranged imports, October 2016-September 2017

Item	Period				
	Oct-Dec 2016	Jan-Mar 2017	Apr-Jun 2017	Jul-Sept 2017	Total
China	372,944	349,980	118,879	64,101	905,904
Nonsubject sources	424,967	265,952	122,364	55,627	868,910
Total U.S. imports	797,911	615,932	241,243	119,728	1,774,814

Source: Compiled from data submitted in response to Commission questionnaires.

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

The Commission requested foreign producers/exports in China to indicate whether hardwood plywood exported by their firm is subject to any third-country antidumping duty, countervailing duty, safeguard findings, remedies, or proceedings. No foreign producers/exporters reported any of the above measures in third-countries.[15] The following third-country markets currently impose antidumping duties on hardwood plywood products from China: Columbia has maintained antidumping duties on wood-based panels from China classified under HTS numbers 4412.31 and 4412.32 since 2014; the European Union has maintained antidumping duties on imports okoumé plywood from China since 2004; Turkey has maintained antidumping duties on Chinese plywood since 2006; and South Korea has maintained duties on Chinese plywood products since 2013 and imposed final antidumping duty orders on coniferous wood plywood from China in March 2016.[16] In addition, Argentina currently imposes mandatory reference prices on imports of certain wood products from China under the HTS heading 4412.[17]

INFORMATION ON NONSUBJECT COUNTRIES

Besides the United States and China, other large producers of hardwood plywood include Malaysia, Indonesia, Russia, India, Japan, and Brazil. The Food and Agriculture Organization (FAO) collects production data for plywood. Because these data include not only hardwood plywood but other wood products such as structural plywood and multilayered wood flooring, they provide a rough approximation of major country production of hardwood plywood. In 2014, the most recent year available, global production of plywood totaled 147.6 million cubic meters, or approximately 154 million square feet.[18] China was, by far, the largest producer, accounting for 71 percent of global production of plywood. Malaysia, Indonesia,

[15] Foreign producer questionnaire responses, section II-9.
[16] Petitioners' postconference brief, Exhibit 1, p. 39 and Exhibit 22.
[17] Ibid.
[18] Cubic meters converted to square feet using a factor of 1.046 square feet per cubic meter.

Russia, India, Japan, Brazil, and Canada each accounted for less than 5 percent of global production.[19]

Table VII-9 presents the largest global export sources of hardwood plywood during 2013-15.[20] China accounted for the largest share of global exports of hardwood plywood during the period, followed by Indonesia, Malaysia, and Russia.

Table VII-10 presents data from the Global Trade Atlas for exports from Canada[21] of hardwood plywood from 2013 to 2015.[22] The United States accounted for the largest share of exports from Canada in 2015, followed by Australia, the United Kingdom, and Mexico.

[19] Food and Agriculture Organization of the United Nations. *FAO Yearbook, Forest Products, 2010-2014,* 2016.

[20] The trade data presented are compiled from HS subheadings 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99, which contain some out-of-scope merchandise including bamboo plywood, multilayered wood flooring, structural plywood, and wood products with a softwood veneer.

[21] Canada is a leading source of U.S. imports covered by the collection of HTS statistical reporting numbers included in Commerce's scope. Indeed, by the end of the data collection period in the Commission's previous investigations, Canada was identified as the single largest source of imports from nonsubject sources. *Hardwood Plywood from China, Investigation Nos. 701-TA-490 and 731-TA-1204 (Final)*, USITC Publication 4434, November 2013, table VII-3. However, as noted in Part IV of this report and shown in Appendix D, data from questionnaires and a more limited universe of HTS statistical reporting numbers suggest that Indonesia is the single-largest source of hardwood plywood from nonsubject sources.

[22] The trade data presented are compiled from HS subheadings 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99, which contain some out-of-scope merchandise including bamboo plywood, multilayered wood flooring, structural plywood, and wood products with a softwood veneer.

Table VII-9
Hardwood plywood: Global exports by source, 2013-15

Exporter	Calendar year		
	2013	2014	2015
	Value (1,000 dollars)		
United States	444,363	420,903	351,296
China	5,033,698	5,813,705	5,487,696
All other major exporters.--Indonesia	2,176,213	2,372,471	2,341,923
Malaysia	1,689,103	1,586,222	1,201,616
Russia	995,536	1,173,867	989,688
Finland	636,874	708,899	593,547
Brazil	429,229	467,760	482,206
Chile	253,603	327,760	349,544
Canada	222,143	251,295	279,531
Germany	270,304	285,865	253,736
Spain	206,092	222,620	219,644
Latvia	227,204	240,194	217,883
All other exporters	2,439,009	2,637,233	2,422,958
Total global exports	15,023,370	16,508,795	15,191,269
	Share of value (percent)		
United States	3.0	2.5	2.3
China	33.5	35.2	36.1
All other major exporters.--Indonesia	14.5	14.4	15.4
Malaysia	11.2	9.6	7.9
Russia	6.6	7.1	6.5
Finland	4.2	4.3	3.9
Brazil	2.9	2.8	3.2
Chile	1.7	2.0	2.3
Canada	1.5	1.5	1.8
Germany	1.8	1.7	1.7
Spain	1.4	1.3	1.4
Latvia	1.5	1.5	1.4
All other exporters	16.2	16.0	15.9
Total global exports	100.0	100.0	100.0

Note.--Quantity data are not reported because there is no consistent unit used across reporting countries. Some countries reported quantity by area measurement, while others reported quantity by weight measurement.

Source: Official exports statistics under HTS subheading 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99 as reported by various national statistical authorities in the GTIS/GTA database, accessed December 21, 2016. Estimates/placeholders imputed for exporters that reported data in 2013 and 2014 but not yet provided data for 2015.

Table VII-10
Hardwood plywood: Canada exports by source, 2013-15

Destination market	Calendar year		
	2013	2014	2015
	Quantity (1,000 square feet)		
Canada exports to the United States	417,591	475,746	529,184
Canada exports to other major destination markets.--			
Australia	10,187	15,228	26,143
United Kingdom	15,818	16,789	18,143
Mexico	2,687	2,877	2,485
Japan	6,786	5,308	1,639
Panama	29	199	841
China	764	1,229	828
Ireland	196	246	537
Bermuda	104	623	459
All other destination markets	5,826	4,063	2,311
Total Canada exports	459,988	522,308	582,570
	Value (1,000 dollars)		
Canada exports to the United States	198,948	226,416	254,638
Canada exports to other major destination markets.--			
Australia	6,609	7,676	9,767
United Kingdom	8,643	10,175	10,385
Mexico	1,273	1,279	1,242
Japan	3,309	2,396	807
Panama	26	138	637
China	393	631	354
Ireland	116	154	351
Bermuda	75	379	196
All other destination markets	2,751	2,051	1,153
Total Canada exports	222,143	251,295	279,531

Table continued on next page.

Table VII-10—Continued
Hardwood plywood: Canada exports by source, 2013-15

Destination market	Calendar year		
	2013	2014	2015
	Unit value (dollars per square foot)		
Canada exports to the United States	0.48	0.48	0.48
Canada exports to other major destination markets.--			
Australia	0.65	0.50	0.37
United Kingdom	0.55	0.61	0.57
Mexico	0.47	0.44	0.50
Japan	0.49	0.45	0.49
Panama	0.90	0.70	0.76
China	0.51	0.51	0.43
Ireland	0.59	0.62	0.65
Bermuda	0.73	0.61	0.43
All other destination markets	0.47	0.50	0.50
Total Canada exports	0.48	0.48	0.48
	Share of quantity (percent)		
Canada exports to the United States	90.8	91.1	90.8
Canada exports to other major destination markets.--			
Australia	2.2	2.9	4.5
United Kingdom	3.4	3.2	3.1
Mexico	0.6	0.6	0.4
Japan	1.5	1.0	0.3
Panama	0.0	0.0	0.1
China	0.2	0.2	0.1
Ireland	0.0	0.0	0.1
Bermuda	0.0	0.1	0.1
All other destination markets	1.3	0.8	0.4
Total Canada exports	100.0	100.0	100.0

Source: Official Canada exports statistics under HTS subheading 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, and 4412.99 as reported by Statistics Canada in the GTIS/GTA database, accessed November 30, 2016.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
81 FR 85639, November 28, 2016	*Hardwood Plywood From China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.federalregister.gov/d/2016-28485
81 FR 91125, December 16, 2016	*Certain Hardwood Plywood Products From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*	https://www.federalregister.gov/d/2016-30305
81 FR 91131, December 16, 2016	*Certain Hardwood Plywood Products From the People's Republic of China: Initiation of Countervailing Duty Investigation*	https://www.federalregister.gov/d/2016-30304

APPENDIX B

CONFERENCE WITNESSES

.CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared as witnesses at the United States International Trade Commission's preliminary conference:

Subject: Hardwood Plywood from China

Inv. Nos.: 701-TA-565 and 731-TA-1341 (Preliminary)

Date and Time: December 9, 2016 - 9:30 a.m.

Sessions were held in connection with these preliminary phase investigations in Main Hearing Room (Room 101), 500 E Street, S.W., Washington, DC.

OPENING REMARKS:

Petitioners (**Timothy C. Brightbill**, Wiley Rein LLP)
Respondents (**Jeffrey S. Grimson**, Mowry & Grimson, PLLC)

In Support of the Imposition of
Antidumping and Countervailing Duty Orders:

Wiley Rein LLP
Washington, DC
on behalf of

Petitioners

Brad Thompson, Chief Executive Officer, Columbia Forest Products

Gary Gillespie, Executive Vice President, Columbia Forest Products

Gail Overgard, Advisor to the Board of Directors, Timber Products Company

Josh Gibeau, International Division Manager, Timber Products Company

Patrick Lynch, Director Plywood, Roseburg Forest Products Co.

Clifton Howlett, Executive Director, Hardwood Plywood & Veneer Association

Phillip C. Carbtree, II, President, Phill's Custom Cabinets

Dr. Seth Kaplan, Economist, International Economic Research, LLC

Timothy C. Brightbill) – OF COUNSEL

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

Husch Blackwell LLP
Washington, DC
on behalf of

Chinese Respondents

Wu Shengfu, Vice Chairman, China National Forest Products Industry Association

Ran Xiangliang, Chief Executive Officer, Linyi Sanfortune Wood Co., Ltd.

Jeffrey S. Neeley) – OF COUNSEL

Mowry & Grimson, PLLC
Washington, DC
on behalf of

American Alliance for Hardwood Plywood

Shawn Dougherty, Director of Asia, Northwest Hardwoods

Greg Simon, Executive Vice President, Far East American

Bill Weaver, Chief Executive Officer, Canyon Creek Cabinet Company

Tom Rogers, Principal, Capital Trade Inc.

Paul Sova, President and Chief Operating Officer, Showplace Wood Products

Steven Bell, President, Bellmont Cabinet Company

Paul Gosnell, Vice President, Patriot Timber Products, Inc.

Matt Hazelbaker, Vice President, Genesis Products LLC

Jonas Israel, Chief Executive Officer, McCorry & Co. Ltd.

Jeffrey S. Grimson) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioners (**Timothy C. Brightbill,** Wiley Rein LLP)
Respondents (**Jeffrey S. Grimson**, Mowry & Grimson, PLLC)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
Hardwood plywood: Summary data concerning the U.S. market, 2013-15, January to September 2015, and January to September 2016
(Quantity=1,000 square feet; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per square foot; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to September		Calendar year			Jan-Sept
	2013	2014	2015	2015	2016	2013-15	2013-14	2014-15	2015-16
U.S. consumption quantity:									
Amount	3,064,196	3,295,049	3,520,410	2,723,923	2,921,771	14.9	7.5	6.8	7.3
Producers' share (fn1)	23.1	22.1	19.9	20.5	18.3	(3.2)	(1.0)	(2.2)	(2.2)
Importers' share (fn1):									
China	37.5	37.9	39.2	38.4	40.6	1.8	0.5	1.3	2.3
Nonsubject sources	39.4	40.0	40.9	41.1	41.1	1.4	0.5	0.9	(0.0)
All import sources	76.9	77.9	80.1	79.5	81.7	3.2	1.0	2.2	2.2
U.S. consumption value:									
Amount	1,831,377	1,924,003	1,991,156	1,560,035	1,602,265	8.7	5.1	3.5	2.7
Producers' share (fn1)	46.8	46.6	43.5	44.4	40.7	(3.4)	(0.2)	(3.1)	(3.8)
Importers' share (fn1):									
China	29.9	30.8	33.2	32.4	35.9	3.2	0.8	2.4	3.5
Nonsubject sources	23.3	22.7	23.4	23.2	23.4	0.1	(0.6)	0.7	0.2
All import sources	53.2	53.4	56.5	55.6	59.3	3.4	0.2	3.1	3.8
U.S. importers' U.S. shipments of imports from:									
China:									
Quantity	1,147,606	1,250,301	1,381,549	1,044,675	1,186,419	20.4	8.9	10.5	13.6
Value	548,236	592,089	660,123	505,412	575,404	20.4	8.0	11.5	13.8
Unit value	$0.48	$0.47	$0.48	$0.48	$0.48	0.0	(0.9)	0.9	0.2
Ending inventory quantity	363,959	322,207	394,354	367,321	385,381	8.4	(11.5)	22.4	4.9
Nonsubject sources:									
Quantity	1,208,671	1,317,817	1,438,227	1,119,768	1,200,255	19.0	9.0	9.1	7.2
Value	425,874	435,861	465,727	361,907	375,534	9.4	2.3	6.9	3.8
Unit value	$0.35	$0.33	$0.32	$0.32	$0.31	(8.1)	(6.1)	(2.1)	(3.2)
Ending inventory quantity	398,069	287,481	499,417	479,779	468,033	25.5	(27.8)	73.7	(2.4)
All import sources:									
Quantity	2,356,277	2,568,118	2,819,776	2,164,443	2,386,674	19.7	9.0	9.8	10.3
Value	974,110	1,027,950	1,125,850	867,319	950,938	15.6	5.5	9.5	9.6
Unit value	$0.41	$0.40	$0.40	$0.40	$0.40	(3.4)	(3.2)	(0.3)	(0.6)
Ending inventory quantity	762,028	609,688	893,771	847,100	853,414	17.3	(20.0)	46.6	0.7
U.S. producers':									
Average capacity quantity	1,432,050	1,435,359	1,433,299	1,104,962	1,103,052	0.1	0.2	(0.1)	(0.2)
Production quantity	732,401	749,688	712,684	564,795	540,541	(2.7)	2.4	(4.9)	(4.3)
Capacity utilization (fn1)	51.1	52.2	49.7	51.1	49.0	(1.4)	1.1	(2.5)	(2.1)
U.S. shipments:									
Quantity	707,919	726,931	700,634	559,480	535,097	(1.0)	2.7	(3.6)	(4.4)
Value	857,267	896,053	865,306	692,716	651,327	0.9	4.5	(3.4)	(6.0)
Unit value	$1.21	$1.23	$1.24	$1.24	$1.22	2.0	1.8	0.2	(1.7)
Export shipments:									
Quantity	21,605	17,420	12,824	9,887	7,294	(40.6)	(19.4)	(26.4)	(26.2)
Value	26,180	21,760	15,751	12,338	9,167	(39.8)	(16.9)	(27.6)	(25.7)
Unit value	$1.21	$1.25	$1.23	$1.25	$1.26	1.4	3.1	(1.7)	0.7
Ending inventory quantity	36,418	41,955	41,376	38,369	39,171	13.6	15.2	(1.4)	2.1
Inventories/total shipments (fn1)	5.0	5.6	5.8	5.1	5.4	0.8	0.6	0.2	0.4
Production workers (fn3)	2,300	2,399	2,391	2,291	2,168	4.0	4.3	(0.3)	(5.4)
Hours worked (1,000s) (fn3)	4,895	5,183	5,224	4,103	3,870	6.7	5.9	0.8	(5.7)
Wages paid ($1,000) (fn3)	89,075	96,256	101,489	78,922	77,062	13.9	8.1	5.4	(2.4)
Hourly wages (dollars) (fn3)	$18.20	$18.57	$19.43	$19.24	$19.91	6.8	2.1	4.6	3.5
Productivity (square feet per hour) (fn3)	139.9	135.7	128.0	129.6	131.5	(8.5)	(3.0)	(5.6)	1.5
Unit labor costs (fn3)	$0.13	$0.14	$0.15	$0.15	$0.15	16.7	5.2	10.9	2.0
Net sales:									
Quantity	681,297	697,905	670,891	536,033	510,461	(1.5)	2.4	(3.9)	(4.8)
Value	821,298	856,322	825,178	660,847	624,331	0.5	4.3	(3.6)	(5.5)
Unit value	$1.21	$1.23	$1.23	$1.23	$1.22	2.0	1.8	0.2	(0.8)
Cost of goods sold (COGS)	729,081	757,642	742,690	594,607	565,010	1.9	3.9	(2.0)	(5.0)
Gross profit or (loss)	92,217	98,680	82,488	66,240	59,321	(10.6)	7.0	(16.4)	(10.4)
SG&A expenses	56,504	62,603	61,490	47,780	48,073	8.8	10.8	(1.8)	0.6
Operating income or (loss)	35,713	36,077	20,998	18,460	11,248	(41.2)	1.0	(41.8)	(39.1)
Net income or (loss)	33,178	34,245	17,863	17,002	10,411	(46.2)	3.2	(47.8)	(38.8)
Capital expenditures	18,123	15,158	21,853	14,772	13,178	20.6	(16.4)	44.2	(10.8)
Unit COGS	$1.07	$1.09	$1.11	$1.11	$1.11	3.4	1.4	2.0	(0.2)
Unit SG&A expenses	$0.08	$0.09	$0.09	$0.09	$0.09	10.5	8.2	2.2	5.7
Unit operating income or (loss)	$0.05	$0.05	$0.03	$0.03	$0.02	(40.3)	(1.4)	(39.5)	(36.0)
Unit net income or (loss)	$0.05	$0.05	$0.03	$0.03	$0.02	(45.3)	0.8	(45.7)	(35.7)
COGS/sales (fn1)	88.8	88.5	90.0	90.0	90.5	1.2	(0.3)	1.5	0.5
Operating income or (loss)/sales (fn1)	4.3	4.2	2.5	2.8	1.8	(1.8)	(0.1)	(1.7)	(1.0)
Net income or (loss)/sales (fn1)	4.0	4.0	2.2	2.6	1.7	(1.9)	(0.0)	(1.8)	(0.9)

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.
fn3.--Employment data and related calculations do not include one firm ***.

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX D

OFFICIAL IMPORT STATISTICS

Table D-1

Hardwood plywood: U.S. imports (initiation HTS numbers less 6 disputed HTS numbers), by source, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Quantity (1,000 square feet)				
U.S. imports from.--					
China	1,038,694	1,280,624	1,529,145	1,166,104	1,207,766
Brazil	20,039	24,563	21,799	18,263	16,607
Canada	186,334	132,761	140,610	102,983	109,444
Ecuador	58,000	54,247	63,017	47,706	57,090
Indonesia	260,183	266,866	350,842	285,883	261,545
Malaysia	158,869	84,096	95,144	72,508	62,955
Russia	263,971	300,628	313,572	239,124	281,636
All other sources	157,010	205,829	244,970	184,239	160,086
Nonsubject sources	1,104,406	1,068,990	1,229,954	950,706	949,362
Total U.S. imports	2,143,099	2,349,614	2,759,099	2,116,810	2,157,128
	Value (1,000 dollars)				
U.S. imports from.--					
China	544,114	653,454	739,888	569,917	543,730
Brazil	16,119	17,690	15,620	12,795	10,910
Canada	87,809	89,407	97,229	70,472	91,168
Ecuador	30,908	28,968	33,606	25,451	29,512
Indonesia	187,191	185,318	250,300	201,846	176,302
Malaysia	113,113	56,436	68,566	51,870	46,008
Russia	145,490	162,414	162,217	132,933	104,448
All other sources	103,678	114,234	127,806	97,532	106,485
Nonsubject sources	684,308	654,468	755,345	592,900	564,834
Total U.S. imports	1,228,422	1,307,922	1,495,233	1,162,817	1,108,564
	Unit value (dollars per square foot)				
U.S. imports from.--					
China	0.52	0.51	0.48	0.49	0.45
Brazil	0.80	0.72	0.72	0.70	0.66
Canada	0.47	0.67	0.69	0.68	0.83
Ecuador	0.53	0.53	0.53	0.53	0.52
Indonesia	0.72	0.69	0.71	0.71	0.67
Malaysia	0.71	0.67	0.72	0.72	0.73
Russia	0.55	0.54	0.52	0.56	0.37
All other sources	0.66	0.55	0.52	0.53	0.67
Nonsubject sources	0.62	0.61	0.61	0.62	0.59
Total U.S. imports	0.57	0.56	0.54	0.55	0.51

Table continued on next page.

Table D-1—Continued

Hardwood plywood: U.S. imports (initiation HTS numbers less 6 disputed HTS numbers), by source, 2013-15, January to September 2015, and January to September 2016

Item	Calendar year			January to September	
	2013	2014	2015	2015	2016
	Share of quantity (percent)				
U.S. imports from.--					
China	48.5	54.5	55.4	55.1	56.0
Brazil	0.9	1.0	0.8	0.9	0.8
Canada	8.7	5.7	5.1	4.9	5.1
Ecuador	2.7	2.3	2.3	2.3	2.6
Indonesia	12.1	11.4	12.7	13.5	12.1
Malaysia	7.4	3.6	3.4	3.4	2.9
Russia	12.3	12.8	11.4	11.3	13.1
All other sources	7.3	8.8	8.9	8.7	7.4
Nonsubject sources	51.5	45.5	44.6	44.9	44.0
Total U.S. imports	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)				
U.S. imports from.--					
China	44.3	50.0	49.5	49.0	49.0
Brazil	1.3	1.4	1.0	1.1	1.0
Canada	7.1	6.8	6.5	6.1	8.2
Ecuador	2.5	2.2	2.2	2.2	2.7
Indonesia	15.2	14.2	16.7	17.4	15.9
Malaysia	9.2	4.3	4.6	4.5	4.2
Russia	11.8	12.4	10.8	11.4	9.4
All other sources	8.4	8.7	8.5	8.4	9.6
Nonsubject sources	55.7	50.0	50.5	51.0	51.0
Total U.S. imports	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production				
U.S. imports from.--					
China	141.8	170.8	214.6	206.5	223.4
Brazil	2.7	3.3	3.1	3.2	3.1
Canada	25.4	17.7	19.7	18.2	20.2
Ecuador	7.9	7.2	8.8	8.4	10.6
Indonesia	35.5	35.6	49.2	50.6	48.4
Malaysia	21.7	11.2	13.4	12.8	11.6
Russia	36.0	40.1	44.0	42.3	52.1
All other sources	21.4	27.5	34.4	32.6	29.6
Nonsubject sources	150.8	142.6	172.6	168.3	175.6
Total U.S. imports	292.6	313.4	387.1	374.8	399.1

Note.--The primary HTS numbers (listed in part I of this report) are a subset of the HTS numbers used in the related case, less six (6) HTS numbers argued to contain mostly out-of-scope hardwood flooring: 4412.31.4075, 4412.31.5125, 4412.32.0565, 4412.32.2525, 4412.32.3125, and 4412.94.3105.

Source: Compiled from official U.S. import statistics using primary HTS numbers less 6 HTS numbers, accessed November 29, 2016. Quantities in meters cubed converted to 1,000 square feet using 1.046 conversion factor.

APPENDIX E

NONSUBJECT COUNTRY PRICE DATA

Two importers reported price data for Canada for products 1, 2, 4, 5, and 6. Price data reported by these firms accounted for less than *** percent of U.S. commercial shipments from Canada. These price items and accompanying data are comparable to those presented in tables V-3 to V-8. Price and quantity data for Canada are shown in tables E-1 to E-3 and in figures E-1 to E-5 (with domestic and subject sources).

In comparing Canadian pricing data with U.S. producer pricing data, prices for product imported from Canada were lower than prices for U.S.-produced product in 14 instances and higher in 8 instances. In comparing Canadian pricing data with Chinese pricing data, prices for product imported from Canada were lower than prices for product imported from China in 2 instances and higher in 20 instances. A summary of price differentials is presented in table E-4.

Table E-1

Hardwood plywood: Weighted-average f.o.b. prices and quantities of imported products 1 and 2[1], by quarters, January 2013-September 2016

	Product 1				Product 2			
	United States		Canada		United States		Canada	
Period	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)
2013:								
Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-Jun.	0.90	2,591,328	***	***	1.17	202,400	***	***
Jul.-Sep.	0.92	2,629,352	***	***	1.11	295,328	***	***
Oct.-Dec.	0.93	2,086,120	***	***	1.12	168,192	***	***
2014:								
Jan.-Mar.	0.92	3,344,624	--	0	1.17	231,232	--	0
Apr.-Jun.	0.93	2,277,616	--	0	1.10	178,432	--	0
Jul.-Sep.	***	***	--	0	1.15	183,008	--	0
Oct.-Dec.	0.94	1,898,128	--	0	1.11	154,976	***	***
2015:								
Jan.-Mar.	0.95	2,582,080	--	0	1.18	260,512	--	0
Apr.-Jun.	0.95	2,450,480	--	0	1.18	169,312	--	0
Jul.-Sep.	0.96	2,964,024	--	0	***	***	--	0
Oct.-Dec.	0.93	2,278,280	--	0	1.17	101,792	--	0
2016:								
Jan.-Mar.	0.93	3,033,888	--	0	1.12	210,880	--	0
Apr.-Jun.	0.91	2,479,728	--	0	1.21	116,768	--	0
Jul.-Sep.	0.91	2,783,744	--	0	1.10	214,304	--	0

[1] Product 1: 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 2: 12 mm (1/2") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch; whole piece), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-2

Hardwood plywood: Weighted-average f.o.b. prices and quantities of imported products 3 and 4[1], by quarters, January 2013-September 2016

	Product 3				Product 4			
	United States		Canada		United States		Canada	
Period	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)
2013:								
Jan.-Mar.	1.05	12,446,968	--	0	0.66	826,048	--	0
Apr.-Jun.	1.11	9,612,536	--	0	0.67	732,504	--	0
Jul.-Sep.	1.12	12,060,688	--	0	0.70	770,296	***	***
Oct.-Dec.	1.14	8,623,048	--	0	0.68	624,736	***	***
2014:								
Jan.-Mar.	1.14	11,988,680	--	0	0.68	762,488	***	***
Apr.-Jun.	1.15	9,174,200	--	0	0.68	771,176	***	***
Jul.-Sep.	1.14	11,888,072	--	0	0.67	969,456	***	***
Oct.-Dec.	1.15	7,760,864	--	0	0.65	597,200	***	***
2015:								
Jan.-Mar.	1.16	11,955,437	--	0	0.65	848,168	***	***
Apr.-Jun.	1.16	8,389,144	--	0	0.63	825,432	***	***
Jul.-Sep.	1.15	9,318,840	--	0	0.65	784,896	--	0
Oct.-Dec.	1.14	7,486,128	--	0	0.62	660,520	--	0
2016:								
Jan.-Mar.	1.15	10,358,232	--	0	0.65	825,952	--	0
Apr.-Jun.	1.14	7,133,416	--	0	0.63	730,176	--	0
Jul.-Sep.	1.13	8,178,496	--	0	0.65	932,424	--	0

[1] Product 3: 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Product 4: 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Maple face (whether plain or rotary sliced), face Grade B or substantially equivalent, Maple back (whether plain or rotary sliced), back grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Table E-3

Hardwood plywood: Weighted-average f.o.b. prices and quantities of imported products 5 and 6[1], by quarters, January 2013-September 2016

	Product 5				Product 6			
	United States		Canada		United States		Canada	
Period	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)	Price (dollars per square foot)	Quantity (square feet)
2013:								
Jan.-Mar.	1.31	456,288	--	0	0.58	1,068,128	***	***
Apr.-Jun.	1.38	352,416	--	0	0.59	784,776	***	***
Jul.-Sep.	1.48	390,144	--	0	0.60	743,336	***	***
Oct.-Dec.	1.40	242,048	--	0	0.59	580,088	***	***
2014:								
Jan.-Mar.	1.44	400,096	--	0	0.60	699,744	--	0
Apr.-Jun.	1.45	316,640	--	0	0.59	527,904	--	0
Jul.-Sep.	1.48	379,264	--	0	0.60	530,816	--	0
Oct.-Dec.	1.43	272,992	***	***	0.58	572,672	--	0
2015:								
Jan.-Mar.	1.45	382,304	--	0	0.59	691,664	--	0
Apr.-Jun.	1.44	394,336	--	0	0.58	1,308,896	--	0
Jul.-Sep.	1.45	373,888	--	0	0.56	2,728,856	--	0
Oct.-Dec.	1.41	263,200	--	0	0.57	2,535,072	--	0
2016:								
Jan.-Mar.	1.43	395,392	--	0	***	***	--	0
Apr.-Jun.	1.43	371,872	--	0	0.57	2,428,336	--	0
Jul.-Sep.	***	***	--	0	***	***	--	0

[1] Product 5: 18 mm (3/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether white birch, natural birch or artisan birch), face Grade C/D+ or substantially equivalent, Birch back (whether white birch, natural birch or artisan birch), back grade 2/3 or substantially equivalent, veneer core, prefinished.

Product 6: 5.2 mm (1/4") thickness (actual or nominal), 4x8 panel size, Birch face (whether plain or rotary sliced), face Grade C or substantially equivalent, back face of Birch or other, Grade 2/3 or substantially equivalent, veneer core, unfinished.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure E-1
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by quarters, January 2013-September 2016

* * * * * * *

Figure E-2
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by quarters, January 2013-September 2016

* * * * * * *

Figure E-3
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 4, by quarters, January 2013-September 2016

* * * * * * *

Figure E-4
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 5, by quarters, January 2013-September 2016

* * * * * * *

Figure E-5
Hardwood plywood: Weighted-average f.o.b. prices and quantities of domestic and imported product 6, by quarters, January 2013-September 2016

* * * * * * *

Table E-4
Hardwood plywood: Summary of underselling/(overselling), by country, January 2013- September 2016

Comparison	Total number of comparisons	Canada lower than the comparison source		Canada higher than the comparison source	
		Number of quarters	Quantity (square feet)	Number of quarters	Quantity (square feet)
Nonsubject vs United States:					
Canada vs. United States	22	14	***	8	***
Nonsubject vs subject country:					
Canada vs. China	22	2	***	20	***

Source: Compiled from data submitted in response to Commission questionnaires.

APPENDIX F

QUESTIONNAIRE RESPONSES OF U.S. PRODUCERS REGARDING ACTUAL AND ANTICIPATED NEGATIVE EFFECTS OF SUBJECT IMPORTS

U.S. producers' individual responses to questions regarding the actual and anticipated negative effects of subject imports are presented below.

* * * * * * *