

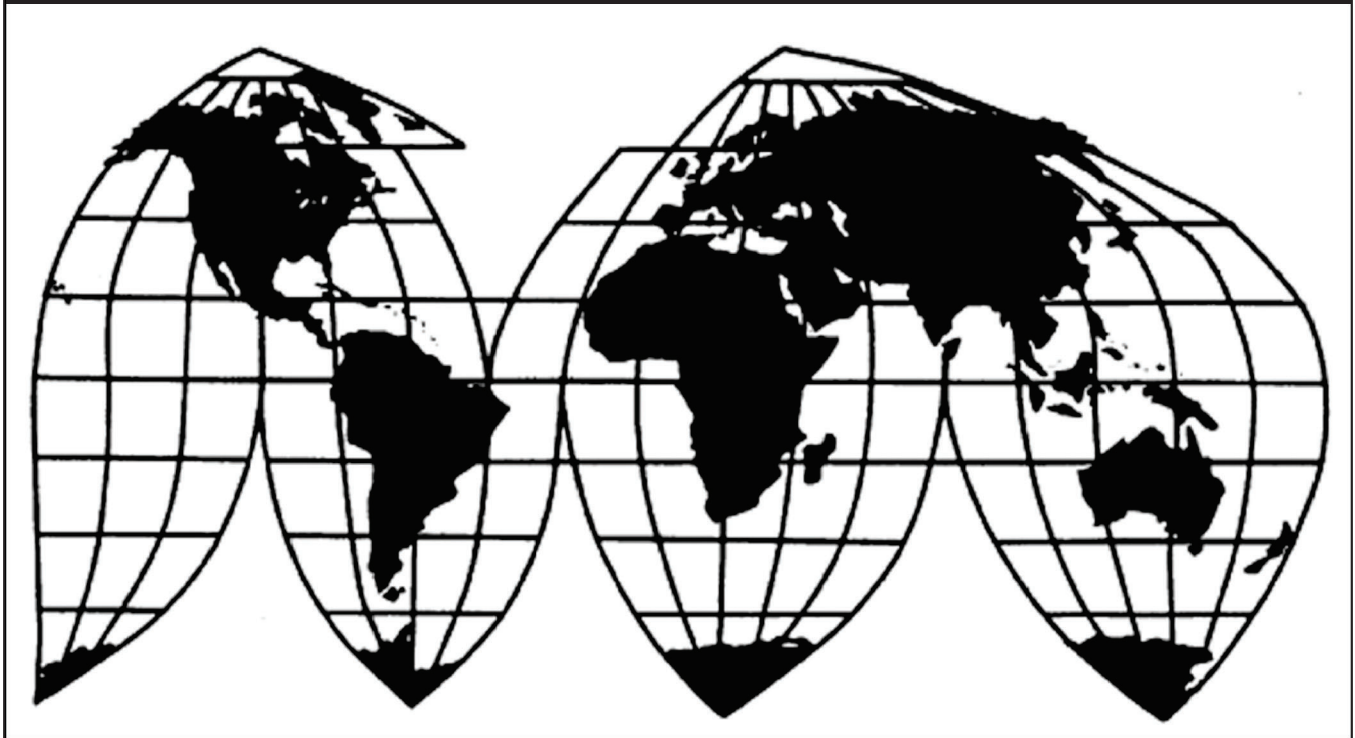
Certain Large Residential Washers from Korea and Mexico

Investigation Nos. 701-TA-488 and 731-TA-1199-1200 (Review)

Publication 4882

April 2019

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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CONTENTS

	Page
Determinations	1
Views of the Commission	3
Part I: Introduction	I-1
Background.....	I-1
The original investigations.....	I-2
Previous and related investigations	I-3
Antidumping duty investigation on LRWs from China	I-3
U.S. safeguard investigation.....	I-3
Trade adjustment	I-5
World Trade Organization dispute settlement developments	I-6
North America Free Trade Agreement (“NAFTA”) panel review	I-7
Antidumping and countervailing duty investigations on covered key raw materials	I-7
Section 232 investigations (Commerce).....	I-8
Section 301 proceeding.....	I-13
Summary data	I-14
Statutory criteria and organization of the report	I-15
Statutory criteria	I-15
Organization of report.....	I-17
Commerce’s reviews	I-18
Administrative reviews.....	I-18
Five-year reviews.....	I-20
The subject merchandise	I-22
Commerce’s scope	I-22
Tariff treatment.....	I-23
The product.....	I-24
Description and applications.....	I-24
Product features.....	I-28
Manufacturing processes	I-31

CONTENTS

	Page
Part I: Introduction--Continued	
Domestic like product issues.....	I-35
U.S. market participants.....	I-36
U.S. producers	I-36
U.S. importers.....	I-42
U.S. purchasers.....	I-43
Apparent U.S. consumption	I-44
U.S. market shares	I-44
Part II: Conditions of competition in the U.S. market.....	II-1
U.S. market characteristics.....	II-1
Impact of the U.S. safeguard measure.....	II-2
Innovation leaders.....	II-4
Channels of distribution	II-4
Geographic distribution	II-5
Supply and demand considerations.....	II-5
U.S. supply	II-5
U.S. demand	II-9
Substitutability issues.....	II-12
Lead times	II-12
Knowledge of country sources	II-13
Factors affecting purchasing decisions.....	II-13
Comparisons of domestic products, subject imports, and nonsubject imports.....	II-18
Comparison of U.S.-produced and imported LRWs	II-21
Elasticity estimates.....	II-23
U.S. supply elasticity.....	II-23
U.S. demand elasticity.....	II-23
Substitution elasticity.....	II-23

CONTENTS

	Page
Part III: Condition of the U.S. industry	III-1
Overview	III-1
Changes experienced by the industry	III-3
Anticipated changes in operations.....	III-4
U.S. production, capacity, and capacity utilization	III-4
Alternative products.....	III-5
Constraints on capacity	III-5
U.S. producers' U.S. shipments and exports.....	III-5
U.S. producers' inventories.....	III-8
U.S. producers' imports.....	III-8
U.S. employment, wages, and productivity	III-9
Financial condition of the U.S. industry	10
Background.....	10
Operations on washers.....	10
SG&A expenses and operating income or loss.....	12
Interest expense, other expenses, and net income or loss	12
Variance analysis	13
Capital expenditures and research and development expenses	13
Assets and return on assets.....	14
Part IV: U.S. imports and the foreign industries	IV-1
U.S. imports.....	IV-1
Overview.....	IV-1
Imports from subject and nonsubject countries.....	IV-1
Cumulation considerations	IV-4
Fungibility	IV-4
Geographical markets	IV-6
Presence in the market	IV-7
U.S. importers' imports subsequent to September 30, 2018.....	IV-10

CONTENTS

	Page
Part IV: U.S. imports and the foreign industries--Continued	
U.S. importers' inventories	IV-11
The industry in Korea	IV-11
Overview.....	IV-11
Changes in operations.....	IV-12
Operations on LRWs	IV-12
Alternative products.....	IV-13
Exports.....	IV-14
The industry in Mexico.....	IV-15
Changes in operations.....	IV-16
Operations on LRWs	IV-17
Alternative products.....	IV-17
Exports.....	IV-18
Subject countries combined.....	IV-19
Antidumping or countervailing duty orders in third-country markets.....	IV-22
Global market.....	IV-22
LRW consumption outside the United States	IV-23
Prices	IV-23
Global supply and demand factors.....	IV-24
The LRW industries in Asia	IV-24
The industry in China.....	IV-24
The industry in Thailand	IV-24
The industry in Vietnam	IV-25
Other residential washer industries.....	IV-25

CONTENTS

	Page
Part V: Pricing data	V-1
Factors affecting prices	V-1
Raw material costs	V-1
Transportation costs to the U.S. market.....	V-2
U.S. inland transportation costs	V-3
Pricing practices	V-3
Pricing methods.....	V-3
Sales terms	V-4
Discounts and promotional prices.....	V-4
Price leadership	V-5
Cross-product and cross-supplier impact.....	V-5
Price data.....	V-8
Price trends.....	V-11
Price comparisons	V-11
Purchasers' perceptions of relative price trends	V-13
Appendixes	
A. <i>Federal Register</i> notices.....	A-1
B. List of hearing witnesses	B-1
C. Summary data	C-1
D. Comments regarding the effects of the orders and the likely effects of revocation	D-1
E. Impact of Section 201 safeguard measures.....	E-1
F. U.S. importers' U.S. shipments by product characteristics	F-1

Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified (including by brackets or by parallel lines) in confidential reports and is deleted and replaced with asterisks in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-488 and 731-TA-1199-1200 (Review)

Certain Large Residential Washers from Korea and Mexico

DETERMINATIONS

On the basis of the record¹ developed in the subject five-year reviews, the United States International Trade Commission (“Commission”) determines, pursuant to the Tariff Act of 1930 (“the Act”), that revocation of the antidumping and countervailing duty orders on large residential washers from Korea would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time, and that revocation of the antidumping duty order on large residential washers from Mexico would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission, pursuant to section 751(c) of the Act (19 U.S.C. 1675(c)), instituted these reviews on January 2, 2018 (83 F.R. 145) and determined on April 9, 2018 that it would conduct full reviews (83 F.R. 18347, April 26, 2018). Notice of the scheduling of the Commission’s reviews and of a public hearing 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* on September 14, 2018

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

(83 F.R. 46757). Effective February 4, 2019, the Commission revised its schedule due to the lapse in appropriations and ensuing cessation of Commission operations (84 FR 2926, February 8, 2019). The hearing was held in Washington, DC, on February 21, 2019, and all persons who requested the opportunity were permitted to appear in person or by counsel.

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended (“the Tariff Act”), that revocation of the countervailing duty order and the antidumping duty order on large residential washers (“LRWs”) from Korea would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. We also determine that revocation of the antidumping duty order on LRWs from Mexico would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

In February 2013, the Commission determined that an industry in the United States was materially injured by reason of imports of LRWs from Korea and Mexico sold at less than fair value (“LTFV”) and subsidized by the government of Korea.¹ On February 15, 2013, Commerce issued antidumping duty orders covering LRWs from Korea and Mexico and a countervailing duty order covering LRWs from Korea.²

On January 2, 2018, the Commission instituted these first reviews of the antidumping duty orders on LRWs from Korea and Mexico and the countervailing duty order on LRWs from Korea.³ On April 9, 2018, the Commission unanimously determined to conduct full reviews of the orders.⁴

The Commission received prehearing and posthearing submissions from domestic producers Whirlpool Corporation (“Whirlpool”) and Haier U.S. Appliance Solutions, Inc., d/b/a/

¹ *Large Residential Washers from Korea and Mexico*, 78 Fed. Reg. 10636 (Feb. 14, 2013).

² *Large Residential Washers from the Republic of Korea: Countervailing Duty Order*, 78 Fed. Reg. 11154 (Feb. 15, 2013); *Large Residential Washers from Mexico and the Republic of Korea: Antidumping Duty Orders*, 78 Fed. Reg. 11148 (Feb. 15, 2013).

³ *Certain Large Residential Washers from Korea and Mexico; Institution of Five-Year Reviews*, 83 Fed. Reg. 145 (January 2, 2018).

⁴ *Large Residential Washers from Korea and Mexico: Notice of Commission Determination To Conduct Full Five-Year Reviews*, 83 Fed. Reg. 18347 (Apr. 26, 2018); Confidential Report (“CR”) at I-2 n.5; Public Report (“PR”) at I-1 n.5. The Commission determined that responses to its notice of institution were adequate with respect to the domestic interested party group and the respondent interested party group with respect to Korea. *Id.* The Commission was evenly divided on whether the respondent interested party group response with respect to Mexico was adequate. *Id.* Commissioner Kearns did not participate in the adequacy determination.

GE Appliances (“GE”), and final comments from Whirlpool. The Commission also received prehearing and posthearing submissions and final comments from LG Electronics Co., Ltd., LGE Electronics USA, Inc., and LG Electronics Alabama, Inc. (collectively “LG”), and Samsung Electronics Co., Ltd., Samsung Electronics Digital Appliances Mexico, Samsung Electronics America, Inc. (“SEHA”), and Samsung Electronics Home Appliances America (collectively “Samsung”), which are foreign producers, importers, and domestic producers of subject merchandise. Representatives of Whirlpool, GE, LG, and Samsung appeared at the Commission’s hearing accompanied by counsel.

Other proceedings. Subsequent to its determinations in the original investigations, the Commission investigated LRWs, under a somewhat narrower scope, in an antidumping duty investigation regarding China and the global safeguard investigation of LRWs.⁵ On January 30, 2017, the Commission determined that an industry in the United States was materially injured by reason of imports of LRWs from China sold at LTFV, and Commerce issued an antidumping duty order covering LRWs from China on February 6, 2017.⁶ On October 5, 2017, pursuant to an investigation instituted under section 201 of the Trade Act of 1974, the Commission determined that LRWs were being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing an article like or directly competitive with the imported article, and provided a report containing its serious injury findings and remedy recommendations to the President on December 4, 2017.⁷ On January 23, 2018, the President issued a proclamation imposing a safeguard measure in the form of a tariff rate quota on imports of LRWs and certain covered parts, as further discussed in section IV.C.4 below.⁸

⁵ The scope of both *LRWs from China* and the *LRWs* safeguard investigation covered all LRWs within the scope of these reviews with the exception of LRWs that are (1) top loading with a permanent split capacitor motor, belt drive, and flat wrap spring clutch; (2) front loading with a controlled induction motor and belt drive; and (3) front loading with a cabinet width of more than 28.5 inches. See *Large Residential Washers from China*, Inv. No. 731-TA-1306 (Final), USITC Pub. 4666 (Jan. 2017) at 5-6; *Large Residential Washers*, Inv. No. TA-201-076, USITC Pub. 4745 (Dec. 2017) at 7-8.

⁶ *Large Residential Washers From China; Determination*, 82 Fed. Reg. 9223 (Feb. 3, 2017); *Large Residential Washers From the People’s Republic of China: Amended Final Affirmative Antidumping Duty Determination and Antidumping Duty Order*, 82 Fed. Reg. 9371 (Feb. 6, 2017).

⁷ See *LRWs Safeguard*, USITC Pub. 4745 at 1-2. The scope of the safeguard investigation was identical to the scope of the antidumping duty investigation of LRWs from China, and thus somewhat narrower than the scope of the orders under review. See *id.* at 7-8.

⁸ *Proclamation 9694 to Facilitate Positive Adjustment to Competition From Imports of Large Residential Washers*, 83 Fed. Reg. 3553 (Jan. 23, 2018). As required by section 201(a)(2) of the Trade Act of 1974, the Commission will submit a report to the President and the Congress on its monitoring of

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the “domestic like product” and the “industry.”⁹ 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 under this subtitle.”¹⁰ The Commission’s practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.¹¹

Commerce has defined the imported merchandise within the scope of the orders under review as follows:

For purposes of these investigations, the term “large residential washers” denotes all automatic clothes washing machines, regardless of the orientation of the rotational axis, except as noted below, with a cabinet width (measured from its widest point) of at least 24.5 inches (62.23 cm) and no more than 32.0 inches (81.28 cm).

Also covered are certain subassemblies used in large residential washers, namely: (1) All assembled cabinets designed for use in large residential washers which incorporate, at a minimum: (a) At least three of the six cabinet surfaces; and (b) a bracket; (2) all assembled tubs designed for use in large residential washers which incorporate, at a minimum: (a) a tub; and (b) a seal; (3) all assembled baskets designed for use in large residential washers which

developments in the domestic industry by the midpoint of the three-year and one day period of relief, or by August 7, 2019. CR at I-6; PR at I-4-5.

⁹ 19 U.S.C. § 1677(4)(A).

¹⁰ 19 U.S.C. § 1677(10); 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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int’l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int’l Trade 1990), *aff’d*, 938 F.2d 1278 (Fed. Cir. 1991); see also S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

¹¹ See, e.g., *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

incorporate, at a minimum: (a) A side wrapper; (b) a base; and (c) a drive hub; and (4) any combination of the foregoing subassemblies.

Excluded from the scope are stacked washer-dryers and commercial washers. The term “stacked washer-dryers” denotes distinct washing and drying machines that are built on a unitary frame and share a common console that controls both the washer and the dryer.

The term “commercial washer” denotes an automatic clothes washing machine designed for the “pay per use” market meeting either of the following two definitions:

(1)(a) It contains payment system electronics; (b) it is configured with an externally mounted steel frame at least six inches high that is designed to house a coin/token operated payment system (whether or not the actual coin/token operated payment system is installed at the time of importation); (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners; or

(2)(a) It contains payment system electronics; (b) the payment system electronics are enabled (whether or not the payment acceptance device has been installed at the time of importation) such that, in normal operation, the unit cannot begin a wash cycle without first receiving a signal from a bona fide payment acceptance device such as an electronic credit card reader; (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners.

Also excluded from the scope are automatic clothes washing machines with a vertical axis and a rated capacity of less than 3.7 cubic feet, as certified to the

U.S. Department of Energy pursuant to 10 CFR § 429.12 and 10 CFR § 429.20, and in accordance with the test procedures established in 10 CFR Part 430.¹²

LRWs are automatic clothes washing appliances capable of cleaning fabrics using water and detergent in conjunction with wash, rinse, and spin cycles typically programmed into the unit.¹³ They are produced in either top load or front load configurations.¹⁴ Top load LRWs possess drums that spin on a vertical axis and are loaded with soiled clothing through a door on the top of the unit.¹⁵ Front load LRWs possess drums that spin on a horizontal or tilted axis and are loaded with soiled clothing through a door in the front of the unit.¹⁶ All LRWs are typically purchased by households for use in single-family dwellings.¹⁷

Top load LRWs can wash clothes using either an agitator or an impeller. Agitator-based top load LRWs are characterized by their use of a pole-shaped agitator inside the drum, which cleans clothes by swirling them through detergent and water.¹⁸ Due to the interior volume occupied by the agitator, agitator-based top load LRWs generally offer less capacity than other types of LRWs.¹⁹ Because agitator-based top load LRWs require more water and energy than impeller-based top load LRWs, they are less likely to satisfy Energy Star certification under U.S. Department of Energy (“DOE”) guidelines, although some agitator-based top load LRW models have qualified for Energy Star.²⁰ In the original investigations, the Commission referred to agitator-based top load LRWs as conventional top load (“CTL”) washers, and found that certain CTL LRWs qualified for Energy Star but none as high efficiency (“HE”) machines under the

¹² *Countervailing Duty Order on Large Residential Washers from the Republic of Korea: Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review*, Department of Commerce, April 26, 2018, found at <https://enforcement.trade.gov/frn/summary/korea-south/2018-09310-1.pdf>; *Issues and Decision Memorandum for the Final Results of First Sunset Review of the Antidumping Duty Order on Large Residential Washers from Mexico*, Department of Commerce, May 4, 2018, found at <https://enforcement.trade.gov/frn/summary/mexico/2018-09948-1.pdf>; *Issues and Decision Memorandum for the Final Results of First Sunset Review of the Antidumping Duty Order on Large Residential Washers from Korea*, Department of Commerce, October 18, 2018, <https://enforcement.trade.gov/frn/summary/korea-south/2018-22635-1.pdf>.

The products subject to these investigations are currently classifiable under statistical reporting number 8450.20.0090 of the Harmonized Tariff System of the United States (HTSUS). Products subject to these investigations may also enter under HTSUS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.90.2000, and 8450.90.6000. Although the HTSUS statistical reporting numbers are provided for convenience and customs purposes, the written description of the merchandise subject to this scope is dispositive. CR at I-35; PR at I-23.

¹³ CR at I-36-37; PR at I-24.

¹⁴ CR at I-36-37; PR at I-24.

¹⁵ CR at I-37; PR at I-25.

¹⁶ CR at I-40; PR at I-27.

¹⁷ CR at I-37; PR at I-24.

¹⁸ CR at I-39; PR at I-26.

¹⁹ CR at I-39-40; PR at I-26.

²⁰ CR at I-39; PR at I-26.

guidelines promulgated by the Consortium for Energy Efficiency (“CEE”).²¹ To comply with more stringent water and energy efficiency standards implemented by the DOE on March 7, 2015, Whirlpool re-engineered its agitator-based LRWs to utilize “HE-agitators” and more efficient “shallow fill” technology, which requires the use of specially formulated HE detergent.²²

Impeller-based top load LRWs are characterized by their use of a flat, rotating hub at the base of the drum, which cleans clothes by lifting and dropping them into a small quantity of water and HE detergent.²³ They reduce energy consumption by spinning clothes at high speed, thereby extracting more water and leaving clothes in need of less time in a dryer.²⁴ In the original investigations, the Commission found that impeller-based top load washers qualified as HE machines under CEE guidelines, and therefore categorized them as “HETL” washers.²⁵ After the DOE implemented increasingly more stringent water and energy efficiency standards on March 7, 2015, January 1, 2018, and February 5, 2018, however, many impeller-based top load LRWs no longer qualified for Energy Star, although impeller-based top load LRWs are more likely to meet the Energy Star standard than agitator-based LRWs.²⁶

Front load LRWs are typically positioned more toward the premium end of the LRW market in terms of price and performance.²⁷ They conserve water by lifting clothes with a baffle as the drum spins on a horizontal or tilted axis and dropping them into a small quantity of water and HE detergent.²⁸ Like impeller-based top load LRWs, front load LRWs reduce energy consumption by spinning clothes at high speeds that extract more water and reduce drying time.²⁹ In the original investigations, the Commission found that all front load washers qualified as HE machines under CEE standards, and therefore categorized them as “HEFL” washers.³⁰ Most front load LRWs qualify for Energy Star under the DOE’s new standards.³¹

1. The Original Investigations

In the original investigations, petitioner argued that the Commission should define a single domestic like product coextensive with the amended scope of the investigation, encompassing all LRWs but excluding top load washers with a capacity of less than 3.7 cubic

²¹ *Certain Large Residential Washers from Korea and Mexico*, Inv. Nos. 701-TA-488, 731-TA-1199-1200 (Final) USITC Pub. 4378 at 6 (Feb. 2013) (“Original Determinations”).

²² CR at I-39-40; PR at I-26.

²³ CR at I-40; PR at I-26.

²⁴ CR at I-40; PR at I-26-27.

²⁵ Original Determinations at 6.

²⁶ CR at I-40; PR at I-27.

²⁷ CR at I-40-41; PR at I-27.

²⁸ CR at I-41; PR at I-27.

²⁹ CR at I-41; PR at I-27.

³⁰ Original Determinations at 7.

³¹ CR at I-41; PR at I-27; CR/PR at Table III-9.

feet.³² Respondents argued that the Commission should define the domestic like product to include both LRWs within the amended scope as well as out-of-scope top load washers with a capacity of less than 3.7 cubic feet, consistent with the domestic like product definition from the preliminary phase of the investigations.³³

The Commission began its analysis by finding no new information on the record that would warrant reconsideration of its finding from the preliminary phase investigations that no clear dividing lines separated CTL, HETL, and HEFL washers within the amended scope.³⁴ Based on an analysis of its traditional like product factors, the Commission also found no clear dividing line separating out-of-scope top load washers with a capacity of less than 3.7 cubic feet from LRWs described by the amended scope.³⁵ Specifically, the Commission found that all top load washers shared the same basic physical characteristics and uses regardless of capacity.³⁶ It found that top load washers with a capacity of less than 3.7 cubic feet were generally interchangeable with LRWs described by the scope, and that both types of washers were produced in the same Whirlpool production facility, sharing production processes and employees to some extent.³⁷ The Commission also found that top load washers with a capacity of less than 3.7 cubic feet and LRWs described by the scope shared the same channels of distribution (with most sold to retailers).³⁸ The Commission also found that top load washers with a capacity of less than 3.7 cubic feet and LRWs within the scope had similar customer and producer perceptions, and petitioner conceded that domestically produced top load washers with a capacity of less than 3.7 cubic feet compete with larger-capacity subject imports within the scope.³⁹ While acknowledging that top load washers with a capacity of less than 3.7 cubic feet were generally less expensive than in-scope LRWs, the Commission found that the preponderance of similarities between top load washers with a capacity of less than 3.7 cubic feet and in-scope LRWs indicated the absence of any clear dividing line.⁴⁰ The Commission therefore defined the domestic like product to include both LRWs described by the scope and top load washers with a capacity of less than 3.7 cubic feet.⁴¹

³² Original Determinations at 7. Pursuant to a request filed by Whirlpool, Commerce had amended the final scope of the investigation to exclude top load washers with a capacity of less than 3.7 cubic feet. *Id.* at 5.

³³ Original Determinations at 7.

³⁴ Original Determinations at 8.

³⁵ Original Determinations at 8.

³⁶ Original Determinations at 9.

³⁷ Original Determinations at 9-10.

³⁸ Original Determinations at 10-11.

³⁹ Original Determinations at 10-11.

⁴⁰ Original Determinations at 11.

⁴¹ Original Determinations at 11.

2. The Current Reviews

In five-year reviews, the Commission frequently adopts the domestic like product definition from the original determination where the record does not suggest that any change is appropriate and no party has argued for a different definition. The domestic interested parties argue, and respondent interested parties do not dispute, that the Commission should adopt the like product definition from the original investigations.⁴² There is no information on the record to indicate that the Commission should revisit the like product definition.⁴³ Accordingly, we again define the domestic like product to include both LRWs described by the scope and top load washers with a capacity of less than 3.7 cubic feet (collectively, “washers”).

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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.”⁴⁴ 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.

1. The Original Investigations

In the original investigations, the Commission did not exclude any related parties under 19 U.S.C. § 1677(4)(B). Although three domestic producers qualified as related parties -- Electrolux, ***, and Whirlpool -- the Commission found that appropriate circumstances did not exist for excluding any of them from the domestic industry as related parties.⁴⁵

⁴² See Domestic Interested Parties’ Prehearing Brief at 16-18. In their respective responses to the notice of institution, LG and Samsung indicated that they disagreed with the Commission’s definition of the domestic like product from the original investigations. See CR at I-54-55; PR at I-36. However, no party requested the collection of data with respect to alternative domestic like product definitions in comments on the draft questionnaires or argued for a different domestic like product definition at the hearing or in briefs. *Id.*

⁴³ See generally, CR at I-36-55, II-23-24; PR at I-26-36, II-15-16.

⁴⁴ 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. See 19 U.S.C. § 1677.

⁴⁵ Confidential Views, *Certain Large Residential Washers from Korea and Mexico*, Inv. Nos. 701-TA-488 and 731-TA-1119-1120 (Final) (“Confidential Original Determinations”), EDIS Doc. No. 656397, at 18.

2. The Current Reviews

In the current reviews, Samsung qualifies as a related party because it is related to a Korean producer and exporter of LRWs and imported LRWs from Korea and Mexico, and ***.⁴⁶ We must therefore determine whether Samsung and *** 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.⁴⁷ Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.⁴⁸ We discuss below whether appropriate circumstances exist to exclude Samsung and *** from the domestic industry.

a. Arguments of the Parties

While taking no position on the issue, Whirlpool notes that the Commission may exclude Samsung as a related party based on Samsung's opposition to continuation of the orders and allegedly greater interest in importing than in domestic production.⁴⁹ Samsung argues that appropriate circumstances do not exist to exclude its domestic operations, SEHA, from the domestic industry because Samsung's primary interest will soon be in domestic production, as

⁴⁶ CR at IV-2; PR at IV-1; CR/PR at Tables I-10-11. Although LG also constructed a U.S. washer production facility during the period of review, CR/PR at Table III-1, LG did not commence domestic production until October 2018, after the period for which we collected data, and therefore reported no data on its domestic operations. *Id.* at III-1. Consequently, LG does not qualify as a domestic producer for purposes of the Commission's definition of the domestic industry. Nevertheless, we consider LG's new U.S. washer production facility as a condition of competition relevant to our analysis in these reviews.

⁴⁷ 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).

⁴⁸ 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.

⁴⁹ Whirlpool and GE's Prehearing Brief at 17; Hearing Tr. at 149 (Levy).

domestic production by SEHA increasingly replaces most imports by Samsung, and because Samsung's interest as an importer has not distorted SEHA's domestic production activities.⁵⁰

b. Analysis

We find that appropriate circumstances do not exist to exclude either Samsung or *** from the domestic industry based on the following analysis.

Samsung

Samsung announced plans to construct a \$380 million washer production facility in Newberry, South Carolina in June 2017, known as SEHA, and commenced domestic production of washers at the facility in January 2018.⁵¹ Samsung's capacity was *** units in January-September 2018 ("interim 2018") and is projected to increase to *** units in 2020.⁵² Samsung's production of washers was *** units in interim 2018 and is projected to be *** units for full year 2018 and *** units in 2019.⁵³ In interim 2018, Samsung was the *** largest domestic producer, accounting for *** percent of domestic industry production during the period.⁵⁴ Samsung claims that *** percent of its U.S. sales will consist of domestically produced washers by 2021.⁵⁵ In interim 2018, when Samsung commenced domestic production, it imported only *** units of LRWs from Korea and *** from Mexico.⁵⁶

The record indicates that Samsung's primary interest is in the domestic production of washers. In particular, Samsung ***, has made significant investments in SEHA, ***, and was the *** largest domestic producer of washers in interim 2018.⁵⁷ Although Samsung *** continuation of the orders, no party has argued that it should be excluded from the definition of the domestic industry.⁵⁸

For all of these reasons, we find that appropriate circumstances do not exist to exclude Samsung from the domestic industry as a related party.

Although ***, equivalent to *** percent of its production that year, it imported *** LRWs from Korea or Mexico for the remainder of the period of review.⁵⁹ *** was the *** largest domestic producer in 2017, accounting for *** percent of domestic production that year, and *** continuation of the orders.⁶⁰ Accordingly, the record of the reviews indicates that

⁵⁰ Hearing Tr. at 214 (Shor).

⁵¹ CR/PR at Table III-1.

⁵² CR/PR at Tables III-3-4; Samsung's Prehearing Brief at 8.

⁵³ CR/PR at Tables III-3-4.

⁵⁴ CR/PR at Table III-4.

⁵⁵ Samsung's Prehearing Brief at 9.

⁵⁶ CR/PR at Table III-12. Samsung's *** were *** worse than the domestic industry average in interim 2018, CR/PR at Table III-16, which Samsung attributes to start-up costs and the high unit costs associated with ramping up production at a new plant. Samsung's Prehearing Brief at 41-42.

⁵⁷ CR/PR at Table III-3.

⁵⁸ CR/PR at Table I-9; Hearing Tr. at 149 (Levy).

⁵⁹ CR/PR at Table III-12.

⁶⁰ CR/PR at Table I-10. *** operating and net income margins were worse than the domestic industry average throughout the period of review. CR/PR at Table III-16.

*** primary interest is in the domestic production of washers. We therefore find that appropriate circumstances do not exist to exclude *** from the domestic industry as a related party.

Based on our definition of the domestic like product, we define the domestic industry as all domestic producers of washers, including Alliance, GE, Samsung, and Whirlpool.⁶¹

III. Cumulation

A. Legal Standard

With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows: the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.⁶²

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.⁶³ The Commission may exercise its discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

In the original investigations, the Commission found a reasonable overlap of competition between and among subject imports from Korea and Mexico and the domestic like product.⁶⁴ Specifically, the Commission found a moderately high degree of substitutability between subject imports from Korea and Mexico and between subject imports from each

⁶¹ CR/PR at Table I-5.

⁶² 19 U.S.C. § 1675a(a)(7).

⁶³ 19 U.S.C. § 1677(7)(G)(i); *see also, e.g., Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

⁶⁴ Original Determinations at 16.

source and the domestic like product.⁶⁵ The Commission also found that during the period of investigation, LRWs from all sources served a nationwide market, shared the same channels of distribution, and were simultaneously present in the U.S. market.⁶⁶ Having found a reasonable overlap of competition, the Commission cumulated subject imports from Korea and Mexico for purposes of its material injury analysis.⁶⁷

In these five-year reviews, the domestic interested parties argue that the Commission should cumulate subject imports from Korea and Mexico because imports from each country are likely to have more than a discernible adverse impact if the orders are revoked, there will be a reasonable overlap of competition between subject imports and the domestic like product, and there is no indication that imports from these countries would compete under different conditions of competition.⁶⁸ Disputing LG's argument that only Korean producers have established related washer production facilities in the United States, Whirlpool argues that Samsung's LRW production operations in both Korea and Mexico mean that this condition of competition does not distinguish subject imports from Korea.⁶⁹ LG argues that the Commission should exercise its discretion to not cumulate subject imports from Korea and Mexico because Korean producers accounting for virtually all subject imports from Korea have made substantial investments in U.S. washer production facilities designed to replace imports of LRWs, unlike the Mexican producer accounting for *** subject imports from Mexico, and have no incentive to undermine their U.S. investments by increasing subject imports from Korea to injurious levels after revocation.⁷⁰

⁶⁵ Original Determinations at 16.

⁶⁶ Original Determinations at 16.

⁶⁷ Original Determinations at 16.

⁶⁸ Whirlpool and GE's Prehearing Brief at 6-7; Whirlpool's Posthearing Brief at 2-3.

⁶⁹ Whirlpool's Posthearing Brief at 2; Whirlpool's Final Comments at 3. Whirlpool argues that in past reviews, the Commission has cumulated subject imports from all countries with producers and exporters related to the same U.S. affiliate. *Id.* (citing *Hot-Rolled Steel Products from Argentina, China, India, Indonesia, Kazakhstan, Romania, South Africa, Taiwan, Thailand, and Ukraine*, Investigation Nos. 701-TA-404-408 and 731-TA-898-902 and 904-908 (Review), USITC Pub. 3956 (Oct. 2007) at 17-18, 20, 44-45). We would note that in the *Hot-Rolled Steel Products* reviews, the Commission cumulated subject imports from three countries possessing Mittal Steel facilities related to Mittal Steel facilities in the United States separately from subject imports from countries with no Mittal Steel facilities in part because Mittal Steel accounted for "virtually all production of subject merchandise" in the three countries. USITC Pub. 3956 at 17. By contrast, Samsung accounted for only *** percent of LRW production in Mexico in 2017. CR/PR at Table IV-16. The only other Mexican producers related to domestic producers, *** and Whirlpool, possess no LRW production facilities in Korea. See CR/PR at Table IV-11. Furthermore, none of the Mexican producers related to domestic producers export LRWs from Mexico to the United States, or are likely to do so in significant volumes. See CR at IV-46-47, 49; PR at IV-15-17; Foreign Producers' Questionnaire of *** at Questions II-9, II-11; see also Section IV.E.1 below.

⁷⁰ See LG's Prehearing Brief at 9-13; Hearing Tr. at 166-67 (Toohey).

The threshold criterion for cumulation in these five-year reviews is satisfied because all reviews were instituted on the same day, January 2, 2018.⁷¹ We consider the following issues in deciding whether to exercise our discretion to cumulate the subject imports: (1) whether imports from any of the subject countries are precluded from cumulation because they are likely to have no discernible adverse impact on the domestic industry; (2) whether there is a likelihood of a reasonable overlap of competition among imports from the subject countries and the domestic like product; and (3) whether there are similarities and differences in the likely conditions of competition under which subject imports are likely to compete in the U.S. market.

Based on the record, we find that subject imports from each of the two countries would not be likely to have no discernible adverse impact on the domestic industry were the antidumping duty orders to be revoked. We also find a likely reasonable overlap of competition among the subject imports and between the subject imports and the domestic like product were the orders to be revoked. We find, however, that there are differences in the likely conditions of competition under which subject imports from Korea and Mexico are likely to compete in the U.S. market if the orders were revoked. We therefore exercise our discretion to not cumulate subject imports from Korea and Mexico, as further explained below.

B. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.⁷² Neither the statute nor the Uruguay Round Agreements Act (“URAA”) Statement of Administrative Action (“SAA”) provides specific guidance on what factors the Commission is to consider in determining that imports “are likely to have no discernible adverse impact” on the domestic industry.⁷³ With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked.

Based on the record, we do not find that imports from either of the two subject countries are likely to have no discernible adverse impact on the domestic industry in the event of revocation of the orders. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

Korea. In the original investigations, the volume of subject imports from Korea increased irregularly from *** units in 2009 to *** units in 2011 but was lower in January-June 2012, at *** units, compared to January-June 2011, at *** units.⁷⁴ Subject imports from Korea as a share of apparent U.S. consumption increased irregularly from *** percent in 2009 to ***

⁷¹ 83 Fed. Reg. 145.

⁷² 19 U.S.C. § 1675a(a)(7).

⁷³ SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).

⁷⁴ Confidential Report from the Original Investigations, EDIS Doc. No. 656396, at Table IV-2.

percent in 2011, and were *** percent in January-June 2012, compared to *** percent in January-June 2011.⁷⁵ Over the period of review, the volume of subject imports from Korea declined from *** units in 2012 to *** units in 2013, *** units in 2014, and *** units in 2015, but increased to *** units in 2016 and *** units in 2017.⁷⁶ Subject imports from Korea were *** units in interim 2018, compared to *** units in interim 2017.⁷⁷ As a share of apparent U.S. consumption, subject imports from Korea declined from *** percent in 2012 to *** percent in 2013, *** percent in 2014, and *** percent in 2015, but increased to *** percent in 2016 and *** percent in 2017, and were *** percent in interim 2017 and 2018.⁷⁸ Reported LRW capacity in Korea declined from *** units in 2012 to *** units in 2013 and 2014, increased to *** units in 2015, and then declined to *** units in 2016 and *** units in 2017.⁷⁹ Reported LRW capacity in Korea was *** units in interim 2018, compared to *** units in interim 2017.⁸⁰ Capacity utilization of the responding producers declined irregularly from *** percent in 2012 to *** percent in 2015 before increasing to *** percent in 2017.⁸¹ Capacity utilization of the responding producers was *** percent in interim 2018, compared to *** percent in interim 2017.⁸² Responding Korean producer exports as a share of total shipments of LRWs ranged from *** percent to *** percent over the period of review, with exports to the United States accounting for the largest share of exports, ranging from *** to *** percent of total shipments.⁸³ Subject imports from Korea undersold the domestic like product in 68 of 75 quarterly comparisons during the original investigations and in *** of *** quarterly comparisons in these reviews.⁸⁴

Based on the Korean industry's significant capacity and exports and the continued presence of subject imports from Korea in the U.S. market, we find that, upon revocation, subject imports from Korea are not likely to have no discernible adverse impact on the domestic industry.

Mexico. In the original investigations, the volume of subject imports from Mexico increased irregularly from *** units in 2009 to *** units in 2011 and was higher in January-June 2012, at *** units, compared to January-June 2011, at *** units.⁸⁵ Subject imports from Mexico as a share of apparent U.S. consumption increased from *** percent in 2009 to *** percent in 2011, and were *** percent in January-June 2012, compared to *** percent in

⁷⁵ Confidential Report from the Original Investigations, EDIS Doc. No. 656396, at Table IV-15.

⁷⁶ CR/PR at Table IV-1.

⁷⁷ CR/PR at Table IV-1.

⁷⁸ CR/PR at Table I-14.

⁷⁹ CR/PR at Table IV-13.

⁸⁰ CR/PR at Table IV-13.

⁸¹ CR/PR at Table IV-13.

⁸² CR/PR at Table IV-13.

⁸³ CR/PR at Table IV-13.

⁸⁴ Confidential Report from the Original Investigations, EDIS Doc. No. 656396, at Table V-18; CR/PR at Table V-10.

⁸⁵ Confidential Report from the Original Investigations, EDIS Doc. No. 656396, at Table IV-2.

January-June 2011.⁸⁶ Over the period of review, the volume of subject imports from Mexico declined from *** units in 2012 to *** units in 2013, increased to *** units in 2014, and then declined to *** units in 2015 and 2016 and *** units in 2017.⁸⁷ Subject imports from Mexico were *** units in interim 2018, compared to *** units in interim 2017.⁸⁸ As a share of apparent U.S. consumption, subject imports from Mexico declined from *** percent in 2012 to *** percent in 2013, *** percent in 2014, *** percent in 2015 and 2016, and *** percent in 2017, and were *** percent in interim 2018 compared to *** percent in interim 2017.⁸⁹ Reported LRW capacity in Mexico declined from *** units in 2012 to *** units in 2013, and to *** units in 2014 and 2015, but increased to *** units in 2016 and 2017.⁹⁰ Reported LRW capacity in Mexico was *** units in interim 2018, compared to *** units in interim 2017.⁹¹ Capacity utilization of the responding producers declined from *** percent in 2012 to *** percent in 2013, increased to *** percent in 2014, and then increased irregularly to *** percent in 2017.⁹² Capacity utilization of the responding producers was *** percent in interim 2018, compared to *** percent in interim 2017.⁹³ Responding Mexican producer exports as a share of total shipments of LRWs ranged from *** percent to *** percent over the period of review, with exports to the United States accounting for a substantial share of total shipments throughout the period of review, ranging from *** to *** percent of total shipments.⁹⁴ Subject imports from Mexico undersold the domestic like product in 31 of 35 quarterly comparisons during the original investigations.⁹⁵ No pricing data were reported for subject imports from Mexico in these reviews.⁹⁶

Based on the Mexican industry's significant excess capacity, high degree of export orientation, and the continuous presence of subject imports from Mexico in the U.S. market, we find that, upon revocation, subject imports from Mexico are not likely to have no discernible adverse impact on the domestic industry.

C. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like

⁸⁶ Confidential Report from the Original Investigations, EDIS Doc. No. 656396, at Table IV-15.

⁸⁷ CR/PR at Table IV-1.

⁸⁸ CR/PR at Table IV-1.

⁸⁹ CR/PR at Table I-14.

⁹⁰ CR/PR at Table IV-18.

⁹¹ CR/PR at Table IV-18.

⁹² CR/PR at Table IV-18.

⁹³ CR/PR at Table IV-18.

⁹⁴ CR/PR at Table IV-18.

⁹⁵ Confidential Report from the Original Investigations, EDIS Doc. No. 656397, at Table V-18; CR/PR at Table V-10.

⁹⁶ CR/PR at Table V-10 note.

product.⁹⁷ Only a “reasonable overlap” of competition is required.⁹⁸ In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.⁹⁹

Fungibility. As in the original investigations, the record of the reviews indicates that there is a moderately high degree of substitutability between subject imports from Korea and Mexico and between subject imports from each source and domestically produced LRWs.¹⁰⁰ Most responding domestic producers reported that subject imports from Korea and Mexico are always used interchangeably with each other and with domestically produced LRWs, while most responding importers reported that subject imports from Korea and Mexico are always or sometimes used interchangeably with each other and with domestically produced LRWs.¹⁰¹ Most responding purchasers reported that subject imports from Korea and Mexico are always or frequently used interchangeably with each other and with domestically produced LRWs.¹⁰² Most responding purchasers reported that U.S., Korean, and Mexican LRWs are comparable in terms of 25 enumerated factors, such as delivery terms; fit, feel, and finish; and product range, with a few exceptions.¹⁰³

Channels of Distribution. Subject imports from Korea and Mexico and the domestic like product shared the same general channels of distribution. During the period of review, the vast majority of domestically produced washers and subject imports from Korea, and a significant

⁹⁷ The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality-related questions; (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product; (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and (4) whether subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int’l Trade 1989).

⁹⁸ *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int’l Trade 1996); *Wieland Werke*, 718 F. Supp. at 52 (“Completely overlapping markets are not required.”); *United States Steel Group v. United States*, 873 F. Supp. 673, 685 (Ct. Int’l Trade 1994), *aff’d*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g., Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), *aff’d sub nom, Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int’l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

⁹⁹ *See generally, Cheflene Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int’l Trade 2002).

¹⁰⁰ CR at II-19; PR at II-12.

¹⁰¹ CR/PR at Table II-13.

¹⁰² CR/PR at Table II-13.

¹⁰³ *See* CR/PR at Table II-12. A majority of responding purchasers reported that domestically produced washers are superior to subject imports from Korea in terms of delivery time, but inferior to subject imports from Korea in terms of internet connectivity and dual-wash chambers. *Id.*

share of subject imports from Mexico, were sold to ***.¹⁰⁴ Although around *** of subject imports from Mexico were sold to ***, domestically produced LRWs and subject imports from Korea were sold to *** as well.¹⁰⁵

Geographic Overlap. The record indicates that LRWs from all sources served a nationwide market during the period of review.¹⁰⁶

Simultaneous Presence in Market. LRWs from all sources were simultaneously present in the U.S. market, with subject imports from Korea and Mexico entering the United States in every month of the period of review.¹⁰⁷

Conclusion. We find that there would likely be a reasonable overlap of competition among subject imports from Korea and Mexico and between subject imports from each source and the domestic like product, were the orders to be revoked. We base this finding on the reasonable overlap of competition evident between LRWs from both subject sources and the domestic like product in terms of fungibility, geographic overlap, common channels of distribution, and simultaneous presence in the U.S. market with the orders in place, the absence of evidence indicating that this reasonable overlap of competition would change after revocation of the orders, and the lack of any contrary argument.

D. Likely Conditions of Competition

In determining whether to exercise our discretion to cumulate the subject imports, we assess whether the subject imports from Korea and Mexico are likely to compete under similar or different conditions in the U.S. market after revocation of the orders.¹⁰⁸ We find that subject imports from Korea are likely to compete in the U.S. market under conditions of competition that are different from the conditions that apply to subject imports from Mexico after revocation, as further explained below. In particular, LG and Samsung, which accounted for virtually all subject imports from Korea during the original investigations and period of review, have constructed U.S. washer production facilities that are expected to supply most of their sales in the U.S. market once fully ramped up.¹⁰⁹

LG announced that it would open a new washer production facility in Clarksville, Tennessee in February 2017, began construction in August 2017, and commenced domestic production in November 2018.¹¹⁰ LG's substantial investment in the new plant, \$357 million,

¹⁰⁴ CR/PR at Table II-3.

¹⁰⁵ CR/PR at Table II-3.

¹⁰⁶ CR/PR at Table II-4.

¹⁰⁷ CR/PR at Table IV-8.

¹⁰⁸ See, e.g., *Allegheny Ludlum Corp.*, 475 F. Supp. 2d at 1378 (recognizing the wide latitude the Commission has in selecting the type of factors it considers relevant in deciding whether to exercise discretion to cumulate subject imports in five-year reviews); *Nucor v. United States*, 569 F. Supp. 2d at 1337-38; *United States Steel*, Slip Op. 08-82.

¹⁰⁹ See LG's Prehearing Brief at 8-11; Samsung's Prehearing Brief at 4-10; CR at IV-38; PR at IV-11; CR/PR at Table III-12.

¹¹⁰ LG's Prehearing Brief at 9; CR/PR at Table III-1.

reflects the plant's large size, with a capacity of 1.2 million units, and its greater degree of vertical integration, encompassing raw material fabrication, subassembly creation, and final assembly, than LG's LRW production facilities in other countries, which rely on outside vendors for all but final assembly.¹¹¹ LG expects employment at the new plant to grow from 450 employees currently to 600 employees by the end of 2019.¹¹² LG projects that the plant will increase production from ***, when the plant will be producing at its full capacity of 1.2 million units of washers annually, representing 90 percent of LG's U.S. sales.¹¹³

As discussed in section II.B above, Samsung announced plans to construct a \$380 million washer production facility in Newberry, South Carolina in June 2017, known as SEHA, and commenced domestic production of front load washers in January 2018 and of top load washers in March 2018.¹¹⁴ Having invested \$*** in the facility thus far, Samsung claims that its U.S. plant is the most modern and vertically integrated washer production facility in the world.¹¹⁵ ***.¹¹⁶ Samsung also projects that production at the plant will increase from *** units in 2018 to *** units in 2019 and around *** units in 2020, near the plant's full capacity of ***, so that *** percent of Samsung's U.S. sales will be supplied domestically by 2021.¹¹⁷

We find that LG and Samsung are likely to maintain their plans to supply the U.S. market primarily from their new U.S. washer production facilities after revocation. Both LG's and Samsung's commitments to producing washers domestically are reflected in their large investments in the new plants, currently totaling \$***, and the large size of the new plants, with a combined annual production capacity of *** units when fully operational.¹¹⁸ LG's and Samsung's new U.S. plants also reflect a highly coordinated strategy of localizing the production of washers for the U.S. market, a strategy that involves their respective parent companies in Korea and their respective U.S. subsidiaries that control their U.S. washer production facilities

¹¹¹ LG's Prehearing Brief at 17-21; CR/PR at Tables III-1, 3.

¹¹² Hearing Tr. at 267-68 (Toohey); CR/PR at Table III-3.

¹¹³ CR/PR at Tables III-1, III-3; LG's Prehearing Brief at 9; Hearing Tr. at 162-63, 267 (Toohey).

¹¹⁴ CR/PR at Table III-1; Staff notes from fieldwork at Samsung's U.S. plant (Oct. 10, 2018), EDIS Document No. 664813 ("Trip Notes") at 2.

¹¹⁵ Samsung's Prehearing Brief at 7; Hearing Tr. at 169-70 (Komaromi).

¹¹⁶ Trip Notes at 2.

¹¹⁷ Samsung's Prehearing Brief at 7-8; Samsung's Responses to Commissioner Questions at 12; Hearing Tr. at 170 (Komaromi).

¹¹⁸ CR/PR at Table III-3; Samsung's Prehearing Brief at 7; Hearing Tr. at 159 (Toohey). Counsel to Whirlpool acknowledged at the hearing that "these are substantial investments and there is vertical integration, as reported" and that "we certainly agree that the Samsung investment appears to be significant and lasting." Hearing Tr. at 83, 90 (Levy). We also note that closing or scaling back its new U.S. production facility would subject LG to clawbacks of the benefits provided to LG under incentive agreements with state and local governments in Tennessee. See LG's Prehearing Brief at 22-24, Exhibit 4; LG's Responses to Commissioner Questions at 16-20. Similarly, Samsung would incur substantial financial penalties under the terms of the financial incentives received from state and local governments for construction of its new U.S. washer production facility if it fails to achieve its long-term investment and employment commitments. Samsung's Prehearing Brief at 8, Exhibit 3.

and are also responsible for importing LRWs from Korea and nonsubject sources.¹¹⁹ All of the entities responsible for LG's and Samsung's strategy of localizing the production of washers for the U.S. market participated in the reviews and all stated unequivocally, in briefs and hearing testimony, that LG and Samsung intend to supply *** percent of their sales in the U.S. market with washers produced at their new U.S. plants.¹²⁰

We further find that LG and Samsung have an economic incentive to limit their imports of LRWs from Korea to volumes and prices that would not undermine their major investments in U.S. washer production facilities.¹²¹ Samsung is unlikely to import significant volumes of LRWs from Korea after revocation because it has not done so since 2012 and produces no LRWs for the U.S. market in Korea.¹²² Indeed, Samsung's capacity to produce LRWs in Korea declined *** percent between 2012 and 2017 and was *** percent lower in interim 2018 compared to interim 2017.¹²³ Instead, Samsung will likely continue to supplement its growing domestic production with declining volumes of nonsubject imports from its production facilities in Thailand and Vietnam, which Samsung has used to serve the U.S. market since 2016.¹²⁴

Although LG continued to import significant volumes of LRWs from Korea during the period of review, it primarily served the U.S. market using imports from Thailand and Vietnam.¹²⁵ Like Samsung, LG plans to reduce its imports from all sources as production of all high-volume LRW models is transferred to its U.S. plant.¹²⁶ This strategy of import reduction and increased U.S. production will leave a reduced volume of subject imports from Korea produced on a "special-purpose manufacturing line" reserved for "cutting edge" new models and legacy OEM models sold in "extremely limited volumes" to ***.¹²⁷ LG projects that its subject imports from Korea will decline from *** units in 2017 to *** units in 2019 and ***

¹¹⁹ See CR/PR at Table I-11; LG's Prehearing Brief at 10-11.

¹²⁰ See LG's Prehearing Brief at 9; Samsung's Prehearing Brief at 7-8; Hearing Tr. at 162-63 (Toohey), 170 (Komaromi), 267 (Toohey). The annual production capacity of LG's and Samsung's new U.S. plants, at 1.2 million and *** units, respectively, is equivalent to more than *** percent of the U.S. shipments of subject and nonsubject imported LRWs reported by LG and Samsung in 2017, which were *** and *** units, respectively. See Importers' Questionnaire Responses of LG and Samsung at Question II-7.

¹²¹ See Hearing Tr. at 166-67 (Toohey) ("LG has no incentive to discount the prices of our most innovative models being imported from Korea, which will represent less than ten percent of our sales if such discounting would just drive down prices for our U.S.-based production, which will represent more than 90 percent of our sales. To do so would make no sense at all."); see also Section IV.D.2 below.

¹²² CR at IV-38; PR at IV-11; CR/PR at Tables III-12, D-1; Foreign Producers' Questionnaire of Samsung at Question II-11; Hearing Tr. at 195 (Shor).

¹²³ Foreign Producers' Questionnaire Response of Samsung at Question II-11.

¹²⁴ CR at IV-3; PR at IV-2; CR/PR at Table III-12; Importer's Questionnaire Response of Samsung at Question II-7e; Samsung's Prehearing Brief at 8; Hearing Tr. at 184-85 (Komaromi, Park), 195 (Shor).

¹²⁵ See Importers' Questionnaire Response of LG at Question II-7.

¹²⁶ Hearing Tr. at 189-190 (Porter), 191, 193 (Kim), LG's Prehearing Brief, Exhibit 9.

¹²⁷ CR at IV-1-2, 38; PR at IV-1, 11; LG's Prehearing Brief at 45-49, Exhibit 10; Hearing Tr. at 162-63 (Toohey).

units in 2020.¹²⁸ We find LG's sourcing strategy credible in light of its economic incentive to ramp up its new U.S. plant as quickly as possible, so as to increase the plant's capacity utilization rate and reduce its unit cost of production to levels that would maximize the return on its sizeable investment in the plant.¹²⁹

In contrast to the Korean producers' investments to localize washer production in the United States, the Mexican producer ***, Electrolux, serves the U.S. market exclusively from its Mexican LRW production facility and produces no washers in the United States.¹³⁰ Other producers of LRWs in Mexico do not serve the U.S. market. Whirlpool and Samsung ceased exporting LRWs from their Mexican production facilities to the United States in 2012, and subsequently reconfigured their respective plants to produce smaller LRWs and out-of-scope washers (and in Samsung's case dryers) for markets in Mexico, Central America, and South America.¹³¹ Mabe, which is ***,¹³² Thus, no Mexican producer that currently serves or has recently served the U.S. market produces washers in the United States or has any plans to do so. Consequently, Electrolux would not face the same incentives and constraints with respect to volumes and prices of subject merchandise exported to the United States as LG and Samsung would face.

Furthermore, Electrolux's subject imports from Mexico are likely to ***,¹³³ By contrast, subject imports from Korea are likely to consist substantially of LRWs ***, with the exception of imports of ***.¹³⁴ Thus, the safeguard measure is likely to ***, providing LG and Samsung with an additional incentive to localize their production of LRWs in the United States.¹³⁵

In sum, subject imports from Korea are likely to compete in the U.S. market under distinct conditions of competition after revocation because LG and Samsung, which accounted for all subject imports from Korea during the period of review, are committed to supplying the U.S. market primarily from their new U.S. washer production facilities, and will likely manage

¹²⁸ LG's Prehearing Brief at 47-48, Exhibit 9. LG's capacity to produce LRWs in Korea declined *** percent between 2012 and 2017, but was *** percent higher in interim 2018 compared to interim 2017. Foreign Producers' Questionnaire Response of LG at Question II-11.

¹²⁹ See Hearing Tr. at 220 (Kim) ("So, currently, as we explained, we're at a very initial stage of running the Tennessee factory and our utmost target is to ramp up as soon as possible and as much as possible, which is why we are mostly focused on the regular 27-inch washer."); see also Samsung's Prehearing Brief at 41-42 (attributing the *** of its U.S. plant in interim 2018 to the high unit costs associated with ramping up production at a new plant).

¹³⁰ CR at IV-46-47; PR at IV-15-16. Electrolux ceased washer production at its Webster City, Iowa facility in early 2011 and transferred all laundry production to its facility in Juarez, Mexico. CR at I-55 n.114; PR at I-36 n.114.

¹³¹ CR at IV-46-47; PR at IV-15-16.

¹³² CR at IV-49; PR at IV-17; CR/PR at Tables I-11, IV-16; Foreign Producers' Questionnaire of Mabe at Questions II-9, II-11.

¹³³ CR at I-5-6; PR at I-4; Importers' Questionnaire Response of Electrolux at Question II-6d; ***, EDIS Document No. 670169.

¹³⁴ See LG's Prehearing Brief at 47-48, 52-53, Exhibit 9.

¹³⁵ See section IV.D.1 below.

their subject imports from Korea accordingly. By contrast, Electrolux, which has accounted for *** subject imports from Mexico since 2013, produces no washers in the United States. We therefore exercise our discretion to not cumulate subject imports from Korea with subject imports from Mexico.

IV. Whether Revocation of the Antidumping and Countervailing Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order “would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time.”¹³⁶ The SAA states that “under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the elimination of its restraining effects on volumes and prices of imports.”¹³⁷ Thus, the likelihood standard is prospective in nature.¹³⁸ The U.S. Court of International Trade has found that “likely,” as used in the five-year review provisions of the Act, means “probable,” and the Commission applies that standard in five-year reviews.¹³⁹

¹³⁶ 19 U.S.C. § 1675a(a).

¹³⁷ SAA at 883-84. The SAA states that “{t}he likelihood of injury standard applies regardless of the nature of the Commission’s original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed.” *Id.* at 883.

¹³⁸ While the SAA states that “a separate determination regarding current material injury is not necessary,” it indicates that “the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked.” SAA at 884.

¹³⁹ See *NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int’l Trade 2003) (“‘likely’ means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)”), *aff’d mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) (“more likely than not” standard is “consistent with the court’s opinion;” “the court has not interpreted ‘likely’ to imply any particular degree of ‘certainty’”); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) (“standard is based on a likelihood of continuation or recurrence of injury, not a certainty”); *Usinor v. United States*, 26 CIT 767, 794 (2002) (“‘likely’ is tantamount to ‘probable,’ not merely ‘possible’”).

The statute states that “the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time.”¹⁴⁰ According to the SAA, a “‘reasonably foreseeable time’ will vary from case-to-case, but normally will exceed the ‘imminent’ timeframe applicable in a threat of injury analysis in original investigations.”¹⁴¹

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to “consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended investigation is terminated.”¹⁴² It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).¹⁴³ The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission’s determination.¹⁴⁴

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.¹⁴⁵ In doing so, the Commission must consider “all relevant economic factors,” including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.¹⁴⁶

¹⁴⁰ 19 U.S.C. § 1675a(a)(5).

¹⁴¹ SAA at 887. Among the factors that the Commission should consider in this regard are “the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities.” *Id.*

¹⁴² 19 U.S.C. § 1675a(a)(1).

¹⁴³ 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings since imposition of the orders under review. CR at I-29 n.82; PR at I-18 n.82.

¹⁴⁴ 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

¹⁴⁵ 19 U.S.C. § 1675a(a)(2).

¹⁴⁶ 19 U.S.C. § 1675a(a)(2)(A-D).

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.¹⁴⁷

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.¹⁴⁸ All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.¹⁴⁹

B. Findings in the Original Investigations

Conditions of Competition. The Commission found the following conditions of competition relevant to its analysis in the original investigations.

Demand. During the original period of investigation, apparent U.S. consumption of washers increased from *** units in 2009 to *** units in 2010 but declined to *** units in 2011 and was *** units in interim 2012, compared to *** units in interim 2011.¹⁵⁰ The Commission found that demand for washers was not highly correlated to economic conditions because a substantial proportion of washer purchases were made to replace existing washers at the end of their useful lives, and washers had few if any substitutes.¹⁵¹ The Commission also found that

¹⁴⁷ See 19 U.S.C. § 1675a(a)(3). The SAA states that “{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices.” SAA at 886.

¹⁴⁸ 19 U.S.C. § 1675a(a)(4).

¹⁴⁹ The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission “considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.” SAA at 885.

¹⁵⁰ Confidential Original Determinations at 27.

¹⁵¹ Original Determinations at 17.

CTL, HETL, and HEFL washers each exhibited distinct demand trends over the period, with apparent U.S. consumption of CTL and HEFL washers declining while apparent U.S. consumption of HETL washers increased.¹⁵² Responding producers, importers, and purchasers attributed these trends to a shift in consumer preferences away from CTL washers to more energy efficient, larger capacity washers and from HEFL washers to HETL washers due to the perceived shortcomings of HEFL washers, including inferior ergonomics and mold and vibration problems.¹⁵³

The Commission found that the differing demand trends of CTL, HETL, and HEFL washers reflected a substantial degree of competition among the three types of washers. As further support, the Commission noted that retailers displayed and advertised the three types of washers side by side, and that consumers “cross-shopped” the different types of washers to a significant degree.¹⁵⁴

Recognizing that competition in the U.S. market occurs at the wholesale and retail levels, the Commission explained that it would focus its analysis on competition and pricing on sales by domestic producers and importers to retailer/distributors, but also recognized that retail consumer preferences influence retailers’ purchasing decisions.¹⁵⁵ Five large retailers – Best Buy, HH Gregg, Home Depot, Lowe’s, and Sears – accounted for 65 to 70 percent of washers sales in the U.S. market.¹⁵⁶

Supply. The Commission found that the domestic industry consisted of four known producers, Alliance, GE, Staber, and Whirlpool, after Fisher & Paykel ceased production in 2009, and Bosch and Electrolux ceased production in 2011.¹⁵⁷ The domestic industry accounted for *** percent of apparent U.S. consumption in 2011.¹⁵⁸ Having begun the period of investigation producing only CTL and HETL washers, Whirlpool commenced domestic production of HEFL washers in the fourth quarter of 2010 and ***.¹⁵⁹

The Commission found that most subject imports from Korea were imported by LG and Samsung, while subject imports from Mexico were imported by Electrolux, Samsung, and Whirlpool.¹⁶⁰ ***.¹⁶¹ Cumulated subject imports accounted for *** percent of apparent U.S. consumption in 2011.¹⁶²

The Commission found that nonsubject imports, largely from China, the Czech Republic, and Germany, declined as a share of apparent U.S. consumption throughout the period of

¹⁵² Original Determinations at 17-18.

¹⁵³ Original Determinations at 17-18.

¹⁵⁴ Original Determinations at 18.

¹⁵⁵ Original Determinations at 18-19.

¹⁵⁶ Original Determinations at 18.

¹⁵⁷ Original Determinations at 19.

¹⁵⁸ Confidential Original Determinations at 31.

¹⁵⁹ Confidential Original Determinations at 32.

¹⁶⁰ Original Determinations at 19-20.

¹⁶¹ Confidential Original Determinations at 33.

¹⁶² Confidential Original Determinations at 33.

investigation, from *** percent in 2009 to *** percent in 2011 and interim 2012.¹⁶³ The decline resulted largely from Whirlpool’s decision to cease importing HEFL washers from Germany effective July 2012, pursuant to its decision to supply the U.S. market with domestically produced HEFL washers.¹⁶⁴

Market Dynamics. The Commission found that in typical sales negotiations between suppliers and retailers, suppliers proposed a minimum advertised price (“MAP”) for each model offered and then negotiated a profit margin for the retailer consisting of the difference between the MAPs and the retailer’s acquisition cost.¹⁶⁵ Retailers decided which models to purchase based on factors including brand, margins, profitability, quality, and retail prices, and allocated the limited floor space at their retail establishments on the basis of consumer demand and the relative profitability of individual units.¹⁶⁶

The Commission found that discounting was prevalent in the LRW market, particularly during holiday promotions such as Black Friday, with most responding purchasers reporting that the volume of LRW sales made at promotional prices increased during the period of investigation, and that over 75 percent or over 90 percent of their sales were made at promotional prices in 2011.¹⁶⁷ Noting that there were two main categories of discounts, the Commission explained that direct discounts were discounts tied to the specific product being sold, while indirect discounts were discounts tied to some broad performance measure or volume discounts based on multiple product lines.¹⁶⁸ Responding purchasers reported that LG and Samsung offered larger discounts than GE or Whirlpool.¹⁶⁹

***¹⁷⁰ ***¹⁷¹ ***¹⁷²

Substitutability. The Commission found a moderately high degree of substitutability between subject imports and domestically produced LRWs, and that price was an important factor in the U.S. LRW market, although non-price factors were also important.¹⁷³ As the Commission explained, both the price-based nature of negotiations between suppliers and retailers and the prevalence of discounting underscored the importance of price in the U.S. market.¹⁷⁴ The Commission also found that subject imports and domestically produced LRWs were comparable with respect to non-price factors, including “fit, feel, and finish” and innovation, based on purchaser responses, Consumer Reports rankings, and the hearing

¹⁶³ Confidential Original Determinations at 33.

¹⁶⁴ Original Determinations at 20.

¹⁶⁵ Original Determinations at 20-21.

¹⁶⁶ Original Determinations at 21.

¹⁶⁷ Original Determinations at 21-22.

¹⁶⁸ Original Determinations at 22.

¹⁶⁹ Original Determinations at 22.

¹⁷⁰ Confidential Original Determinations at 37.

¹⁷¹ Confidential Original Determinations at 38.

¹⁷² Confidential Original Determinations at 38.

¹⁷³ Original Determinations at 23.

¹⁷⁴ Original Determinations at 24.

testimony of a witness from Home Depot, a large purchaser of LRWs that otherwise opposed the imposition of duties.¹⁷⁵

Finally, the Commission found that domestically produced top load washers with a capacity of less than 3.7 cubic feet were not shielded from subject import competition to a significant degree, based on its definition of the domestic like product, Whirlpool's production of HETL washers with a capacity of less than 3.7 cubic feet, and consumer cross-shopping of CTL washers with HETL and HEFL washers.¹⁷⁶ The Commission also found that the prices of subject imports affected sales of all domestically produced washers, including CTL washers, with HETL washers capturing market share from CTL washers as they expanded into lower price points.¹⁷⁷ Witnesses from Whirlpool and Home Depot had stated at the hearing that discounts on more fully featured LRWs compelled price reductions on less featured models through "price compression," and responding purchasers reported that the availability of a highly featured LRW at a low price affects the sales of less highly featured LRWs.¹⁷⁸

Volume. The Commission found that the volume and increase in volume of cumulated subject imports from Korea and Mexico were significant, both absolutely and relative to apparent U.S. consumption and production, over the period of investigation.¹⁷⁹ Finding that interim 2012 data were affected by the filing of the petition, the Commission relied principally on data from 2009 to 2011.¹⁸⁰ Cumulated subject import volume increased irregularly from *** units in 2009, equivalent to *** percent of apparent U.S. consumption, to *** units in 2011, equivalent to *** percent of apparent U.S. consumption.¹⁸¹ The ratio of subject imports to domestic industry production also increased irregularly from *** percent in 2009 to *** percent in 2011.¹⁸²

The Commission also found that subject imports significantly increased their penetration of the HETL and HEFL washer segments, which were important to Whirlpool's profitability and viability, at the direct expense of the domestic industry.¹⁸³ Specifically, the Commission found that the domestic industry's ability to compensate for declining sales of CTL washers with increased sales of HETL washers was compromised by subject imports, as they captured *** percentage points of market share from the domestic industry in the HETL segment between 2009 and 2011.¹⁸⁴

¹⁷⁵ Original Determinations at 24-25.

¹⁷⁶ Original Determinations at 26.

¹⁷⁷ Original Determinations at 26.

¹⁷⁸ Original Determinations at 26.

¹⁷⁹ Original Determinations at 29-30.

¹⁸⁰ Original Determinations at 30 & n.240. The Commission exercised its discretion to discount data from the interim 2012 period on finding that the petition's filing contributed significantly to the domestic industry's improved performance in interim 2012, by helping the industry realize a price increase and by reducing the volume of subject imports from Korea in interim 2012. *Id.* at 30 n.240.

¹⁸¹ Confidential Original Determinations at 52.

¹⁸² Confidential Original Determinations at 52.

¹⁸³ Original Determinations at 31-32.

¹⁸⁴ Confidential Original Determinations at 54-55.

The Commission further found that subject imports significantly increased their penetration of the HEFL washer market, from *** percent in 2009 to *** percent in 2011, resulting in a *** percentage point decline in the domestic industry's market share in the segment.¹⁸⁵ The Commission found this market share loss significant because subject import competition contributed to Bosch's decision to close its U.S. HEFL washer plant in May 2011 and because the elevated subject import market share contributed to Whirlpool's inability to capitalize on its \$100 million investment to shift HEFL production from Germany and Mexico to the United States.¹⁸⁶

Price. The Commission found subject import underselling to be significant because subject imports undersold domestically produced washers in *** of *** quarterly comparisons, or *** percent of the time, at margins averaging *** percent.¹⁸⁷

The Commission also found that pervasive subject import underselling depressed domestic like product prices to a significant degree.¹⁸⁸ As support, the Commission observed that domestic prices had declined on six of eleven pricing products, accounting for *** percent of reported sales volume.¹⁸⁹ The Commission also found it significant that domestic prices declined on all four products covering HETL washers, notwithstanding the *** percent increase in apparent U.S. consumption of such washers.¹⁹⁰ Even as to the four pricing products for which domestic prices increased, products that exclusively covered ***, the Commission found that ***.¹⁹¹

The Commission further found that pervasive subject import underselling suppressed domestic like product price increases that otherwise would have occurred to a significant degree.¹⁹² While it incurred increasing raw material costs, the domestic industry's ratio of cost of goods sold to net sales increased from *** percent in 2009 to *** percent in 2011, irrespective of demand trends.¹⁹³

¹⁸⁵ Confidential Original Determinations at 55-56.

¹⁸⁶ Original Determinations at 33-34.

¹⁸⁷ Confidential Original Determinations at 60.

¹⁸⁸ Original Determinations at 36.

¹⁸⁹ Confidential Original Determinations at 61-62. The Commission rejected respondents' argument that the price declines largely reflected the influence of life cycle pricing, as domestically produced washers nearing the end of their life cycles were discounted. Original Determinations at 36 n.272. As the Commission explained, respondents' life cycle theory was contradicted by pricing data collected in the preliminary phase investigation that controlled for life cycle pricing, which was similar to the pricing data that did not control for life cycle pricing, and by other record evidence showing that producers would have little flexibility or reason to reduce a model's wholesale price on anything other than a temporary, promotional basis. *Id.*

¹⁹⁰ Confidential Original Determinations at 62.

¹⁹¹ Confidential Original Determinations at 62-63.

¹⁹² Original Determinations at 37.

¹⁹³ Confidential Original Determinations at 63.

The Commission found further support for its price suppression finding in an analysis of the HETL and HEFL washers segments, in which subject import competition was most intense.¹⁹⁴ Despite the *** percent increase in apparent U.S. consumption of HETL washers, the Commission explained, the domestic industry's ratio of cost of goods sold to net sales with respect to HETL washers increased from *** percent in 2009 to *** percent in 2011, driven by a cost-price squeeze in the portion of the domestic industry that competed most directly with subject imports – HETL washers with a capacity of 3.7 cubic feet or greater.¹⁹⁵

With respect to HEFL washers, the Commission found that the domestic industry's ratio of cost of goods sold to net sales increased from *** percent in 2009 to *** percent in 2011.¹⁹⁶ The Commission found it noteworthy that this ratio increased *** percentage points between 2009 and 2010, to *** percent, notwithstanding a *** percent increase in apparent U.S. consumption of HEFL washers, as subject imports pervasively undersold the domestic like product and captured *** percentage points of market share from the domestic industry.¹⁹⁷ The Commission also found that the domestic industry's ratio of cost of goods sold to net sales was elevated in 2011 because low-priced subject import competition had ***, even as demand for HEFL washers in the same capacity range *** between 2009 and 2011.¹⁹⁸

The Commission found additional evidence that low-priced subject imports adversely impacted domestic like product prices in the lost sales and revenue allegations confirmed by purchasers in the final phase of the investigations, totaling \$*** and \$***, respectively.¹⁹⁹ The Commission also noted that in the preliminary phase of the investigations, ***, resulting in lost revenue of \$*** over the lives of the respective contracts.²⁰⁰ ***.”²⁰¹

Impact. The Commission found that the domestic industry's performance deteriorated between 2009 and 2011 according to most measures, including employment, U.S. shipments, market share, end-of-period inventory, and operating income, and that three U.S. washer facilities closed during the period.²⁰² Although the domestic industry's capacity increased between 2009 and 2011, due to Whirlpool's decision to shift HEFL production to the United States and Bosch's and Electrolux's maintenance of domestic production facilities through 2011 before closing them, the industry's production and capacity utilization declined.²⁰³ While recognizing that the domestic industry's capital and research and development expenditures remained substantial during the period, the Commission observed that much of the increase in

¹⁹⁴ Original Determinations at 38.

¹⁹⁵ Confidential Original Determinations at 64.

¹⁹⁶ Confidential Original Determinations at 64.

¹⁹⁷ Confidential Original Determinations at 64-65.

¹⁹⁸ Confidential Original Determinations at 65.

¹⁹⁹ Confidential Original Determinations at 66.

²⁰⁰ Confidential Original Determinations at 66-67.

²⁰¹ Confidential Original Determinations at 66-67.

²⁰² Confidential Original Determinations at 68-71.

²⁰³ Confidential Original Determinations at 68-69.

capital expenditures reflected investments by Whirlpool in HEFL washer production, which had generated substantial losses, and investments by GE in HETL and CTL production ***.²⁰⁴

The Commission found a causal nexus between subject imports and the domestic industry's deteriorating condition during the 2009-11 period.²⁰⁵ It found that the significant increase in subject import volume captured *** percentage points of market share from the domestic industry and that significant subject import underselling had depressed and suppressed domestic like product prices to a significant degree.²⁰⁶ Low-priced subject import competition had also resulted in a significant volume and value of lost sales for the domestic industry.²⁰⁷

The Commission rejected respondents' argument that subject import competition was significantly attenuated because a large proportion of domestic industry production consisted of CTL washers, of which there were no subject imports.²⁰⁸ As the Commission explained, the proportion of the domestic industry's U.S. shipments competing directly with subject imports increased as CTL washers declined as a share of the industry's shipments from *** percent in 2009 to *** percent in 2011, due to a shift in consumer preferences in favor of HE washers.²⁰⁹ Rather than improving the domestic industry's performance, however, the industry's shift from CTL washers to HETL and HEFL washers was accompanied by a significant decline in the profitability in both segments due to subject import competition, which largely drove the industry's overall losses.²¹⁰

The Commission also found that subject imports had a significant adverse impact on the domestic industry's sales of CTL washers, notwithstanding the absence of subject imported CTL washers.²¹¹ In making this finding, the Commission recalled its findings that the U.S. market encompassed a continuum of washer products with substantial cross-shopping between different segments and that discounts on larger, more fully featured washers, such as HETL and HEFL washers, adversely affected sales volumes and prices of smaller, less fully featured washers, such as CTL washers.²¹² Based on these market dynamics, the Commission found that low-priced subject import competition reduced demand for CTL washers and forced domestic producers to reduce prices and forego price increases on CTL washers as lower prices on HETL and HEFL washers compressed CTL washer prices.²¹³

The Commission considered whether there were other factors that may have adversely impacted the domestic industry to ensure that injury from such factors was not attributed to

²⁰⁴ Confidential Original Determinations at 71-72.

²⁰⁵ Original Determinations at 42.

²⁰⁶ Confidential Original Determinations at 72-73.

²⁰⁷ Original Determinations at 42.

²⁰⁸ Original Determinations at 42.

²⁰⁹ Confidential Original Determinations at 73-74.

²¹⁰ Confidential Original Determinations at 74-75.

²¹¹ Original Determinations at 44.

²¹² Original Determinations at 44.

²¹³ Original Determinations at 44-45.

subject imports.²¹⁴ The Commission found that macroeconomic trends could not explain the domestic industry's weak performance because such trends have limited influence over washer demand, apparent U.S. consumption was flat, and demand shifted to what should have been more profitable HETL and HEFL washers with a capacity of 3.7 cubic feet or greater, such as Whirlpool's Alpha HEFL washers.²¹⁵ It also found that nonsubject imports had a declining presence in the U.S. market during the period of investigation, with most consisting of Whirlpool's imports of HEFL washers from Germany, which ceased in July 2012.²¹⁶

Based on the foregoing analysis, the Commission concluded that the domestic industry was materially injured by reason of subject imports.²¹⁷

C. Conditions of Competition and the Business Cycle in the Current Reviews

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."²¹⁸ The following conditions of competition inform our determinations.

1. Demand Conditions

About two-thirds of demand for LRWs is driven by consumers needing to replace existing washers at the end of those products' functional lives, otherwise known as "replacement demand," with the balance driven by home sales, renovations, and new construction.²¹⁹ Thus, demand for LRWs is primarily driven by necessity. Most responding domestic producers, importers, and purchasers reported that U.S. demand for LRWs increased during the period of review, consistent with strong U.S. economic performance and increased activity in the housing market.²²⁰ Apparent U.S. consumption of LRWs increased from *** units in 2012 to *** units in 2013, *** units in 2014, *** units in 2015, *** units in 2016, and *** units in 2017, a level *** percent higher than in 2012.²²¹ Apparent U.S. consumption was *** units in interim 2018, compared to *** units in interim 2017.²²²

Future demand growth for LRWs in the U.S. market is expected to moderate. An industry study by Freedonia Group ***.²²³ Most responding importers and foreign producers

²¹⁴ Original Determinations at 45.

²¹⁵ Original Determinations at 45.

²¹⁶ Confidential Original Determinations at 77-78.

²¹⁷ Original Determinations at 46.

²¹⁸ 19 U.S.C. § 1675a(a)(4).

²¹⁹ CR at II-15; PR at II-9.

²²⁰ CR at II-16; PR at II-9; CR/PR at Figures II-1-3, Table II-6.

²²¹ CR/PR at Tables I-13, C-1.

²²² CR/PR at Tables I-13, C-1.

²²³ CR at II-16; PR at II-9; *see also* Whirlpool and GE's Prehearing Brief at 43; Hearing Tr. at 139-40 (Liotine).

anticipate that demand will increase over the next two years, but most responding domestic producers anticipate that demand will fluctuate.²²⁴ Responding purchasers were divided on the question, with eight anticipating that demand will increase, six anticipating that demand will decrease, five anticipating no change, and four anticipating that demand will fluctuate.²²⁵

Competition in the U.S. market occurs at two levels of trade: sales by domestic producers and importers to retailer/distributors and sales by retailers to consumers.²²⁶ Domestic producers and importers made most of their sales to retailers, distributors, and buying groups.²²⁷ Four large appliance retailers – Best Buy, Home Depot, Lowe’s, and Sears – together accounted for three-quarters of purchases of LRWs in 2017.²²⁸ *** purchases LRWs on an original equipment manufacturer (“OEM”) basis ***.²²⁹ Consistent with our practice of examining first arm’s-length transactions in the U.S. market, we have focused our analysis of competition and pricing in the U.S. LRW market on sales by domestic producers and importers to retailer/distributors.²³⁰ Nevertheless, we also recognize that consumer preferences influence retailers’ purchasing decisions.²³¹

2. Supply Conditions

The U.S. market is currently served by four domestic producers, which accounted for *** percent of apparent U.S. consumption in 2017; subject imports from Korea, which accounted for *** percent of apparent U.S. consumption in 2017; subject imports from Mexico, which accounted for *** percent of apparent U.S. consumption in 2017; and nonsubject imports, which accounted for *** percent of apparent U.S. consumption in 2017.²³²

The domestic industry consists of Whirlpool, GE, Alliance, and Samsung, with Whirlpool alone accounting for *** percent of domestic washer production in 2017.²³³ LG commenced washer production at its new U.S. plant in November 2018.²³⁴ In addition to LG’s and

²²⁴ CR/PR at Table II-6.

²²⁵ CR/PR at Table II-6.

²²⁶ CR/PR at II-1 n.1.

²²⁷ CR/PR at Table II-3. Buying groups negotiate prices on behalf of multiple retailers.

²²⁸ CR/PR at II-1.

²²⁹ CR at II-1-2; PR at II-1.

²³⁰ See *LRWs from China*, USITC Pub. 4666 at 16; Original Determinations at 18-19; *Bottom Mount Combination Refrigerator-Freezers from Korea and Mexico*, Inv. Nos. 701-TA-477 and 731-TA-1180-1181 (Final), USITC Pub. 4318 (May 2012) at 16; *Sodium Hexametaphosphate from China*, Inv. No. 731-TA-1110 (Final), USITC Pub. 3984 (March 2008) at 13 n.91; *Kosher Chicken from Canada*, Inv. No. 731-TA-1062 (Preliminary), USITC Pub. 1062 (January 2004) at 15 n.120.

²³¹ See CR at II-25; PR at II-16; CR/PR at Table II-8 & n.1.

²³² CR/PR at Table I-14.

²³³ CR/PR at Tables I-10. As previously mentioned, LG produced no LRWs domestically during the period for which we collected data, and Samsung’s production did not begin until 2018. Therefore, as their U.S. production increases, the proportion of U.S. production accounted for by these two firms will substantially increase, while Whirlpool’s share of U.S. production will decrease.

²³⁴ LG’s Prehearing Brief at 9; CR/PR at Table III-1.

Samsung's investments in new U.S. plants, discussed in section III-D above, ***, GE, and Whirlpool made major investments in domestic production during the period of review. In 2012 and 2013, Whirlpool and GE completed their "repatriation" of washer production, having invested in the domestic production of washers that had previously been imported by the companies as well as in new platforms.²³⁵ Whirlpool also ***, and reported investing in ***.²³⁶ ***,²³⁷

*** accounted for *** of subject imports from Korea during the period of review and *** subject imports from Korea after 2012.²³⁸ Samsung does not currently produce LRWs for the U.S. market in Korea and has not exported LRWs from Korea to the United States *** since 2012.²³⁹

***.²⁴⁰ Electrolux ceased washer production at its Webster City, Iowa facility in early 2011 and transferred all laundry product production to its facility in Juarez, Mexico.²⁴¹ As discussed in section III.D above, *** and currently use the facilities to produce smaller LRWs and out-of-scope washers (and dryers in Samsung's case) for markets in Mexico, Central America, and Latin America.²⁴² Another responding Mexican producer, Mabe, ***.²⁴³

Nonsubject import volume increased more than six fold between 2012 and 2017, as LG and Samsung shifted production of LRWs for the U.S. market from Korea and Mexico to nonsubject countries.²⁴⁴ LG and Samsung initially sourced LRWs from China but subsequently shifted to sourcing LRWs primarily from Thailand and Vietnam.²⁴⁵

3. Market Dynamics

As already discussed, most washers are sold by domestic producers and importers to

²³⁵ See CR/PR at Tables III-1-2. Whirlpool invested in the domestic production of front load LRWs that had formerly been imported from Germany and Mexico. *Id.* at Table III-2.

²³⁶ CR at I-8, III-48 n.47; PR at I-5, III-14 n.47; CR/PR at Table III-18; Whirlpool and GE's Prehearing Brief at 80.

²³⁷ CR at III-48-49 & n.48; PR at III-13 & n.48; CR/PR at Table III-18.

²³⁸ CR at IV-2; PR at IV-1; CR/PR at Tables III-12, IV-1.

²³⁹ CR at IV-38; PR at IV-11; CR/PR at Table III-12. Dongbu Daewoo Electronics ("Daewoo"), another Korean producer of LRWs, did not complete a questionnaire response in these reviews, but accounted for only *** percent of Korean exports of LRWs to the United States in 2011. CR at IV-38 n.10; PR at IV-11 n.10; Confidential Report from the Original Investigations/Original Determinations at Table VII-1. No party has argued that Daewoo is likely to export LRWs from Korea to the United States in significant volumes after revocation.

²⁴⁰ CR at IV-2; PR at IV-1.

²⁴¹ CR at I-55 n.114; PR at I-36 n.114.

²⁴² CR at IV-2, 46-47; PR at IV-1.

²⁴³ See Foreign Producers' Questionnaire of Mabe at Questions II-9, II-11

²⁴⁴ CR at IV-2; PR at IV-1.

²⁴⁵ See CR at I-22, IV-60-62; PR at I-14, IV-24-25. As discussed above, there is an antidumping duty order in place on imports of LRWs from China, as well as safeguard measures that have been applied to imports of LRWs on a global basis.

the four largest retailers – Best Buy, Home Depot, Lowe’s, and Sears – and most retailers purchase washers through direct negotiations with suppliers.²⁴⁶ Typical negotiations between LRW suppliers and retailers revolve around prices and margins.²⁴⁷ Responding domestic producers and importers reported offering purchasers a wide range of discounts, categorized as either direct (tied to a specific product) or indirect (tied to broad performance measures of multiple products), with promotional discounts provided during holidays such as President’s Day and Black Friday (the day after Thanksgiving).²⁴⁸

Retailer flooring decisions are an important factor driving sales of LRWs.²⁴⁹ Retailers seek to display an assortment of models and brands at a range of price points to serve a wide variety of customers.²⁵⁰ Most responding purchasers that allocated floor space to a range of LRW models reported doing so on the basis of price, profit margin, and factors related to consumer demand.²⁵¹ Most responding purchasers reported that wholesale pricing, including discounts and promotions, is important in deciding to allocate a given floor spot to one LRW model over another.²⁵²

4. Substitutability and Other Conditions

As discussed in section III.C above, we find that there is a moderate to high degree of substitutability between imports and domestically produced washers.²⁵³ Most responding domestic producers reported that subject imports from Korea and Mexico are always used interchangeably with each other and with domestically produced washers, while most responding importers reported that subject imports from Korea and Mexico are always or sometimes used interchangeably with each other and with domestically produced washers.²⁵⁴ Most responding purchasers reported that subject imports from Korea and Mexico are always or frequently used interchangeably with each other and with domestically produced washers.²⁵⁵ Most responding purchasers reported that U.S., Korean, and Mexican LRWs are comparable in terms of 25 enumerated factors, such as delivery terms, fit, feel, and finish, and product range, with a few exceptions.²⁵⁶

We further find that price is an important factor in purchasing decisions for LRWs, although non-price factors are also important.²⁵⁷ Responding purchasers reported that

²⁴⁶ CR at V-5; PR at V-3; CR/PR at Table V-1.

²⁴⁷ See CR at V-5-8; PR at V-3-4.

²⁴⁸ CR at II-18, V-8-9; PR at II-11, V-4-5.

²⁴⁹ CR at II-26; PR at II-17; Hearing Tr. at 42 (Tubman), 56 (Mattingly), 262 (Porter).

²⁵⁰ CR/PR at II-1.

²⁵¹ CR at II-26; PR at II-17.

²⁵² CR at II-26; PR at II-17.

²⁵³ CR at II-19; PR at II-12.

²⁵⁴ CR/PR at Table II-13.

²⁵⁵ CR/PR at Table II-13.

²⁵⁶ See CR/PR at Table II-12.

²⁵⁷ See CR at II-21-22; PR at II-13-14; CR/PR at Tables II-8-9.

availability, reliability of supply, product consistency, and price were among the most important factors influencing their LRW purchasing decisions.²⁵⁸ When asked to rank factors used in purchasing decisions, more responding purchasers (17) ranked price/pricing/cost among their top three factors than any other factor, followed by quality (13) and availability/supply (9).²⁵⁹ Similarly, more responding purchasers (10) ranked price/pricing/cost as the number one factor in their purchasing decisions than any other factor, followed by features/design/technology/innovations (5), quality (3), and margin opportunity (3).²⁶⁰ When asked whether differences other than price are ever significant to purchasers in choosing between domestically produced washers and subject imported LRWs, most responding domestic producers and responding purchasers reported “sometimes” while responding importers were evenly split between “always” and “never.”²⁶¹

Domestic producer and importer pricing practices and the prevalence of discounting constitute further evidence that price is an important factor in the LRW market. As discussed above, negotiations for the supply of LRWs revolve around prices and margins, with suppliers (domestic producers and importers) generally negotiating these terms directly with retailers.²⁶² Moreover, retailers consider relative profit margins when allocating limited retail floor space to LRW models from different suppliers.²⁶³ *** responding domestic producers and importers engaged in discounting and reported offering multiple types of discounts.²⁶⁴

Other information on the record also indicates that domestically produced washers are comparable to imported LRWs in terms of non-price factors. Whirlpool, GE, LG, and Samsung each reported numerous innovative features either introduced during the period of review or exclusively available on their LRWs during the period.²⁶⁵ Responding purchasers identified Samsung, LG, Whirlpool, GE, and Electrolux as innovation leaders, although more responding purchasers identified Samsung, LG, and Whirlpool as innovation leaders than GE and Electrolux.²⁶⁶ Moreover, both domestically produced washers and imported LRWs were highly rated in publications and surveys during the period of review.²⁶⁷

We also find that differences in product mix did not significantly attenuate competition between subject imports from Korea and Mexico and domestically produced washers. In making this finding, we recognize that front load LRWs accounted for a higher proportion of subject import shipments from Korea (*** percent in 2017) and Mexico (*** percent in 2017) than domestic industry shipments (*** percent in 2017) and that agitator-based top load LRWs

²⁵⁸ CR at II-22; PR at II-14; CR/PR at Table II-9.

²⁵⁹ CR/PR at Table II-8.

²⁶⁰ CR/PR at Table II-8.

²⁶¹ CR/PR at Table II-15.

²⁶² See CR at V-5-8; PR at V-3-4.

²⁶³ CR at II-26; PR at II-17.

²⁶⁴ CR at II-18, V-8-9; PR at II-11, V-4-5.

²⁶⁵ CR at II-5-6; PR at II-4.

²⁶⁶ CR at II-6; PR at II-4.

²⁶⁷ See, e.g., Respondent Interested Parties’ Hearing Exhibit 14; Domestic Producers’ Questionnaire Response of Whirlpool at Attachments 4-6.

accounted for more than half of domestic industry U.S. shipments (***) percent in 2017) but *** subject import shipments.²⁶⁸ We also recognize that subject imports from Mexico consisted *** LRWs, whereas subject imports from Korea consisted *** LRWs and domestically produced washers consisted of *** washers.²⁶⁹

These differences in product mix did not attenuate import competition to a significant degree for several reasons. First, subject imports of front load LRWs and impeller-based top load LRWs, which accounted for *** subject imports, respectively, competed directly with domestically produced front load washers and impeller-based top load washers, which accounted for *** domestic industry shipments in 2017.²⁷⁰ Subject imports of front load LRWs also competed with domestically produced top load washers to the extent that consumers cross-shopped front load and top load LRW models, and all responding purchasers reported that consumers are sometimes or usually willing to switch between top load and front load LRWs based on relative pricing.²⁷¹ Similarly, subject imports of impeller-based top load LRWs competed with domestically produced agitator-based top load washers insofar as the more stringent energy efficiency standards that took effect on March 7, 2015 forced domestic producers to redesign their agitator-based top load washers to make them more like impeller-based top load washers in terms of efficiency.²⁷² Finally, most responding purchasers reported that belt driven LRWs compete with direct drive LRWs, consistent with the 15 of 16 responding purchasers reporting that subject imports from Mexico (with belt drive) were always or frequently interchangeable with subject imports from Korea (with direct drive).²⁷³ The record also shows that *** domestically produced washers are belt driven, and thus similar to subject imports from Mexico in terms of this characteristic.²⁷⁴

We find a number of other conditions of competition relevant to our analysis. On January 23, 2018, the President issued a proclamation imposing a safeguard measure in the form of a tariff rate quota on imports of certain LRWs and a tariff rate quota on imports of certain covered parts, effective February 7, 2018 through February 7, 2021.²⁷⁵ Under the safeguard measure, imports of washers in excess of 1.2 million units annually were to be

²⁶⁸ CR/PR at Tables III-6, 8, IV-3-4.

²⁶⁹ CR at III-23; PR at III-7-8; CR/PR at Tables III-10, IV-6.

²⁷⁰ CR/PR at Tables III-6, 8-9, IV-3-4.

²⁷¹ See CR at II-23-24 (19 responding purchasers reported that consumers are sometimes willing to switch between TL and FL LRWs based on the relative pricing between the two offerings, and six reported that consumers usually are); PR at 15-16; see also Domestic Producers' Questionnaire Response of Whirlpool, Attachment 3 (a *** cross-shopping study ***).

²⁷² CR at I-39-40; PR at I-26.

²⁷³ CR at V-14; PR at V-7-8; CR/PR at Table II-13.

²⁷⁴ CR at III-23; PR at III-7-8; CR/PR at Table III-10; E-mail ***, EDIS Document No. 663806. A majority of the domestic industry's U.S. shipments consisted of "other products," which were comprised primarily of ***. *Id.*

²⁷⁵ *Proclamation 9694 to Facilitate Positive Adjustment to Competition From Imports of Large Residential Washers*, 83 Fed. Reg. 3553 (January 25, 2018). Imports of washers and covered parts from Canada were excluded from the safeguard measure.

subject to a tariff of 50 percent in the first year, 45 percent in the second year, and 40 percent in the third year, with an in-quota tariff of 20 percent in the first year, 18 percent in the second year, and 16 percent in the third year.²⁷⁶ With respect to covered parts, imports in excess of 50,000 units were to be subject to a tariff of 50 percent in the first year, imports in excess of 70,000 units were to be subject to a tariff of 45 percent in the second year, and imports in excess of 90,000 units were to be subject to a tariff of 40 percent in the third year, with no additional in-quota tariff.²⁷⁷ The scope of the safeguard measure covers all LRWs within the scope of the reviews with the exception of LRWs that are (1) top loading with a permanent split capacitor motor, belt drive, and flat wrap spring clutch; (2) front loading with a controlled induction motor and belt drive; and (3) front loading with a cabinet width of more than 28.5 inches.²⁷⁸

There is also evidence that the domestic industry incurred increased raw material costs towards the end of the period of review due to the tariffs imposed on steel and aluminum pursuant to section 232 of the Trade Expansion Act of 1962 on March 22, 2018, and the tariffs imposed on certain components imported from China pursuant to section 301 of the Trade Act of 1974 on June 20 and September 21, 2018.²⁷⁹ Most responding domestic producers and importers reported that the imposition of tariffs on steel and aluminum pursuant to section 232 impacted raw material costs for washers, with domestic producers *** reporting increased steel and aluminum prices in 2018.²⁸⁰ Domestic producers ***, as well as the domestic operations of ***, reported that the imposition of tariffs on components imported from China pursuant to section 301 has increased their costs.²⁸¹

²⁷⁶ *Proclamation 9694*, 83 Fed. Reg. 3553.

²⁷⁷ *Proclamation 9694*, 83 Fed. Reg. 3553. Covered parts include (1) all cabinets or portions thereof; (2) all assembled tubs, incorporating at a minimum a tub and a seal; (3) all assembled baskets incorporating at a minimum a side wrapper, a base, and a drive hub, and (4) any combination of the foregoing parts or subassemblies. *Id.*

²⁷⁸ *Proclamation 9694*, 83 Fed. Reg. 3553.

²⁷⁹ CR at I-12-21 & n.55, III-39 n.22, V-2-4; PR at I-8-13 & n.55, III-11 n.22, V-1-2; Whirlpool and GE's Prehearing Brief at 44-45; Hearing Tr. at 53 (Tubman), 57 (Mattingly).

²⁸⁰ CR at V-3; PR at V-2.

²⁸¹ CR at V-4; PR at V-2. Although the record shows that the domestic industry's ratio of raw material costs to net sales was higher in interim 2018, at *** percent, than in interim 2017, at *** percent, the ratio was similar to that in full year 2017, at *** percent, and lower than the ratios in 2014 (*** percent) and 2016 (*** percent). CR/PR at Table III-14.

D. Revocation of the Countervailing Duty Order and the Antidumping Duty Order on Subject Imports from Korea Is Not Likely to Lead to the Continuation or Recurrence of Material Injury to the Domestic Industry within a Reasonably Foreseeable Time

1. Likely Volume of Subject Imports

During the period of review, subject imports from Korea declined in terms of volume and market share between 2012 and 2015 before increasing through 2017 to levels that remained well below those in 2012. Specifically, subject imports from Korea declined from *** units in 2012 to *** units in 2013, *** units in 2014, and to *** units in 2015 before increasing to *** units in 2016 and *** units in 2017, a level *** percent lower than in 2012.²⁸² Subject imports from Korea were *** units in interim 2018, compared to *** units in interim 2017.²⁸³ U.S. shipments of subject imports from Korea as a share of apparent U.S. consumption declined from *** percent in 2012 to *** percent in 2013, *** percent in 2014, and *** percent in 2015 before increasing to *** percent in 2016 and *** percent in 2017, a level *** percentage points lower than in 2012.²⁸⁴ Subject imports from Korea had a market share of *** percent in both interim 2017 and 2018.²⁸⁵

As an initial matter, we find the volume of subject imports from Korea temporarily increased in 2017 as *** built up inventories to help mitigate the possibility of supply disruptions in 2018 caused by imposition of a safeguard measure.²⁸⁶ We find it likely that after revocation, the volume of subject imports from Korea will be significantly lower than the inflated level seen in 2017 in light of the following factors.

Subject Korean producers possess limited excess capacity with which to increase exports to the United States. Over the period of review, the capacity of subject Korean producers declined significantly as LG shifted *** and Samsung shifted *** global LRW production for the U.S. market from Korea to nonsubject countries.²⁸⁷ Specifically, the capacity of responding producers in Korea declined from *** units in 2012 to *** units in 2017, a level *** percent lower than in 2012, and was *** units in interim 2018, compared to *** units in interim 2017.²⁸⁸ At the same time, the Korean industry became less export oriented, with exports as a share of total shipments declining irregularly from *** percent in 2012 to *** percent in 2017.²⁸⁹ The Korean industry's exports as a share of total shipments were *** percent in

²⁸² CR/PR at Table IV-1.

²⁸³ CR/PR at Table IV-1.

²⁸⁴ CR/PR at Table I-14.

²⁸⁵ CR/PR at Table I-14.

²⁸⁶ CR at IV-36; PR at IV-11; CR/PR at Tables IV-1, IV-10; *see also* Whirlpool and GE's Prehearing Brief at 48; Hearing Tr. at 39 (Liotine), 176 (Klett).

²⁸⁷ CR at III-1, IV-2, 38; PR at III-1, IV-2, 11-12.

²⁸⁸ CR/PR at Table IV-13.

²⁸⁹ CR/PR at Table IV-13.

interim 2018, compared to *** percent in interim 2017.²⁹⁰ Similarly, the Korean industry's export shipments to the United States declined irregularly as a share of total shipments from *** percent in 2012 to *** percent in 2017.²⁹¹ The Korean industry's export shipments to the United States as a share of total shipments were *** percent in interim 2018, compared to *** percent in interim 2017.²⁹² As the Korean industry's capacity declined at a greater rate than its production, the industry's rate of capacity utilization increased irregularly from *** percent in 2012 to *** percent in 2017; it was *** percent in interim 2018, compared to *** percent in 2017.²⁹³ Furthermore, LG and Samsung reported *** and ***.²⁹⁴ Due to these trends, subject Korean producers possessed excess capacity of only *** units in 2017, equivalent to *** percent of apparent U.S. consumption that year.²⁹⁵

LG's and Samsung's new U.S. washer production facilities provide a strong incentive for both companies to limit their imports of LRWs, including subject imports from Korea, after revocation. Although LG is planning to continue imports of LRWs from Korea, it will have an economic incentive to reduce such imports pursuant to its strategy of supplying the U.S. market primarily from its large, new U.S. washer production facility. As discussed in section III.D, LG projects that its new U.S. plant will be fully operational *** and producing washers at an annual rate of *** units, equivalent to *** percent of LG's annual sales in the United States.²⁹⁶ To accommodate increased production at its new U.S. plant, which will focus on high-volume washer models, LG plans to import a reduced volume of LRWs from Korea consisting of "cutting edge" new models, as well as legacy OEM models sold in "extremely limited volumes" to ***.²⁹⁷ LG projects that its subject imports from Korea will decline from *** units in 2017 to *** units in 2019 and *** units in 2020.²⁹⁸

We find LG's stated sourcing strategy credible in light of its economic incentive to ramp up its new U.S. plant as quickly as possible, so as to increase the plant's capacity utilization rate and reduce its unit cost of production to levels that would maximize the financial return on its

²⁹⁰ CR/PR at Table IV-13.

²⁹¹ CR/PR at Table IV-13.

²⁹² CR/PR at Table IV-13.

²⁹³ CR/PR at Table IV-13.

²⁹⁴ Foreign Producers' Questionnaire Responses of LG and Samsung at Questions II-2b and II-3e.

²⁹⁵ CR/PR at Tables I-13, IV-13. In interim 2018, which was less affected by *** inventory buildup in anticipation of the safeguard measure, subject Korean producers possessed excess capacity of *** units, equivalent to *** percent of apparent U.S. consumption during that period. *Id.*

²⁹⁶ CR/PR at Tables III-1-3; Importers' Questionnaire Response of LG at Questions II-5a and II-7a (reporting total U.S. commercial shipments of *** units in 2017, including LRWs imported from Korea and nonsubject sources).

²⁹⁷ CR at IV-1-2, 38; PR at IV-1, 11; LG's Prehearing Brief at 45-49, Exhibit 10; Hearing Tr. at 162-63 (Toohey), 191, 221, 223 (Kim).

²⁹⁸ LG's Prehearing Brief at 47-48, Exhibit 9.

sizeable investment in the plant.²⁹⁹ By localizing the production of higher-volume washer models, LG will be able to increase production at its U.S. plant and gain economies of scale more rapidly. By limiting subject imports from Korea to lower-volume, higher-value LRW models, LG can leverage the “special-purpose manufacturing line” at its Korean production facility and justify the higher production costs prevailing in Korea relative to LG’s LRW production facilities in Thailand and Vietnam.³⁰⁰ We also find it likely that LG will be able to ramp up production considerably at its new U.S. plant within a reasonably foreseeable time, given LG’s rapid progress and recent experience with establishing new LRW production capacity for the U.S. market in China, Thailand, and Vietnam.³⁰¹ After LG’s U.S. plant is operating at its full capacity of 1.2 million units per year, LG will need to import only the small portion of U.S. demand for its LRWs that the plant cannot supply, which would have been *** units in 2017.³⁰²

We find that Samsung is unlikely to resume subject imports of LRWs from Korea after revocation. As discussed in section IV.C.2 above, Samsung has not imported LRWs from Korea *** since 2012 and no longer produces LRWs for the U.S. market in Korea.³⁰³ Given this, Samsung will likely continue to supplement its growing domestic production with declining volumes of nonsubject imports from its production facilities in Thailand and Vietnam, which Samsung has used to serve the U.S. market since 2016.³⁰⁴ Samsung would have little incentive to shift production of LRWs for the U.S. market from Thailand and Vietnam to Korea after

²⁹⁹ See Hearing Tr. at 220 (Kim); see also Samsung’s Prehearing Brief at 41-42 (attributing the *** of its U.S. plant in interim 2018 to the high unit costs associated with ramping up production at a new plant).

³⁰⁰ LG’s Prehearing Brief at 45-49, Exhibit 10; Hearing Tr. at 162-63 (Toohey). LG reports that its costs of production are higher in Korea than in Thailand and Vietnam, noting that a particular LRW model costing \$*** to produce in Korea costs \$*** to produce in Thailand and \$*** to produce in Vietnam. LG’s Responses to Commissioner Questions at 10-11. Given the higher production costs prevailing in Korea, LG would have no incentive to shift LRW production for the U.S. market from Thailand and Vietnam to Korea after revocation, and intends to continue serving the U.S. market with declining volumes of nonsubject imports from Thailand and Vietnam after revocation. LG’s Responses to Commissioner Questions at 33. Once the shift of LRW production to the United States is complete, however, LG plans to use its facility in Vietnam to *** and its facility in Thailand ***. *Id.* at 14.

³⁰¹ See *LRWs Safeguard*, USITC Pub. 4745 at 25-26; Importers’ Questionnaire Response of LG at Question II-7e; Respondent Interested Parties’ Hearing Exhibits 2-9. LG commenced production of washers at its new U.S. plant in November 2018, 15 months after construction began on the greenfield plant. CR/PR at Table III-1; LG’s Prehearing Brief at 9.

³⁰² See CR/PR at Table III-3; Importers’ Questionnaire Response of LG at Questions II-5a and II-7a; Hearing Tr. at 159 (Myers).

³⁰³ CR at IV-38; PR at IV-11; CR/PR at Tables III-12, D-1; Foreign Producers’ Questionnaire of Samsung at Question II-11; Hearing Tr. at 195 (Shor). ***. Compare CR/PR at Table III-12 with Importers’ Questionnaire Response of Samsung at Question II-5c.

³⁰⁴ CR at IV-3; PR at IV-2; CR/PR at Table III-12; Importer’s Questionnaire Response of Samsung at Question II-7e; Samsung’s Prehearing Brief at 8.

revocation given the relatively higher production costs prevailing in Korea and the duplicative investment that such a shift would require.³⁰⁵

As with LG, Samsung's substantial investment in its new U.S. washer production facility provides an economic incentive for Samsung to localize production of LRWs as rapidly as possible, so as to increase the plant's rate of capacity utilization, reduce its unit cost of production, and maximize the financial return on Samsung's investment.³⁰⁶ Indeed, the *** that Samsung's domestic operations sustained in interim 2018, due to start-up costs and high fixed costs spread across limited production volume, provide a strong economic incentive for Samsung to expand domestic production as rapidly as possible to reduce its unit costs to an economic level.³⁰⁷

The record confirms that Samsung has moved quickly to construct its new U.S. plant and to ramp up production there. After announcing its intention to construct the plant in June 2017, using the shell of an existing plant, Samsung commenced production of front load washers in January 2018 and production of top load washers on a second assembly line in March 2018, producing *** units in interim 2018 and *** units in full year 2018.³⁰⁸ Given Samsung's rapid progress, and its recent experience with establishing new LRW production capacity for the U.S. market rapidly in China, Thailand, and Vietnam, we find it likely that Samsung will be able to ramp up production considerably at its U.S. plant within a reasonably foreseeable time.³⁰⁹ After Samsung's new U.S. plant is operating at its full capacity of *** units per year, Samsung will need to import only the small portion of U.S. demand for its LRWs that

³⁰⁵ See Samsung's Responses to Commissioner Questions at 5; see also LG's Responses to Commissioner Questions at 10-11.

³⁰⁶ Samsung's Prehearing Brief at 41-42; Samsung's Responses to Commissioner Questions at 2.

³⁰⁷ Samsung's Prehearing Brief at 41-42; CR/PR at Table III-16 (Samsung reported *** on its domestic operations of \$***, equivalent to *** percent of net sales value, due to *** higher unit costs than other domestic producers).

³⁰⁸ CR/PR at Tables III-1, 4; Samsung's Prehearing Brief at 8; Hearing Tr. at 168-69 (Komaromi).

³⁰⁹ See *LRWs Safeguard*, USITC Pub. 4745 at 25-26; CR/PR at Tables III-1-2; Respondent Interested Parties' Hearing Exhibit 15; Trip Notes at 2-3. We are unpersuaded by the domestic interested parties' argument that LG's and Samsung's inexperience with U.S. production, and Samsung's admission that "2018 did not end up as we expected," mean that LG's and Samsung's forecast import needs are speculative and unreliable. Whirlpool's Posthearing Brief at 7 (quoting Hearing Tr. at 184 (Komaromi)); Whirlpool's Final Comments at 8. Regardless of what Samsung may have expected in 2018, Samsung's projections for domestic production in 2019 (*** units) and 2020 (*** units) necessarily took into account its actual production of *** units in 2018. See Samsung's Prehearing Brief at 8; Samsung's Responses to Commissioner Questions at 12. Furthermore, LG and Samsung possess extensive experience in establishing new production capacity for the U.S. market quickly in other countries. Samsung has extensive experience with investing in the United States, having invested \$30 billion in its overall U.S. operations over a 40-year period. See Respondents' Hearing Exhibit 16. Both companies have ample incentives to rapidly increase production at their respective U.S. plants and the record shows that they are in the process of doing so.

the plant cannot supply, which would have been *** units in 2017, and will likely do so from nonsubject sources.³¹⁰

We find that imposition of the safeguard measure on February 7, 2018, covering imports of certain LRWs from all sources, including Korea, provides an additional incentive for LG and Samsung to ramp up their new U.S. plants quickly. As discussed in section IV.C.4 above, the safeguard measure is in the form of a TRQ of 1.2 million units annually, with an in-quota tariff of 18 percent and an out-of-quota tariff of 45 percent currently.³¹¹ The record shows that the TRQ for the first year of the measure was filled in October 2018, and that the TRQ for the second year of the measure was 43.9 percent filled as of March 4, 2019, less than a month after the TRQ “reset” on February 7, 2019.³¹² Subject imports from Korea declined substantially after October 2018, when all such imports other than extra-wide LRWs would have been subject to the out-of-quota tariff that was then 50 percent.³¹³ In light of the trade-restrictive effects of the out-of-quota tariff rate, the TRQ will likely limit LG’s and Samsung’s sales of imported LRWs subject to the measure to around 1.2 million units per year, while the in-quota tariff rate would significantly increase the cost of such sales. Given that LG and Samsung reported U.S. commercial shipments of *** units of LRWs in 2017, the severe restrictions imposed by the safeguard measure on their sales of LRWs subject to the measure create a strong incentive for LG and Samsung to localize production of LRWs as rapidly as possible, both to maintain their respective shares of the U.S. market and to minimize their tariff exposure under the measure, which is scheduled to continue until February 7, 2021. Thus, the safeguard measure provides additional support for us to find that LG and Samsung are likely to maximize production at their U.S. plants.

In sum, we find that subject imports from Korea are likely to decline from current levels after revocation of the orders, though they are not likely to cease entirely as LG supplements its U.S. production with certain low-volume models.

2. Likely Price Effects

We find that subject imports from Korea are not likely to undersell the domestic like product or depress or suppress domestic like product prices to a significant degree after revocation of the orders. As an initial matter, we again observe that there is a moderately high degree of substitutability between subject imports from Korea and the domestic like product and that price is an important factor in purchasing decisions, as discussed in section IV.C.4 above. In light of LG’s and Samsung’s new U.S. washer production facilities, we find that subject imports from Korea are not likely to enter the U.S. market in volumes or at prices that

³¹⁰ See CR/PR at Table III-3; Importers’ Questionnaire Response of Samsung at Question II-7a (reporting U.S. commercial shipments of *** units in 2017); Hearing Tr. at 184-85 (Komaromi, Park), 195 (Shor).

³¹¹ CR at I-5; PR at I-4.

³¹² CR at IV-35; PR at IV-10.

³¹³ CR/PR at Table IV-8; Respondent Interested Parties’ Hearing Exhibit 30.

could adversely affect domestic like product prices and, by extension, the profitability of their domestic operations, for the following reasons.

The limited pricing data on the record of these reviews shows a mixed pattern of over- and underselling by subject imports from Korea.³¹⁴ The Commission collected pricing data on sales of six products, and two domestic producers and one importer of subject merchandise from Korea provided usable pricing data, accounting for approximately *** percent of U.S. producers' shipments and *** percent of U.S. shipments of subject imports from Korea in 2017.³¹⁵ These data indicate that subject imports from Korea undersold the domestic like product in eight quarterly comparisons, accounting for reported sales of *** units, and oversold the domestic like product in eight quarterly comparisons, accounting for reported sales of *** units.³¹⁶ We acknowledge, however, that overselling during the period of review is not necessarily dispositive of likely pricing behavior if the disciplining effect of the orders were to be lifted.³¹⁷

We find that LG and Samsung are unlikely to resume the significant underselling by subject imports from Korea that occurred during the original investigations because such underselling would seriously undermine their substantial investments in new washer production facilities in the United States. We have found that LG and Samsung are likely to ramp up their respective U.S. plants as rapidly as possible so as to maximize their U.S. investments with the goal that approximately *** percent of their U.S. sales will be supplied domestically.³¹⁸ Any resumption of significant underselling by LG and Samsung would likely undermine their respective new U.S. plants by increasing demand for subject imports from Korea at the expense of demand for washers produced by the plants, which would reduce the plants' capacity utilization and profitability without increasing LG's and Samsung's overall sales and market share.

Any resumption of significant underselling by LG and Samsung would also undermine their own U.S. plants by adversely affecting the sales prices of the washers produced by those plants. Given that LG's and Samsung's new U.S. plants will likely supply ** percent of each company's respective sales in the U.S. market within a reasonably foreseeable time, it is unlikely that LG and Samsung could significantly undersell domestically produced washers with subject imports from Korea without also significantly underselling the washers produced by their own U.S. plants.³¹⁹ LG and Samsung would have no incentive to significantly undersell the

³¹⁴ CR/PR at Table V-10.

³¹⁵ CR at V-16; PR at V-9.

³¹⁶ CR/PR at Table V-10.

³¹⁷ Subject imports from Korea primarily undersold the domestic like product during the period examined in the original investigations, in *** of *** quarterly comparisons. CR/PR at Table V-10 n.1.

³¹⁸ See section IV.D.1 above.

³¹⁹ We recognize that LG plans to complement the high-volume washer models produced by its U.S. plant with a smaller volume of higher-value LRW models imported from Korea, including extra-wide LRWs excluded from the scope of the safeguard measure. See LG's Prehearing Brief at 47-48, Exhibit 9; CR at I-5-6; PR at I-4. Nevertheless, we find it unlikely that LG could import LRWs from Korea in a way that harms Whirlpool and GE but not its domestic operations, as the domestic interested parties argue.

washers produced by their U.S. plants because the moderately high degree of substitutability we have found, coupled with the importance of price to purchasers, means that such underselling would likely depress and suppress the sales prices of washers produced by the plants, thereby reducing the financial returns on LG's and Samsung's substantial investments in the plants.³²⁰

Based on our findings that significant underselling by subject imports from Korea is unlikely, and that the volume of such imports is likely to decline significantly from levels that are already considerably lower than during the original investigations, we find that subject imports from Korea are not likely to depress or suppress domestic like product prices to a significant degree after revocation.³²¹ Having made substantial investments in new U.S. washer

Whirlpool and GE's Prehearing Brief at 84-85. As discussed in section IV.C.4, the record shows a significant degree of cross-shopping between front load and top load LRWs. See CR at II-23-24; PR at II-15-16; see also Domestic Producers' Questionnaire Response of Whirlpool, Attachment 3. The record also shows that the availability and/or price of highly featured LRWs affects the sales of less featured LRWs, indicating that LG could not engage in significant underselling with its highly featured LRWs imported from Korea without affecting the sales of less featured washers produced at its U.S. plant. CR at V-11; PR at V-6. Indeed, the domestic interested parties argue that significant underselling by even a limited volume of subject imports at the high end of the market would likely depress domestic producers' prices across their product lines, including the product lines of LG's and Samsung's domestic operations, through cross shopping and price compression. Whirlpool and GE's Prehearing Brief at 72; Whirlpool's Final Comments at 11; see also Hearing Tr. at 89 (Levy) ("If Samsung were to bring in a model in the lineup and crash prices with it, it would be injurious not only to Whirlpool and GE Appliances, but to at least adjacent, if not the entire part of their lineup"). We therefore find it unlikely that LG would risk undermining its new U.S. plant by significantly underselling domestically produced washers with the higher-value LRW models that it plans to import from Korea after revocation.

³²⁰ See Hearing Tr. at 166-67 (Toohey).

³²¹ We recognize that the domestic industry's ratio of cost of goods sold to net sales increased towards the end of the period of review to *** percent in interim 2018, which was the highest level of the period of review. CR/PR at Table III-14. The domestic interested parties attribute this trend to the imposition of tariffs on imports of steel and aluminum pursuant to section 232 and on imports of components from China pursuant to section 301, which have allegedly increased the domestic industry's raw material costs. See Whirlpool and GE's Prehearing Brief at 44-45; Hearing Tr. at 53 (Tubman), 118, 121 (Levy). There is no evidence or allegation that subject imports from Korea contributed to the suppression of domestic like product prices during the period of review. Nor are subject imports from Korea likely to suppress domestic like product prices to a significant degree after revocation in light of our findings that significant underselling is unlikely and that the volume of subject imports from Korea is likely to decline.

We also recognize that LG's imports of extra-wide LRWs, which are not subject to the safeguard measure, are likely to compete with Whirlpool's new Janus line of large-capacity front load washers, which were launched in November 2018. See Hearing Tr. at 221 (Kim); Whirlpool's Responses to Commissioner Questions at II-23. Contrary to Whirlpool's argument, however, we find it unlikely that LG will import extra-wide LRWs from Korea in volumes or at prices that could have significant adverse price effects on domestically produced washers. See Whirlpool's Posthearing Brief at 13, II-20-22. As already discussed, we find it unlikely that LG would risk undermining its new U.S. plant by significantly

production facilities, LG and Samsung are unlikely to import LRWs from Korea in volumes or at prices that could have significant adverse price effects on the washers produced by these facilities and, by extension, the entire domestic industry.

3. Likely Impact³²²

Strong growth in apparent U.S. consumption, and the domestic industry's substantial investments in new products and capacity, resulted in improvements in certain measures of domestic industry performance over the period of review, including capacity, production, U.S. shipments, and employment. Notwithstanding these favorable trends, however, the domestic industry's rate of capacity utilization remained weak and its financial performance poor throughout the period.

The domestic industry's capacity increased *** percent between 2012 and 2017, from *** units in 2012 to *** units in 2017, and was *** units in interim 2018, compared to *** units in interim 2017.³²³ Although the industry's production increased by a greater *** percent between 2012 and 2017, from *** units in 2012 to *** units in 2017, causing the domestic industry's rate of capacity utilization to increase from *** percent to *** percent, the industry's rate of capacity utilization remained weak.³²⁴ Indeed, the industry's rate of capacity utilization returned to 2012 levels in interim 2018, at *** percent, as higher capacity in interim 2018 relative to interim 2017 was accompanied by flat production.³²⁵

With increasing capacity and production, the domestic industry's employment-related indicators generally improved during the period of review. The industry's employment

underselling domestically produced washers with the extra-wide LRWs that it plans to import from Korea, which could depress the sales and prices of the front load washers that it produces domestically. Furthermore, the record shows that *** percent of Whirlpool's sales of Janus front load washers in November and December of 2018, by volume, were sold at net unit prices that were lower (\$*** to \$***) than the lowest net unit price on LG's sales of extra-wide front load LRWs in 2018 (\$*** to \$***). *Compare* Whirlpool's Responses to Commissioner Questions at II-24 *with* LG's Prehearing Brief at 53. Both the relatively high prices of LG's sales of extra-wide front load LRWs and their relatively low sales volumes (***) units in 2018 and a projected *** units in 2019 and *** units in 2020), LG's Prehearing Brief at 52-53, make it unlikely that LG's imports of such LRWs from Korea would have significant adverse price effects after revocation.

³²² Section 752(a)(6) of the Act states that "the Commission may consider the magnitude of the margin of dumping" in making its determination in a five-year review. 19 U.S.C. § 1675a(a)(6). The statute defines the "magnitude of the margin of dumping" to be used by the Commission in five-year reviews as "the dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title." 19 U.S.C. § 1677(35)(C)(iv). *See also* SAA at 887. For the antidumping duty order on LRWs from Korea, Commerce assigned likely margins of up to 82.41 percent. *Large Residential Washers from the Republic of Korea: Final Results of the First Five-Year Sunset Review of the Antidumping Duty Order*, 83 Fed. Reg. 52803 (Oct. 18, 2018).

³²³ CR/PR at Tables III-4, C-1.

³²⁴ CR/PR at Tables III-4, C-1.

³²⁵ CR/PR at Table III-4.

increased irregularly by *** percent between 2012 and 2017, from *** production and related workers (“PRWs”) in 2012 to *** PRWs in 2017, and was *** PRWs in interim 2018, compared to *** PRWs in interim 2017.³²⁶ The industry’s total hours worked and total wages paid showed similar improvements.³²⁷

Consistent with its increasing production, the domestic industry’s volume-related indicators generally improved during the period of review. The domestic industry’s net sales volume increased *** percent between 2012 and 2017, from *** units in 2012 to *** units in 2017, and was *** units in interim 2018, compared to *** units in interim 2017.³²⁸ The industry’s commercial U.S. shipments increased by an even greater *** percent between 2012 and 2017, from *** units in 2012 to *** units in 2017, and were *** units in interim 2018, compared to *** units in interim 2017.³²⁹ Because apparent U.S. consumption increased by *** percent between 2012 and 2017, however, the industry’s market share declined irregularly from *** percent in 2012 to *** percent in 2017.³³⁰ The domestic industry’s market share was *** percent in interim 2018, compared to *** percent in interim 2017, as apparent U.S. consumption declined by more than the industry’s U.S. shipments between the interim periods.³³¹

Notwithstanding the domestic industry’s increased U.S. shipments, the industry’s financial performance remained poor throughout the period of review. The domestic industry’s gross profit declined irregularly by *** percent between 2012 and 2017, from \$*** in 2012 to \$*** in 2017, and was \$*** in interim 2018, compared to \$*** in interim 2017.³³² The industry’s operating loss worsened from negative \$*** in 2012 to negative \$*** in 2016 before narrowing to negative \$*** in 2017.³³³ The industry’s operating loss was negative \$*** in interim 2018, compared to negative \$*** in interim 2017, with the greater operating loss in interim 2018 resulting largely from ***.³³⁴ As a share of net sales, the domestic industry’s operating loss worsened from negative *** percent in 2012 to negative *** percent in 2016

³²⁶ CR/PR at Tables III-13, C-1.

³²⁷ CR/PR at Tables III-13, C-1. The domestic industry’s total hours worked increased irregularly by *** percent between 2012 and 2017, from *** hours in 2012 to *** hours in 2017, and were *** hours in interim 2018, compared to *** hours in interim 2017. *Id.* The industry’s wages paid increased irregularly by *** percent between 2012 and 2017, from \$*** in 2012 to \$*** in 2017, and were \$*** in interim 2018, compared to \$*** in interim 2017. *Id.*

³²⁸ CR/PR at Tables I-14, III-6, C-1.

³²⁹ CR/PR at Tables I-14, III-6, C-1.

³³⁰ CR/PR at Tables I-14, III-6, C-1.

³³¹ CR/PR at Tables I-14, III-6, C-1.

³³² CR/PR at Table III-14, C-1.

³³³ CR/PR at Table III-14.

³³⁴ CR/PR at Tables III-14, 16; Samsung’s Prehearing Brief at 41-42. Even excluding ***, the domestic industry’s financial performance was poor in interim 2018, with an operating loss of negative \$***, equivalent to negative *** percent of net sales, and a net loss of negative \$***. CR/PR at Table C-2.

before narrowing to negative *** percent in 2017.³³⁵ The industry's operating loss as a share of net sales was negative *** percent in interim 2018, compared to negative *** percent in interim 2017.³³⁶ The industry's net loss showed a similar trend, worsening from \$*** in 2012 to \$*** in 2016 before narrowing to \$*** in 2017.³³⁷ The industry's net loss was \$*** in interim 2018, compared to \$*** in interim 2017.³³⁸ The industry's return on assets worsened from negative *** percent in 2012 to negative *** percent in 2016 before improving to a still negative *** percent in 2017.³³⁹

The domestic industry's capital expenditures and research and development expenses generally increased between 2012 and 2015, as domestic producers invested to expand their capacity and improve the competitiveness of their washers, but declined *** thereafter.³⁴⁰ Specifically, the domestic industry's capital expenditures increased irregularly from \$*** in 2012 to \$*** in 2015, before declining to \$*** in 2016 and \$*** in 2017.³⁴¹ The industry's capital expenditures were \$*** in interim 2018, compared to \$*** in interim 2017.³⁴² Similarly, the industry's research and development expenditures increased from \$*** in 2012 to \$*** in 2015, but declined to \$*** in 2016 and to \$*** in 2017.³⁴³ The industry's research and development expenditures were \$*** in interim 2018, compared to \$*** in interim 2017.³⁴⁴

Based on the domestic industry's weak rate of capacity utilization and poor financial performance throughout the period of review, including the interim period, we find that the industry is vulnerable to the continuation or recurrence of material injury. Further increasing the industry's vulnerability are projections that demand growth will slow in the reasonably foreseeable future.³⁴⁵

Notwithstanding the domestic industry's current vulnerability, we find that the domestic industry's condition is likely to improve according to many indicators within a reasonably foreseeable time, as LG's and Samsung's U.S. washer production facilities become fully operational. Compared to 2017, LG's and Samsung's new plants, once fully utilized, will increase domestic industry capacity by *** percent, production by *** percent, employment by *** percent, U.S. shipments by *** percent, and market share by *** percentage points.³⁴⁶ At that point, all else being equal, the domestic industry's share of apparent U.S. consumption will be over *** percent.³⁴⁷ Thus, LG's and Samsung's substantial investment in the domestic

³³⁵ CR/PR at Table III-14.

³³⁶ CR/PR at Table III-14.

³³⁷ CR/PR at Table III-14.

³³⁸ CR/PR at Table III-14.

³³⁹ CR/PR at Table III-19.

³⁴⁰ ***. CR at III-49 & n.49; PR at III-13 & n.49.

³⁴¹ CR/PR at Table III-18.

³⁴² CR/PR at Table III-18.

³⁴³ CR/PR at Table III-18.

³⁴⁴ CR/PR at Table III-18.

³⁴⁵ CR at II-16; PR at II-9.

³⁴⁶ CR/PR at Tables I-14, III-3, III-4, III-6, III-13.

³⁴⁷ CR/PR at Tables I-13-14, III-3.

production of washers, equivalent to *** percent of the domestic industry's total capital expenditures during the period of review, will fundamentally alter competition in the U.S. LRW market by replacing most import competition with intensified domestic competition within a larger domestic industry.³⁴⁸

We have found that LG's and Samsung's determination to fully utilize their U.S. plants as quickly as possible will likely result in a decline in subject imports from Korea after revocation, as ***, and Samsung will have no incentive to resume exporting LRWs from Korea to the United States.³⁴⁹ We have also found that significant underselling by subject imports from Korea, and significant depression or suppression of domestic like product prices caused by subject imports from Korea, are unlikely after revocation because LG and Samsung are unlikely to import LRWs from Korea in volumes or at prices that would likely have significant adverse price effects on the washers produced at their new U.S. plants and, by extension, the entire domestic industry.³⁵⁰ To the contrary, LG and Samsung are likely to limit subject imports from Korea, as well as nonsubject imports from their plants in Thailand and Vietnam, to non-injurious volumes and prices to protect their combined \$*** investment in U.S. washer production.³⁵¹ We therefore conclude that, if the orders were revoked, subject imports from Korea would not be likely to have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

We find further support for this conclusion in the likely restraining effect that the safeguard measure will have on subject imports from Korea after revocation of the orders. As discussed in section IV.D.1 above, the safeguard measure creates a strong economic incentive for LG and Samsung to ramp up their U.S. plants quickly by effectively limiting their volume of imports from all sources to 1.2 million units, and by imposing an 18 percent in-quota tariff, declining to 16 percent in February 7, 2020, on such imports.³⁵² Only by rapidly replacing their imports of LRWs subject to the safeguard measure with domestically produced washers will LG and Samsung be able to maintain their share of apparent U.S. consumption without incurring significant additional costs caused by the safeguard. Indeed, the additional cost of the tariffs imposed on imported LRWs subject to the safeguard measure would make it difficult for LG and Samsung to compete against domestic producers for flooring at retailers without the use of domestically produced washers, given the importance of price and profit margins to retailer flooring decisions.³⁵³ By the time the safeguard measure is scheduled to terminate on February 7, 2021, LG and Samsung are likely to have fully ramped up their new U.S. plants, and would therefore continue to have strong economic incentives to limit the volumes and prices of subject imports from Korea to non-injurious levels.

³⁴⁸ Compare Samsung's Prehearing Brief at 7; CR/PR at Table III-3 with CR/PR at Table III-18.

³⁴⁹ See section IV.D.1 above.

³⁵⁰ See section IV.D.2 above.

³⁵¹ Samsung's Prehearing Brief at 7; CR/PR at Table III-3.

³⁵² CR at I-5-6; PR at I-4.

³⁵³ CR at II-26; PR at II-17; Hearing Tr. at 101-2 (Tubman), 102 (Mattingly), 262 (Shor), 262 (Porter).

For all of the foregoing reasons, we conclude that if the countervailing and antidumping duty orders were revoked, subject imports from Korea would not be likely to lead to continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

E. Revocation of the Antidumping Order on Subject Imports from Mexico Is Likely to Lead to the Continuation or Recurrence of Material Injury to the Domestic Industry within a Reasonably Foreseeable Time

1. Likely Volume of Subject Imports

We find that subject imports from Mexico are likely to increase significantly from current levels after revocation. Subject imports from Mexico maintained a significant presence in the U.S. market throughout the period of review. Subject imports from Mexico declined from *** units in 2012 to *** units in 2013, increased to *** units in 2014, and then declined to *** units in 2015 and 2016, and to *** units in 2017.³⁵⁴ Subject imports from Mexico were *** units in interim 2018, compared to *** units in interim 2017.³⁵⁵ As a share of apparent U.S. consumption, U.S. shipments of subject imports from Mexico declined from *** percent in 2012 to *** percent in 2013, *** percent in 2014, *** percent in 2015 and 2016, and to *** percent in 2018.³⁵⁶ U.S. shipments of subject imports from Mexico as a share of apparent U.S. consumption were *** percent in interim 2018, compared to *** percent in interim 2017.³⁵⁷ Thus, ***, which accounted for *** subject imports from Mexico since 2013, has demonstrated a continued interest in serving the U.S. market, and maintains ongoing relationships with U.S. customers.

The capacity of subject Mexican producers declined during the period of review as Whirlpool shifted production of subject front load LRWs from Mexico to the United States after 2012 and repurposed its Mexican production facility to produce out-of-scope washers for the Mexican and Central American markets.³⁵⁸ Responding Mexican producers reported that their capacity declined from *** units in 2012 to *** units in 2015 before increasing to *** units in 2016 and 2017.³⁵⁹ Responding Mexican producers reported capacity of *** units in interim 2018, compared to *** units in interim 2017.³⁶⁰ Electrolux maintained an annual capacity of *** units during 2012-17 and a capacity of *** in both interim periods.³⁶¹

³⁵⁴ CR/PR at Table IV-1.

³⁵⁵ CR/PR at Table IV-1.

³⁵⁶ CR/PR at Table I-14.

³⁵⁷ CR/PR at Table I-14.

³⁵⁸ CR at IV-46-48; PR at IV-15-16.

³⁵⁹ CR/PR at Table IV-18.

³⁶⁰ CR/PR at Table IV-18.

³⁶¹ Foreign Producers' Questionnaire Response of Electrolux at Question II-11.

Although the Mexican industry's rate of capacity utilization increased irregularly during the period of review, as the industry's production generally declined by less than its capacity declined, the Mexican industry continued to operate at a low rate of capacity utilization that yielded substantial excess capacity. After initially declining from *** percent in 2012 to *** percent in 2013, the responding Mexican producers' rate of capacity utilization increased to *** percent in 2014, declined to *** percent in 2015, and then increased to *** percent in 2016 and to *** percent in 2017.³⁶² Responding Mexican producers reported a rate of capacity utilization of *** percent in interim 2018, compared to *** percent in interim 2017.³⁶³ Responding Mexican producers possessed *** units of excess capacity in 2017, equivalent to *** percentage points of apparent U.S. consumption that year.³⁶⁴ Electrolux alone reported excess capacity of *** units in 2017, equivalent to *** percent of apparent U.S. consumption that year.³⁶⁵

We find that the subject Mexican producers, specifically Electrolux,³⁶⁶ are likely to use substantial excess capacity to significantly increase exports to the United States after revocation. After both Samsung and Whirlpool ceased exporting LRWs from Mexico to the United States in 2012, responding Mexican producers reported that the share of their total shipments exported to the United States declined irregularly from *** percent in 2012 to *** percent in 2017, still a significant level. The share of their total shipments exported to the United States was *** percent in interim 2018, compared to *** percent in interim 2017.³⁶⁷ Electrolux remained *** on exports to the United States throughout the period, with exports to the United States as a share of total shipments increasing irregularly from *** percent in 2012

³⁶² CR/PR at Table IV-18.

³⁶³ CR/PR at Table IV-18.

³⁶⁴ CR/PR at Tables I-13, IV-18.

³⁶⁵ Foreign Producers' Questionnaire Response of Electrolux at Question II-11; CR/PR at Table I-13.

³⁶⁶ We find it unlikely that the other responding Mexican producers, Mabe, Samsung, and Whirlpool, will export LRWs from Mexico to the United States in significant quantities after revocation. Mabe, which is ***, CR at IV-49; PR at IV-17; CR/PR at Tables I-11, IV-16; Foreign Producers' Questionnaire of Mabe at Questions II-9, II-11. *** and currently use the facilities to produce smaller LRWs and out-of-scope washers (and dryers in Samsung's case) for markets in Mexico, Central America, and Latin America. CR at IV-2, 46-47; PR at IV-1, 15-16. Whirlpool and Samsung would have little incentive to resume imports of LRWs from their Mexican facilities in significant quantities after revocation. Whirlpool is committed to serving the U.S. market from its domestic production facility. Since 2013, Samsung has served the U.S. market using nonsubject LRWs imported from China, Thailand, and Vietnam, and will likely satisfy *** percent of its U.S. sales using LRWs produced domestically within a reasonably foreseeable time. Importers' Questionnaire Response of Samsung at Question II-7; *see also* Section IV.D.1 above. Given the availability of LRWs from its facilities in Thailand and Vietnam, and the additional investment that producing LRWs for the U.S. market at its facility in Mexico would entail, we find it unlikely that Samsung would shift production of LRWs for the U.S. market from Thailand and Vietnam to Mexico after revocation, for the *** percent of its U.S. sales that are not supplied domestically. Consequently, we concentrate our analysis on Electrolux.

³⁶⁷ CR at IV-46-47; PR at IV-15-16; CR/PR at Table IV-18.

to *** percent in 2017 and *** percent in interim 2018, compared to *** percent in interim 2017.³⁶⁸ Electrolux ceased washer production at its Webster City, Iowa facility in early 2011 and transferred all laundry production to its facility in Juarez, Mexico, ***.³⁶⁹

As further evidence of its commitment to serving the U.S. market, ***, and introduced a new generation of front load LRWs in May 2018.³⁷⁰ Electrolux would likely leverage its new line of front load LRWs to significantly increase exports to the United States after revocation, in order to use its substantial excess capacity in Mexico. The safeguard measure on imports of certain LRWs would not be an impediment or disincentive to Electrolux's exports to the United States because ***.³⁷¹

In sum, we find that revocation of the order would likely result in a significant increase in subject import volume within a reasonably foreseeable time.

2. Likely Price Effects

We find that subject imports from Mexico are likely to undersell the domestic like product and to depress or suppress domestic like product prices to a significant degree after revocation of the order. As an initial matter, we again observe that there is a moderately high degree of substitutability between subject imports from Mexico and the domestic like product and that price is an important factor in purchasing decisions, as discussed in section IV.C.4 above.

That *** subject imports from Electrolux in Mexico possess belt drives makes them no less substitutable with domestically produced washers. Most responding purchasers reported that belt driven LRWs compete with direct drive LRWs, consistent with the 15 of 16 responding purchasers reporting that subject imports from Mexico (which are all belt drive) were always or frequently interchangeable with subject imports from Korea (which are all direct drive).³⁷² The record also shows that *** domestically produced washers are belt driven, and thus similar to subject imports from Mexico in terms of this characteristic.³⁷³ Furthermore, when Whirlpool filed a changed circumstances request in March 2018 requesting that Commerce revoke the order on LRWs from Mexico with respect to CIM/belt drive front load LRWs, LG and Samsung

³⁶⁸ Foreign Producers' Questionnaire Response of Electrolux at Question II-11.

³⁶⁹ CR at I-55 n.114; PR at I-36 n.114; Importers' Questionnaire Response of Electrolux at Question II-7.

³⁷⁰ Foreign Producers' Questionnaire Response of Electrolux at Question II-2a; Whirlpool's Responses to Commissioner Questions at II-19, Attachment D; Samsung's Posthearing Brief at Exhibit 3.

³⁷¹ CR at I-5-6; PR at I-4; Importers' Questionnaire Response of Electrolux at Question II-6d; ***, EDIS Document No. 670169.

³⁷² CR at V-14; PR at V-7-8; CR/PR at Table II-13. Consistent with these purchasers' responses, Electrolux's new generation of CIM/belt drive front load LRWs received a favorable review from CNET.com, a website that reviews consumer electronics. See Samsung's Posthearing Brief at Exhibit 3. The review does not refer to the CIM/belt drive technology as a detracting feature.

³⁷³ CR at III-23; PR at III-7-8; CR/PR at Table III-10; E-mail ***, EDIS Document No. 663806.

opposed the request by stressing that CIM/belt drive front load LRWs imported from Mexico compete with the washers produced at their respective U.S. plants.³⁷⁴

We find that subject imports from Mexico are likely to undersell the domestic like product to a significant degree based on the significant underselling by subject imports from Mexico that prevailed during the original investigations and the likelihood that subject Mexican producers will use underselling to rapidly increase their penetration of the U.S. market. No pricing product data was reported on sales of subject imports from Mexico during the period of review.³⁷⁵ During the original investigations, subject imports from Mexico undersold the domestic like product in *** of *** quarterly comparisons, at margins ranging from *** to *** percent.³⁷⁶ Sales of products *** imported from Mexico, ***, undersold the domestic like product in *** of *** quarterly comparisons, at margins ranging from *** to *** percent.³⁷⁷

Consistent with our finding that the volume of subject imports from Mexico is likely to increase significantly after revocation, we find that the subject Mexican industry, and Electrolux specifically, is likely to resume its underselling strategy from the original investigations as a means of rapidly increasing their penetration of the U.S. market. The moderately high degree of substitutability between subject imports from Mexico and the domestic like product and the importance of price in purchasing decisions make underselling an effective strategy for capturing market share. Moreover, Electrolux is well positioned to resume significant underselling given that its subject imports from Mexico consist *** of CIM/belt drive front load LRWs, which are excluded from the safeguard measure.³⁷⁸ Absent the disciplining effect of the order, subject Mexican producers are likely to undersell the domestic like product to a significant degree, as they did during the original investigations.

We also find that the likely significant underselling after revocation, coupled with the likely significant volume of subject imports from Mexico, would likely result in the depression or suppression of domestic like product prices to a significant degree. To defend their flooring at retailers and retain market share, domestic producers would have to reduce their prices or forego price increases that would have otherwise occurred in an environment of increasing costs. The alternative would be for domestic producers to cede flooring and market share to

³⁷⁴ In opposing Whirlpool's request, Samsung stated that CIM/belt drive LRWs imported from Mexico "will continue to compete alongside in-scope models" and that exclusion of such washers from the order "may negatively impact its U.S. production operations." Whirlpool's Responses to Commissioner Questions at II-17. Similarly, in its response, LG stated that such revocation would "cause competitive harm to U.S. LRW producers LGE and Samsung" because imports of CIM/belt drive LRWs from Mexico "compete directly with U.S. produced subject LRWs." *Id.* GE also opposed Whirlpool's request. *Id.* at II-15.

³⁷⁵ CR at V-16; PR at V-9.

³⁷⁶ CR/PR at Table V-10 n.1.

³⁷⁷ Confidential Report from the Original Investigations at V-21, Tables V-6, 15; Original Determinations at V-11, Tables V-6, 15.

³⁷⁸ CR at I-5-6; PR at I-4; Importers' Questionnaire Response of Electrolux at Question II-6d; E-mail ***, EDIS Document No. 670169

lower-priced subject imports from Mexico, which would depress the domestic industry's already weak rate of capacity utilization and weaken its financial performance.

Thus, we conclude that, if the order were revoked, the significant volume of subject imports from Mexico likely would significantly undersell the domestic like product to gain market share, thereby depressing or suppressing domestic like product prices to a significant degree.

3. Likely Impact³⁷⁹

We evaluate the likely impact of subject imports from Mexico in light of our finding that the domestic industry is vulnerable to the continuation or recurrence of material injury, detailed in our analysis in section IV.D.3 above. In light of the industry's vulnerability, we find that subject imports from Mexico would likely have a significant adverse impact on the domestic industry after revocation.

As discussed above, we have found that revocation of the order on subject imports from Mexico would likely result in a significant increase in subject import volume that would likely undersell the domestic like product, thereby depressing and/or suppressing domestic like product prices to a significant degree. In light of Electrolux's *** on the U.S. market and the exclusion of its subject imports of CIM/belt drive LRWs from the safeguard measure, we find that Electrolux would likely resume its underselling strategy from the original investigations in order to fill its substantial excess capacity in Mexico with significantly increased exports to the United States. We find that the likely volume of subject imports from Mexico, coupled with the adverse price effects of such imports, would likely have a significant adverse impact on the production, shipments, sales, market share, and revenues of the domestic industry. These reductions would have a direct adverse impact on the industry's profitability and employment as well as its ability to raise capital and make and maintain necessary capital investments. We therefore conclude that, if the order were revoked, subject imports from Mexico would be likely to have a significant adverse impact on the domestic industry within a reasonably foreseeable time.

We are unpersuaded by Samsung's argument that subject imports from Mexico could not be injurious because Whirlpool argued for the exclusion of Mexico from the safeguard measure during the safeguard investigation of LRWs and requested, through a changed circumstances request, that Commerce revoke the antidumping duty order on LRWs from Mexico with respect to CIM/belt drive front load LRWs on grounds that trade relief was no

³⁷⁹ Section 752(a)(6) of the Act states that "the Commission may consider the magnitude of the margin of dumping" in making its determination in a five-year review. 19 U.S.C. § 1675a(a)(6). The statute defines the "magnitude of the margin of dumping" to be used by the Commission in five-year reviews as "the dumping margin or margins determined by the administering authority under section 1675a(c)(3) of this title." 19 U.S.C. § 1677(35)(C)(iv). *See also* SAA at 887. For the antidumping duty order on LRWs from Mexico, Commerce assigned likely margins of up to 72.41 percent. *Large Residential Washers from Mexico: Final Results of the First Five-Year Sunset Review of the Antidumping Duty Order*, 83 Fed. Reg. 21764 (May 10, 2018).

longer necessary.³⁸⁰ As discussed in sections IV.C.4 and IV.E.2 above, the record shows that subject imports of CIM/belt drive front load LRWs from Mexico compete with domestically produced washers, irrespective of Whirlpool's arguments in the safeguard investigation and in its changed circumstances request.

Furthermore, Whirlpool states that it requested revocation of the order with respect to CIM/belt drive front load LRWs in March 2018 in part because ***.³⁸¹ Once GE lodged its opposition to the request in May 2018, however, the request lacked adequate industry support to succeed and Commerce issued a negative preliminary changed circumstances review determination in November 2018, prompting Whirlpool to withdraw the request in December 2018.³⁸² Thus, Whirlpool's changed circumstances request was motivated not only by its assessment of the competitive threat posed by subject imports of CIM/belt drive LRWs from Mexico at the time of the request, but also by ***.³⁸³

In our analysis of the likely impact of subject imports from Mexico on the domestic industry, we have taken into account whether there are other factors that likely would affect the domestic industry to ensure that we are not attributing injury from such other factors to subject imports. As discussed above, subject imports from Korea and nonsubject imports, primarily from China, Thailand, and Vietnam, maintained a substantial share of apparent U.S. consumption during the period of review, increasing irregularly from *** percent in 2012 to *** percent in 2017 and to *** percent in interim 2018, compared to *** percent in interim 2017.³⁸⁴

We have found that imports from Korea are unlikely to have a significant adverse impact on the domestic industry after revocation because LG is likely to limit such imports to a reduced volume of high end LRWs at non-injurious prices as it localizes the production of about 90 percent of its sales in the U.S. market.³⁸⁵

We also find that nonsubject imports from Thailand and Vietnam are not likely to weaken the causal nexus between subject imports from Mexico and the likely adverse impact on the domestic industry. As previously discussed, LG and Samsung account for virtually all imports of LRWs from Thailand and Vietnam, and these producers are likely to increasingly replace such imports with washers produced at their new U.S. plants.³⁸⁶ Thus, a declining

³⁸⁰ Samsung's Prehearing Brief at 10-14.

³⁸¹ Whirlpool's Responses to Commissioner Questions at II-14-15.

³⁸² Whirlpool's Responses to Commissioner Questions at II-14-15. ***. *Id.* at II-16.

³⁸³ Whirlpool's Responses to Commissioner Questions at II-14-15. Electrolux's *** also suggests that Electrolux maintains a strong interest in the U.S. market and is seeking unrestricted access to U.S. customers.

³⁸⁴ CR/PR at Table I-14.

³⁸⁵ See section IV.D, above.

³⁸⁶ See Hearing Tr. at 191 (Kim), 184 (Park), 256 (Toohey), 257 (Komaromi); LG's Responses to Commissioner Questions at 14, 32-33; Samsung's Responses to Commissioner Questions at 12. Once the shift of LRW production to the United States is complete, LG plans to use its facility in Vietnam to *** and its facility in Thailand ***. LG's Responses to Commissioner Questions at 14. Samsung plans to use its facilities in Thailand and Vietnam to produce washers in different sizes and with different

volume of nonsubject imports would not prevent subject imports from Mexico from underselling domestic prices and regaining market share at the domestic industry's expense. Moreover, LG and Samsung would have no incentive to significantly undersell the domestic like product using nonsubject imports from Thailand and Vietnam because doing so would likely displace shipments from their new U.S. plants, and depress or suppress the prices of washers produced at the plants, thereby undermining their substantial investments in the plants.³⁸⁷

We also find that nonsubject imports from China will not sever the causal nexus between subject imports from Mexico and the adverse impact on the domestic industry. The volume of LRWs imported from China by LG and Samsung has declined *** since imposition of the antidumping duty order on certain LRWs from China, and these imports will remain under the restraint of the order in the reasonably foreseeable future.³⁸⁸ Although *** imports of *** LRWs from China are ***, and were *** higher in interim 2018 (***) than in interim 2017 (***) will likely manage the volumes and prices of such imports to avoid harming its U.S. production, and by extension the entire domestic industry.³⁸⁹ Indeed, such imports did not prevent the domestic industry *** from posting a narrower operating loss in interim 2018 (negative *** percent of net sales) than in interim 2017 (negative *** percent of net sales).³⁹⁰

Based on the preceding analysis, we find that any impact from the nonsubject imports would likely be distinct from injury caused by the subject imports from Mexico. Thus, we find that imports from Korea and nonsubject imports from China, Thailand, and Vietnam are unlikely to weaken the causal nexus between subject imports from Mexico and the likely significant adverse impact on the domestic industry that we have found.

In sum, we find that revocation of the order on subject imports from Mexico would likely lead to a significant adverse impact on the domestic industry within a reasonably foreseeable time. Thus, we conclude that if the order were revoked, subject imports from Mexico would likely lead to the continuation or recurrence of material injury to the domestic industry within a reasonably foreseeable time.

specifications than the LRWs sold in the U.S. market, for sale in Asia. Hearing Tr. at 185-86 (Park), 186-87 (Komaromi).

³⁸⁷ Furthermore, nonsubject imports from Thailand and Vietnam are subject to the safeguard measure, which creates a strong economic incentive for LG and Samsung to replace such imports with domestic production as rapidly as possible both to preserve their market share and to minimize their tariff liability. See section IV.D.3 above.

³⁸⁸ See Importers' Questionnaire Responses of LG and Samsung at Question II-7e.

³⁸⁹ CR at IV-60; PR at IV-24; CR/PR at Table III-12; Importers' Questionnaire Response of *** at Question II-7d.

³⁹⁰ CR/PR at Tables III-12, C-2.

V. Conclusion

For all the foregoing reasons, we determine that revocation of the countervailing duty order and the antidumping duty order on LRWs from Korea would not be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time. We also determine that revocation of the antidumping duty order on LRWs from Mexico would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

PART I: INTRODUCTION

BACKGROUND

On January 2, 2018, the U.S. International Trade Commission (“Commission” or “USITC”) gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended (“the Act”),¹ that it had instituted reviews to determine whether revocation of the countervailing duty order on certain large residential washers (“LRWs”)² from the Republic of Korea (“Korea”) and the antidumping duty orders on certain LRWs from Korea and Mexico would likely lead to the continuation or recurrence of material injury to a domestic industry.^{3 4} On April 9, 2018, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act.⁵ The following tabulation presents information relating to the background and schedule of this proceeding:⁶

¹ 19 U.S.C. 1675(c).

² For ease and consistency of reference, this report uses the short form “LRWs” for “large residential washers.” With respect to domestic operations, this term includes top-load washers with a capacity of less than 3.7 cubic feet. Subject imports from Korea and Mexico are consistent with Commerce’s scope; nonsubject imports include top-load washers with a capacity of less than 3.7 cubic feet, regardless of source.

³ *Certain Large Residential Washers from Korea and Mexico; Institution of a Five-Year Reviews*, 83 FR 145, January 2, 2018. All interested parties were requested to respond to this notice by submitting the information requested by the Commission.

⁴ In accordance with section 751(c) of the Act, the U.S. Department of Commerce (“Commerce”) published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders concurrently with the Commission’s notice of institution. *Initiation of Five-Year (“Sunset”) Reviews*, 83 FR 100, January 2, 2018.

⁵ *Certain Large Residential Washers From Korea and Mexico; Notice of Commission Determination To Conduct Full Five-Year Reviews*, 83 FR 18347, April 26, 2018. The Commission found the responses of the domestic producers of LRWs and subject producers and importers of LRWs from Korea to be adequate. Accordingly, the Commission determined to conduct full reviews of the antidumping and countervailing duty orders on large residential washers from Korea. While the Commission found the individual response of the producer of LRWs in Mexico to be adequate, two Commissioners determined that the respondent interested party group response was adequate, and two Commissioners found the respondent interested party group response was inadequate. The Commission unanimously determined to conduct a full review of the antidumping duty order on washers from Mexico. Commissioner Kearns did not participate.

⁶ The Commission’s notice of institution, notice to conduct full reviews, scheduling notice, and statement on adequacy are referenced in appendix A and may also be found at the Commission’s web site (internet address www.usitc.gov). Commissioners’ votes on whether to conduct expedited or full reviews may also be found at the web site. Appendix B presents the witnesses appearing at the Commission’s hearing.

Effective date	Action
February 15, 2013	Commerce's countervailing duty order on LRWs from Korea (78 FR 11154) and antidumping duty orders on LRWs from Korea and Mexico (78 FR 11148)
January 1, 2018	Notice of initiation by Commerce (83 FR 100, January 2, 2018)
January 2, 2018	Notice of institution by Commission (83 FR 145)
April 9, 2018	Commission's determinations to conduct full five-year reviews (83 FR 18347, April 26, 2018)
May 2, 2018	Commerce's final results of expedited five-year review of the countervailing duty order on LRWs from Korea (83 FR 19222)
May 10, 2018	Commerce's final results of expedited five-year review of the antidumping duty order on LRWs from Mexico (83 FR 21764)
October 18, 2018	Commerce's final results of full five-year review of the antidumping duty order on LRWs from Korea (83 FR 52803)
September 7, 2018	Commission's scheduling of the reviews (83 FR 46757, September 14, 2018)
February 4, 2019	Commission's revised scheduling of the reviews (84 FR 2926, February 8, 2019)
February 21, 2019	Commission's hearing
March 29, 2019	Commission's vote
April 24, 2019	Commission's determinations and views

The original investigations

The original investigations resulted from a petition filed on December 30, 2011 with Commerce and the Commission by Whirlpool Corporation ("Whirlpool"), Benton Harbor, Michigan. On December 26 and 27, 2012, Commerce determined that imports of certain LRWs from Korea and Mexico, respectively, were being sold at less than fair value ("LTFV") and that countervailable subsidies were being provided to producers and exporters of large residential washers from Korea.⁷ The Commission determined on February 8, 2013, that the domestic industry was materially injured by reason of imports of certain LRWs from Korea and Mexico sold at LTFV and subsidized by the government of Korea.⁸ On February 15, 2013, Commerce issued antidumping duty orders on LRWs from Korea and Mexico and a countervailing duty order on LRWs from Korea.⁹

⁷ *Notice of Final Determination of Sales at Less Than Fair Value: Large Residential Washers From the Republic of Korea*, 77 FR 75975, December 26, 2012; *Notice of Final Determination of Sales at Less Than Fair Value: Large Residential Washers From Mexico*, 77 FR 76288, December 27, 2012; and *Large Residential Washers From the Republic of Korea: Final Affirmative Countervailing Duty Determination*, 77 FR 75975, December 26, 2012.

⁸ *Large Residential Washers From Korea and Mexico*, 78 FR 10636, February 14, 2013.

⁹ *Large Residential Washers From the Republic of Korea: Countervailing Duty Order*, 78 FR 11154, February 15, 2013, and *Large Residential Washers From Mexico and the Republic of Korea: Antidumping Duty Orders*, 78 FR 11148, February 15, 2013.

PREVIOUS AND RELATED INVESTIGATIONS

Antidumping duty investigation on LRWs from China

On December 16, 2015, Whirlpool filed a petition alleging that an industry in the United States was materially injured and threatened with material injury by reason of LTFV imports of LRWs from China. Following notification of a final determination by Commerce that imports of LRWs from China were being sold at LTFV, the Commission determined on January 30, 2017, that a domestic industry was materially injured by reason of LTFV imports of LRWs from China.¹⁰ Commerce published an antidumping duty order on LRWs from China on February 6, 2017.¹¹ Initial duty margins are shown in Table I-1.¹²

Table I-1
LRWs: Commerce's dumping margins for producers/exporters in China

Country	Manufacturer/exporter	Dumping margin (percent)
China	LG Electronics/Nanjing LG-Panda Appliances	38.43
	Samsung Electronics /Suzhou Samsung Electronics	57.37
	All others	49.72

Source: 82 FR 9371, February 6, 2017.

U.S. safeguard investigation

On June 5, 2017, pursuant to a petition filed by Whirlpool, the Commission instituted a safeguard investigation¹³ to determine “whether LRWs were being imported into the United States in such increased quantities as to be a substantial cause of serious injury, or the threat thereof, to the domestic industry producing an article like or directly competitive with the imported articles.”¹⁴ On October 5, 2017, the Commission determined that “large residential washers are being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing an article like or directly competitive with the imported article.”¹⁵ The Commission provided a report containing its

¹⁰ *Large Residential Washers From China; Determination*, 82 FR 9223, February 3, 2017.

¹¹ *Large Residential Washers From the People's Republic of China: Amended Final Affirmative Antidumping Duty Determination and Antidumping Duty Order*, 82 FR 9371, February 6, 2017.

¹² *Large Residential Washers From the People's Republic of China: Amended Final Affirmative Antidumping Duty Determination and Antidumping Duty Order*, 82 FR 9371, February 6, 2017.

¹³ Pursuant to Section 202 of the Trade Act of 1974.

¹⁴ *Large Residential Washers; Institution and Scheduling of Safeguard Investigation and Determination That The Investigation Is Extraordinarily Complicated*, 82 FR 27076, June 13, 2017.

¹⁵ *Increased Imports of Large Residential Washers Injure U.S. Industry, USITC Determines*, October 5, 2017, https://www.usitc.gov/press_room/news_release/2017/er1005l841.htm. See also, *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

serious injury findings and remedy recommendations to the President on December 4, 2017.¹⁶ On January 23, 2018, the President issued a proclamation imposing a safeguard measure in the form of a tariff rate quota on imports of washers provided for in subheadings 8450.11.00 and 8450.20.00 and a tariff rate quota on imports of certain covered parts, effective February 7, 2018 through February 7, 2021.¹⁷ Under the safeguard measure, imports of washers in excess of 1.2 million units annually were to be subject to an additional tariff of 50 percent in the first year, 45 percent in the second year, and 40 percent in the third year, with an in-quota tariff of 20 percent in the first year, 18 percent in the second year, and 16 percent in the third year.¹⁸ With respect to covered parts, imports in excess of 50,000 units were to be subject to an additional tariff of 50 percent in the first year, imports in excess of 70,000 units were to be subject to a tariff of 45 percent in the second year, and imports in excess of 90,000 units were to be subject to a tariff of 40 percent in the third year, while no additional duty would apply to goods within the in-quota tariff trigger quantity.¹⁹ ²⁰ The scope of the safeguard measure covers all LRWs within the scope of these reviews with the exception of LRWs that are 1) top loading with a permanent split capacitor motor, belt drive, and flat wrap spring clutch; 2) front loading with a controlled induction motor and belt drive; and 3) front loading with a cabinet width of more than 28.5 inches.²¹

On May 14, 2018, Korea requested consultations under the World Trade Organization (“WTO”) dispute settlement process with the United States concerning definitive safeguard measures imposed by the United States on imports of residential washers. On May 25, 2018, Thailand requested to join the consultations. Subsequently, the United States informed the Dispute Settlement Body (“DSB”) that it had accepted Thailand’s request to join the consultations. On August 14, 2018, Korea requested the establishment of a panel and at its meeting on September 26, 2018, the DSB established a panel, but to date the DSB has not selected the panelists.²²

As required by section 201(a)(2) of the Trade Act of 1974 (19 U.S.C. §2251(a)(2)), the Commission will submit a report to the President and the Congress on its monitoring of developments in the domestic industry by the midpoint of the three-year and one day period of

¹⁶ *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

¹⁷ *Proclamation 9694, To Facilitate Positive Adjustment to Competition From Imports of Large Residential Washers*, 83 FR 3553, January 25, 2018. Imports of washers and covered parts from Canada were excluded from the safeguard measure.

¹⁸ *Ibid.*

¹⁹ *Ibid.* Covered parts include 1) all cabinets or portions thereof; 2) all assembled tubs, incorporating at a minimum a tub and a seal; 3) all assembled baskets incorporating at a minimum a side wrapper, a base, and a drive hub, and 4) any combination of the foregoing parts or subassemblies. *Id.*

²⁰ According to CBP’s quota status report for March 2019, 526,854 units of 1.2 million have been imported. <https://www.cbp.gov/sites/default/files/assets/documents/2019-Mar/Quota%20Status%20Report%20MAR%202019.pdf>, accessed March 4, 2019.

²¹ *Ibid.*

²² World Trade Organization (WTO), “DS546: United States—Safeguard measure on imports of large residential washers,” October 16, 2018, retrieved March 7, 2019.

relief, or by August 7, 2019. The Commission issued its schedule in this proceeding effective February 15, 2019. (84 FR 5715, February 22, 2019).

Trade adjustment

On December 19, 2017, the U.S. Department of Labor (“DOL”) submitted a report to the President on the extent to which U.S. workers in the LRW industry are likely be certified as eligible for trade adjustment assistance and if such workers might be covered by existing U.S. government adjustment programs.²³ The DOL estimated that 324 workers would likely be eligible for trade adjustment petitions by the end of 2019 and that existing programs would be able to cover such workers.²⁴

On October 3, 2017, during the remedy phase of the Commission’s safeguard investigation, petitioner Whirlpool and Haier U.S. Appliance Solutions, Inc., d/b/a/ GE Appliances (“GE”), a non-petitioning domestic producer that supported the petition, submitted to the Commission, plans to facilitate positive adjustment to import competition (“adjustment plans”).²⁵ The fulfillment of the adjustment plans assumes that an “appropriate” safeguard remedy would be issued by the President. The adjustment plans were submitted to the Commission before the Commission made its remedy determination for its report and remedy recommendation to the President.²⁶

GE Appliances’ adjustment plan covers three broad categories. First, GE Appliances would provide “updated offerings,” which include new washing machine platforms, products, feature innovations, and production lines for their manufacture, as well as the necessary research and development (“R&D”). Second, GE Appliances would invest in training for hourly workers, as well as managerial, supervisory, and design staff. GE Appliances’ goal is to increase skills to gain efficiency in production, design, and execution. Third, GE Appliances would invest product and design innovation while continuing to reduce costs in the process.

Whirlpool’s adjustment plan focuses on revisiting all the projects the company cancelled, curtailed, or rejected during 2016–2017, as well as evaluating new projects.²⁷ Potential new investments would also focus on leveraging digital technology and advanced robotics, to further optimize the company’s manufacturing facilities and raise productivity.²⁸ Whirlpool’s plan also covers incremental investments for new products and innovations, as well as manufacturing and logistics enhancements.²⁹

²³ *Large Residential Washers (LRWs)*, 82 FR 61329, December 27, 2017.

²⁴ *Ibid.*

²⁵ Such adjustment plans are contemplated in section 202 of the Trade Act of 1974, 19 U.S.C. § 2252(a)(4). Whirlpool’s Adjustment Plan, October 3, 2017, p. 3. GE Appliances’ Adjustment Plan, October 3, 2017, p. 1.

²⁶ GE Appliances’ Adjustment Plan, October 3, 2017, p. 4.

²⁷ Whirlpool’s Adjustment Plan, October 3, 2017, p. 2.

²⁸ Whirlpool’s Adjustment Plan, October 3, 2017, p. 2.

²⁹ Whirlpool’s Adjustment Plan, October 3, 2017, p. 6.

World Trade Organization dispute settlement developments³⁰

In August 2013, the Korean government requested consultations under the World Trade Organization (“WTO”) dispute settlement process with the United States concerning Commerce’s antidumping and countervailing duty investigations on LRWs from Korea. In January 2014, a Dispute Settlement Body (“DSB”) panel was established, and in March 2016, a panel report was circulated supporting many of Korea’s claims. In April 2016, the United States appealed to the Appellate Body, and Korea cross-appealed. In September 2016, the DSB adopted the Appellate Body report and the earlier panel report, as modified by the Appellate Body report. In October 2016, the United States stated that it intended to implement the DSB’s recommendations and rulings, but that the United States would need a reasonable period of time (“RPT”) for implementation. In December 2016, Korea requested binding arbitration to determine the RPT. As a result, the appointed arbitrator determined the RPT to be 15 months, expiring on December 26, 2017. In mid-January 2018, Korea requested the authorization of the DSB to suspend concessions or other obligations pursuant to Article 22.2 of the Dispute Settlement Understanding as the United States had failed to comply with the DSB’s recommendations and rulings within the RPT. In late January 2018, the United States informed the DSB that it objected to Korea’s proposed level of suspension of concessions. On January 22, 2018, the DSB took note that the matter raised by the United States had been referred to arbitration, and an organizational meeting was held on February 14, 2018, to discuss procedural aspects of the arbitration proceeding. In late February 2018, the Arbitrator adopted its Working Procedures and a timetable for the proceedings, including procedures for the protection of Business Confidential Information. The Arbitrator held its substantive meeting with parties in June 2018, with parties submitting oral and written responses to the Arbitrator’s questions beginning in June 2018 and concluding with parties submitting comments on each other’s responses in September 2018. On February 8, 2019, the WTO Arbitrator authorized Korea to impose tariffs on U.S. imports after finding that the United States had not complied with a 2016 ruling that faulted the United States for duties it had imposed on LRWs from Korea. The Arbitrator determined that the level of nullification or impairment caused by the WTO-inconsistent anti-dumping and countervailing duty measures at the end of the RPT amounted to \$74.40 million and \$10.41 million, respectively. These amounts may be adjusted for inflation for the year 2018 and on an annual basis thereafter. The Arbitrator also noted that the United States may have recourse to the appropriate dispute settlement procedures, should the United States consider that the application of the suspension by Korea exceeds the level of nullification or impairment sustained by Korea.

In response to the DSB’s recommendations and rulings, on December 15, 2017, the U.S. Trade Representative (“USTR”) requested that Commerce initiate a proceeding under section

³⁰ Unless otherwise noted, information for the section is drawn from World Trade Organization (WTO), “DS464: United States—Anti-Dumping and Countervailing Measures on Large Residential Washers from Korea,” February 8, 2019, retrieved February 12, 2019.

129 of the Uruguay Round Agreements Act.³¹ On December 18, 2017, Commerce initiated the requested section 129 proceeding, and has since issued initial and supplemental questionnaires to interested parties seeking information necessary to conduct the section 129 proceeding.

In response to the Commission's notice of institution for these current reviews, Samsung argued that if Commerce were to implement the DSB's findings, Commerce "should find that Samsung was neither dumping nor receiving countervailable subsidies."³² In its response to Commerce's notice of initiation for these current reviews, LG argued that had Commerce followed methodologies for calculating the antidumping margin consistent with the WTO Antidumping Agreement, LG's positive margins would be zero margins.³³ LG claimed that in light of the WTO DSB's recommendations and findings, LG "has exported substantial quantities of subject LRWs to the United States with no dumping margin."³⁴

North America Free Trade Agreement ("NAFTA") panel review

On April 18, 2018, Electrolux requested NAFTA binational panel review of Commerce's final antidumping duty determination regarding LRWs from Mexico.³⁵ That panel review is currently pending.

Antidumping and countervailing duty investigations on covered key raw materials

In the second half of 2016, Commerce issued antidumping duty and countervailing duty orders on cold-rolled steel, such as that used on the production of LRWs. In total, these orders covered imports of cold-rolled steel from seven countries. In 2017, Commerce issued a combination of antidumping and countervailing duty orders on stainless steel sheet and strip, which is also used in the production of LRWs.³⁶

³¹ World Trade Organization (WTO), "United States – Anti-Dumping And Countervailing Measures On Large Residential Washers From Korea, WT/DS464/17/Add.2, February 16, 2018, https://www.wto.org/english/tratop_e/dispu_e/cases_e/ds464_e.htm, retrieved March 12, 2018.

³² Samsung's Response to the Notice of Institution, February 1, 2018, p. 10.

³³ LG, "LG Electronics' Notice of Intent to Participate and Substantive Response to Notice of Initiation of Sunset Review," February 5, 2018, pp. 21–22.

³⁴ *Ibid.*

³⁵ *North American Free Trade Agreement (NAFTA), Article 1904 Binational Panel Review: Notice of Request for Panel Review*, 83 FR 19221, May 2, 2018.

³⁶ On July 7, 2016, the Commission completed and filed its determinations that an industry in the United States is materially injured by reason of imports of cold-rolled steel flat products from China and Japan that have been found by the Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV"), and that have been found by Commerce to be subsidized by the government of China.

On September 12, 2016, the Commission completed and filed its determinations that an industry is materially injured by reason of imports of cold-rolled steel flat products from Brazil, India, Korea, and the United Kingdom that have been found by Commerce to be sold in the United States at LTFV, and to

Section 232 investigations (Commerce)

Steel

HTS subheadings 8450.20.00, 8450.11.00, 8450.90.20, and 8450.90.60 were not included in the enumeration of iron and steel provisions that are subject to the additional 25-percent *ad valorem* national-security duties under Section 232 of the *Trade Expansion Act of 1962*, as amended.³⁷ However, stainless steel sheet and cold-rolled steel, raw materials for producing LRWs, were included among the articles subject to the additional 25-percent *ad valorem* national-security duties.^{38 39}

On April 19, 2017, Commerce initiated an investigation under section 232 of the Trade Expansion Act of 1962 as amended (19 U.S.C. 1862), to assess the impact of steel imports on the national security of the United States.^{40 41} Commerce submitted the results of the investigations to the President on January 11, 2018.⁴² On March 8, 2018, the President

be subsidized by the governments of Brazil and Korea. The Commission further determined that an industry in the United States is threatened with material injury by reason of imports of cold-rolled steel flat products that have been found by Commerce to be subsidized by the government of India.

On March 24, 2017, the Commission completed and filed its determinations that an industry is materially injured by reason of imports of stainless steel sheet and strip from China that have been found by Commerce to be sold in the United States at LTFV, and to be subsidized by the government of China.

On September 20, 2017, the Commission determined that revocation of the countervailing duty order on imports of stainless steel sheet and strip from Korea and the antidumping duty orders on imports of stainless steel sheet and strip from Japan, Korea, and Taiwan would be likely to lead to a continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

³⁷ *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9705, March 8, 2018, 83 FR 11625, March 15, 2018.

³⁸ *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9705, March 8, 2018, 83 FR 11625, March 15, 2018.

³⁹ See U.S. notes 16(a) and 16(b), subchapter III of chapter 99. *Htsus (2018) Revision 13*, USITC publication No. 4832, October 2018, pp. 99-III-5 – 99-III-6, 99-III-59, 99-III-62.

⁴⁰ U.S. Department of Commerce website: <https://www.commerce.gov/news/press-releases/2018/01/statement-department-commerce-submission-steel-section-232-report>, retrieved December 11, 2018.

⁴¹ Section 232 of the Trade Expansion Act of 1962 (19 U.S.C. §1862) authorizes the Secretary of Commerce to conduct these investigations.

⁴² U.S. Department of Commerce website: <https://www.commerce.gov/news/pressreleases/2018/01/statement-department-commerce-submission-steel-section-232-report>, retrieved December 11, 2018.

announced his decision to impose 25 percent ad valorem duties on specified steel mill products from all U.S. trading partners, except Canada and Mexico.^{43 44}

On March 22, 2018, the President authorized the suspension of tariffs on steel and aluminum products of the following countries: Argentina, Australia, Brazil, Canada, Mexico, member countries of the European Union, and Korea.⁴⁵ On April 30, 2018, the President announced that the expiration of exemptions on tariffs on steel and aluminum imports from Canada, the European Union member states, and Mexico would occur on May 31, 2018.⁴⁶ The President also announced the exemptions were extended permanently for Korea in return for agreeing to product-specific quotas beginning on January 1, 2019.⁴⁷ Exemptions for Argentina, Australia, and Brazil were also extended until alternative restraints could be finalized.⁴⁸

On May 31, 2018, under a Presidential Proclamation issued under Section 232 of the Trade Expansion Act of 1962, the President announced tariffs will no longer be suspended for steel and aluminum imports from Mexico, Canada, and the European Union, effective July 1, 2018. Steel products from these countries will be subject to a 25 percent ad valorem duty.⁴⁹

A subsequent Presidential proclamation established absolute quotas for Argentina, Brazil, and Korea as an alternate to the 25 percent ad valorem duty for imports of steel mill articles, effective June 1, 2018 (leaving Australia as the only country exempt from both tariffs and quotas).^{50 51} On August 10, 2018, the President authorized adjusting the ad valorem tariff on steel imports from Turkey from 25 percent to 50 percent.⁵²

⁴³ *Presidential Proclamation 9705 of March 8, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 11625.

⁴⁴ For the purposes of this proclamation, “articles of iron or steel” are defined at the Harmonized Tariff Schedule (HTS) six-digit level as: 7206.10 through 7216.50, 7216.99 through 7301.10, 7302.10, 7302.40 through 7302.90, and 7304.10 through 7306.90, including any subsequent revisions to these HTS classifications.

⁴⁵ *Presidential Proclamation 9711 of March 22, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 13361.

⁴⁶ *Presidential Proclamation 9740 of April 30, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 20683.

⁴⁷ *Presidential Proclamation 9740 of April 30, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 20683.

⁴⁸ *Presidential Proclamation 9740 of April 30, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 20683.

⁴⁹ *Presidential Proclamation 9759 of May 31, 2018, Adjusting Imports of Steel into the United States*, 83 FR 25857, June 5, 2018.

⁵⁰ U.S. Customs and Border Protection, “QB 18-126 Absolute Quotas for Steel Mill Articles: Argentina, Brazil and Korea,” <https://www.cbp.gov/trade/quota/bulletins/qb-18-126-absolute-quota-aluminum-products-argentina-brazil-south-korea>, retrieved December 11, 2018.

⁵¹ U.S. Customs and Border Protection, “Section 232 Tariffs on Aluminum and Steel,” <https://www.cbp.gov/trade/programs-administration/entry-summary/232-tariffs-aluminum-and-steel>, retrieved December 11, 2018.

⁵² *Presidential Proclamation 9772 of August 10, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 40429, August 15, 2018.

In the President’s proclamation establishing the tariff under Section 232, the Secretary of Commerce was authorized to provide relief from the 25 percent ad valorem duties for any steel articles determined “not to be produced in the United States in a sufficient and reasonably available amount or of a satisfactory quality and is also authorized to provide such relief based upon specific national security considerations. Such relief shall be provided for any article only after a request for exclusion is made by a directly affected party located in the United States.”⁵³ Approved exclusions are made on a product specific basis and are limited to the individual or organization that submitted the specific exclusion request, unless Commerce approves a broader application of the product based exclusion request for additional importers.^{54 55}

On June 20, 2018, Commerce announced its first set of product exclusions granted from Section 232 tariffs on steel imports. Forty-two exclusion requests were granted, covering seven companies importing steel products from Japan, Sweden, Belgium, Germany, and China.⁵⁶

⁵³ U.S. Department of Commerce, Bureau of Industry and Security, “Section 232 National Security Investigation of Steel Imports Information on the Exclusion and Objection Process,” <https://www.bis.doc.gov/index.php/232-steel>, retrieved December 11, 2018.

⁵⁴ *Requirements for Submissions Requesting Exclusions from the Remedies Instituted in Presidential Proclamations Adjusting Imports of Steel into the United States and Adjusting Imports of Aluminum into the United States; and the Filing Objections to Submitted Exclusion request for Steel and Aluminum*, 83 FR 12106, March 19, 2018.

⁵⁵ Whirlpool ***. Petitioner Whirlpool’s posthearing brief, pg. II-48.

In its posthearing brief, Samsung states that it has ***. With respect to steel, Samsung ***. Respondent Samsung’s posthearing brief, pg. 11.

In its posthearing brief, GE states that it ***. GE’s posthearing brief, pg. 4.

In its posthearing brief, LG states that it utilizes three types of steel that are all subject to Section 232 duties: ***. LG also stated that it ***. LG’s posthearing brief, Attachment A, pg. 2. LG also states that it ***. LG’s posthearing brief, Attachment A, pg. 3. See also part V “Impact of Section 232 tariffs on steel and aluminum.”

⁵⁶ The seven companies receiving the exclusions are: Schick Manufacturing, Inc. of Shelton, Connecticut; Nachi America Inc. of Greenwood, Indiana; Hankev International of Buena Park, California; Zapp Precision Wire of Summerville, South Carolina; U.S. Leakless, Inc. of Athens, Alabama; Woodings Industrial Corporation of Mars, Pennsylvania; and PolyVision Corporation of Atlanta, Georgia. The exempted products were not specified. U.S. Department of Commerce, “Department of Commerce Grants First Product Exclusion Requests from Section 232 Tariffs on Steel Imports,” <https://www.commerce.gov/news/press-releases/2018/06/department-commerce-grants-first-product-exclusion-requests-section-232>, retrieved December 11, 2018.

Table I-2

LDWP: Section 232 tariffs summary

Country	Effective date	Ad valorem duty rate	Absolute quotas
Argentina	May 31, 2018	Exempt	2.4 metric tons
Australia	May 31, 2018	Exempt	Exempt
Brazil	May 31, 2018	Exempt	683 metric tons
Canada	May 31, 2018	25%	N/A
European Union	May 31, 2018	25%	N/A
Mexico	May 31, 2018	25%	N/A
Korea	April 30, 2018	Exempt	185,000 metric tons
Turkey	August 13, 2018	50%	N/A
All other countries	March 8, 2018	25%	N/A

Source: U.S. Customs and Border Patrol website: <https://www.cbp.gov/trade/programs-administration/entry-summary/232-tariffs-aluminum-and-steel>, updated on November 29, 2018.

Aluminum

HTS subheadings 8450.20.00, 8450.11.00, 8450.90.20, and 8450.90.60 were not included in the enumeration of aluminum provisions that are subject to the additional 25-percent *ad valorem* national-security duties under Section 232 of the *Trade Expansion Act of 1962*, as amended.^{57 58} However, aluminum castings, a raw material for producing parts LRWs, such as the transmission, was included among the articles subject to the additional 10-percent *ad valorem* national-security duties.^{59 60}

On April 26, 2017, Commerce initiated an investigation under section 232 of the Trade Expansion Act of 1962 as amended (19 U.S.C. 1862), to assess the impact of aluminum imports on the national security of the United States.^{61 62} Commerce submitted the results of the investigations to the President on January 19, 2018.⁶³ On March 8, 2018, the President

⁵⁷ *Presidential Proclamation 9704 of March 8, 2018, Adjusting Imports of Aluminum Into the United States*, 83 FR 11619, December 19, 2018.

⁵⁸ *Ibid.*

⁵⁹ *Ibid.*

⁶⁰ See U.S. notes 19(a) and 19(b), subchapter III of chapter 99. *HTSUS (2018) Revision 13*, USITC publication No. 4832, October 2018, pp. 99-III-12, 99-III-66.

⁶¹ U.S. Department of Commerce website: <https://www.commerce.gov/issues/trade-enforcement/section-232-aluminum#memo>, retrieved December 19, 2018.

⁶² Section 232 of the Trade Expansion Act of 1962 (19 U.S.C. §1862) authorizes the Secretary of Commerce to conduct these investigations.

⁶³ White House website: <https://www.whitehouse.gov/presidential-actions/presidential-proclamation-adjusting-imports-aluminum-united-states/>, retrieved December 19, 2018.

announced his decision to impose 10 percent ad valorem duties on specified steel mill products from all U.S. trading partners, except Canada and Mexico.^{64 65}

On March 22, 2018, the President authorized the suspension of tariffs on steel and aluminum products of the following countries: Argentina, Australia, Brazil, Canada, Mexico, member countries of the European Union, and Korea.⁶⁶ On April 30, 2018, the President announced that the expiration of exemptions on tariffs on steel and aluminum imports from Canada, the European Union member states, and Mexico would occur on May 31, 2018.⁶⁷ Exemptions for Argentina, Australia, and Brazil were also extended until alternative restraints could be finalized.⁶⁸

On May 31, 2018, under a Presidential Proclamation issued under Section 232 of the Trade Expansion Act of 1962, the President announced tariffs will no longer be suspended for steel and aluminum imports from Brazil, Mexico, Canada, and the European Union, effective July 1, 2018. Aluminum products from these countries will be subject to a 10 percent ad valorem duty.⁶⁹

A subsequent Presidential proclamation established absolute quotas for Argentina, as an alternate to the 10 percent ad valorem duty for imports of aluminum articles, effective June 1, 2018 (leaving Australia as the only country exempt from both tariffs and quotas).⁷⁰

In the President's proclamation establishing the tariff under Section 232, the Secretary of Commerce was authorized to provide relief from the 10 percent ad valorem duties for any steel articles determined "not to be produced in the United States in a sufficient and reasonably available amount or of a satisfactory quality and is also authorized to provide such relief based upon specific national security considerations. Such relief shall be provided for any article only after a request for exclusion is made by a directly affected party located in the United States."⁷¹ Approved exclusions are made on a product specific basis and are limited to the individual or

⁶⁴ *Presidential Proclamation 9704 of March 8, 2018, Adjusting Imports of Aluminum Into the United States*, 83 FR 11619, December 19, 2018.

⁶⁵ For the purposes of this proclamation, "articles of aluminum" are defined at the Harmonized Tariff Schedule (HTS) as: 7601, 7604, 7605, 7606, 7607, 7608, 7609, 7616.99.51.60, and 7616.99.51.70, including any subsequent revisions to these HTS classifications.

⁶⁶ *Presidential Proclamation 9710 of March 22, 2018, Adjusting Imports of Aluminum Into the United States*, 83 FR 13355, December 19, 2018.

⁶⁷ *Presidential Proclamation 9739 of April 30, 2018, Adjusting Imports of Aluminum Into the United States*, 83 FR 20677, December 19, 2018.

⁶⁸ *Ibid.*

⁶⁹ *Presidential Proclamation 9758 of May 31, 2018, Adjusting Imports of Steel into the United States*, 83 FR 25849, December 19, 2018.

⁷⁰ U.S. Customs and Border Protection, "Section 232 Tariffs on Aluminum and Steel," <https://www.cbp.gov/trade/programs-administration/entry-summary/232-tariffs-aluminum-and-steel>, retrieved December 11, 2018.

⁷¹ U.S. Department of Commerce Announces Steel and Aluminum Tariff Exclusion Process <https://www.commerce.gov/news/press-releases/2018/03/us-department-commerce-announces-steel-and-aluminum-tariff-exclusion>, retrieved December 19, 2018.

organization that submitted the specific exclusion request, unless Commerce approves a broader application of the product based exclusion request for additional importers.^{72 73}

On June 20, 2018, Commerce announced its first set of product exclusions granted from Section 232 tariffs on aluminum imports. Sixty-two exclusion requests were granted, with the following companies receiving the exclusions: Ball Metal Beverage Container Corp. of Broomfield, Colorado; Bemis Company, Inc. of Neenah, Wisconsin; Channel Alloys of Norwalk, Connecticut; Constellium-UACJ ABS LLC of Bowling Green, Kentucky; Cornell Dubilier Marketing of Liberty, South Carolina; Garmco, Inc. of Winter Garden, Florida; Generac Power Systems of Waukesha, Wisconsin; International Converter, LLC of Caldwell, Ohio; Mandel Metals, Inc. of Franklin Park, Illinois; ProAmpac Intermediate Inc. of Cincinnati, Ohio; Schluter Systems of Plattsburgh, New York; Trinidad/Benham Corp. of Denver, Colorado.⁷⁴ The exempted products include 6020 T8 Cold finished aluminum bars, high purity etched and formed foil, and cansheet body stock of 3104/H19 alloy.⁷⁵

Section 301 proceeding

Large residential washers imported from China provided for in HTS subheadings 8450.11.00, 8450.20.00, 8450.90.20, and 8450.90.60 are not subject to any additional *ad valorem* duties under Section 301 of the *Trade Act of 1974*. However, certain inputs into LRWs are subject to these duties.

Section 301 of the Trade Act of 1974, as amended (“Trade Act”),⁷⁶ authorizes the USTR, at the direction of the President, to take appropriate action to respond to a foreign country’s unfair trade practices. On August 18, 2017, the USTR initiated an investigation into certain policies and practices of the Government of China related to technology transfer, intellectual

⁷² *Requirements for Submissions Requesting Exclusions from the Remedies Instituted in Presidential Proclamations Adjusting Imports of Steel into the United States and Adjusting Imports of Aluminum into the United States; and the Filing Objections to Submitted Exclusion request for Steel and Aluminum*, 83 FR 12106, March 19, 2018.

⁷³ LG states that LG utilizes *** in its production of LRWs. At present, ***. LG notes that each LG ***, and each ***. LG states that no aluminum producer in the United States can produce the *** so it submitted an exclusion request but the outcome of the exclusion request is still pending. LG’s posthearing brief, Attachment A, pg. 3.

⁷⁴ U.S. Department of Commerce, *Requirements for Submissions Requesting Exclusions from the Remedies Instituted in Presidential Proclamations Adjusting Imports of Steel into the United States and Adjusting Imports of Aluminum into the United States; and the Filing Objections to Submitted Exclusion request for Steel and Aluminum*, Docket ID BIS-2018-0002, <https://www.regulations.gov/docket?D=BIS-2018-0002>, retrieved December 20, 2018.

⁷⁵ S&P Global, “US Commerce grants first Section 232 aluminum product exclusion,” <https://www.spglobal.com/platts/en/market-insights/latest-news/metals/071318-us-commerce-grants-first-section-232-aluminum-product-exclusions>, retrieved December 20, 2018.

⁷⁶ 19 U.S.C. § 2411.

property, and innovation.⁷⁷ On April 6, 2018, the USTR published its determination that the acts, policies, and practices of China under investigation are unreasonable or discriminatory and burden or restrict U.S. commerce, and are thus actionable under section 301(b) of the Trade Act.⁷⁸ The USTR determined that it was appropriate and feasible to take action and proposed the imposition of an additional 25 percent duty on products from China with an annual trade value of approximately \$50 billion. The additional duties were initially proposed in two tranches. Tranche 1 covered 818 tariff subheadings, with an approximate annual trade value of \$34 billion.⁷⁹ Tranche 2 covered 279 tariff subheadings, with an approximate annual trade value of \$16 billion.

On September 21, 2018, the USTR published a notice in the *Federal Register* modifying its prior action in accordance with the specific direction of the President under his authority pursuant to section 307(a)(1) of the Trade Act, determining to include 5,745 full and partial tariff subheadings with an approximate annual trade value of \$200 billion, while maintaining the prior action. The USTR determined that the rate of additional duty is initially 10 percent ad valorem, effective September 24, 2018.^{80 81}

SUMMARY DATA

Table I-3 presents a summary of data from the original investigations and the current full five-year reviews. Figure I-1 shows U.S. producers' U.S. shipments and U.S. shipments from subject and nonsubject sources during 2009-17. Since the Commission's original investigations, there have been several developments affecting the LRW industry. First, U.S. producers either increased production or began production. GE Appliances began production of front load LRWs in the United States in April 2013; Samsung began producing LRWs in Newberry, South Carolina in January 2018; and LG began producing LRWs in its manufacturing facility in Clarksville, Tennessee in October 2018. Second, new energy efficiency and water use standards for LRWs went into effect in 2015 and 2018. Third, the supply of imported LRWs shifted away from Korea and Mexico, first to China, and then to Thailand and Vietnam. As discussed above, in early

⁷⁷ *Initiation of Section 301 Investigation; Hearing; and Request for Public Comments: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 82 FR 40213, August 24, 2017.

⁷⁸ *Notice of Determination and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 14906, April 6, 2018.

⁷⁹ *Notice of Action and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 28710, June 20, 2018.

⁸⁰ *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 47974, September 21, 2018.

⁸¹ All four U.S. producers source a variety of LRW components that are subject to Section 301 measures. For further details see Part V – Raw material costs. Whirlpool and GE ***. Whirlpool's posthearing brief, p. II-48 and Attachment H. Samsung's posthearing brief, p. 11. GE's posthearing brief, p. 4. LG's posthearing brief, Attachment A, pg. 3 and Exhibit Q1.

February 2017, Commerce issued an antidumping duty order on LRW imports from China. In January 2018, the President issued a proclamation imposing a safeguard measure comprised of tariff rate quotas on imports of LRWs and covered parts, effective February 7, 2018.

Table I-3

LRWs: Comparative data from the original investigations and current review, 2011 and 2017

* * * * *

Figure I-1

LRWs: U.S. shipments of domestic product and imports, 2009-17

* * * * *

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 751(c) of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation “would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury.”

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury—

(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account--

(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,

(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,

(C) whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and

(D) in an antidumping proceeding . . . , (Commerce’s findings) regarding duty absorption . . .

(2) VOLUME.--In evaluating the likely volume of imports of the subject

merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including--

(A) any likely increase in production capacity or existing unused production capacity in the exporting country,

(B) existing inventories of the subject merchandise, or likely increases in inventories,

(C) the existence of barriers to the importation of such merchandise into countries other than the United States, and

(D) 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.

(3) PRICE.--In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether--

(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and

(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.

(4) IMPACT ON THE INDUSTRY.--In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to--

(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,

(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and

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

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, “the Commission may consider the magnitude of the margin of dumping or the magnitude of the net

countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement.”

Organization of report

Information obtained during the course of the reviews that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for washers as collected in the reviews is presented in appendix C. U.S. industry data are based on the questionnaire responses of five U.S. producers of washers that are believed to have accounted for virtually all domestic production of LRWs in 2017. U.S. import data and related information are based on the questionnaire responses of six U.S. importers of LRWs that are believed to have accounted for virtually all U.S. imports of LRWs from Korea, Mexico, and all other sources during 2017. Foreign industry data and related information are based on the questionnaire responses of five foreign producers of LRWs. Two producers in Korea accounted for virtually all U.S. imports of LRWs from Korea and three producers in Mexico accounted for virtually all U.S. imports of LRWs from Mexico. Responses by U.S. producers, importers, purchasers, and foreign producers of LRWs to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D. Appendix E presents responses by U.S. producers, importers, and purchasers of LRWs to a series of questions concerning the significance of the section 201 measures. Appendix F presents U.S. importers’ U.S. shipments by certain product characteristics.

COMMERCE'S REVIEWS⁸²

Administrative reviews

Since 2013, when the antidumping and countervailing duty orders were issued, Commerce has completed eight administrative reviews.^{83 84} Four administrative reviews

⁸² On May 11, 2018, in response to a request by Whirlpool, Commerce published a notice of initiation of changed circumstances reviews to consider the possible revocation, in part, of the antidumping orders on LRWs from Korea and Mexico and the countervailing order on large residential washers from Korea with respect to LRWs that (1) have a horizontal rotational axis; (2) are front loading; and (3) have a drive train consisting, inter alia, of (a) a controlled induction motor and (b) a belt drive (hereinafter, FL CIM/Belt washers). On November 14, 2018, Commerce published its preliminary determination not to revoke the antidumping duty orders on LRWs from Korea and Mexico and the countervailing duty order on LRWs from Korea, in part, with respect to with respect to FL CIM/belt washers, because Whirlpool Corporation, the requestor, does not account for substantially all of the production of domestic like product to which these orders pertain. On December 21, 2018, Whirlpool withdrew its request for a changed circumstances review, citing insufficient domestic support for the request and concerns expressed by other parties relating to the competitiveness of LRWs covered by the request (GE Appliances, LG, and Samsung submitted comments to Commerce opposing the changed circumstances review. In its submission, LG noted that not only did Whirlpool not satisfy the industry support legal requirement, but also partially revoking the order would cause competitive harm to the U.S. LRW industry from the FL CIM/Belt washers that compete directly with U.S. produced LRWs. *Large Residential Washers from the Republic of Korea and Mexico: Initiation of Changed Circumstances Reviews, and Consideration of Revocation, in Part, of the Antidumping Duty Orders on Large Residential Washers from the Republic of Korea and Mexico and the Countervailing Duty Order on Large Residential Washers from the Republic of Korea*, 83 FR 22006, May 11, 2018; *Preliminary Results of Changed Circumstances Reviews of the Antidumping Duty Orders on Large Residential Washers From the Republic of Korea and Mexico, and the Countervailing Duty Order on Large Residential Washers From the Republic of Korea*, 83 FR 56808, November 14, 2018; letter from Curtis, Mallet-Prevost, Colt & Mosle, counsel to LG, May 21, 2018; and letter from Cassidy Levy Kent, counsel to Whirlpool, to Secretary of Commerce, December 21, 2018. On March 13, 2019, Commerce published its final determination not to revoke the antidumping duty orders on LRWs from Korea and Mexico and the countervailing duty order on LRWs from Korea, in part, with respect to FL CIM/belt washers. *Final Results of Changed Circumstances Reviews of the Antidumping Duty Orders on Large Residential Washers From the Republic of Korea and Mexico, and the Countervailing Duty Order on Large Residential Washers From the Republic of Korea*, 84 FR 8088, March 13, 2019.

Commerce has not conducted any anti-circumvention findings since the completion of the original investigations. In addition, Commerce has not made any duty absorption findings or issued any company revocations or scope rulings since the imposition of the order.

⁸³ Commerce partially rescinded the review of the antidumping duty order on LRWs from Korea and Mexico for the period of February 1, 2014 through January 31, 2015, *Large Residential Washers From the Republic of Korea: Partial Rescission of Antidumping Duty Administrative Review; 2014–2015*, 80 FR 55091, September 14, 2015; *Large Residential Washers From Mexico: Partial Rescission of Antidumping Duty Administrative Review; 2014–2015*, 80 FR 61792, October 14, 2015.

regarding the antidumping duty order on LRWs from Korea, one administrative review regarding the countervailing duty order on LRWs from Korea, and three reviews regarding the antidumping duty order on LRWs from Mexico. The results of the reviews are shown in tables I-3, I-4, and I-5, respectively.

Table I-4
LRWs: Administrative reviews of the countervailing duty order on imports of LRWs from Korea

Date results published	Period of review	Producer or exporter	Subsidy rate (percent)
September 15, 2015 80 FR 55336	6/5/2012- 12/31/2013	Daewoo Electronics Corporation	81.91
		Samsung Electronics Co., Ltd	34.77

Source: Cited Federal Register notices.

Table I-5
LRWs: Administrative reviews of the antidumping duty order on imports of LRWs from Korea

Date results published	Period of review	Producer or exporter	Weighted average margin (percent)
September 12, 2017 82 FR 42788	2/1/2015- 1/31/2016	LG Electronics, Inc.	0.00
September 12, 2016 81 FR 62715	2/1/2014- 1/31/2015	LG Electronics, Inc.	1.62
September 15, 2015 80 FR 55595	8/3/2012- 1/31/2014	Daewoo Electronics Corporation	79.11
		LG Electronics, Inc.	1.52
		Samsung Electronics Co., Ltd	82.35
November 5, 2015 80 FR 68508 ¹	8/3/2012- 1/31/2014	LG Electronics, Inc.	1.38
January 31, 2018 83 FR 4467	2/1/2016- 1/31/2017	LG Electronics, Inc.	0.64
February 26, 2019 84 FR 6131	2/1/2017- 1/31/2018	LG Electronics, Inc.	0.0

¹ Amended final results of the antidumping duty administrative review.

Source: Cited *Federal Register* notices.

⁸⁴ Commerce rescinded the review of the countervailing duty order on LRWs from Korea for the period of January 1, 2014 through December 31, 2014, *Large Residential Washers From the Republic of Korea: Rescission of Countervailing Duty Administrative Review; 2014*, 80 FR 43064, July 21, 2015.

Table I-6
LRWs: Administrative reviews of the antidumping duty order on imports of LRWs from Mexico

Date results published	Period of review	Producer or exporter	Weighted average margin (percent)
September 15, 2015 80 FR 55335	8/3/2012- 1/31/2014	Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.V.	6.45
November 5, 2015 80 FR 68510 ¹	8/3/2012- 1/31/2014	Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.V.	6.22
September 12, 2016 81 FR 62714	2/1/2014- 1/31/2015	Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.V.	2.47
July 12, 2017 82 FR 32169	2/1/2015- 1/31/2016	Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.V.	3.67
March 19, 2018 83 FR 11963	2/1/2016- 1/31/2017	Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.V.	72.41

¹ Amended final results of the antidumping duty administrative review.

Source: Cited Federal Register notices

Five-year reviews

Commerce has issued the final results of its expedited review with respect to the antidumping duty order on LRWs from Korea, determining that revocation would be likely to lead to continuation or recurrence of dumping and that the magnitude of the margin likely to prevail would be weighted-average dumping margins up to 82.41 percent.⁸⁵

Commerce has also issued the final results of its expedited review with respect to the antidumping duty order on LRWs from Mexico, determining that revocation would be likely to lead to continuation or recurrence of dumping and that the magnitude of the margin likely to prevail would be weighted-average dumping margins up to 72.41 percent.⁸⁶

Finally, Commerce has issued the final results of its expedited review with respect to countervailing duty order on LRWs from Korea.⁸⁷ Table I-7 presents the countervailable subsidy and dumping margins calculated by Commerce in its original investigations and first reviews.

⁸⁵ *Large Residential Washers from Mexico and the Republic of Korea: Antidumping Duty Orders*, 78 FR 11148, February 15, 2013; and *Large Residential Washers From the Republic of Korea: Final Results of the First Five-Year Sunset Review of the Antidumping Duty Order*, 83 FR 52803, October 18, 2018

⁸⁶ *Large Residential Washers from Mexico and the Republic of Korea: Antidumping Duty Orders*, 78 FR 11148, February 15, 2013; and *Large Residential Washers From Mexico: Final Results of the Expedited First Five-Year Sunset Review of the Antidumping Duty Order*, 83 FR 21764, May 10, 2018

⁸⁷ *Large Residential Washers from the Republic of Korea: Final Results of Expedited First Sunset Review of the Countervailing Duty Order*, 83 FR 19222, May 2, 2018.

Table I-7

LRWs: Commerce's original and first five-year review countervailable subsidy and dumping margins for producers/exporters in Korea and dumping margins for producers/exporters in Mexico

Item	Original margin (percent)	First five-year review margin (percent)
Producers/exporters in Korea		
Countervailable subsidy:		
Daewoo Electronics Corporation	72.30	80.25
Samsung Electronics Co., Ltd.	1.85	20.75
All others	1.85	15.28
Dumping margin:		
Daewoo Electronics Corporation	82.41	Up to 82.41
LG Electronics Inc.	13.02	Up to 82.41
Samsung Electronics Co., Ltd.	9.29	Up to 82.41
All others	11.86	Up to 82.41
Producers/exporters in Mexico		
Dumping margin:		
Electrolux Home Products Corp. NV/Electrolux Home Products de Mexico, S.A. de C.	36.52	Up to 72.41
Samsung Electronics Mexico S.A. de C.V.	72.41	Up to 72.41
Whirlpool International S. de R.L. de C.V.	72.41	Up to 72.41
All others	36.52	Up to 72.41

Note.—Commerce found the following programs to constitute countervailable subsidies: GOK Supplier Support Fund Tax Deduction; Subsidy for Investment in Gyeonggi Province: Infrastructure Funding under Article 29 of the Special Law; Subsidy for Investment in Gyeonggi Province: Financial Support under Article 19 of the Special Law; Subsidy for Investment in Gyeonggi Province: Exemption of Dues under Article 20 of the Special Law; Subsidy for Investment in Gyeonggi Province: Provision of Land for Less Than Adequate Remuneration (LTAR); Subsidy for Investments in Hwaseong Dongtan Semiconductor Factory: Provision of Land for LTAR; Subsidy for Investments in Hwaseong Dongtan Semiconductor Factory: Loan Forgiveness on Land Contract; Subsidy for Investments in Hwaseong Dongtan Semiconductor Factory: Provision of Preferential Water Supply Infrastructure for Free; Korea Electric Power Corporation Provision of Electricity for LTAR; RSTA Article 7-2 Tax Credit for improving Enterprise's Bill System; RSTA Article 22 Tax Exemption from Corporate Tax on Dividend Income from Investment in Overseas Resources Development; RSTA Article 24 Tax Credit for Investment, etc. in Productivity Increasing Facility; RSTA Article 25-3 Tax Credit for Investment in Facilities for Environmental Conservation; and RSTA Article 104-14 Tax Credit for Third Party Distribution Expense.

Source: 78 FR 11154, February 15, 2013; 80 FR 55595 September 15, 2015; 82 FR 32169, July 12, 2017; 83 FR 4467, January 31, 2018; 83 FR 19222, May 2, 2018; and Commerce's *Countervailing Duty Order on Large Residential Washers from the Republic of Korea: Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review*, April 26, 2018.

THE SUBJECT MERCHANDISE

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:⁸⁸

All large residential washers and certain subassemblies thereof.

For purposes of this investigation, the term "large residential washers" denotes all automatic clothes washing machines, regardless of the orientation of the rotational axis, except as noted below, with a cabinet width (measured from its widest point) of at least 24.5 inches (62.23 cm) and no more than 32.0 inches (81.28 cm).

Also covered are certain subassemblies used in large residential washers, namely: (1) All assembled cabinets designed for use in large residential washers which incorporate, at a minimum: (a) At least three of the six cabinet surfaces; and (b) a bracket; (2) all assembled tub designed for use in large residential washers which incorporate, at a minimum: (a) A tub; and (b) a seal; (3) all assembled baskets designed for use in large residential washers which incorporate, at a minimum: (a) A side wrapper; (b) a base; and (c) a drive hub; and (4) any combination of the foregoing subassemblies.

Excluded from the scope are stacked washer-dryers and commercial washers. The term "stacked washer-dryers" denotes distinct washing and drying machines that are built on a unitary frame and share a common console that controls both the washer and the dryer. The term "commercial washer" denotes an automatic clothes washing machine designed for the "pay per use" market meeting either of the following two definitions:

(1)(a) It contains payment system electronics; (b) it is configured with an externally mounted steel frame at least six inches high that is designed to house a coin/token operated payment system (whether or not the actual coin/token operated payment system is installed at the time of importation); (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners; or

(2)(a) It contains payment system electronics; (b) the payment system electronics are enabled (whether or not the payment acceptance device has been installed at the time of importation)

⁸⁸ *Countervailing Duty Order on Large Residential Washers from the Republic of Korea: Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review*, Department of Commerce, April 26, 2018, found at <https://enforcement.trade.gov/frn/summary/korea-south/2018-09310-1.pdf>; *Issues and Decision Memorandum for the Final Results of First Sunset Review of the Antidumping Duty Order on Large Residential Washers from Mexico*, Department of Commerce, May 4, 2018, found at <https://enforcement.trade.gov/frn/summary/mexico/2018-09948-1.pdf>; *Issues and Decision Memorandum for the Final Results of First Sunset Review of the Antidumping Duty Order on Large Residential Washers from Korea*, Department of Commerce, October 18, 2018, <https://enforcement.trade.gov/frn/summary/korea-south/2018-22635-1.pdf>.

such that, in normal operation, the unit cannot begin a wash cycle without first receiving a signal from a bona fide payment acceptance device such as an electronic credit card reader; (c) it contains a push button user interface with a maximum of six manually selectable wash cycle settings, with no ability of the end user to otherwise modify water temperature, water level, or spin speed for a selected wash cycle setting; and (d) the console containing the user interface is made of steel and is assembled with security fasteners.

Also excluded from the scope are automatic clothes washing machines with a vertical rotational axis and a rated capacity of less than 3.70 cubic feet, as certified to the U.S. Department of Energy pursuant to 10 CFR 429.12 and 10 CFR 429.20, and in accordance with the test procedures established in 10 CFR Part 430.

Tariff treatment

The subject LRWs are provided for in HTS subheading 8450.20.00 and are imported under statistical reporting numbers 8450.20.0040 and 8450.20.0080.⁸⁹ Particular LRWs are provided for in HTS subheadings 8450.11.00, while specified parts of LRWs are provided for in subheading 8450.90.20 or 8450.90.60. The general duty rate for subheading 8450.20.00 is 1.0 percent ad valorem. The general duty rate for subheading 8450.11.00 is 1.4 percent ad valorem. Parts and subassemblies covered by the scope of the orders are classified under HTS subheading 8450.90.20, which provides for tubs and tub assemblies, and HTS subheading 8450.90.60, which provides for other parts. Both 8450.90.20 and 8450.90.60 have a general duty rate of 2.6 percent ad valorem.⁹⁰ As discussed above, LRWs, parts and certain subassemblies covered by the scope are currently subject to tariff-rate quotas under a safeguard measure imposed effective February 7, 2018. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the merchandise of these investigations is dispositive. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

⁸⁹ In 2015, HTS 8450.20.0090 was divided into 8450.20.0040 and 8450.20.0080.

⁹⁰ Harmonized Tariff Schedule of the United States (2018). Eligible goods imported under U.S. free trade agreements or the Caribbean Basin Economic Recovery Act ("CBERA"), or from most beneficiary developing countries under the Generalized System of Preferences ("GSP") program, may receive duty-free entry. Ecuador is excluded from GSP eligibility for one of the parts subheadings.

Table I-8
LRWs: Summary of duties

Measure	Detail
AD/CVD (Administrative Reviews)	The results of the administrative reviews are shown in tables I-4, I-5, and I-6.
Section 201 TRQs	The TRQs applicable to certain LRWs and covered parts are described on page I-5.
Section 232 - Aluminum	HTS subheadings 8450.20.00, 8450.11.00, 8450.90.20, and 8450.90.60 were not included in the enumeration of aluminum provisions that are subject to the additional 25-percent <i>ad valorem</i> national-security duties under Section 232 of the <i>Trade Expansion Act of 1962</i> , as amended. However, aluminum castings, a raw material for producing parts LRWs, such as the transmission, was included among the articles subject to the additional 10-percent <i>ad valorem</i> national-security duties.
Section 232 - Steel	HTS subheadings 8450.20.00, 8450.11.00, 8450.90.20, and 8450.90.60 were not included in the enumeration of iron and steel provisions that are subject to the additional 25-percent <i>ad valorem</i> national-security duties under Section 232 of the <i>Trade Expansion Act of 1962</i> , as amended. However, stainless steel sheet and cold-rolled steel, raw materials for producing LRWs, were included among the articles subject to the additional 25-percent <i>ad valorem</i> national-security duties.
Section 301	Products from China provided for in HTS subheadings 8450.11.00, 8450.20.00, 8450.90.20, and 8450.90.60 are not subject to any additional <i>ad valorem</i> duties under Section 301 of the <i>Trade Act of 1974</i> .

THE PRODUCT

Description and applications⁹¹

LRWs are home appliances that remove soil from fabric, using water and detergent as the principal cleaning agents. All units feature wash, rinse, and spin cycles; have a cabinet width of at least 24.5 inches (62.23 cm) and no more than 32.0 inches (81.28 cm); and feature a rotational axis that is either vertical or horizontal. Excluded from the scope are automatic clothes washing machines with a vertical rotational axis and a rated capacity of less than 3.70 cubic feet.⁹² All LRWs feature a metal drum or basket into which laundry is loaded, a plastic tub that holds water, a motor, a pump, and a user interface and control unit to set wash cycles. Single-family households are the principal consumers of LRWs.

Configurations of LRWs in the U.S. market

Currently in the U.S. market, LRWs are typically produced and sold in two configurations, either with a vertical axis, generally referred to as a “top load” LRWs or a horizontal axis, generally referred to as “front load” LRWs. Both configurations can be

⁹¹ Unless otherwise noted, this section is from *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017.

⁹² See section on Commerce’s scope.

equipped with various features, for instance, water heaters, different washing cycles, steam cleaning capabilities, and cabinet finishing. The primary distinctions between these configurations of LRWs are based on the location of the loading door, the orientation of the axis, and the cleaning mechanics. A general description of these LRW configurations follows.

Top load LRWs

A top load LRW features a top loading door for loading clothes and contains a basket that spins on a vertical axis (see figure I-2). Top load LRWs come equipped with a broad array of product features and are sold at a wide range of price points. The cleaning mechanics of a top load LRW consist of laundry being loaded into a basket that spins on a vertical axis. In order to further facilitate a cleaning motion, an agitator or impeller is placed in the center of the basket. The difference between these two cleaning technologies is explained further below.

Figure I-2
LRWs: Top load washers



Source: Whirlpool. The washer on the left is more likely to contain an “agitator” as its means of moving clothes, water, and detergent around the basket whereas the washer on the right is more likely to contain an “impeller.”

Cleaning technology: agitator vs. impeller

A top load LRW contains either an agitator or an impeller, both of which facilitate the cleaning movement of clothes, water, and detergent inside the basket of the machine. Figure I-3 presents an example of an agitator and an impeller.

Figure I-3:
LRWs: An example of an agitator and an impeller



Source: Whirlpool. An agitator (left). An impeller (right).

Agitator

An agitator is a center post that projects from the bottom of the wash basket and is equipped with fins or vanes that creates a washing action by rotating back and forth.

When a top load LRW with an agitator is set to clean a load of clothes, it first fills its tub with water and then creates the back and forth, washing motion through the use of its agitator. The force of the agitator and its motion tend to treat fabrics more harshly than LRWs with impellers, because the agitator often twists and tangles clothes. LRWs with agitators tend to use more water and more energy than LRWs with impellers. Specifically, the agitator needs more water to operate effectively and generally spins clothes more slowly during the spin cycle, requiring longer use of a dryer and thus consuming more energy. Because of the higher water and electricity consumption used by LRWs with an agitator, they are less likely to meet energy standards for “high-efficiency” or meet the Energy Star standard, although some agitator-based LRWs have qualified for Energy Star certification. LRWs with an agitator generally occupy the “value” segment of the market at lower price points. In anticipation of the more stringent energy efficiency standards that took effect on March 7, 2015, discussed below, Whirlpool redesigned its agitator-based top load LRWs to utilize shallow fill technology and HE agitators (or “agi-pellers”), which combine aspects of agitators and impellers.

Impeller

An impeller is a somewhat flat, rotating hub which does not contain a center post. It creates washing motion by rotating and creating currents in the water. Due to the lack of a center post, impellers occupy less space in the basket and consequently, top load LRWs with impellers generally have higher capacities than agitator-based LRWs.

During the cleaning cycle of a top load LRW with an impeller, the tub fills only partly with water. Because so little water is used in the tub, a special detergent designated “HE” must be used. The HE detergent is formulated to create fewer suds thereby minimizing the water necessary to rinse. Top load LRWs with an impeller also spin at higher speeds than top load

LRWs with an agitator, thereby extracting more water before clothes go into the dryer, and thus reducing energy consumption. Because of the lower water and electricity consumption, many LRWs with an impeller qualified as “high efficiency” and were Energy Star certified under the energy efficiency standards prior to March 7, 2015. Even after the more stringent energy efficiency standards became effective on January 1, 2018, and February 5, 2018, these LRWs are more likely to meet high efficiency energy standards or meet the Energy Star standard, although not all models meet these standards.

Front load LRWs

Front load LRWs feature a front loading door for loading clothes and a drum that spins on a horizontal axis. (see figure I-4). Front load LRWs are typically positioned at the premium end of the LRW market in terms of price and performance. They often come equipped with a broad variety of product features. The drums of front load LRWs fill only partly with water and clean clothes through a process of lifting them to the top of the tub and dropping them into the water by a “baffle” and using the centrifugal force of the spinning drum. Front load LRWs generally consume the least amount of water during the wash cycle and feature the fastest spinning speeds of all types of LRWs. Because of the lower water and electricity consumption, all front load LRWs qualified as “high efficiency” and were Energy Star certified under the energy efficiency standards before and after January 1, 2018, and February 5, 2018. Generally, front load LRWs work most effectively with low-foaming, HE detergent. Most front load LRW load capacities are roughly equivalent to top load LRWs with an impeller but tend to have higher load capacities than top load LRWs with an agitator. Very fast spin cycles mean better moisture extraction compared even with top load LRWs with an impeller, thereby reducing drying time and energy consumption. Although front load LRWs were known to develop mold and odors, causing some consumers to prefer top load washing machines, such problems have now been largely addressed by the industry.⁹³

⁹³ Kimberly Janeway, “Preventing Funky Front-Loader Mold,” Consumer Reports, March 8, 2016. <https://www.consumerreports.org/front-load-washers/preventing-that-funky-front-loader-mold/>, retrieved December 6, 2018. See also Kimberly Janeway, “Settlement in Front-Loader Mold Case to Benefit Owners,” Consumer Reports, June 24, 2016, <https://www.consumerreports.org/washing-machines/settlement-in-front-loader-mold-case/>, retrieved December 6, 2018.

Because of mold accumulation, class action litigation claiming design defects and breach of implied warranties has occurred involving many manufacturers of front load LRWs. See *In re Whirlpool Corp. Front-Loading Washer Prods. Liab. Litig.*; *In re LG Front Load Washing Machine Class Action Litigation*, No. 08-51 (Dist. N.J.); *In re Samsung Front Load Washing Machine Class Action Litigation*, No. 12-cv-0541 (Dist. N.J.). In April 2014, the lawsuit against Samsung was dismissed. Class Action News, “Samsung Front Load Washing Machine Class Action,” undated. <http://www.classactionsnews.com/consumer/samsung-front-load-washing-machine-class-action>, with “Court dismissed Samsung Lawsuit,” April 2, 2014, at <http://www.classactionsnews.com/sites/default/files/Samsung%20-%20Court%20order%20re%20Motion%20to%20Dismiss.pdf>, retrieved December 6, 2018. In 2014,

Figure I-4
LRWs: Front load washer



Source: Lowe's.

Product features⁹⁴

Product features have become increasingly prevalent in the LRW marketplace, and are seen by many manufacturers as a means of maintaining competitiveness. These features can include energy efficiency, capacity, appearance (color, cabinet finishing, decorative elements, etc.), and new innovations such as noise reduction and steam cleaning. A number of the features of LRWs are explained below.

Energy efficiency

Consumers may prefer energy efficiency as a factor in buying LRWs. Energy efficiency standards for LRWs are promulgated by three entities: (1) the Consortium for Energy Efficiency (“CEE”),⁹⁵ (2) the U.S. Environmental Protection Agency (“EPA”), and (3) the U.S. Department of

Whirlpool received a favorable jury verdict in one of these class action lawsuits, but settled the remaining litigation. <http://www.reuters.com/article/us-whirlpool-washers-verdict-idUSKBN0IJ25Y20141030> and <http://www.washersettlement.com/>, retrieved December 6, 2018. In June 2016, LG also reached a settlement in its class action for washers sold during 2002–2006. <http://www.lgwashersettlement.com/>, retrieved December 6, 2018.

⁹⁴ Unless otherwise noted, this section is from *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, pp. I-19-I-23.

⁹⁵ The CEE is a nonprofit agency that encourages greater adoption of energy-efficient products and services through the development of various initiatives. According to the CEE web site, members include

Energy (“DOE”). All of these entities establish standards for identifying energy efficient LRWs based largely on two factors: (1) energy utilization and (2) water consumption of the washer. More specifically, energy utilization is calculated using the “integrated modified energy factor” (“IMEF”), which represents the number of cubic feet of laundry that can be washed with one kilowatt-hour of electricity taking into consideration the total energy consumption of the entire laundry cycle, which includes both washing and drying. The higher the IMEF number, the more laundry may be washed and dried with the same one kilowatt-hour of energy, and the higher the energy efficiency of the washer. Water consumption is calculated using the “integrated water factor” (“IWF”), which is defined as the gallons of water needed to wash each cubic foot of laundry.⁹⁶ The lower the IWF number, the less water is used to clean each cubic foot of laundry, and the higher the water efficiency of the washer.

Based on the relative IMEF and IWF measures, the CEE categorizes LRWs into tiers of energy efficiency, with the third and advanced tiers reserved for the most energy efficient washers.

Also using IMEF and IWF measures, the EPA and the DOE assign the “Energy Star” classification to LRWs. In general, the EPA and DOE revise Energy Star standards periodically based on several factors, including changes to the Federal minimum efficiency standards,⁹⁷ technological advances which generate greater energy efficiencies, and product availability.⁹⁸ Additionally, the EPA may revise these standards when the market share for Energy Star rated LRWs reach or exceed 50 percent for a particular category of LRW.⁹⁹ Major changes in U.S. energy efficiency standards for residential washers occurred in January 2011, March 2015, and

utility companies, environmental groups, research organizations, and state energy offices in the United States and Canada. The agency also solicits input from manufacturers and both the U.S. Department of Energy and the Environmental Protection Agency. <http://www.cee1.org/content/about>, retrieved December 6, 2018.

⁹⁶ Prior to March 2015, CEE and Energy Star standards were calculated using the “modified energy factor” (“MEF”), which represents the number of cubic feet of laundry that can be washed with one kilowatt-hour of electricity and the “water factor” (“WF”)—the gallons of water needed to wash each cubic foot of laundry. Consortium for Energy Efficiency, Inc., “Super Efficient Home Appliance Initiative - January 2017,” January 2017, <https://library.cee1.org/content/cee-super-efficient-home-appliance-initiative-january-2017/>, retrieved December 6, 2018.

⁹⁷ Pursuant to the Energy Policy and Conservation Act of 1975, the U.S. Department of Energy (“DOE”) sets minimum energy efficiency standards for approximately 50 categories of appliances and equipment used in homes, businesses, and other applications, including LRWs. <https://energy.gov/eere/buildings/appliance-and-equipment-standards-program>, retrieved December 6, 2018. See U.S. Department of Energy, Energy Efficiency & Renewable Energy, *Saving Energy and Money with Appliance and Equipment Standards in the United States*, fact sheet, January 2017,

<https://energy.gov/eere/buildings/downloads/appliance-and-equipment-standards-fact-sheet> for fact sheet at

https://energy.gov/sites/prod/files/2017/01/f34/Appliance%20and%20Equipment%20Standards%20Fact%20Sheet-011917_0.pdf, retrieved December 6, 2018.

⁹⁸ <https://energy.gov/eere/buildings/energy-star>, retrieved December 6, 2018.

⁹⁹ Ibid.

January and February 2018. As shown in table I-9, the newer efficiency standards require large increases in the efficiency of top load LRWs to decrease in the volume of water that can be used in the LRW wash and rinse cycles and increase energy efficiency.

**Table I-9
LRWs: Energy efficiency standards**

Standard	Efficiency levels January 1, 2018 and February 5, 2018 ¹		Efficiency levels March 7, 2015 ²		Efficiency levels January 1, 2011 to March 6, 2015 ³	
	IMEF	IWF	IMEF	IWF	MEF	WF
Federal minimum— Top load	1.57	6.5	1.29	8.4	1.26	9.5
Front load	(⁴)	(⁴)	1.84	4.7	1.26	9.5
Energy Star— Top load	2.06	4.3	2.06	4.3	2.0	6.0
Front load	2.76	3.2	2.38	3.7	2.0	6.0
CEE Tier 1	2.76	3.2	2.38	3.7	2.0	6.0
CEE Tier 2	2.92	3.2	2.74	3.2	2.2	4.5
CEE Tier 3	(⁵)	(⁵)	2.92	3.2	2.4	4.0
CEE Advanced Tier	3.10	3.0	(⁵)	(⁵)	(⁵)	(⁵)

¹ Federal energy efficiency minimums for residential clothes washers compliance dates began on January 1, 2018, and Energy Star standards and CEE standards on February 5, 2018.

² Federal energy efficiency minimums for residential clothes washers, ENERGY STAR, and CEE standards compliance dates began March 7, 2015.

³ Federal energy efficiency minimums, Energy Star standards, and CEE ratings compliance dates began effective January 1, 2011.

⁴ Not applicable.

⁵ Not published.

Source: U.S. Department of Energy, Consortium for Energy Efficiency, *Super Efficient Home Initiative, Energy Conservation Program: Energy Conservation Standards for Residential Clothes Washers*, 77 F.R. 59719, October 1, 2012, *Certain Large Residential Washers from Korea and Mexico Invs. Nos. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Publication 4378, February 2013, pp. I-13—I-14.

Capacity

Capacity refers to the volume of clothes an LRW can wash per load. Capacity is among the most sought after features for consumers, especially for large households. Capacity ranges for different types of LRWs vary. For example, top load LRWs with an agitator feature the lowest capacity and range from 2.5-3.9 cubic feet (“cf.”), while the capacity of front load LRWs and top load LRWs with an impeller range from 3.3-4.3 cf. and 3.5-6.2 cf. of capacity, respectively. The DOE requires manufacturers to certify and declare the capacity of their LRWs at the time of sale. Producers of LRWs are constantly attempting to increase the capacity of

their LRWs. In 2014, Samsung began producing a 5.6 cf. LRW. Whirlpool currently has the largest capacity LRW on the market at 6.2 cf.¹⁰⁰

Appearance

The appearance of LRWs can vary greatly. Color, cabinet finish, and decorative elements are examples of LRW features that may differ. LRWs are available in a variety of colors, but white appears on many models. For example, in December 2018, Lowe's online shopping website that includes search filters listed 74 washers in white, 17 in a stainless look, 6 in black, with fewer washers available in red and blue.¹⁰¹ The Home Depot's online shopping Internet website listed 43 residential washers (front load and top load) in white; 28 washers in stainless finishes (including platinum, graphite steel, stainless steel, and black stainless); 9 washers in gray; 4 washers in chrome; and fewer than 3 washers each in black, blue purple, metallic carbon, red/orange, and slate.¹⁰²

Manufacturing processes¹⁰³

Development of product platforms

Generally, the manufacture of LRWs begins with the design and production of a LRW "platform." A platform is the basic frame from which multiple models are built with a variety of features. In *Large Residential Washers from China*, all producers of LRWs, Whirlpool, GE, LG, and Samsung, reported using "platforms" to develop product models. Samsung and LG view platforms as encompassing a broad engineering design that may be developed around a research and design project. A platform would have certain parameters for items such as drive systems, size, and design structure. Thus, models produced within a platform may have a particular width, such as 28 inches, but different features.

Whirlpool and GE stated that a platform is expected to last for an extended period of time, such as 10 to 20 years, or longer. A platform may be upgraded during its lifecycle, once every 2 to 3 years, and even 5 years. Samsung stated, and LG agreed, that a platform likely will have a lifecycle of 5 to 30 years, but may be upgraded every 2 to 5 years.

LRW manufacturers may have several platforms in operation at a given time. For example, Whirlpool has two to four platforms for its top load LRWs and one to two platforms for its front load LRWs. New platforms will overlap with the lifecycle of older platforms.

¹⁰⁰ Whirlpool website, <https://www.whirlpool.com/laundry/washers/top-load/p.6.2-cu.-ft.-top-load-washer-with-load-and-go-bulk-dispenser.wtw9500ec.html>, retrieved December 6, 2018.

¹⁰¹ Lowe's, "Washing Machines," December 6, 2018, <https://www.lowes.com/pl/Washing-machines-Washers-dryers-Appliances/4294857977>, retrieved December 6, 2018.

¹⁰² The Home Depot, <https://www.homedepot.com/b/Appliances-Washers-Dryers-Washing-Machines/N-5yc1vZc3ov>, retrieved December 6, 2018.

¹⁰³ Unless otherwise noted, this section is from *Large Residential Washers from China*, Inv. No. 731-TA-1306 (Final), USITC Publication 4666, January 2017.

Development of product models and “stock keeping units” (“SKUs”)

A “model” is an LRW defined by various features or functionality. In *Large Residential Washers from China*, Whirlpool, GE, LG, and Samsung agreed that a particular LRW model will typically have a lifecycle of 1-3 years.¹⁰⁴

Whirlpool, GE, LG, and Samsung also noted that terms “model” and “SKU” are generally synonymous. Whirlpool noted, however, that a model might have more than one SKU because that model is produced in more than one location or in different colors.

Production process

Whirlpool

LRWs are typically mass produced in a production plant. Whirlpool produces all the LRWs that it sells in the United States in its Clyde, Ohio, manufacturing plant, which covers 2.4 million square feet.

Whirlpool produces all LRWs using the same manufacturing technology and processes. LRWs are produced through several distinct manufacturing processes that involve a wide variety of materials, which may be purchased in large quantities as cut, shaped, or painted pieces, or as component systems (figure I-5). The components for each module originate within five areas in the petitioner’s production plant, including materials receiving, cabinet assembly, fabrication support, plastics forming, and machining.

¹⁰⁴ *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. I-19.

Figure I-5
LRWs: Production processes for LRWs

Operations in the plant

- Materials receiving
- Cabinet forming
- Fabrication support: blanking, stamping, and forging of metal; and machining of metal bar stock
- Plastics forming



LRW modules

- Cabinetry
- Drive system
- Wash system
- Control system
- Exterior features
- Interior features
- Literature
- Labels
- Packaging



Assembly line



Finished LRW ready for shipping

Source: *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. I-21.

First, the materials department receives all purchased materials, including raw materials and purchased components, including pre-stamped metal blanks, injection molded parts, electrical subassemblies, printed literature and labels, and packaging materials. Then, the materials department will maintain inventories and deliver material to the appropriate fabrication department or directly to the assembly line.

During the cabinet assembly stage, the exterior metal shell of the washer is created, including the top, lid, and door. Raw metal blanks, which are formed from steel coils, are then stamped on metal stamping presses and then assembled if necessary. Some components are often pre-fabricated in the fabrication support department before being delivered to the cabinet assemblers. Cabinets and lids are then fabricated and processed through the paint department. Completed, painted cabinets and lids are then delivered to the final assembly lines. Washer doors are typically purchased as an assembly and delivered to the assembly line to be attached to the cabinet.

Next, the fabrication support department processes raw materials such as steel bar stock and coil sheet steel. Purchased steel bar stock is formed and machined into components of the wash systems and drive. Cold-rolled sheet steel is cut to the appropriate size, stamped, and formed using custom dies designed by the petitioner. The formed parts are cleaned and painted as necessary. Such fabricated steel components are used in the cabinet, drive and the wash unit assembly.

The plastics forming department processes raw plastic pellets or granules primarily into the plastic tubs used for the wash unit modules. The granules are melted and then injected into plastic molding equipment. The equipment uses molds to obtain the required geometry. Once the tubs are created through this process, they are delivered to the final assembly departments.

The wash system module consists of a basket (drum) and plastic tube joined together. This combines products from the fabrication and the plastics forming operations. The shell of the basket is made of steel that is stamped to shape and welded together. The fabrication of the basket is automated. The metal shell of the basket is fastened to the tube and shell to form the wash module.

LRW modules are designed in-house in Whirlpool and then produced by specialty producers. These include the drive system, LRW controls, literature, and labels. The drive system components, which includes the motor, transmission, seals, metal, and plastic housings, are designed and sized by Whirlpool engineers. These components are purchased from specialized producers and then fabricated in other departments.

The controls, as well as interior and exterior feature components are designed by Whirlpool engineers and then supplied by specialty manufacturers. The company owns the dies for all feature components. Whirlpool also designs its own electronics hardware and software and then contracts with global suppliers for the production of electronic devices and assemblies.

Whirlpool produces cabinets, basket drums, and tubs at the Clyde facility. Whirlpool purchases electrical, electronics, motors, and harnesses from third party suppliers. Whirlpool sources its electronics from Mexico and Asia and sources its motors from the United States, Mexico, and overseas. Whirlpool stated that *** percent of its LRWs is sourced from the United States; and that Whirlpool's Clyde facility is a Foreign Trade Zone.¹⁰⁵

The final assembly consists of integrating the purchased parts and the self-produced subassemblies on an assembly line. All components are presented to the assembly line, which include the cabinet, wash unit, drive, control systems, interior and exterior features, literature, labels, and packaging. All these components are assembled in a defined order to construct the finished washer. The final product undergoes testing and inspection and is visually inspected for fit and finish.

The finished and inspected product is then transferred to the packaging area where labels are applied, literature is included, and the washer is packaged. Before the unit is automatically shrink-wrapped or packaged in a corrugated box, an external protective

¹⁰⁵ Staff field trip report, Whirlpool, November 2, 2018. EDIS doc. Id. 664816, December 20, 2018.

packaging is applied manually to the unit. The packaged unit is then shipped to a distribution center.

Samsung

Samsung began commercial production of LRWs at its Newberry, South Carolina facility in January 2018. This facility has over 1.5 million square feet. Samsung ***. Samsung has a variety of equipment that is used during the production of both its top loading and front loading LRWs, ***. According to Samsung, ***. Currently, there are ***. When Samsung ***. Samsung uses ***. The front load has a *** while the top load washer has a ***. The backs of the LRW tubs produced in Newberry are ***. Samsung's Newberry operations are ***. For 2019, Samsung projects to ***.¹⁰⁶

LG

LG announced its decision to build its U.S. washing machine factory in February 2017. Construction of the million-square-foot facility in Clarksville, Tennessee, began in August 2017. Initial production began in October 2018, and LG plans to be in ***.¹⁰⁷

DOMESTIC LIKE PRODUCT ISSUES

In its original determinations, the Commission defined the domestic like product to include both LRWs as described by the scope definition, and top-load washers with a capacity of less than 3.7 cubic feet (excluded from the scope).¹⁰⁸ In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate definitions of the domestic like product and domestic industry.¹⁰⁹ In

¹⁰⁶ Staff field trip report, Samsung Electronics Home Appliances America, October 10, 2018. Doc. Id. 664813, December 20, 2018.

¹⁰⁷ LG's producer questionnaire response, Attachment C.

¹⁰⁸ *Certain Large Residential Washers from Korea and Mexico, Inv. Nos. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Publication 4378, February 2013, p. 11. The Commission noted that the record indicated a preponderance of similarities between top-load washers with a capacity of less than 3.7 cubic feet and LRWs described by the amended scope. Top-load washers with a capacity of less than 3.7 cubic feet and LRWs were generally interchangeable and similar in terms of their physical characteristics and uses; manufacturing facilities, processes, and employees; channels of distribution; and customer and producer perceptions. They generally differed from LRWs in terms of price, and even with respect to this factor there is overlap. Given the absence of any clear dividing line separating domestically produced top-load washers with a capacity less than 3.7 cubic feet from those with larger capacity, the Commission defined the domestic like product to include both LRWs as described by the scope definition, and top-load washers with a capacity of less than 3.7 cubic feet.

¹⁰⁹ *Certain Large Residential Washers from Korea and Mexico; Institution of Five-Year Reviews*, 83 FR 145, January 2, 2018.

their response to the Notice of Institution, GE Appliances and Whirlpool agreed with the Commission's definition of the domestic like product as stated in the original investigations.¹¹⁰ In its response to the Notice of Institution, LG disagreed with the Commission's definition of the domestic like product and argued that all washers should be covered in the definition including "all washers with a capacity of less than 3.7 cubic feet; top load residential washers with permanent split capacitor, belt, drive, and flat wrap spring clutch; front load residential washers with a controlled induction motor and a belt drive; and extra wide residential washers."¹¹¹ Samsung also disagreed with the Commission's definition of the domestic like production and argued that the definition should include all residential washers including "any out-of-scope residential washers that are produced in the United States."¹¹² No party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires. In its prehearing brief, the domestic interested parties agreed with the definition of the domestic like product set forth in the original investigations.¹¹³ No other interested party provided further comment on the domestic like product.

U.S. MARKET PARTICIPANTS

U.S. producers

During the original investigations, seven firms supplied the Commission with information on their U.S. operations with respect to LRWs. These firms accounted for virtually all U.S. production of LRWs in 2011.¹¹⁴ In these current proceedings, the Commission issued U.S. producers' questionnaires to six firms, five of which provided the Commission with

¹¹⁰ GE Appliances' response to the Notice of Institution, February 1, 2018, p. 8; and Whirlpool's response to the Notice of Institution, February 1, 2018, p. 16.

¹¹¹ LG's response to the Notice of Institution, February 1, 2018, p. 12.

¹¹² Samsung's response to the Notice of Institution, February 1, 2018, p. 11.

¹¹³ Domestic interested parties' prehearing brief, p. 17.

¹¹⁴ The seven U.S. producers that supplied the Commission with usable questionnaire information during the original investigations were: Alliance, BSH, Electrolux, Fisher & Paykel, GE, Staber, and Whirlpool. BSH, which produced front-load LRWs, ceased production at its New Bern, North Carolina facility in late 2010. Electrolux, which produced front-load LRWs and out-of-scope top-load residential washers less than 3.7 cubic feet capacity, ceased production at its Webster City, Iowa facility in early 2011 and transferred all laundry production to its facility in Juarez, Mexico. Fisher & Paykel reported production of out-of-scope top-load residential washers less than 3.7 cubic feet capacity, which it produced at its Clyde, Ohio facility until October 2009, when it transferred production to its facility in Amata City, Thailand. Staber, headquartered in Groveport, Ohio, produces LRWs and drying cabinets for the medical, fire, and laundry equipment sectors, and also performs contract manufacturing. *Certain Large Residential Washers from Korea and Mexico, Inv. No. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Publication 4378, February 2013, p. I-3 and *Large Residential Washers, Inv. No TA-201-076*, USITC Publication 4745, December 2017, p. I-27.

information on their LRW operations.¹¹⁵ These firms are believed to account for virtually all U.S. production of LRWs in 2017. Presented in table I-10 is a list of current domestic producers of LRWs and each company’s position on continuation of the orders, production locations, and share of reported production of LRWs in 2017.

Table I-10
LRWs: U.S. producers, positions on orders, U.S. production locations, related and/or affiliated firms, and shares of 2017 reported U.S. production

Firm	Position on continuation of orders	Production location	Share of production (percent)
Alliance	***	Ripon, WI	***
GE Appliances	***	Louisville, KY	***
LG	***	Clarksville, TN	***
Samsung	***	Newberry, SC	***
Whirlpool	***	Clyde, OH	***
Total			100.0

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

As indicated in table I-11, three U.S. producers (***) are related to foreign producers of LRWs and three firms (***) are related to U.S. importers of LRWs. In addition, as discussed in greater detail in Part III, four U.S. producers directly imported the subject merchandise.

Table I-11
LRWs: U.S. producers' ownership, related and/or affiliated firms, since January 2012

* * * * *

Alliance¹¹⁶

Alliance is a privately-held corporation which was founded in 1908 and headquartered in Ripon, Wisconsin. The company has manufacturing facilities in the United States, China, and the Czech Republic. The company is a leader in the global commercial laundry market and produces washers and dryers for coin-operated laundries, multi-housing laundries, but also residential washers. Alliance Laundry Systems manufactures products under the brands Speed Queen, Huebsch, IPSO, Primus, and UniMac. Alliance produces and markets its residential

¹¹⁵ Staber Industries, Inc. did not provide a response to the Commission’s U.S. producer questionnaire, but stated that it produced and shipped *** LRWs in 2017. Email from William Staber, President, Staber Industries, November 16, 2018.

¹¹⁶ Unless otherwise noted, information from *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

washers under the Speed Queen brand name.¹¹⁷ In 2014, Alliance reported total global revenues of \$726.3 million and net income of \$29.6 million.¹¹⁸ Alliance reported that in 2017, *** percent of its total production were residential washers whereas *** percent were commercial washers and dryers.¹¹⁹ Alliance reported ***.¹²⁰ In June 2015, Alliance announced that it had obtained \$400 million in financing to assist in growing the company in both North America and Europe.¹²¹ In June 2015, Alliance undertook a \$46 million expansion, including installation of a 1,500 ton transfer press for its Speed Queen residential washing machines.¹²² In May 2016, Alliance announced a \$62.6 million expansion of its manufacturing campus, adding 225,000 square feet for a new North America sales and marketing headquarters and the conversion of an existing warehouse into a manufacturing facility.¹²³ In March 2018, Alliance also announced an investment of approximately \$50 million to build a new manufacturing plant in Thailand, with construction to begin in April 2018 and production to begin in early 2019.¹²⁴

General Electric¹²⁵

GE Appliances was a division of General Electric (“GE”) until June 2016, when GE Appliances was sold to the Chinese company Qingdao Haier Co., Ltd. (“Haier”). GE, founded in 1892 and headquartered in Fairfield, Connecticut, is a global diversified infrastructure and financial services company offering products and services ranging from aircraft engines, power generation, oil and gas production equipment, and household appliances to medical imaging, business and consumer financial and industrial products. The manufacturing operations occur in approximately 41 countries, more than 500 manufacturing plants, and carry out eight business segments, which include (1) power; (2) renewable energy; (3) oil and gas; (4) aviation; (5) healthcare; (6) transportation; (7) energy connections and lighting; (8) and capital.¹²⁶ In

¹¹⁷ Alliance Laundry Systems, “Our brands,” <https://alliancelaundry.com/en-us/our-brands/speed-queen> (accessed March 5, 2019).

¹¹⁸ Alliance Laundry Holdings LLC, Annual Report, 2014. Alliance is not a publically trade company and therefore does not file annual Form 10-K reports.

¹¹⁹ Alliance’s producer questionnaire, response to question III-5.

¹²⁰ Ibid. at question II-2.

¹²¹ PRNewswire, “Alliance Laundry Completes New \$400 Million Asset-Backed Finance Facility,” June 19, 2015. <https://www.prnewswire.com/news-releases/alliance-laundry-completes-new-400-million-asset-backed-finance-facility-300106401.html>.

¹²² Ibid.

¹²³ Alliance Laundry Systems LLC, “Largest Expansion In Alliance Laundry Systems History Approved,” press release, May 11, 2016. <https://alliancelaundry.com/en-us/newsroom/largest-expansion-in-alliance-laundry-systems-hist>.

¹²⁴ The Nation, “Alliance Laundry invests Bt1.5 bn on factory,” March 24, 2018. <http://www.nationmultimedia.com/detail/Corporate/30341615>.

¹²⁵ Unless otherwise noted, information from *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

¹²⁶ General Electric Co. Form 10-K, 2017.

2017, GE reported \$122.1 billion in revenue and \$6.2 billion in net loss.¹²⁷ Globally, the firm employed approximately 313,000 employees in 2017, with 106,000 of those employed in the United States.¹²⁸

In 2010, GE Appliances initiated a \$150 million investment at its Louisville, Kentucky facility (“Appliance Park”) to produce top load and front load LRWs in the United States. In 2012, GE Appliances began producing a broader range of top load LRWs at Appliance Park. GE Appliances previously produced top load LRWs with a capacity of under 3.7 cubic feet at Appliance Park. In 2013, GE Appliances began production of front load LRWs at Appliance Park.

GE has been in the process of a multi-year restructuring where the company has sought to focus on its core industrial businesses and thereby reduce the number of its consumer and financial business segments. As part of this restructuring, in September 2014, GE announced that it was selling its appliances division to AB Electrolux of Stockholm, Sweden. The U.S. Department of Justice filed to stop the merger in July 2015, arguing that it would lead to less competition and higher prices for buyers of appliances. On December 7, 2015, GE announced that it had terminated its agreement to sell its appliances division to Electrolux and would now pursue other options to sell the division.¹²⁹ On January 15, 2016, GE announced that it had entered into a definitive agreement to sell its appliances division to Haier. On June 6, 2016, GE announced that it had completed the sale of its appliances division, GE Appliances, to Haier for \$5.6 billion.¹³⁰ The deal included the stake of 48.4 percent that GE Appliances owns in Mabe, a Mexican appliances company that manufactures washers.¹³¹ ¹³² In October 2018, Haier announced that it would invest \$200 million to expand GE Appliance’s washer and dishwasher operations in Appliance Park.¹³³ Currently, GE Appliances is a wholly owned subsidiary of Haier. The Haier Group is a large multinational manufacturer and distributor of electronics and home appliances headquartered in Qingdao, China. In 2017, Haier announced that it would expand its washer production in China by building a plant in Hefei, the capital of East China’s Anhui province, which the ability to produce three million units annually.¹³⁴

¹²⁷ Ibid.

¹²⁸ Ibid.

¹²⁹ General Electric, “GE Statement on Appliances Business,” Press Release, December 7, 2015, <https://www.genewsroom.com/press-releases/ge-statement-appliances-business-282453>.

¹³⁰ General Electric, “GE Completes Sale of Appliances Business to Haier,” Press Release, June 6, 2016. <https://pressroom.geappliances.com/news/ge-completes-sale-of-appliances-business-to-haier>.

¹³¹ The New York Times, “G.E. to Sell Appliance Division to Haier for \$5.4 Billion,” January 15, 2016. <https://www.nytimes.com/2016/01/16/business/dealbook/haier-ge-appliances.html>.

¹³² Forbes, “Mabe, en la incertidumbre por la negociacion del TLCAN,” November 16, 2017. <https://www.forbes.com.mx/la-vida-sin-ge/>.

¹³³ Twice, “GE Expanding Laundry, Dishwasher Production,” October 3, 2018. <https://www.twice.com/product/ge-expanding-laundry-dishwasher-production>.

¹³⁴ China Daily, “Haier to make washing machines in Hefei,” November 3, 2017. http://www.chinadaily.com.cn/business/2017-11/03/content_34059400.htm.

LG Electronics

LG Electronics, Inc. is headquartered in Seoul, Korea and operates four business units (1) home entertainment, (2) mobile communications, (3) home appliances and air solutions, and (4) vehicle components, which produce an array of products such as flat panel televisions, mobile cellular devices, air conditioners, washing machines, and refrigerators. The firm employs 75,000 employees worldwide and reported global sales of \$47.9 billion in 2016.¹³⁵

Since 2012, LG produced LRWs within its home appliances and air solutions business unit in Korea and at its affiliates in China, Thailand, and Vietnam. The company began exports of LRWs from Thailand and Vietnam in ***. LG reported that it ***.¹³⁶ LG stated that in its operations in Korea ***.¹³⁷

In February 2017, LG announced that it would open a U.S. production plant for LRWs in Clarksville, Tennessee. LG reported that it began production of subject LRWs at its Tennessee factory in late 2018, ***.¹³⁸ Initial production began in November 2018, with plans to be ***.¹³⁹

Samsung¹⁴⁰

Samsung Electronics, Inc. is headquartered in Gyeonggi-do, Korea and operates nine business units (1) visual display, (2) digital appliances, (3) printing solutions, (4) health and medical equipment, (5) mobile communications, (6) network businesses, (7) memory, (8) system LSI, and (9) LED business, which produce an array of products, such as flat panel televisions, printers, photocopiers, medical equipment, mobile cellular devices, computer networking devices, washing machines, and refrigerators. The firm reported global sales of \$212.2 billion in 2017.¹⁴¹ Samsung produces LRWs in its digital appliances business unit. The firm produces LRWs in Korea, Mexico, China (Suzhou Samsung Electronics Co., Ltd. and Suzhou Samsung Electronics Co, Ltd. – Export), Thailand, and Vietnam.¹⁴² Production of LRWs in China

¹³⁵ LG, “Company Information,” undated, <https://www.lg.com/global/investor-relations/company-info>, retrieved March 5, 2019.

¹³⁶ Foreign producer questionnaire of LG Korea, response to II-2.

¹³⁷ Ibid.

¹³⁸ Producer questionnaire LG, response to II-3.

¹³⁹ LG’s Prehearing brief, p. 9.

¹⁴⁰ Unless otherwise noted, information from *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

¹⁴¹ Samsung reported global revenue of \$239.6 trillion Korean won (Converted to using an exchange rate of 1129.04 Korean won to the U.S. dollar for 2017). Samsung, “Financial Highlights,” undated, <https://www.samsung.com/global/ir/financial-information/financial-valuation-snapshot/>, retrieved March 6, 2019. Federal Reserve Board, “Foreign Exchange Rates – G.5A,” February 5, 2019, <https://www.federalreserve.gov/releases/g5a/current/>, retrieved March 6, 2019.

¹⁴² Samsung’s foreign producer questionnaire, response to question I-4.

began in *** and ***, while production of LRWs in Thailand and Vietnam commenced in 1995 and 2016, respectively. Samsung's operations in Mexico ***.¹⁴³

In June 2017, Samsung announced that it would open a production site for LRWs in Newberry, South Carolina.¹⁴⁴ Samsung's Newberry operations is a fully-integrated LRW manufacturing facility employing nearly *** workers with a goal to employ to *** workers by the end of 2019 and approximately *** employees by 2020.¹⁴⁵ In 2018, Samsung produced more than *** LRW units in Newberry, and projects to produce approximately *** LRWs in 2019.¹⁴⁶ Samsung stated that it believes its Newberry plant will be fully operational ***. At that time, Samsung ***.^{147 148}

Whirlpool¹⁴⁹

Whirlpool, founded in 1898 and headquartered in Benton Harbor, Michigan, is a manufacturer and marketer of home appliances with net sales totaling approximately \$21 billion for 2018 and net loss of \$159 million as of December 31, 2018.¹⁵⁰ Globally, the firm employed approximately 92,000 employees and 41 manufacturing facilities in 14 countries as of 2018.¹⁵¹ It manufactures and markets products globally under brand names such as Whirlpool, KitchenAid, Maytag, Consul, Brastemp, Amana, Bauknecht, Jenn-Air and Indesit. Its principal products are laundry appliances, refrigerators and freezers, cooking appliances, dishwashers, mixers and other portable household appliances. The firm reports earnings by geographic segment, which consist of North America, Latin America, EMEA (Europe, Middle East and Africa) and Asia. The North American segment produces, markets, and distributes home appliances and portable appliances under a variety of brand names, primarily *Whirlpool, Maytag, KitchenAid, Jenn-Air, Amana, Roper, Admiral, Affresh, Gladiator, Inglis, Estate, Acros, and Supermatic*, and distributes primarily to retailers, distributors, and builders.¹⁵²

¹⁴³ Samsung's posthearing brief, Samsung responses to Commission questions, p. 3.

¹⁴⁴ Samsung, "Samsung to Expand U.S. operations, Open \$380 Million Home Appliance Manufacturing Plant in South Carolina," press release, June 28, 2017, <https://news.samsung.com/us/samsung-south-carolina-home-appliance-manufacturing-plant-investment-newberry/>, retrieved March 6, 2019.

¹⁴⁵ Samsung's prehearing brief, p. 7.

¹⁴⁶ Ibid, p. 8.

¹⁴⁷ Samsung's posthearing brief, Samsung responses to Commission questions, p. 12.

¹⁴⁸ Samsung reported that in 2018, LRWs produced in Newberry were indistinguishable from those LRWs produced for the U.S. market at its other facilities. The ***. It also stated that in 2019, ***. Samsung's posthearing brief, Samsung responses to Commission questions, p. 1.

¹⁴⁹ Unless otherwise noted, information from *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

¹⁵⁰ Whirlpool SEC Form 10-K, issued February 8, 2019.

¹⁵¹ Ibid.

¹⁵² Ibid.

In 2010, Whirlpool began production of front load LRWs in the United States after investing \$100 million to expand its existing facility in Clyde, Ohio. Prior to 2010, Whirlpool supplied front load LRWs to the U.S. market from Whirlpool’s facilities in Germany and Mexico.¹⁵³ A wholly-owned subsidiary, Whirlpool Overseas Manufacturing S.a.r.l. (“Whirlpool Mexico”), ceased exports of LRWs to the United States in July 2012, and currently produces LRWs for sale in non-U.S. markets. Whirlpool has LRW production in the United States, as well as Brazil, China, Colombia, and Mexico. The company maintains a large home appliance presence in Europe which includes residential washer production, but not LRW production.

U.S. importers

In the original investigations, nine U.S. importing firms supplied the Commission with usable information on their operations involving the importation of LRWs, accounting for virtually all of U.S. imports of LRWs from Korea and Mexico during 2011.¹⁵⁴ Of the responding U.S. importers, three were domestic producers: Electrolux, GE Appliances, and Whirlpool.¹⁵⁵

In the current proceedings, the Commission issued U.S. importers’ questionnaires to 16 firms believed to be importers of LRWs, including all U.S. producers of LRWs. Usable questionnaire responses were received from six firms, representing virtually all U.S. imports from Korea and Mexico.¹⁵⁶ Table I-12 lists all responding U.S. importers of LRWs from Korea, Mexico, and other sources, their locations, and their shares of U.S. imports in 2017.

Table I-12
LRWs: U.S. importers, source(s) of imports, U.S. headquarters, and shares of imports in 2017

Firm	Headquarters	Share of imports by source (percent)				
		Korea	Mexico	Subject sources	Nonsubject sources	All import sources
Electrolux	Charlotte, NC	***	***	***	***	***
GE Appliances	Louisville, KY	***	***	***	***	***
LG Alabama	Huntsville, AL	***	***	***	***	***
LG	Englewood Cliffs, NJ	***	***	***	***	***
Samsung	Ridgefield Park, NJ	***	***	***	***	***
Whirlpool	Benton Harbor, MI	***	***	***	***	***
Total		***	***	***	***	***

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

¹⁵³ *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication No. 4666, January 2017, pp. III-2 – III-3.

¹⁵⁴ *Certain Large Residential Washers from Korea and Mexico, Inv. No. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Publication 4378, February 2013, p. IV-1.

¹⁵⁵ *Certain Large Residential Washers from Korea and Mexico, Inv. No. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Publication 4378, February 2013, p. III-6.

¹⁵⁶ Two firms (***) certified that they did not import LRWs from any source at any time since January 1, 2002. In addition, *** did not provide a questionnaire response and stated that they imported only ***.

Electrolux¹⁵⁷

Electrolux is a producer of home appliances and appliances for professional use, headquartered in Stockholm, Sweden. The company's products include refrigerators, ovens, cookers, hobs, dishwashers, washing machines, vacuum cleaners, air conditioners and small domestic appliances. Its most recognized brands include Electrolux, AEG, Zanussi, and Frigidaire.¹⁵⁸ In 2018, Electrolux had sales of SEK 124 billion (\$13.9 billion) and 54,419 employees.¹⁵⁹

Electrolux was a U.S. producer of LRWs and other residential washing machines until April 2011, when the company closed its washer manufacturing facility in Webster City, Iowa. Electrolux subsequently produced and exported front load LRWs from its facility in Juarez, Mexico to the United States.

Electrolux maintains its North American Global Technology Center and headquarters in Charlotte, North Carolina. The company manufactures other appliances in the United States, such as cooking appliances in Memphis, Tennessee, dishwashers in Kinston, North Carolina, freezers in St. Cloud, Minnesota, and refrigerators in Anderson, South Carolina.

Currently, Electrolux has LRW production in Brazil, Mexico, and Thailand.¹⁶⁰ In March 2016, Electrolux *** at its manufacturing plant in Mexico.¹⁶¹ In December 2016, Electrolux *** at its plant in Mexico.¹⁶² The company also has residential washer production in Italy and Poland.

U.S. purchasers

The Commission received 25 usable questionnaire responses from firms that bought LRWs since January 1, 2012.¹⁶³ ¹⁶⁴ Seventeen responding purchasers are retailers, four are distributors or wholesalers, two are buying groups, two are homebuilders or contractors, and one is a rent-to-own firm. Large purchasers of LRWs include ***, as well as ***.

¹⁵⁷ Unless otherwise noted, information from *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017.

¹⁵⁸ Electrolux Group, *Electrolux Annual Report 2018*, February 27, 2019, p. 90, <https://www.electroluxgroup.com/en/latest-annual-report-24418/>, retrieved March 6, 2019.

¹⁵⁹ *Ibid.*, pp. 75, 82.

¹⁶⁰ Electrolux's importer questionnaire, response to question I-5.

¹⁶¹ Electrolux's foreign producer questionnaire, response to question II-2.

¹⁶² Electrolux's foreign producer questionnaire, response to question II-2.

¹⁶³ Of the 24 responding purchasers, 20 purchased the domestic LRWs, 14 purchased imports of the subject merchandise from Korea, 12 purchased imports of the subject merchandise from Mexico, and 12 purchased imports of LRWs from other sources. Purchase information was also collected by firm. Twenty-two purchasers reported purchasing LRWs from Whirlpool and/or GE Appliances, 19 purchasers reported purchasing from LG, 19 purchased from Samsung, 16 purchased from Electrolux, and 8 purchased from other firms.

¹⁶⁴ Samsung provided a purchaser questionnaire because it has become the distributor for Samsung's U.S. production as well as the importer of record. It began purchasing from the U.S. entity in 2018.

Twelve of 18 responding purchasers reported that they did not compete for sales with their suppliers, but six did, citing manufacturers' direct sales to consumers. Four purchasers reported that they compete directly with either GE or Whirlpool and one purchaser reported that Samsung sells direct to end users online. *** reported purchasing LRWs for resale under *** own brand, ***. *** reported that it has a commercial sales team and a builder/distributor company that competes with manufacturers for sales to builders/contractors.

APPARENT U.S. CONSUMPTION

Data concerning apparent U.S. consumption of LRWs are shown in table I-13 and figure I-6. The quantity of U.S. producers' U.S. shipments increased during 2012-17 by *** percent. U.S. shipments of imports from nonsubject sources increased *** percent during 2012-17, while the quantity of U.S. shipments of imports from Korea declined *** percent and U.S. shipments of imports from Mexico declined *** percent over the same period. These trends resulted in an overall increase in apparent U.S. consumption, ending *** percent higher in 2017 than in 2012, by quantity, increasing in each year of the period. The value of apparent U.S. consumption also increased, by *** percent, between 2012 and 2017. In January-September 2018 compared with January-September 2017, apparent U.S. consumption was *** percent lower in terms of quantity, but *** percent higher in terms of value. U.S. shipments of imports from Mexico and U.S. producer's shipments were higher in January-September 2018 compared with January-September 2017, while U.S. shipments of imports from Korea and from nonsubject sources were lower.

Table I-13

LRWs: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure I-6

LRWs: Apparent U.S. consumption, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. MARKET SHARES

U.S. market share data are presented in table I-14.

Table I-14

LRWs: U.S. consumption and market shares, 2012-17, January to September 2017, and January to September 2018

* * * * *

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

U.S. MARKET CHARACTERISTICS

Most sales of LRWs are made directly to retailers.¹ Four large national appliance retailers (Best Buy, Home Depot, Lowe's, and Sears) accounted for more than three-quarters of purchases of LRWs in the United States in 2017. Sears' share of the LRW market has reportedly declined but remains one of the largest retailers.^{2 3} There are also a large number of smaller retailers of LRWs, many of which belong to one of the four or five major buyer groups that negotiate prices for groups of these smaller retailers.^{4 5} Retailers tend to market and display a variety of LRWs, from basic models to higher-end models, front load and top load models, as well as a variety of brands. Retailers' sales of LRWs are concentrated around promotional holiday periods.⁶

Most sales in the U.S. market are of manufacturers' own brands. However, original equipment manufacturer ("OEM") sales, ***,⁷ accounted for approximately 12 percent of reported LRW purchases in 2017. In-store sales continue to dominate online purchases, although many consumers research prices, quality, and features online before going to the store.⁸

Purchasers generally described better quality and more innovations in the LRW industry since January 1, 2012. This includes larger capacity machines, improvements in features, color options, technologies such as WiFi connectivity, efficiency, and vibration improvements. Purchasers anticipate that these types of innovations will continue in the future. Several firms mentioned price increases due to duties, primarily the U.S. safeguard measure, and that the domestic industry's market share has increased as a result. Purchasers also anticipate increased U.S. production as new facilities from LG and Samsung come online.

¹ Competition in the U.S. market occurs at two levels of trade: sales by domestic producers and importers to retailer/distributors and sales by retailers to consumers. *Large Residential Washers from China, Investigation No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. II-1.

² *Large Residential Washers from China, Investigation No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. II-1.

³ Sears Holdings Corporation filed for Chapter 11 bankruptcy on October 15, 2018. <https://searsholdings.com/press-releases/pr/2116>, retrieved December 13, 2018.

⁴ One buyer group, ***, reported total purchases of LRWs for all of its members in its questionnaire response, which accounted for *** percent of reported total purchases in 2017. Based on the publicly available webpage of buyer's group NATM, purchasers' questionnaires from *** may reflect purchases made through buyer's groups. See [www. http://natmcorp.com/members/](http://natmcorp.com/members/), retrieved March 14, 2019.

⁵ *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. II-1.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.

Apparent U.S. consumption of LRWs increased during 2012-17. Overall, apparent U.S. consumption in 2017 was *** percent higher than in 2012.⁹

Impact of the U.S. safeguard measure¹⁰

U.S. producers, importers, and purchasers were asked a number of questions on the imposition of the U.S. safeguard measure.¹¹ First, firms were asked if the January 22, 2018 announcement and subsequent implementation of the U.S. safeguard measures on imports of LRWs had any discernible impact on their firm's operations and on the overall market. All three U.S. producers, two of three importers, and 14 of 23 purchasers reported that the U.S. safeguard measure did have a discernible impact on their operations and/or the market as a whole.

*** stated that the U.S. safeguard measure has provided temporary relief from injurious imports, that market conditions for U.S. manufacturers were beginning to improve in late 2018, and that the remedy was slow to take hold due to pre-safeguard "stockpiling" by Samsung and LG and the ability of Samsung and LG to absorb the lower in-quota tariff rate.¹² *** reported reduced discount levels during promotional periods and it has experienced increased demand for its LRWs while overall demand has fluctuated throughout 2018. *** stated that the U.S. safeguard measure caused tremendous price pressure as imports flooded the market prior to the measure's implementation, but that the measure resulted in lower sales of imports in the middle of the year.

*** stated that it had to raise the U.S. price of its imported LRWs and parts to cover the cost of the U.S. safeguard measure and that its future imports will be limited to very high-priced models from Korea, with less elastic demand that can absorb the cost of the duties. It continued that the measure has increased prices for both domestic producers and imports, which has had some negative effect on demand. *** stated that the U.S. safeguard measure has caused market disruptions and limited the availability of imported LRWs in the United States, affecting its ability to offer a full range of LRW products.

Purchasers generally reported that LRWs prices increased, supply was constrained, and sales decreased.

Firms were also asked to assess the specific effects of the U.S. safeguard measure on overall demand and prices for LRWs in the U.S. market, as well as the impact on the firm's LRW operations in the United States. As seen in table II-1, U.S. producers' responses were mixed with respect to demand, but most reported improved prices and improvements in their

⁹ Apparent U.S. consumption of LRWs was approximately *** units in January-September 2018 compared to approximately *** units in January-September 2017.

¹⁰ *** reported identical responses in their U.S. producers' and importers' questionnaires regarding the impact of the U.S. safeguard measure. Staff has consolidated the respective responses and *** responses are presented in this section as *** and *** responses are presented as ***.

¹¹ Full responses to the questions regarding the U.S. safeguard measure are included in appendix E.

¹² *** also provided its "Six Month Safeguard Review" of its U.S. washer business. See *** U.S. producer questionnaire response, attachment 1. See also *** posthearing brief, Part II - Answers to Commission questions, pp. II-49-53.

operations. Importers reported that demand, prices, and their operations worsened or fluctuated since the announcement; two importers reported no change in operations. A plurality of responding purchasers reported increased prices but no change in demand or in their purchases. U.S. producers reported that they were able to reduce discounts during promotional periods and that demand and profitability had increased. They also reported that imports flooded the market prior to the U.S. safeguard measure's implementation. Purchasers reported price increases, shortages, or reduced sales volume due to the implementation of the U.S. safeguard measure. Importer responses differed; *** reported that the U.S. safeguard measure would have no impact because of ***, but would disrupt the market and increase prices. *** reported that the U.S. safeguard measure had disrupted the market and affected its ability to offer a full range of product in the U.S. market.

Table II-1
LRWs: Firms' responses regarding effects of the U.S. safeguard measure in the U.S. market

Item	Improved	No change	Worsened	Fluctuated
Overall demand:				
U.S. producers	---	1	1	1
Importers	---	---	2	1
Purchasers	2	10	8	2
Price:				
U.S. producers	2	1	---	---
Importers	---	---	2	1
Purchasers	---	6	17	---
Impact on firm operations:				
U.S. producers	2	---	1	---
Importers	---	2	1	1
Purchasers	5	8	7	2

Note.--Purchasers were asked to report based on the prices they pay for LRWs and the impact on their purchases instead of operations.

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

Lastly, firms were asked to assess the changes to their competitiveness outlook in the U.S. market. While two of three responding U.S. producers reported that the U.S. safeguard measure somewhat improved their competitiveness outlook, most responding importers and purchasers reported that their outlook did not change (table II-2).

Table II-2
LRWs: Firms' responses regarding changes to competitiveness outlooks due to the U.S. safeguard measure

Competitiveness outlook	Strongly worsened	Somewhat worsened	No change	Somewhat improved	Strongly improved
U.S. producers	---	---	1	2	---
Importers	---	1	3	---	---
Purchasers	3	4	15	2	1

Note.--Purchaser *** indicated both a somewhat worsened and somewhat improved outlook.

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

Innovation leaders

U.S. producers and importers were asked to identify product features that their firms had added since January 1, 2012. All U.S. producers and importers described an extensive list of innovations to their products during this period. *** cited its smart detergent dispenser, steam clean in top load washers, stain removal settings, WiFi Connect, the ability for the washer to preset dryer controls, factory installed, built-in pedestal, and consumer ability to add water to wash and rinse cycles above default settings. It reported that competitors also offer the WiFi connection feature.¹³ *** provided a long list of its own recent innovations, including a bulk detergent dispenser, dynamic venting technology, NEST connected technology, largest capacity agitator washer at 6.0 cu ft., and adaptive wash.¹⁴ *** cited its front load and top load washer in one machine (***), built-in sink for pre-treating clothes (***), ability to add wash after cycle has started (***), black stainless steel color, and super speed wash cycle. *** cited its twin wash system, extra wide size washer, front control, on door control, and integrated controls, magnetic ventilation, recessed detergent box, and black stainless steel finish. *** cited its pre-mix of cleaning additives (***), user selected stain remove functions (***), off-balance detection algorithm (***), and a water system that can bypass the laundry additive dispenser (***).

Purchasers were asked to identify suppliers that they considered innovation leaders in the LRW market since January 1, 2012. An innovation leader was defined as a firm that initiated technological or quality improvements that mattered to the purchaser and/or its customers. Samsung was named by 16 purchasers, LG by 15, Whirlpool by 8, and GE Appliances and Electrolux by 1 each. Purchasers described Samsung as leading in both style and features, including color, size, smart diagnosis, steam, integrated sink, internet connectivity, and appeal to younger consumers. LG was described as leading in both design and features, including large capacity, pedestal design, internet connectivity, and twin wash, as well as faster integration of new technology and features into units. Whirlpool was described as leading in new features in wash technology that consumers actually use and continue to develop quality products with features that will make the consumers happy. GE Appliances was described as leading in capacity size and model selection.

*** described only LG and/or Samsung as innovation leaders, while *** described only Whirlpool and/or GE Appliances as innovation leaders. *** described Whirlpool, LG and Samsung as innovation leaders.

CHANNELS OF DISTRIBUTION

U.S. producers and importers of LRWs from Korea sold mainly to *** while importers of LRWs from Mexico sold mainly to *** in 2017, as shown in table II-3.¹⁵

¹³ See *** questionnaire response attachment.

¹⁴ See *** questionnaire response, attachment 7.

¹⁵ The apparent shift in U.S. producers' shipments from *** in January-September 2018 primarily reflects ***. U.S. producer ***.

Table II-3

LRWs: U.S. producers' and importers' share of reported U.S. shipments, by sources and channels of distribution, 2012-17, January-September 2017, and January-September 2018

* * * * *

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling LRWs to all regions in the United States (table II-4). For U.S. producers, *** percent of sales were within 100 miles of their production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers made *** percent of their sales within 100 miles of their U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-4

LRWs: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	Korean importers	Mexican importers	Subject importers
Northeast	4	3	3	5
Midwest	4	3	3	5
Southeast	4	3	3	5
Central Southwest	4	3	3	5
Mountain	4	3	3	5
Pacific Coast	4	3	3	5
Other ¹	3	3	2	5
All regions (except Other)	4	3	3	5
Reporting firms	4	3	3	5

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

Table II-5 provides a summary of the supply factors regarding LRWs from U.S. producers and from subject countries. Both Korean and Mexican producers have reduced capacity considerably, while capacity in the United States has increased with Samsung's new LRW production facility commencing production in 2018. LG has begun production at its LRW facility in the United States, bringing further capacity increases in the U.S. market.

Table II-5

LRWs: Supply factors that affect the ability to increase shipments to the U.S. market

Country	Capacity (1,000 units)		Capacity utilization (percent)		Ratio of inventories to total shipments (percent)		Shipments by market, 2017 (percent)		Able to shift to alternate products
	2012	2017	2012	2017	2012	2017	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	***	***	***	***	***	***	***	***	0 of 5
Korea	***	***	***	***	***	***	***	***	2 of 2
Mexico	***	***	***	***	***	***	***	***	3 of 4

Note.—Responding U.S. producers accounted for all U.S. production of LRWs in 2017. Responding foreign producer/exporter firms accounted for virtually all of U.S. imports of LRWs from Korea and Mexico during 2017. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Organization of report."

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

Domestic production

Based on available information, U.S. producers of LRWs have the ability to respond to changes in demand with moderate changes in the quantity of shipments of U.S.-produced LRWs to the U.S. market. The main contributing factors to this degree of responsiveness of supply are some unused capacity and inventories. Factors mitigating responsiveness of supply include limited inventories, limited ability to shift shipments from alternate markets, and being unable to shift production to or from alternate products.

U.S. producers' capacity utilization increased as a result of production increases outpacing capacity increases from 2012 to 2017. Reported major export markets are Canada, Asia, and Europe. All U.S. producers reported that they cannot produce other products on the same equipment as LRWs, but *** reported production of *** on the same equipment. Factors affecting U.S. producers' ability to shift production include time and money investment and specialized equipment. *** stated that some employees may be capable of shifting to a different production line, but the products produced on those lines are not easily shifted. It also stated that a barrier to exporting LRWs to countries, other than ***, is the investment needed to satisfy other markets' regulatory requirements.

U.S. producers reported that production constraints include the number of parts made in the support area, the number of assembly lines, steel sourcing disruptions related to the section 232 tariffs, lack of available workers ***, lengthy training processes, equipment cycle time, and press capacity for producing plastic washer tubs.

Subject imports from Korea

Based on available information, producers of LRWs from Korea have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of LRWs to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from alternate markets. Factors mitigating

responsiveness of supply include limited capacity and inventories, and limited ability to shift production to or from alternate products.

Korean producers substantially reduced both capacity and production from 2012 to 2017. LG Korea and Samsung Korea reported its principal export markets are the Americas, Europe, and Asia.¹⁶

*** stated that “although it is extremely difficult, inefficient, and costly, it is possible to shift production to dryers and small residential washers.” *** stated that the production line of LRWs is solely designed for LRWs, but could be utilized to produce small washers, i.e. the ***, but that it is inefficient to shift production to this product line.

Both Korean producers reported that LRWs produced for the Korean market are not interchangeable with LRWs sold to the United States. *** stated that demand in each country differs with respect to product features such as preferred capacity, best-selling color, and additional function, and model specifications are independently determined by local market demands in each selling country, thus shifting sales between the U.S. market and other country markets would be challenging. Other reasons LRWs are not interchangeable between the U.S. market and other countries are different electrical voltages, languages, water tap valves, and national standards. *** also reported that it would be difficult to shift shipments from other markets to the United States because of different voltages, standards, and certifications and would take a considerable amount of time and cost to do so.

Neither Korean producer reported third country trade actions.

Subject imports from Mexico

Based on available information, producers of LRWs from Mexico have the ability to respond to changes in demand with large changes in the quantity of shipments of LRWs to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the substantial unused capacity, some inventories, some ability to shift shipments from alternate markets, and ability to shift production to or from alternate products.

Mexican producers reported substantial declines in both capacity and production from 2012 to 2017, notably because Whirlpool repatriated its LRW operations in Mexico to the United States in 2013. Samsung Mexico reported that its major export markets are ***. *** stated that, “although extremely difficult, inefficient, and costly, it is possible to shift production to dryers and small residential washers.” *** stated that it can shift production between dryers, front load washers, and laundry centers. Reported production constraints include conveyor speed, production line capacity, and basket or tub molding machinery capacity. *** stated that to increase capacity, it would be necessary to install additional production lines or increase the number of shifts. *** reported the difficulty to shift shipments from other markets because of different voltages, standards, and certifications and would take a considerable amount of time and cost to do so. *** reported that LRWs produced and sold in Mexico are interchangeable with LRWs sold to the United States.

¹⁶ LG Korea reported exporting to ***. Samsung Korea reported exporting to ***.

Imports from nonsubject sources

Imports from nonsubject sources (as well as nonsubject imports from Korea and Mexico of out-of-scope product) accounted for *** percent of total U.S. imports in 2017. The largest nonsubject sources of imports during 2012-17 were China, Vietnam, and Thailand. Combined, these countries accounted for 97 percent of imports from nonsubject sources in 2017.

Supply constraints¹⁷

Three of four responding U.S. producers and three of the four responding importers reported no supply constraints. The only U.S. producer reporting supply constraints (***) reported this was because demand outpaced supply. Importer *** also reported supply constraints in 2017 that led to allocation. While *** reported no supply constraints, it did report extended delivery times on occasion for particular models.

About half of responding purchasers did not report experiencing supply constraints since January 1, 2012. Twelve of 25 responding purchasers reported supply constraints imposed by suppliers including: inventory constraints, delivered less than ordered, or missed timely shipments; production constraints due to availability of parts or material and factory capacity; and allocations because of U.S. safeguard measures.¹⁸ *** reported that Whirlpool stopped selling its branded products to the purchaser in 2017 and that GE Appliances and Whirlpool restricted access in certain states before 2015 for its ***.

New suppliers

Eight of 25 purchasers indicated that new suppliers entered the U.S. market since January 1, 2012, and six expect additional entrants. Purchasers cited LG and Samsung's new U.S. production facilities, Haier through the acquisition of GE Appliances, Crosley (which is made by ***), Midea (China), Arcelik (Turkey), and Beko (Turkey).

Product changes

All three responding U.S. producers and all four responding importers reported that there have been changes to the product mix or range. Reported changes include the increased share of top load LRWs relative to front load LRWs after the introduction of high efficiency top load LRWs; Department of Energy standards to reduce water and energy consumption; higher

¹⁷ *** reported identical responses in their respective U.S. producers' and importers' questionnaires regarding supply constraints. Staff has consolidated the respective responses and *** responses are presented in this section as ***. *** reported a supply constraint with respect to its import operations, but did not report one with respect to its U.S. production, and is included as both a U.S. producer and an importer.

¹⁸ The U.S. safeguard measure put tariff-rate quotas in place, renewing in February of each year of the effective dates of the measure. See Part I, "U.S. safeguard investigation" for details.

capacity, dual wash, color, connectivity, increased wash speed, and HETL product mix. Product changes have also reportedly enabled CIM/belt drive front load LRW imports from Mexico to compete at the higher end of the market, with reduced vibration and increased spin speeds. Firms also reported that Lowe's and Home Depot increased the number of brands they sold in 2012; that Sears, which sold Kenmore brand LRWs produced by Whirlpool, has declined; and that *** continues to introduce new features for the top end of the market.

One of three responding U.S. producers and all three responding importers anticipated changes in product mix or ranges. Expected changes include: continued changes in Department of Energy requirements, and ***.

U.S. demand¹⁹

Based on available information, the overall demand for LRWs is likely to experience small-to-moderate changes in response to changes in price. While the majority of LRW purchases are to replace existing units that have reached the end of their product life, a smaller share of purchases consist of initial purchases for new homes, as well as some discretionary purchases. About two-thirds of LRW purchases are to replace an existing washer, while the remainder are related to home sales, renovations, and new construction, although the ratio of new versus replacement purchases varies depending on the housing market. LRWs reportedly have a 7 to 10 year lifespan.²⁰

According to an industry study by Freedonia Group, ***.²¹ ***.²² Industry experts also anticipate softening demand at for this point in the replacement cycle and a decline in housing starts and remodels.²³ GE appliances estimated that demand declined by one percent going into 2019.²⁴

The U.S. housing market has improved since 2012. U.S. housing starts increased by 49 percent from January 2012 to December 2018 (figure II-1). Existing home sales also trended upwards, increasing by 9 percent from January 2012 to December 2018 (figure II-2). Similarly, home remodeling also increased, with NAHB's remodeling market index increasing by 21 percent between first quarter 2012 and fourth quarter 2018 (figure II-3).

¹⁹ *** reported identical responses in their U.S. producers' and importers' questionnaires regarding demand factors. Staff has consolidated the respective responses and *** responses are presented in this section as *** and *** responses are presented as ***.

²⁰ *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. II-8. See also, Hearing transcript, p. 140 (Liotine).

²¹ Freedonia Group, *Clothes Washers and Dryers in the U.S., Industry Study*, February 2018, ***.

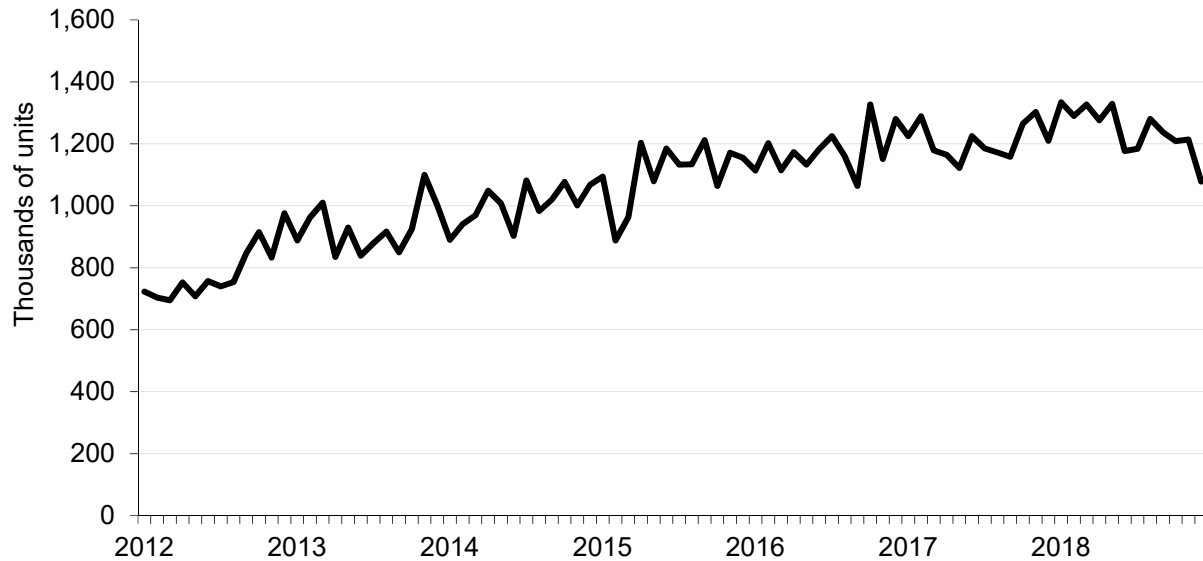
²² Freedonia Group, *Clothes Washers and Dryers in the U.S., Industry Study*, February 2018, ***.

²³ Hearing transcript, p. 140 (Liotine).

²⁴ Hearing transcript, p. 141 (Mattingly).

Figure II-1

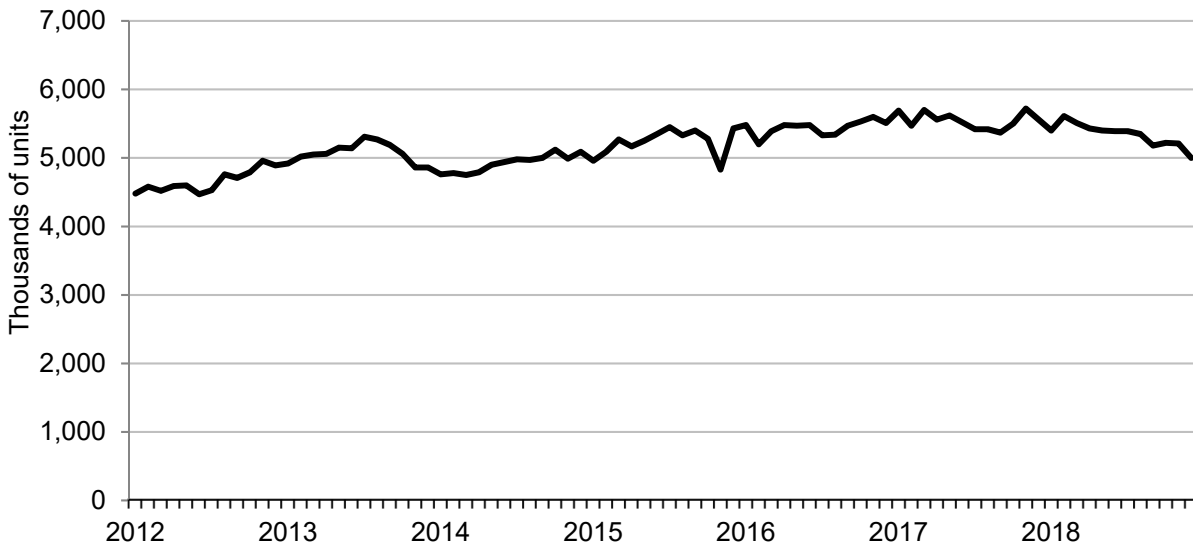
U.S. housing starts: New privately owned housing units started, monthly, seasonally adjusted annual rate, January 2012-December 2018



Source: U.S. Census Bureau, http://www.census.gov/construction/nrc/historical_data/index.html, retrieved March 7, 2019.

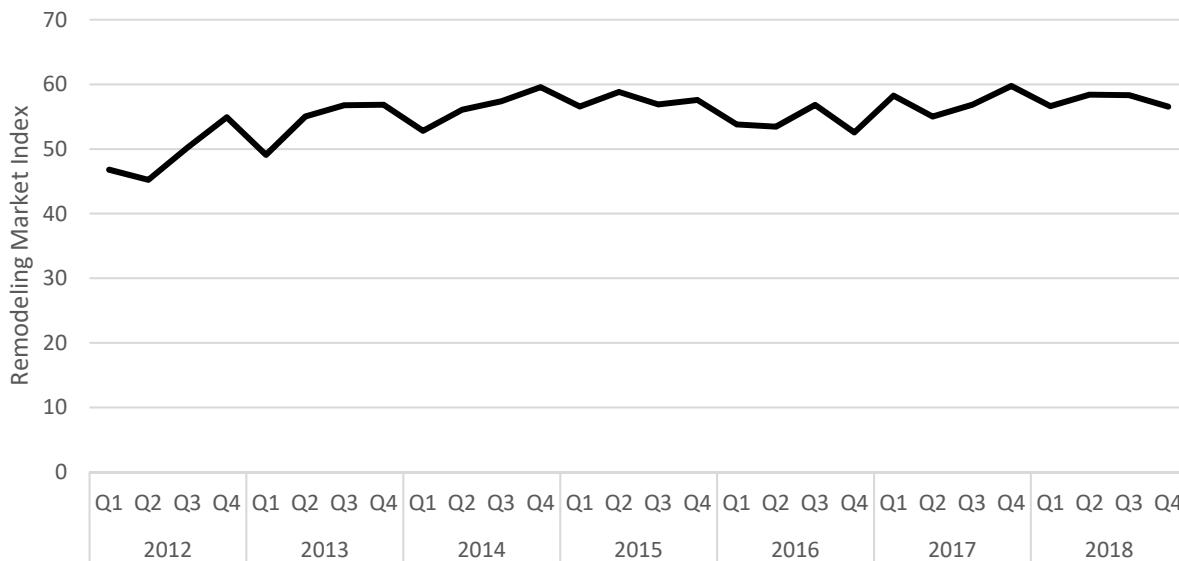
Figure II-2

U.S. home sales: Existing home sales, seasonally adjusted annual rate, January 2012-December 2018



Source: National Association of Realtors, <http://www.realtor.org/topics/existing-home-sales>, retrieved March 7, 2019.

Figure II-3
Remodeling Index, January 2012-December 2018



Source: National Association of Home Builders, Remodeling Market Index, <http://www.nahb.org/en/research/housing-economics/housing-indexes/remodeling-market-index.aspx>, retrieved March 7, 2019.

Business cycles

The LRW market traditionally has high volume sales around holidays associated with promotional discounts. These holidays include Presidents Day, Memorial Day, Labor Day, Columbus Day, and Black Friday.²⁵ Two of three U.S. producers, 1 of 4 importers, and 7 of 24 purchasers indicated that the market was subject to business cycles while two U.S. producers, all four importers, and three purchasers indicated that the market was subject to other distinct conditions of competition. Three of four responding U.S. producers, all 3 responding importers, and 6 of 13 responding purchasers reported that business cycles or other conditions of competition had changed. Firms reported the increased use and extended timeframe of holiday promotions. Distinctive conditions of competition reported included: the importance of floor positions and the relationship of this to promotional support; the importance of third party studies such as consumer reports; and, according to ***, the tendency for washers and dryers to be sold as pairs by producers and therefore by retailers.

Demand trends

Most firms reported an increase in U.S. demand for LRWs since January 1, 2012 (table II-6). Firms expect demand to increase or fluctuate over the next two years.

²⁵ *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. II-10.

Table II-6
LRWs: Firms' responses regarding U.S. demand

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	3	---	---	---
Importers	3	---	---	1
Purchasers	12	4	3	4
Foreign producers	4	---	---	1
Anticipated future demand				
U.S. producers	1	---	---	2
Importers	2	---	---	1
Purchasers	8	5	6	4
Foreign producers	3	---	---	2

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

Substitute products

All U.S. producers, all importers, and nearly all (24 of 25) purchasers reported that there were no substitutes for LRWs and did not anticipate any future changes in substitutes.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported LRWs depends upon such factors as relative prices, quality (e.g., standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there is a moderately high degree of substitutability between domestically produced LRWs and LRWs imported from subject sources.

Lead times

LRWs are primarily sold from inventory. U.S. producers reported that *** percent of their commercial shipments were sold from inventory, with lead times averaging *** days. The remaining *** percent of their commercial shipments were produced-to-order, with lead times averaging *** days. Importers reported that *** percent of their commercial shipments were sold from U.S. inventories, with lead times averaging *** days. The remaining *** percent of their commercial shipments came from foreign inventories, with lead times averaging *** days.

Foreign producer LG Korea reported that *** percent of its 2017 sales were produced-to-order, with an average lead time of *** days. Foreign producer Electrolux reported that *** percent of its 2017 sales were from inventory, with an average lead time of *** days, and the remaining *** percent were produced-to-order, with an average lead time of *** days. Foreign producer Samsung ***.

Knowledge of country sources

Twenty-four purchasers indicated they had marketing/pricing knowledge of domestically produced LRWs, 18 of LRWs imported from Korea, 13 of LRWs imported from Mexico, and 13 of LRWs from nonsubject countries.

As shown in table II-7, most purchasers sometimes make purchasing decisions based on the producer but never based on country of origin while most purchasers' customers sometimes make purchasing decisions based on producer or country of origin. Of the 19 purchasers that reported that they at least sometimes make decisions based on the manufacturer, firms cited availability (4); price/cost (3); quality, margins, and brand loyalty or reputation (2 each); breadth of selection, value, look and feel, features, and brand performance (1 each).

Table II-7
LRWs: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	5	6	8	6
Purchaser's customers make decision based on producer	1	6	16	---
Purchaser makes decision based on country	---	---	6	19
Purchaser's customers make decision based on country	---	---	16	6

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

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for LRWs were price (17 firms), quality (13 firms), availability/supply (9 firms), features and innovation (8), margin opportunity (7), and promotions/discounts/promotional support (6), as shown in table II-8. Price was the most frequently cited first-most important factor (cited by 10 firms), followed by features and innovation (5 firms); quality was the most frequently reported second-most important factor (6 firms); and availability/supply was the most frequently reported third-most important factor (6 firms).

Table II-8
LRWs: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price/pricing/cost	10	4	3	17
Quality	3	6	4	13
Availability/supply	---	3	6	9
Features/design/technology/innovation	5	2	1	8
Margin opportunity	3	3	1	7
Promotions/discounts/promotional support	---	3	4	6
All other factors ¹	4	4	5	---

¹ Other factors include margin profitability, value to the consumer, distribution contract, brand awareness or recognition, full product line up/breadth of selection, customer preference, consumer demand, service, consumer support from manufacturer under warranty, vendor relationships, and sustainability.

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

A majority of responding purchasers (17 of 25) reported that they “sometimes” purchase the lowest-priced product and the remaining 8 purchasers reported that they “usually” do.

When asked if they purchased LRWs from one source although a comparable product was available from another source, seven of 25 responding purchasers reported reasons including customers prefer domestically produced products and brand preference or loyalty.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 25 factors in their purchasing decisions (table II-9). Twelve factors were rated as very important by more than half of responding purchasers, five of which – availability, reliability of supply, product consistency, price, and delivery time – were rated as very important by more than two-thirds of responding purchasers.

Table II-9**LRWs: Importance of purchase factors, as reported by U.S. purchasers, by factor**

Factor	Very important	Somewhat important	Not important
Availability	23	2	---
Reliability of supply	22	3	---
Product consistency	21	4	---
Price	20	4	---
Delivery time	17	6	2
Margin opportunity ¹	16	8	1
Quality meets industry standards	15	9	1
Delivery terms	14	8	3
Direct discounts ² offered	15	9	1
Quality exceeds industry standards	13	11	1
Technical support/service	14	11	---
Fit, feel, and finish	13	12	---
Indirect discounts ³ offered	12	10	3
Brand	11	12	2
Innovative features	11	14	---
Payment terms	10	13	2
Design and styling	9	16	---
Large capacity	10	15	---
U.S. transportation costs	7	12	6
Ease of use	7	15	3
Minimum quantity requirements	6	8	11
Packaging	6	14	5
Product range	7	14	4
Internet-connectivity	1	15	9
Dual-wash chambers	---	9	16

¹ “Margin opportunity” refers to the profit margins for retailers for the product in question.

² Direct discounts are all discounts, incentives, allowances, rebates, promotional amount, cash incentives for retail sales personnel (SPIFFs) or other sales support, and/or any other form of payment or allowance to a retailer) that are tied to sales of the specific large residential washer(s) for which the discounts are provided, whether or not such discounts are given on the sales price to the customer or are in the form of a post-sale discount, rebate or other type of sales support after the customer resells the product to its customer.

³ Indirect discounts are any discounts, incentives, allowances, rebates, promotional amount, cash incentives for retail sales personnel (SPIFFs) or other sales support, and/or any other form of payment or allowance to a retailer) that, while not specifically tied to the products in question, are properly allocable to sales of such products because sales of such products were part of the basis on which the discount, incentive, allowance, etc. was given.

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

Top load and front load platforms

Purchasers were asked how often consumers are willing to switch between a top load LRW and a front load LRW based on relative pricing. Most (19 of 25) purchasers responded that consumers are “sometimes” willing to switch, and the remaining firms reported that consumers

“usually” are. Purchaser *** stated that front load washing technology is superior to top load in gentleness, ability to clean, and energy/water savings and that if front load washers are discounted, some consumers can be convinced to switch from a standard top load unit to a front load unit. When asked about price reductions of less featured domestic top load washers affecting the price of highly featured top and front load washers from Korea, *** reported that this is not a comparable purchase because they are different products, budgets, and customers.²⁶

Supplier certification

Eight of 25 responding purchasers require their suppliers to become certified or qualified to sell LRWs to their firm. Purchasers reported that the time to qualify a new supplier ranged from 30 to 60 days and includes evaluating quality, brand, reputation, price offerings, how the product fits assortment needs, value added to assortment, contract negotiations, financial soundness, factory audits, line reviews, and fill rates. No purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify product, or had lost its approved status since January 1, 2012.

Changes in purchasing patterns

Seventeen of 24 purchasers purchased LRWs from Korea and Mexico before imposition of the orders under review. Seven of these purchasers reported that their purchasing patterns were essentially unchanged, two firms stopped purchases and one firm reduced purchases from Korea because of the orders; no firms stopped or reduced purchases from Mexico because of the order. Seven firms changed their pattern of purchases from Korea and/or Mexico for reasons other than the orders, including changes in consumer demand, consumer brand, and feature preference. Four firms cited the production location changes from LG and Samsung. Regarding purchases from nonsubject countries, 12 purchasers reported that their purchasing patterns were essentially unchanged, two increased purchases because of the order, and 5 changed their patterns for reasons other than the orders, for the same reasons listed above. *** stated that its nonsubject purchases increased because it began purchasing nonsubject LRWs from Samsung in 2015. Seven responding purchasers reported that they changed their pattern of purchases from Korea or Mexico and nonsubject countries to maintain suppliers.

Purchasers were asked about changes in their purchasing patterns from different sources since January 1, 2012 (table II-10). Reasons reported for changes in sourcing included demand changes, changes in consumer brand and feature preferences, production moved out of Korea and Mexico to other countries, availability, price, margin fluctuations, diversification of suppliers, and an RFP/bid resulted in a manufacturer change.

²⁶ See further discussion in Part V.

Table II-10**LRWs: Changes in purchase patterns from U.S., subject, and nonsubject countries**

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	---	2	9	8	4
Korea	3	4	6	4	3
Mexico	4	3	4	5	3
All other countries	2	1	6	2	3
Sources unknown	4	---	1	2	1

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

Twelve of 25 responding purchasers reported that they had changed suppliers since January 1, 2012. Specifically, firms dropped or reduced purchases from Whirlpool, Amana, Maytag, LG, and Electrolux because of increased prices, and Haier because of its corporate purchase of GE Appliances that took its distribution needs in a different direction. Firms added or increased purchases from LG, Samsung, and GE Appliances for product diversity; Speed Queen; Midea because it is a new brand; and Electrolux because of an expansion of the responding purchaser's current relationship with Frigidaire.

Floor spots

Seventeen of 24 responding purchasers reported that they allocated floor spots to different types of LRWs at different price points. Purchasers reported a number of factors influencing the allocation of floor space to LRWs at different price points including: price; profit margin; availability; service; top selling models; offering trade up options; balancing a range of platforms with trends in demand; based on price low to high; good, better, best line ups for the suppliers; and income and demographics of customers near the store. In addition, 14 of 25 purchasers reported that wholesale pricing, including discounts and promotions, is important in deciding to allocate a given floor spot to one LRW model over another.

Lastly, purchasers were asked how their allocation of floor spots of LRWs had changed since January 1, 2012. As shown in table II-11, the majority of responding purchasers reported that their floor spot allocation remained constant overall.²⁷

Table II-11**LRWs: Changes in allocation of floor spots from U.S., subject, and nonsubject countries**

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
Overall	1	---	4	15	4
United States	1	4	2	11	4
Korea	4	3	5	6	4
Mexico	5	1	2	8	5
Other	5	2	3	6	5

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

²⁷ *** stated that its ***. *** posthearing brief, Part II - Answers to Commission questions, p. II-41.

Importance of purchasing domestic product

Most (22 of 23) purchasers reported that most or all of their purchases did not require purchasing U.S.-produced LRWs. Two reported that domestic product was required by law (for 1 to 10 percent of their purchases) and seven reported it was required by their customers (for 1 to 100 percent of their purchases).

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing LRWs produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 25 factors (see table II-9) for which they were asked to rate the importance.

Most purchasers reported that U.S. and subject LRWs were comparable on all factors, except purchasers rated the United States as superior on delivery time and inferior on dual-wash chambers and internet connectivity with respect to Korea.

Most purchasers reported that U.S. and nonsubject LRWs were comparable on all factors, with the exception of availability and delivery time, in which the United States was rated superior, and dual-wash chambers in which the United States was rated inferior. A majority of responding purchasers rated LRWs from Korea and Mexico as comparable across all factors.

Table II-12
LRWs: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. Korea			U.S. vs. Mexico			Korea vs. Mexico		
	S	C	I	S	C	I	S	C	I
Availability	9	11	---	5	11	---	---	14	1
Reliability of supply	6	13	---	2	13	---	---	13	1
Product consistency	2	15	1	1	13	---	---	14	---
Price	---	16	2	1	11	2	---	14	---
Delivery time	12	8	---	6	10	---	---	11	4
Margin opportunity ³	1	12	3	---	13	1	1	11	1
Quality meets industry standards	---	19	---	---	14	---	---	15	---
Delivery terms	8	12	---	3	13	---	---	14	1
Direct discounts ¹ offered	1	16	2	1	12	1	1	13	1
Quality exceeds industry standards	1	16	1	1	13	---	---	14	---
Technical support/service	5	14	---	2	12	1	---	13	2
Fit, feel, and finish	2	13	3	2	13	---	2	13	---
Indirect discounts ² offered	---	15	4	1	13	1	1	14	---
Brand	---	17	3	2	14	---	2	12	---
Innovative features	---	12	6	---	12	2	2	11	1
Payment terms	---	18	---	---	14	---	---	14	---
Design and styling	1	17	2	2	14	---	2	13	---
Large capacity	---	15	3	1	12	1	2	10	1
U.S. transportation costs	3	15	---	3	12	---	---	12	2
Ease of use	1	17	1	---	14	---	---	14	---
Minimum quantity requirements	5	13	---	---	14	---	---	13	1
Packaging	---	17	1	---	13	1	1	13	---
Product range	---	17	2	1	14	---	2	13	---
Internet-connectivity	---	8	9	1	9	4	4	8	1
Dual-wash chambers	---	5	10	---	7	4	2	7	1

Table continued on next page.

Table II-12--Continued

LRWs: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. nonsubject			Korea vs. nonsubject			Mexico vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	8	6	---	---	12	---	---	11	1
Reliability of supply	6	8	---	---	12	---	---	11	1
Product consistency	2	11	---	---	12	---	---	12	---
Price	1	11	1	---	12	---	---	11	1
Delivery time	8	6	---	---	11	1	---	11	1
Margin opportunity ¹	2	9	2	---	12	---	---	11	1
Quality meets industry standards	1	12	---	---	12	---	---	12	---
Delivery terms	4	10	---	---	12	---	---	12	---
Direct discounts ² offered	1	11	1	1	11	---	1	11	---
Quality exceeds industry standards	1	12	---	---	12	---	---	12	---
Technical support/service	4	9	---	---	11	1	---	11	1
Fit, feel, and finish	1	10	2	---	12	---	1	10	1
Indirect discounts ³ offered	2	8	3	---	12	---	---	11	1
Brand	2	11	1	---	12	---	1	10	1
Innovative features	1	9	3	1	11	---	1	10	1
Payment terms	1	12	---	---	12	---	---	12	---
Design and styling	1	10	2	---	12	---	1	10	1
Large capacity	1	12	---	1	11	---	1	11	---
U.S. transportation costs	2	10	---	---	11	---	---	11	---
Ease of use	1	12	---	---	12	---	---	12	---
Minimum quantity requirements	3	10	---	---	11	1	---	11	1
Packaging	1	10	2	---	12	---	1	11	---
Product range	1	11	1	---	12	---	1	11	---
Internet-connectivity	1	8	4	---	12	---	1	10	1
Dual-wash chambers	1	5	6	2	8	---	---	6	4

¹ "Margin opportunity" refers to the profit margins for retailers for the product in question.

² Direct discounts are all discounts, incentives, allowances, rebates, promotional amount, cash incentives for retail sales personnel (SPIFFs) or other sales support, and/or any other form of payment or allowance to a retailer) that are tied to sales of the specific large residential washer(s) for which the discounts are provided, whether or not such discounts are given on the sales price to the customer or are in the form of a post-sale discount, rebate or other type of sales support after the customer resells the product to its customer.

³ Indirect discounts are any discounts, incentives, allowances, rebates, promotional amount, cash incentives for retail sales personnel (SPIFFs) or other sales support, and/or any other form of payment or allowance to a retailer) that, while not specifically tied to the products in question, are properly allocable to sales of such products because sales of such products were part of the basis on which the discount, incentive, allowance, etc. was given.

Note.--S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

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

Comparison of U.S.-produced and imported LRWs²⁸

In order to determine whether U.S.-produced LRWs can generally be used in the same applications as imports from Korea and Mexico, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-13, most responding U.S. producers and purchasers reported that domestically produced LRWs are “always” interchangeable with LRWs imported from Korea and Mexico, while a plurality of responding importers reported they “sometimes” are. Only importers reported reasons for limited interchangeability, including limited interchangeability of component parts between manufacturers; products that are not interchangeable between markets because of voltage and feature demand differences; and differences in appearance, ease of use, warranty, and features that limit interchangeability.²⁹

Table II-13
LRWs: Interchangeability between LRWs produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting				
	A	F	S	N	A	F	S	N	A	F	S	N	
U.S. vs. subject countries:													
U.S. vs. Korea	2	---	---	1	1	---	2	1	12	7	1	---	
U.S. vs. Mexico	2	---	---	1	1	---	2	1	9	6	2	---	
Subject countries comparisons:													
Korea vs. Mexico	1	---	---	1	1	---	2	1	10	5	1	---	
Nonsubject countries comparisons:													
U.S. vs. nonsubject	2	---	---	1	1	---	2	1	9	4	2	---	
Korea vs. nonsubject	1	---	---	1	1	---	2	1	9	4	1	---	
Mexico vs. nonsubject	1	---	---	1	1	---	2	1	9	4	1	---	

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

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

As can be seen from table II-14, most responding purchasers reported that domestically produced LRWs “always” met minimum quality specifications. Responding purchasers reported that LRWs imported from Korea and Mexico “always” or “usually” met minimum quality specifications.

²⁸ *** reported identical responses in their respective U.S. producers’ and importers’ questionnaires regarding interchangeability and factors other than price. Staff has consolidated the respective responses and *** responses are presented in this section as *** responses and *** responses are presented as *** responses.

²⁹ *** reported that it doesn’t have any knowledge relating to the interchangeability of LRWs based on their country of origin and that all LRWs are generally interchangeable to the extent they are all used for the same purpose.

Table II-14
LRWs: Ability to meet minimum quality specifications, by source¹

Source	Always	Usually	Sometimes	Rarely or never
United States	14	8	---	1
Korea	10	8	---	1
Mexico	7	8	1	1
Other sources	5	7	1	1

¹ Purchasers were asked how often domestically produced or imported LRWs meets minimum quality specifications for their own or their customers' uses.

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

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of LRWs from the United States, subject, or nonsubject countries. As seen in table II-15, U.S. producers and most responding purchasers reported that there are “sometimes” significant differences other than price, while importers were split between there “always” being significant factors and “never” any significant factors. Factors other than price that purchasers and importers report are always or frequently significant include: brand reputation, quality, product range, availability, lead time, and technical support.

Table II-15
LRWs: Significance of differences other than price between LRWs produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. Korea	---	---	3	---	2	---	---	2	2	1	13	3
U.S. vs. Mexico	---	---	3	---	2	---	---	2	1	1	11	3
Subject countries comparisons:												
Korea vs. Mexico	---	---	2	---	2	---	---	2	1	1	10	3
Nonsubject countries comparisons:												
U.S. vs. nonsubject	---	---	3	---	2	---	---	2	1	1	10	2
Korea vs. nonsubject	---	---	2	---	2	---	---	2	---	1	9	2
Mexico vs. nonsubject	---	---	2	---	2	---	---	2	1	1	9	2

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

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

ELASTICITY ESTIMATES

This section discusses elasticity estimates. Parties were encouraged to comment on these estimates. Parties did not provide comments.

U.S. supply elasticity

The domestic supply elasticity³⁰ for LRWs measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of LRWs. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced LRWs. Analysis of these factors above indicates that the U.S. industry is likely to be able to substantially increase or decrease shipments to the U.S. market; an estimate in the range of 4 to 8 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for LRWs measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of LRWs. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the LRWs in the production of any downstream products. Based on the available information, the aggregate demand for LRWs is likely to be inelastic; a range of -0.3 to -0.8 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.³¹ Product differentiation, in turn, depends upon such factors as quality (e.g., appearance, warranty, service, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced LRWs and imported LRWs is likely to be in the range of 3 to 5.

³⁰ A supply function is not defined in the case of a non-competitive market.

³¹ The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

PART III: CONDITION OF THE U.S. INDUSTRY

OVERVIEW

The information in this section of the report was compiled from responses to the Commission’s questionnaires. Five firms, which accounted for virtually all U.S. production of washers during 2017, supplied information on their operations in these reviews on LRWs.¹

Since the Commission’s original investigations, there have been several developments affecting the LRW industry. First, new U.S. producers either increased production or began production. GE Appliances began production of top load LRWs in the United States in 2012; Samsung began producing LRWs in Newberry, South Carolina in January 2018; and LG began producing LRWs in its manufacturing facility in Clarksville, Tennessee in October 2018. Second, new energy efficiency and water use standards for LRWs went into effect in 2015 and 2018. Finally, the supply of imported LRWs shifted from Korea and Mexico, first to China, and then to Thailand and Vietnam. In early February 2017, the United States government announced an antidumping duty order on LRW imports from China. In January 2018, the United States government issued a safeguard measure consisting of tariff rate quotas on imports of LRWs and covered parts, effective in February 7, 2018. Table III-1 presents a timeline of major developments in the domestic LRW industry since 2012.

Table III-1
LRW: Important industry events since 2012

Year	Month	Company	Event
2012	May	Miele & Cie	Miele announced to dealers that it was exiting the U.S. market and would no longer export its 27-inch LRWs to the United States.
	July	Whirlpool	Ceased production of LRWs in Mexico for the U.S. market effective July 12, 2012.
		Whirlpool	Applied for Foreign Trade Zone subzone for its entire Clyde, Ohio manufacturing facility.
	November	GE Appliances	Began production of top load LRWs at Appliance Park, Louisville, Kentucky, creating 150 new jobs for this product.
		Whirlpool	Received approval by the Foreign-Trade Zones Board for FTZ operations.

Table continued on next page.

¹ LG, which provided a U.S. producer’s questionnaire response, commenced LRW commercial production in October 2018.

Table III-1--Continued
LRW: Important industry events since 2012

2013	February	U.S. Department of Commerce	Antidumping duty orders issued on LRWs from Korea and Mexico. Countervailing duty order issued on LRWs from Korea.
	First quarter	Whirlpool	Ceased production of LRWs in Germany.
	April	GE Appliances	Began production of front load LRWs at Appliance Park, Louisville, Kentucky. The assembly lines for the front load LRWs and dryers cost more than \$100 million and added 200 new jobs.
	December	LG	Closed production of a *** line. These production lines were converted for manufacturing ***.
2014	September	GE Appliances	Parent company announced its intent to sell GE's appliances division to AB Electrolux, Sweden.
	October	LG	Closed production of a *** line. These production lines were converted for manufacturing ***.
2015	March	EnergyStar and CEE	New energy and water efficiency standards for LRWs become effective.
	August	GE Appliances	Announced \$100 million investment in a new top load washer design and expanded manufacturing capability at its laundry plant in Louisville, Kentucky.
	December	Whirlpool	Petitions filed with Commerce and the Commission alleging that an industry in the United States was materially injured and threatened with material injury by reason of imports from China of LRWs that were sold in the United States at LTFV.
		GE Appliances	Parent company announced that it terminated its agreement to sell its appliances division to Electrolux and would pursue other options.
2016	January	GE Appliances	Announced its intent to sell its GE Appliances division to Haier of China.
	April	LG	LG completely closed its only washer production line in Mexico (***). The plant was then converted for LG's ***.
	June	GE Appliances	Announced the completion of the sale of its appliance division to Haier for \$5.6 billion.
	October	LG	Closed production of a *** line. These production lines were converted for manufacturing ***.
	November	GE Appliances	Union members vote down new labor contract proposed by Haier-owned GE Appliances.

Table continued on next page.

Table III-1--Continued
LRW: Important industry events since 2012

2017	January	GE Appliances	GE Appliances reached tentative agreement with the union for a new contract; the union subsequently approved the four-year contract.
	February	U.S. Department of Commerce	Antidumping duty order issued on LRWs from China.
		LG	Announced it would build a \$250 million home appliance production facility near Clarksville, Tennessee, including for washing machines, opening in 2019.
	June	U.S. International Trade Commission	Instituted a section 201 safeguard investigation on global imports of LRWs.
		Samsung	Announced it would invest \$380 million in an appliance production facility, including washing machines, in Newberry, South Carolina, with LRW production possible in 2018.
	December	U.S. International Trade Commission	Agency delivered its recommendations to the President.
2018	January	EnergyStar and CEE	New energy and water efficiency standards for LRWs become effective and surpass levels of 2015 requirements.
		Samsung	Company begins U.S. production of LRWs
	January and February	President of the United States	Issued Presidential Proclamation implementing the safeguard measure, a tariff-rate quota for three years and one day on imports of washers and certain washer parts. The safeguard applies to imports from all countries but Canada.
	October	LG	Company begins U.S production of LRWs

Source: Compiled from various cited sources.

Changes experienced by the industry

Domestic producers 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 LRWs

since 2012. Alliance, GE Appliances, LG, Samsung, and Whirlpool all indicated that they had experienced such changes; their responses are presented in table III-2.^{2 3}

Table III-2
LRWs: Changes in the character of U.S. operations since January 1, 2012

* * * * *

Anticipated changes in operations

The Commission asked domestic producers to report anticipated changes in the character of their operations relating to the production of LRWs. Their responses appear in table III-3.

Table III-3
LRWs: Anticipated changes in the character of U.S. operations

* * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization.⁴ Samsung began production in January 2018, and is therefore included in domestic industry data, but LG began production in October 2018. U.S. capacity increased in each year except 2014, ending *** percent higher in 2017 than in 2012. U.S. production increased in each year, ending *** percent higher in 2017 than in 2012. Capacity utilization increased by *** percentage points during this span. All operating firms *** increased capacity between 2012 and 2017, while all operating firms increased production over the same period.⁵ *** accounted for the majority of the increase in capacity and production, as it reportedly ***.

Capacity was *** percent higher in January-September 2018 than in January-September 2017, while production was *** percent lower. The increase in capacity was largely due to *** and to ***. The decline in production was largely due to ***.

² GE stated that pursuant to its adjustment plans submitted in the safeguard investigation, it has announced a two hundred million dollar investment in October 2018, much of which is going to its washer facility. In addition, it has hired additional workers, invested in workforce development, and introduced new products and innovations. Hearing transcript, p. 58 (Mattingly) and GE Appliance's posthearing brief, p. 9.

³ Whirlpool stated that consistent with its adjustment plan submitted in the safeguard investigation, it has made new investments and taken other steps to enhance its LRW operations. The investments include launching of a new front load washer platform named Janus and ***. Other steps include ***. Hearing transcript, p. 40 (Liotine) and Whirlpool's posthearing brief, appendix G.

⁴ *** imported parts and components not covered by these reviews into foreign trade zones ("FTZ") and produced washers in the FTZ. ***.

⁵ ***.

Table III-4

LRWs: U.S. producers' production, capacity, and capacity utilization, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-1

LRWs: U.S. producers' production, capacity, and capacity utilization, 2012-17, January to September 2017, and January to September 2018

* * * * *

Alternative products

As shown in table III-5, *** percent of the production by U.S. producers during January 2012 to September 2018 consisted of LRWs. *** reported producing commercial washers, stacked washer-dryers, and other products using the same equipment, machinery, or employees used to produce LRWs.⁶ Overall capacity utilization between 2012 and 2017 increased *** percentage points, as overall capacity increased *** percentage points and total production increased *** percentage points.

Table III-5

LRWs: U.S. producers' overall plant capacity and production on the same equipment as LRW production, 2012-17, January to September 2017, and January to September 2018

* * * * *

Constraints on capacity

Four of the five responding U.S. producers reported constraints in the manufacturing process. These constraints included lack of qualified workers, steel disruptions, number of assembly lines, and constraints on the production of input parts.

U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-6 presents U.S. producers' U.S. shipments, export shipments, and total shipments. One firm, ***, reported internal consumption and two firms, ***, reported transfers to related firms.⁷ Three firms (***) reported exports, mainly to Canada and *** Europe and Asia. U.S. shipments increased in each year during 2012-17, ending *** percent higher in 2017 than in 2012. ***.

⁶ Other products include ***.

⁷ ***.

Table III-6

LRWs: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table III-7 and figures III-2 and III-3 present U.S. producers' U.S. shipments by product type. In 2012, the majority of U.S. producers' U.S. shipments were out-of-scope top load washers with a capacity of less than 3.7 cu. feet ("small top load washers"), followed by in-scope top load LRWs. During 2012-17, the share of covered top load washers increased, becoming the majority of U.S. producers' U.S. shipments since 2014.

Table III-7

LRWs: U.S. producers' U.S. shipments, by type, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-2

LRWs: U.S. producers' U.S. shipments, by type, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-3

LRWs: U.S. producers' U.S. shipments, by type, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table III-8 and figures III-4 and III-5 present U.S. producers' U.S. shipments by cleaning technology and capacity. The majority of U.S. producers' U.S. shipments were top load washers with agitators, the largest share of which was out-of-scope small top load washers with a capacity of less than 3.7 cubic feet with agitators. There was a shift from small top load washers without agitators to large top load washers without agitators, largely due to ***.⁸

Table III-8

Top load LRWs: U.S. producers' U.S. shipments, by cleaning technology and capacity, 2012-17, January to September 2017, and January to September 2018

* * * * *

⁸ Email from ***, March 7, 2019.

Figure III-4

Top load LRWs: U.S. producers' U.S. shipments, by cleaning technology and capacity, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-5

Top load LRWs: U.S. producers' U.S. shipments, by cleaning technology and capacity, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table III-9 and figures III-6 and III-7 present U.S. producers' U.S. shipments by configuration and energy efficiency, including both LRWs and out-of-scope top load washers with a capacity of less than 3,7 cubic feet. The majority of U.S. producers' U.S. shipments were top load non-Energy Star washers, which increased as a share of U.S. shipments from *** percent in 2012 to *** percent in 2017. Whirlpool stated that under the new 2015 Energy Star standards, many impeller-based top load LRWs, which would have qualified as Energy Star under the prior standards, no longer qualified as Energy Star.⁹

Table III-9

LRWs: U.S. producers' U.S. shipments, by configuration and energy efficiency, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-6

LRWs: U.S. producers' U.S. shipments, by configuration and energy efficiency, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-7

LRWs: U.S. producers' U.S. shipments, by configuration and energy efficiency, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table III-10 and figures III-8 and III-9 present U.S. producers' U.S. shipments by drive type, including LRWs and out-of-scope top load washers with a capacity of less than 3.7 cubic feet. The majority of U.S. producers' U.S. shipments are categorized as other washers, which

⁹ *Large Residential Washers from China, Investigation No. 731-TA-1306 (Final)*, USITC Publication 4666 (January 2017), p. 17 n.60 and email from ***, March 7, 2019.

include washers with a permanent split capacitor (PSC) motor without a flat wrap spring clutch.¹⁰

Table III-10

LRWs: U.S. producers' U.S. shipments, by drive type, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-8

LRWs: U.S. producers' U.S. shipments, by drive type, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure III-9

LRWs: U.S. producers' U.S. shipments, by drive type, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. PRODUCERS' INVENTORIES

Table III-11 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. Inventories and the ratios fluctuated during 2012-16, then increased to their highest levels in 2017.¹¹

Table III-11

LRWs: U.S. producers' inventories, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. PRODUCERS' IMPORTS

Table III-12 presents data on responding U.S. producers' U.S. washer production and U.S. imports of LRWs from subject and nonsubject sources.

¹⁰ Email from ***, November 17, 2018.

¹¹ The increased inventories in 2017 were largely due to ***. ***.

Table III-12

LRWs: U.S. producers' U.S. production, imports, and import ratios to U.S. production, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-13 shows U.S. producers' employment-related data.¹² PRWs, hours worked, wages paid, productivity, hours worked per PRW, hourly wages, and unit labor costs increased between 2012 and 2017, and all but hours worked per PRW and productivity were higher in January-September 2018 than in January-September 2017.

Table III-13

LRWs: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2012-17, January to September 2017, and January to September 2018

* * * * *

¹² In addition, Samsung reported *** PRWs in 2017 prior to commencement of LRW commercial production in January 2018.

FINANCIAL CONDITION OF THE U.S. INDUSTRY

Background

Four U.S. producers reported usable financial results on their washers operations: Alliance, GE Appliances, Samsung, and Whirlpool.¹³ *** accounted for the majority of the quantity of total net sales in 2017 and January to September 2018 (**% percent, **% percent), followed by *** (**% percent, **% percent), *** (**% percent, **% percent), and *** (**% percent, **% percent).¹⁴ All U.S. producers reported their financial results on the basis of generally accepted accounting principles (GAAP) and for the calendar-year periods.

Operations on washers

Table III-14 presents aggregated data on U.S. producers' operations in relation to washers. Table III-15 shows the changes in average unit values ("AUVs") of select financial indicators. Table III-16 presents selected company-specific financial data.

Table III-14

LRWs: Results of operations of U.S. producers, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table III-15

LRWs: Changes in average unit values, between calendar years and between partial year periods

* * * * *

Table III-16

LRWs: Select results of operations of U.S. producers, by company, 2012-17, January to September 2017, and January to September 2018

* * * * *

Sales volume and value

U.S. producers' net sales values consisted of commercial sales (**% percent), internal consumption (**% percent), and transfers to related firms (**% percent) in 2017.¹⁵

¹³ ***.

¹⁴ ***.

¹⁵ ***. Emails from ***, December 3 and 13, 2018. ***. Email from ***, December 3, 2018. ***. Email from ***, December 11, 2018.

As shown in table III-14, the quantity and value of net sales reported by U.S. producers increased from 2012 to 2017, and were somewhat higher in interim 2018 compared to interim 2017.¹⁶ As shown in table III-16, ***.^{17 18 19}

Cost of goods sold and gross profit or loss

Raw material costs ranged from *** percent of total COGS in 2017 to *** percent in 2013 and were at their lowest level in interim 2018 (*** percent) (see table III-14). Raw materials consist of steel, plastics, computer and electrical components, and other material input such as ***.^{20 21 22} *** reported that there were no substantial changes in the cost share of these or other inputs during the reporting period. As shown in table III-14, the industry's unit raw material costs moved within a relatively narrow range throughout the full-year period except for 2012, and were higher in interim 2018 compared to interim 2017. ***.^{23 24 25} ***.²⁶

On an overall basis, other factory costs ("OFC") accounted for the second largest share of COGS ranging from *** percent (2013) to *** percent (interim 2018) of total COGS. As shown in table III-14, the industry's unit OFC moved within a relatively narrow range from 2012 to 2016 and increased in 2017, and were higher in interim 2018. ***.^{27 28} ***.²⁹ ***.

Direct labor ("DL") costs represented the smallest share of COGS ranging from *** percent (2012, 2016, and 2017) to *** percent (interim 2018) of total COGS. As shown in table III-14, the industry's unit DL costs moved within a relatively narrow range from 2012 to 2017, and were higher in interim 2018. As shown in table III-16, ***. ***.³⁰ ***.³¹ ***.

As shown in table III-14, the industry's gross profit declined irregularly from 2012 to 2017. Gross profit increased in 2013 and 2015 because net sales increased by amounts that

¹⁶ As depicted in appendix C, table C-2, the total quantity of net sales excluding Samsung was ***, while total value of net sales was somewhat higher between the comparable interim periods.

¹⁷ ***. Email from ***, December 3, 2018.

¹⁸ ***. Email from ***, December 5, 2018.

¹⁹ ***. Email from ***, December 3, 2018.

²⁰ ***. Email from ***, December 3, 2018.

²¹ ***. Email from ***, December 7, 2018.

²² Steel represented *** percent, *** percent, and *** percent of the raw material costs in 2017 for ***, respectively. ***. Email from ***, December 12, 2018. ***. U.S. producers' questionnaire response of ***, question IV-19 and email from ***, December 12, 2018. ***. Email from ***, December 12, 2018. ***. ***'s posthearing brief, p. II-48. ***. Email from ***, December 12, 2018.

²³ ***. Email from ***, December 5, 2018.

²⁴ ***. Email from ***, December 3, 2018.

²⁵ ***. Emails from ***, December 3 and 12, 2018.

²⁶ ***. Email from ***, December 3, 2018.

²⁷ ***. Email from ***, December 5, 2018.

²⁸ ***. Email from ***, December 3, 2018.

²⁹ ***. Email from ***, December 5, 2018.

³⁰ ***. Email from ***, December 5, 2018.

³¹ ***. Email from ***, December 3, 2018.

exceeded the corresponding increase in COGS from the prior year. In contrast, gross profit declined in 2014, 2016, and 2017 because the increase in COGS exceeded the corresponding increase in sales from the prior year. The industry's gross profit was lower in interim 2018 compared to interim 2017, as the change in COGS was greater than the change in total net sales value.³² As shown in table III-16, ***.

SG&A expenses and operating income or loss

The U.S. industry's total SG&A expenses and corresponding SG&A expense ratio (total SG&A expenses divided by total revenue) increased from 2012 to 2015, then decreased through 2017. On a company-specific basis, ***.³³ ***.³⁴ ***.

The U.S. industry's operating loss increased from 2012 to 2016, then decreased in 2017, and was higher between the comparable interim periods.³⁵ As shown in table III-16, ***.

Interest expense, other expenses, and net income or loss

Classified below the operating income level are interest expense, other expense, and other income, which are usually allocated to the product line from high levels in the corporation.

Interest expenses increased from 2012 to 2017 and were higher in January-September 2018 compared to January-September 2017. ***.³⁶

Other expenses moved within a relatively narrow range from 2012 to 2016, then increased in 2017, and were lower in interim 2018 than in interim 2017. ***.³⁷ ³⁸

Other income decreased irregularly from 2012 to 2017, and was lower in interim 2018 compared to interim 2017. ***.³⁹

Energy Efficiency Tax Credits ("EETCs") were available on energy efficient washer production during the period for which data were collected, reducing the amount of income tax owed to the government. ***.⁴⁰ ***.⁴¹ ***.⁴²

³² As depicted in appendix C, table C-2, the total gross profit excluding Samsung was higher between the comparable interim periods.

³³ ***. Email from ***, December 5, 2018.

³⁴ ***. Email from ***, December 5, 2018.

³⁵ As depicted in appendix C, table C-2, the total operating loss excluding Samsung was *** in January-September 2018.

³⁶ ***. Email from ***, December 5, 2018.

³⁷ ***. Email from ***, December 4, 2018.

³⁸ ***. Email from ***, December 5, 2018.

³⁹ ***. Email from ***, December 5, 2018.

⁴⁰ ***. ***'s posthearing brief, pp. II-58 to II-59.

⁴¹ ***' posthearing brief, p. 8

⁴² Email from ***, March 1, 2019.

*** 43 *** 44

The U.S. industry reported net losses of varying magnitudes throughout the period (see table III-14). While sharing the same directional trend, annual and interim-period net losses exceeded corresponding operating losses due to the inclusion of interest expense and other income/expenses.

Variance analysis

The variance analysis presented in table III-17 is based on the data in table III-14.⁴⁵ The analysis shows that the year to year increase in operating losses from 2012 to 2015 was primarily attributable to ***. The increase in operating loss from 2015 to 2016 is attributable to ***. The improvement in the operating loss from 2016 to 2017 is attributable to ***. The higher operating loss in January-September 2018 compared to January-September 2017 is primarily attributable to ***.

Table III-17
LRWs: Variance analysis on the operations of U.S. producers, 2012-17, January-March 2017, and January-March 2018

* * * * *

Capital expenditures and research and development expenses

Table III-18 presents capital expenditures and research and development (“R&D”) expenses, by U.S producers. Primarily reflecting investment in new and/or updated platforms, full-year capital expenditures increased irregularly from 2012-15, but declined in 2016 and 2017. The industry’s capital expenditures were higher in interim 2018 compared to interim 2017. ***.⁴⁶ ⁴⁷ ***.⁴⁸ ***.⁴⁹

⁴³ ***’s posthearing brief, p. II-59.

⁴⁴ ***’ posthearing brief, p. 8-9.

⁴⁵ 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 expense variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances.

⁴⁶ ***. U.S. producers’ questionnaire response of ***, question III-13. ***. Email from ***, December 10, 2018.

⁴⁷ ***. U.S. producers’ questionnaire response of ***, question III-13.

⁴⁸ ***. U.S. producers’ questionnaire response of ***, question III-13.

The level of the U.S. industry’s full-year R&D expenses increased during 2012-15 and then declined in 2016 and 2017. In general, this pattern is consistent with R&D expenses that are related to and/or support capital expenditure activity.⁵⁰ The industry’s R&D expenses were lower in interim 2018 compared to interim 2017.

Table III-18

LRWs: Capital expenditures and research and development expenses for U.S. producers, by firm, 2012-17, January to September 2017, and January to September 2018

* * * * *

Assets and return on assets

Table III-19 presents data on the U.S. producers’ total assets and their operating return on assets.⁵¹ Total assets increased continuously from 2012 to 2017. *** accounted for the largest share of total assets (ranging from *** percent in 2017 to *** percent in 2012), followed by *** (ranging from *** percent in 2012 to *** percent in 2016), Samsung (*** percent in 2017), and *** (ranging from *** percent in 2014 to *** percent in 2016).⁵² While generally consistent with the directional pattern of capital expenditures, the value of total net assets reflects changes (positive and negative) in a number of underlying current and non-current asset balances.

Table III-19

LRWs: Value of assets used in production, warehousing, and sales, and return on asset for U.S. producers by firm, calendar years 2012-17

* * * * *

(...continued)

⁴⁹ ***. Email from ***, December 5, 2018.

⁵⁰ ***. U.S. producers’ questionnaire response of ***, question III-13. ***. Email from ***, December 10, 2018. ***. U.S. producers’ questionnaire response of ***, question III-13. ***. Email from ***, December 5, 2018.

⁵¹ With respect to a company’s overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company’s balance sheet) reflects an aggregation of a number of assets which are generally not product specific. Accordingly, high-level allocation factors were required in order to report a total asset value for washers.

⁵² ***. ***’s posthearing brief, Exhibit 1, pp. 16-19. ***. Email from ***, March 8, 2019. ***. Email from ***, March 14, 2019.

PART IV: U.S. IMPORTS AND THE FOREIGN INDUSTRIES

U.S. IMPORTS

Overview

The Commission issued questionnaires to 16 firms believed to have imported LRWs between January 2012 and September 2018. Six firms provided data and information in response to the questionnaires, while two firms indicated that they had not imported LRWs during the period for which data were collected.^{1 2} These firms accounted for virtually all subject imports of LRWs from Korea, Mexico, as well as virtually all nonsubject imports. In light of the data coverage by the Commission's questionnaires, unless stated otherwise, import data in this report are based on questionnaire responses.

Imports from subject and nonsubject countries

Table IV-1 and figure IV-1 present information on subject imports of LRWs from Korea and Mexico, and nonsubject imports, based on responses to the Commission's questionnaires. Table IV-2 presents information on imports of LRWs from nonsubject sources based on official import statistics. Subject imports of LRWs from Mexico and Korea declined in 2013 after the issuance of the countervailing and antidumping orders under review.

Subject imports of LRWs from Korea declined by *** percent between 2012 and 2017, approximately *** in each year during 2012-15, and then increasing *** in 2016 and 2017, respectively. ***, which accounted for *** of subject imports from Korea, stated that the decline in imports were due to ***. In addition, ***.

Subject imports of LRWs from Mexico declined by *** percent between 2012 and 2017, largely due to a *** percent decline in 2013 ***. ***. ***. ***.³

Nonsubject imports increased more than six fold between 2012 and 2017. *** accounted for much of this increase, reflecting a shift in imports of LRWs from Korea and Mexico to nonsubject sources.

¹ In addition, *** did not provide a questionnaire response and stated that they imported only ***.

² Two firms, ***, used foreign trade zones; two firms, two firms, ***, used bonded warehouses; and one firm, ***, imported LRWs under the Temporary Importation under Bond ("TIB") program.

³ Email from ***, December 11, 2018.

Samsung noted that while it plans to continue to supplement production at its facility in Newberry, South Carolina, with imports from Thailand and Vietnam, these imports would ultimately be phased out as its production in the United States grows.⁴ LG stated that it anticipates reaching maximum production at its Clarksville, Tennessee facility by *** with the ability to supply 90 percent of LG’s U.S. LRW sales. The remaining 10 percent would be imported from Korea, Thailand, and Vietnam, and would be concentrated in high-end, higher priced, models, and in particular, high-end, high-priced, front-load models.⁵

Table IV-1
LRWs: U.S. imports by source, 2012-17, January to September 2017, and January to September 2018

* * * * *

Figure IV-1
LRWs: U.S. imports by source, 2012-17, January to September 2017, and January to September 2018

* * * * *

⁴ Hearing transcript, pp. 184-185 (Park). Samsung stated that imports from Thailand and Vietnam will be ***. Samsung’s posthearing brief, Responses To Commissioners’ Questions, p. 12. Samsung noted that it did not have plans to move production from Vietnam to the United States of its Flex-Wash washers as it requires assemble on a unique line and is one of Samsung’s very high-end, top-of-the-line models. Hearing transcript, p. 257 (Komaromi).

⁵ Hearing transcript, p. 190 (Porter) and LG’s posthearing brief, Exh1, p. 11 and p. 28. LG noted that its U.S. facility would not produce some washers, such as Side Kick washers, extra-wide washers, and some other luxury models. Hearing transcript, p. 255 (Toohey).

Table IV-2
LRWs: U.S. imports from nonsubject sources, by source, 2012-17, January to September 2017,
and January to September 2018

Item	Calendar year						January to September	
	2012	2013	2014	2015	2016	2017	2017	2018
	Value (1,000 dollars)							
U.S. imports from.--								
Vietnam	9	24	393	966	189,940	684,406	469,237	304,765
Thailand	13,490	16,095	18,906	16,134	146,774	520,124	276,542	273,059
China	336,134	927,133	1,166,739	1,350,818	980,873	279,568	203,870	271,274
Germany	90,791	37,286	47,689	51,907	53,347	54,358	39,738	49,357
Italy	16,825	18,572	23,996	18,558	26,912	35,024	29,179	11,289
Spain	8,737	9,641	11,406	14,582	11,787	15,909	10,288	11,690
Sweden	12,297	13,266	13,165	14,945	13,600	12,908	8,752	10,789
Poland	62	26	54	128	257	6,699	2,957	11,030
India ¹	3,106	3,873	3,829	7,227	6,248	5,881	4,353	4,208
Taiwan	2,080	2,854	1,528	3,873	4,664	5,514	3,536	3,066
Japan	2,364	5,494	7,973	3,778	3,511	4,071	3,127	1,941
Turkey ¹	369	653	1,252	1,823	2,792	3,752	2,926	3,563
Canada ¹	2,405	937	1,316	2,435	1,798	1,471	1,201	789
All other sources ¹	29,634	26,848	18,629	10,559	8,373	7,695	5,305	7,336
Nonsubject sources	518,304	1,062,702	1,316,876	1,497,733	1,450,876	1,637,382	1,061,012	964,157
	Share of value (percent)							
U.S. imports from.--								
Vietnam	0.0	0.0	0.0	0.1	13.1	41.8	44.2	31.6
Thailand	2.6	1.5	1.4	1.1	10.1	31.8	26.1	28.3
China	64.9	87.2	88.6	90.2	67.6	17.1	19.2	28.1
Germany	17.5	3.5	3.6	3.5	3.7	3.3	3.7	5.1
Italy	3.2	1.7	1.8	1.2	1.9	2.1	2.8	1.2
Spain	1.7	0.9	0.9	1.0	0.8	1.0	1.0	1.2
Sweden	2.4	1.2	1.0	1.0	0.9	0.8	0.8	1.1
Poland	0.0	0.0	0.0	0.0	0.0	0.4	0.3	1.1
India ¹	0.6	0.4	0.3	0.5	0.4	0.4	0.4	0.4
Taiwan	0.4	0.3	0.1	0.3	0.3	0.3	0.3	0.3
Japan	0.5	0.5	0.6	0.3	0.2	0.2	0.3	0.2
Turkey ¹	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.4
Canada ¹	0.5	0.1	0.1	0.2	0.1	0.1	0.1	0.1
All other sources ¹	5.7	2.5	1.4	0.7	0.6	0.5	0.5	0.8
Nonsubject sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

¹ Exempt (or a subset, in the case of all other sources) from the safeguard measures that entered into effect on February 7, 2018.

Notes continued on next page.

Table IV-2

LRWs: Nonsubject U.S. imports, by source, 2012-17, January to September 2017, and January to September 2018--Continued

Note.--Information presented in this table encompasses both LRWs as defined by Commerce's scope and top-load washers with a capacity of less than 3.7 cubic feet. Subject imports are limited to LRWs as defined by Commerce's scope; nonsubject imports include LRWs as defined by Commerce's scope from sources other than Korea and Mexico and top-load washers with a capacity of less than 3.7 cubic feet from all sources.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.20.0040, 8450.20.0080, 8450.20.0090, 8450.90.2000, and 8450.90.6000, accessed November 27, 2018.

CUMULATION CONSIDERATIONS

In assessing whether U.S. imports from the subject countries are likely to compete with each other and with the domestic like product, the Commission has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility⁶

U.S. importers' U.S. shipments by product type

Table IV-3 presents U.S. importers' U.S. shipments by product type. During January 2012-September 2018, except in 2017, covered front load washers were the largest share of U.S. shipments of imports from Korea and virtually all U.S. shipments of import from Mexico, while nonsubject imports were both covered front load and top load washers. Over the same period, front load washers had the highest average unit values for U.S. importers' U.S. shipments from each source.

Table IV-3

LRWs: U.S. importers' U.S. shipments, by product type, 2012-17, January to September 2017, and January to September 2018

* * * * *

⁶ See appendix F for high-level graphical representation of U.S. importers' U.S. shipments by certain characteristics.

U.S. importers' U.S. shipments by cleaning technology and capacity

Table IV-4 presents U.S. importers' U.S. shipments by cleaning technology and capacity. The large majority of U.S. shipments of imports were top load washers without agitator, including ***, from nonsubject sources.⁷

Table IV-4
Top load washers: U.S. importers' U.S. shipments, by cleaning technology and capacity, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. importers' U.S. shipments by configuration and energy efficiency

Table IV-5 presents U.S. importers' U.S. shipments by configuration and energy efficiency. During January 2012-September 2018, front load Energy Star washers represented the largest share of U.S. importers' U.S. shipments of imports from each subject source (except for U.S. importers' U.S. shipments of imports from Korea in ***). While the vast majority of U.S. shipments of imports from Korea and nonsubject sources were of Energy Star rated washers, U.S. shipments of imports from Mexico also included front load non-Energy Star rated washers.

Table IV-5
LRWs: U.S. importers' U.S. shipments, by configuration and energy efficiency, 2012-17, January to September 2017, and January to September 2018

* * * * *

U.S. importers' U.S. shipments by drive type

Table IV-6 presents U.S. importers' U.S. shipments by drive type.⁸ The vast majority of U.S. shipments of imports from Korea were direct drive washers, which also represented the largest share of U.S. shipments of imports from nonsubject sources, although front load CIM/belt drive washers also represented a substantial share. *** U.S. shipments of imports from Mexico (except in ***) were front load CIM/belt washers.

⁷ ***.

⁸ Other products include washers with a permanent split capacitor (PSC) motor without a flat wrap spring clutch.

Table IV-6**LRWs: U.S. importers' U.S. shipments, by drive type, 2012-17, January to September 2017, and January to September 2018**

* * * * *

Geographical markets

Table IV-7 presents U.S. imports by border of entry. The majority of subject imports from Korea entered through borders of entry in the west (largely through Los Angeles, California) followed by the east (New York, New York and Savanna, Georgia), while the vast majority of subject imports from Mexico entered through the south (El Paso, Texas and Laredo, Texas), and nonsubject imports entered through the east (New York, New York and Savanna, Georgia) followed by the west (Los Angeles, California).

Table IV-7**LRWs: U.S. imports, by border of entry, 2017**

Item	Border of entry				
	East	North	South	West	All borders
	Value (1,000 dollars)				
U.S. imports from.-- Korea	56,938	1,046	1,076	204,854	263,914
Mexico	---	75	171,831	---	171,906
Subject sources	56,938	1,121	172,907	204,854	435,821
Nonsubject sources	405,378	237,266	157,652	993,161	1,793,456
All import sources	462,316	238,387	330,559	1,198,014	2,229,277
	Share across (percent)				
U.S. imports from.-- Korea	21.6	0.4	0.4	77.6	100.0
Mexico	---	0.0	100.0	---	100.0
Subject sources	13.1	0.3	39.7	47.0	100.0
Nonsubject sources	22.6	13.2	8.8	55.4	100.0
All import sources	20.7	10.7	14.8	53.7	100.0
	Share down (percent)				
U.S. imports from.-- Korea	12.3	0.4	0.3	17.1	11.8
Mexico	---	0.0	52.0	---	7.7
Subject sources	12.3	0.5	52.3	17.1	19.5
Nonsubject sources	87.7	99.5	47.7	82.9	80.5
All import sources	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Note.--Data are likely overstated as official statistics includes certain out-of-scope washers not considered as part of the Commission's previous expansion of the domestic like product. Additionally, these official statistics likely do not include most small residential washers (merchandise included in the domestic like product of the original investigations). Finally, imports from nonsubject sources are likely overstated due to the inclusion of ***.

Source: Official U.S. import statistics using HTS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.20.0040, 8450.20.0080, 8450.90.2000, and 8450.90.6000, accessed November 27, 2018.

Presence in the market

Table IV-8 and figures IV-2 and IV-3 present monthly U.S. imports. U.S. imports from each source were present in each month during January 2012 through December 2018.

Table IV-8
LRWs: Monthly U.S. imports, January 2012 through December 2018

Item	Source				
	Korea	Mexico	Subject sources	Nonsubject sources	All import sources
Quantity (units)					
2012.--					
January	34,953	54,642	89,595	162,069	251,664
February	54,455	57,876	112,331	133,415	245,746
March	83,743	80,020	163,763	173,382	337,145
April	124,092	78,500	202,592	181,408	384,000
May	149,101	63,529	212,630	221,228	433,858
June	137,241	63,921	201,162	198,307	399,469
July	134,013	51,364	185,377	232,803	418,180
August	85,451	33,152	118,603	197,369	315,972
September	73,657	38,559	112,216	242,414	354,630
October	95,054	45,657	140,711	281,563	422,274
November	61,837	36,278	98,115	222,677	320,792
December	51,304	22,623	73,927	246,416	320,343
2013.--					
January	46,832	23,465	70,297	276,396	346,693
February	47,953	30,223	78,176	218,410	296,586
March	54,646	36,847	91,493	239,193	330,686
April	68,291	27,935	96,226	315,863	412,089
May	61,686	34,002	95,688	367,011	462,699
June	51,291	32,996	84,287	337,713	422,000
July	35,132	33,223	68,355	292,779	361,134
August	17,234	33,561	50,795	313,442	364,237
September	38,980	35,906	74,886	373,621	448,507
October	57,640	41,338	98,978	324,280	423,258
November	38,503	34,768	73,271	258,463	331,734
December	35,429	33,513	68,942	232,589	301,531
2014.--					
January	44,222	30,717	74,939	398,628	473,567
February	35,614	36,772	72,386	295,621	368,007
March	25,965	43,406	69,371	395,034	464,405
April	38,733	35,767	74,500	497,790	572,290
May	46,313	27,220	73,533	426,694	500,227
June	23,599	29,454	53,053	523,434	576,487
July	21,038	65,103	86,141	519,127	605,268
August	18,621	70,842	89,463	549,562	639,025
September	8,823	64,794	73,617	669,874	743,491
October	14,364	66,227	80,591	687,308	767,899
November	7,644	63,137	70,781	601,970	672,751
December	5,687	37,741	43,428	424,888	468,316

Table continued on next page.

Table IV-8--Continued
LRWs: Monthly U.S. imports, January 2012 through December 2018

Item	Source				
	Korea	Mexico	Subject sources	Nonsubject sources	All import sources
Quantity (units)					
2015.--					
January	8,128	28,338	36,466	599,314	635,780
February	7,336	29,723	37,059	572,712	609,771
March	10,715	34,862	45,577	669,696	715,273
April	12,710	31,639	44,349	579,506	623,855
May	15,267	28,338	43,605	355,779	399,384
June	7,377	31,586	38,963	618,498	657,461
July	6,319	32,576	38,895	594,364	633,259
August	4,353	37,342	41,695	680,781	722,476
September	11,915	31,419	43,334	577,875	621,209
October	20,437	35,958	56,395	681,589	737,984
November	9,391	24,112	33,503	567,606	601,109
December	7,608	20,370	27,978	613,511	641,489
2016.--					
January	7,870	21,739	29,609	570,140	599,749
February	14,293	23,815	38,108	792,427	830,535
March	14,961	34,142	49,103	952,662	1,001,765
April	9,341	27,232	36,573	841,867	878,440
May	10,648	42,674	53,322	1,025,513	1,078,835
June	11,164	37,006	48,170	919,041	967,211
July	8,536	24,786	33,322	638,648	671,970
August	11,684	29,723	41,407	628,143	669,550
September	27,781	28,177	55,958	712,323	768,281
October	24,290	32,610	56,900	870,084	926,984
November	35,236	31,800	67,036	832,950	899,986
December	31,260	17,149	48,409	539,527	587,936
2017.--					
January	19,462	22,390	41,852	745,899	787,751
February	32,702	25,434	58,136	668,921	727,057
March	27,030	24,591	51,621	677,956	729,577
April	29,576	23,980	53,556	653,296	706,852
May	32,983	28,149	61,132	889,058	950,190
June	39,188	33,896	73,084	897,049	970,133
July	23,207	31,399	54,606	927,157	981,763
August	24,565	32,278	56,843	832,349	889,192
September	23,151	22,203	45,354	821,518	866,872
October	31,915	22,052	53,967	1,072,361	1,126,328
November	93,512	23,546	117,058	1,067,892	1,184,950
December	76,256	28,703	104,959	898,661	1,003,620

Table continued on next page.

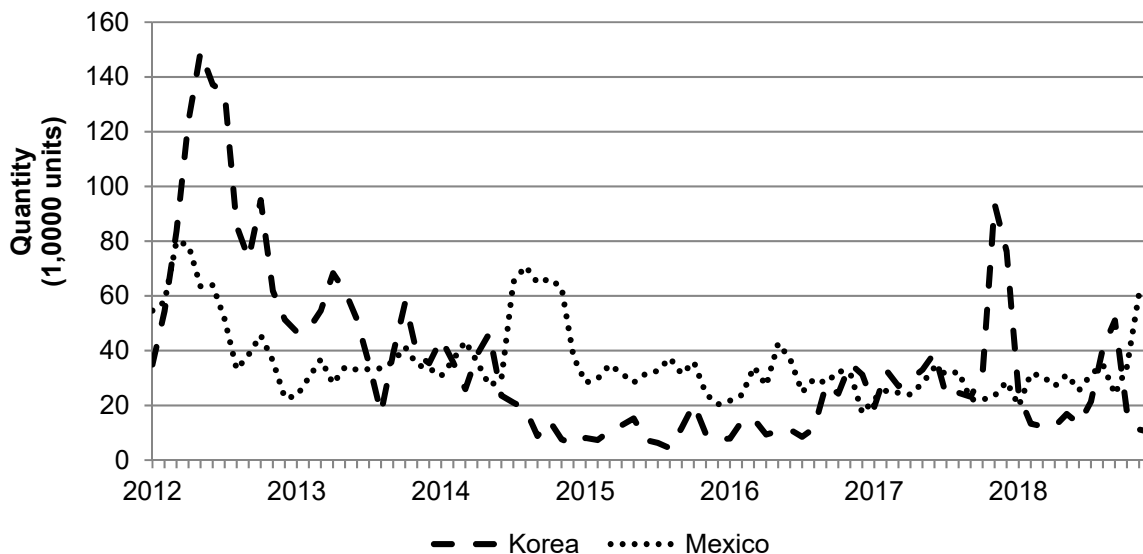
Table IV-8--Continued
LRWs: Monthly U.S. imports, January 2012 through December 2018

Item	Source				
	Korea	Mexico	Subject sources	Nonsubject sources	All import sources
	Quantity (units)				
2018.--					
January	23,756	19,815	43,571	828,273	871,844
February	13,298	31,673	44,971	507,000	551,971
March	12,302	30,626	42,928	557,481	600,409
April	12,367	27,028	39,395	768,544	807,939
May	16,889	31,231	48,120	681,646	729,766
June	13,233	25,442	38,675	721,140	759,815
July	21,397	31,300	52,697	692,523	745,220
August	40,930	34,904	75,834	923,329	999,163
September	51,088	24,057	75,145	1,037,003	1,112,148
October	17,592	34,108	51,700	939,198	990,898
November	11,190	60,751	71,941	276,314	348,255
December	10,134	64,979	75,113	251,031	326,144

Note.--Information presented in this table encompasses both LRWs as defined by Commerce's scope and top-load washers with a capacity of less than 3.7 cubic feet. In relation U.S. import volumes, imports from subject sources (Korea and Mexico) are limited to LRWs as defined by Commerce's scope (8450.20.0040, 8450.20.0080, and 8450.20.0090), while imports from nonsubject sources include LRWs from sources other than Korea and Mexico (8450.20.0040, 8450.20.0080, and 8450.20.0090) as well as top-load washers with a capacity of less than 3.7 cubic feet from all sources (8450.11.0040 and 8450.11.0080) including but not limited to Korea and Mexico. Imports from nonsubject sources are likely overstated due to the inclusions of ***.

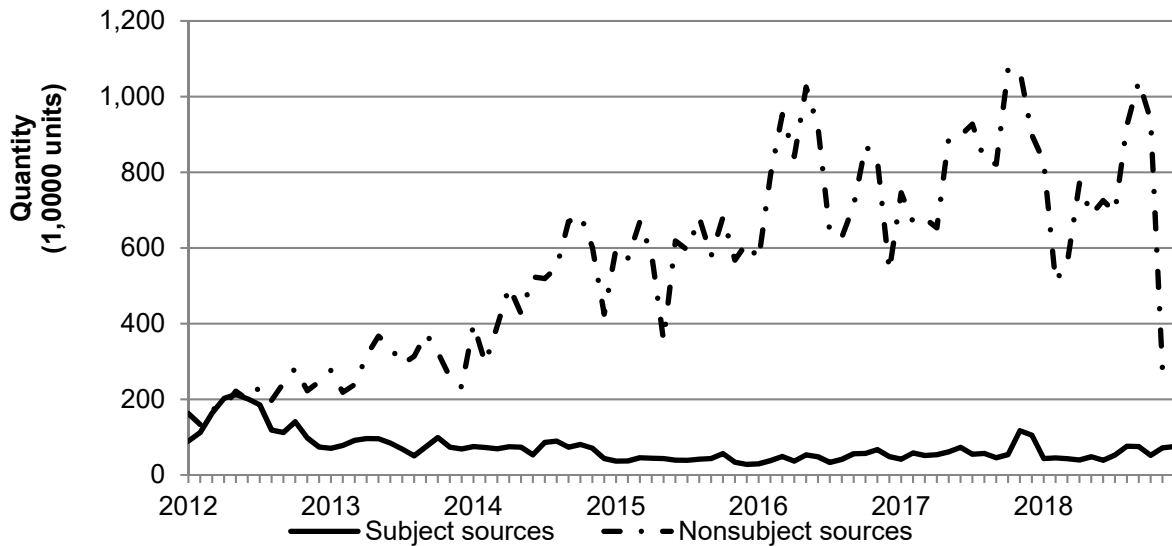
Source: Official U.S. import statistics using HTS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.20.0040, 8450.20.0080, and 8450.20.0090, accessed March 8, 2019.

Figure IV-2
LRWs: Monthly U.S. imports from subject sources, January 2012 through December 2018



Source: Official U.S. import statistics using HTS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.20.0040, 8450.20.0080, and 8450.20.0090, accessed March 8, 2019.

Figure IV-3
LRWs: Monthly U.S. imports, January 2012 through December 2018



Source: Official U.S. import statistics using HTS statistical reporting numbers 8450.11.0040, 8450.11.0080, 8450.20.0040, 8450.20.0080, and 8450.20.0090, accessed March 8, 2019.

U.S. IMPORTERS' IMPORTS SUBSEQUENT TO SEPTEMBER 30, 2018

The Commission requested importers to indicate whether they had imported or arranged for subject imports from Korea and Mexico and for nonsubject imports for delivery after September 30, 2018 (Table IV-9). Four importers reported arranged imports; two firms (***) reported arranged subject imports from Korea and four firms (***) reported arranged nonsubject imports.

Under the safeguard measure, imports of LRWs in excess of 1.2 million units annually were subject to an additional tariff. This tariff-rate quota was filled in October 2018 for the tariff-rate quota period of February 7, 2018 through February 6, 2019 and was 43.9 percent filled, as of March 4, 2019, for the tariff-rate quota period of February 7, 2019 through February 6, 2020.⁹

Table IV-9
LRWs: U.S. importers' arranged imports, October 2018 to September 2019

* * * * *

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

⁹ U.S. Customs and Border Protection, *Quota Status Reports*, found at <https://www.cbp.gov/document/report/quota-status-reports>, retrieved on March 7, 2018.

U.S. IMPORTERS' INVENTORIES

Table IV-10 presents data for inventories of subject imports of LRWs from Korea and Mexico and nonsubject imports held in the United States. Two firms (***) held the vast majority of inventories of subject imports from Korea. The vast majority of inventories of subject imports from Mexico were held by ***. Four firms, *** had inventories of nonsubject imports. In 2016 and 2017, and during the interim periods, two firms (***) held the majority of these inventories. The ratio of inventories to U.S. imports for these two firms increased in 2017 and were higher in January to September 2018 compared with January to September 2017. *** stated that it increased imports in 2017 to help mitigate the possible supply disruptions in 2018, following the filing of the safeguard on large residential washers in 2017.

Table IV-10

LRWs: U.S. importers' end-of-period inventories of imports, by source, 2012-17, January to September 2017, and January to September 2018

* * * * *

THE INDUSTRY IN KOREA

Overview

The Commission issued foreign producers' or exporters' questionnaires to three firms believed to produce and/or export LRWs from Korea. Usable responses to the Commission's questionnaire were received from two firms: LG Electronics Inc. ("LG Korea") and Samsung Electronics Co., Ltd. ("Samsung Korea").¹⁰ Responding Korean producers' exports to the United States accounted for all U.S. imports of LRWs from Korea in 2017. Both producers have related U.S. producers that are in the process of ramping up production of LRWs. Samsung noted that it does not produce LRWs for the U.S. market in Korea nor has it exported LRWs to the United States since 2013.¹¹ In addition, while it plans to continue to supplement production at its facility in Newberry, South Carolina, with imports from its facilities outside of Korea, namely Thailand and Vietnam, these imports would ultimately be phased out as its production in the United States grows.¹² LG stated that it anticipates reaching maximum production at its Clarksville, Tennessee facility by *** with the ability to supply 90 percent of LG's U.S. LRW sales. The remaining 10 percent would be imported from Korea, Thailand, and Vietnam, and would be

¹⁰ Dongbu Daewoo Electronics, the other Korean firm that was sent a questionnaire, did not provide a response. In 2016, it produced 5 million front load washers. *Dongbu Daewoo Appliance Corporation, About Us*, <http://daewoophils.com/about.aspx>, retrieved March 4, 2019.

¹¹ Samsung's posthearing brief, p. 8.

¹² Hearing transcript, pp. 184-185 (Park) and Samsung's posthearing brief, Responses To Commissioners' Questions, p. 12.

concentrated in high-end, higher priced, models, and in particular, high-end, high-priced, front-load models.¹³

Table IV-11 presents information on the LRW operations of the two responding producers and exporters in Korea.

Table IV-11
LRWs: Summary data for producers in Korea, 2017

Firm	Production (units)	Share of reported production (percent)	Exports to the United States (units)	Share of reported exports to the United States (percent)	Total shipments (units)	Share of firm's total shipments exported to the United States (percent)
LG Korea	***	***	***	***	***	***
Samsung Korea	***	***	***	***	***	***
Total	***	***	***	***	***	***

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

Changes in operations

As presented in table IV-12 producers in Korea reported several operational and organizational changes since January 1, 2012.

Table IV-12
LRWs: Korean producers' reported changes in operations, since January 1, 2012

* * * * *

Operations on LRWs

Table IV-13 presents aggregate production, capacity, shipments, and inventory data for responding firms in Korea. The capacity of producers in Korea declined by *** percent between 2012 and 2014, then increased by *** percent in 2015, before declining again in 2016 and 2017, ending *** percent lower in 2017 than in 2012, and were *** percent lower in January-September 2018 compared with January-September 2017.¹⁴ Korean producers' production decreased by *** percent between 2012 and 2015, and then increased by *** percent between 2015 and 2017, ending *** percent lower in 2017 than in 2012, and were *** percent lower in January-September 2018 compared with January-September 2017.¹⁵ Capacity utilization

¹³ Hearing transcript, p. 190 (Porter) and LG's posthearing brief, Exh1, p. 11 and p. 28. LG noted that its U.S. facility would not produce some washers, such as Side Kick washers, extra-wide washers, and some other luxury models. Hearing transcript, p. 255 (Toohey).

¹⁴ ***. Email from ***, December 3, 2018. Staff adjusted capacity to equal production in in 2017 and the interim periods where production exceeded capacity.

¹⁵ Korean producers reported constraints on production including ***.

generally declined between 2012 and 2015, before increasing, ending *** percentage points higher in 2017 than in 2012, but was *** percentage points lower in January-September 2018 compared with January-September 2017.¹⁶

Home market shipments increased as a share of total shipments, reaching its apex in 2016 before declining, but ending *** percentage points higher in 2017 than in 2012. In contrast, exports as a share of total shipments declined, reaching its lowest in 2015, before increasing, but ending *** percentage points lower in 2017 than in 2012. While exports to the United States had the largest decline in terms of quantity between 2012 and 2017, it remained the largest export destination throughout the period.

End-of-period inventories declined by *** percent between 2012 and 2017, and were *** percent lower as a share of production and total shipments over the same period.

Table IV-13

LRWs: Data on industry in Korea, 2012-17, January to September 2017, and January to September 2018

* * * * *

Alternative products

As shown in table IV-14, responding firms in Korea produced other products on the same equipment and machinery used to produce LRWs. LRWs represented the largest share of production followed by other products, which included residential washers with cabinets less than 24.5 inches and dryers. Between 2012 and 2017, overall capacity and production declined *** percent and *** percent, respectively. This resulted in overall capacity utilization, which closely tracked LRW capacity utilization, increasing *** percentage points between 2012 and 2017. Capacity utilization was *** percentage points lower in January-September 2018 compared with January-September 2017.

Table IV-14

LRWs: Korea producers' overall capacity and production on the same equipment as subject production, 2012-17, January to September 2017, and January to September 2018

* * * * *

¹⁶ *** .

Exports

According to GTA, the leading export markets for residential and commercial washers from Korea are the United States, Taiwan, Saudi Arabia, and Iran (table IV-15).¹⁷ During 2017, the United States was the top export market for residential and commercial washers from Korea, accounting for 45.2 percent of such exports, followed by the Taiwan (6.9 percent).

Table IV-15
Residential and commercial washers: Exports from Korea by destination market, 2012-17

Item	Calendar year					
	2012	2013	2014	2015	2016	2017
	Quantity (units)					
Korea's exports to the United States	1,126,896	556,072	286,803	134,738	234,458	478,103
Korea's exports to other major destination markets.--						
Taiwan	78,521	85,975	83,996	74,269	84,643	72,688
Saudi Arabia	57,441	70,523	58,662	86,213	55,966	45,354
Iran	278,289	35,780	14,772	23,283	21,453	32,251
Canada	222,946	96,492	22,391	7,631	5,351	29,835
Colombia	70,207	95,212	59,482	37,671	33,807	28,970
Mexico	96,214	107,618	67,915	51,267	52,357	28,626
Peru	46,750	37,120	37,084	23,227	23,262	27,913
China	21,670	34,259	46,379	44,365	37,017	27,414
All other destination markets	766,397	725,437	764,238	462,900	346,495	286,045
Total Korea exports	2,765,331	1,844,488	1,441,722	945,564	894,809	1,057,199
	Value (1,000 dollars)					
Korea's exports to the United States	511,839	278,880	142,153	83,785	130,154	263,023
Korea's exports to other major destination markets.--						
Taiwan	27,480	31,369	32,555	26,644	30,932	29,224
Saudi Arabia	26,065	34,192	28,566	41,831	28,712	23,425
Iran	90,790	12,730	10,022	12,252	12,859	19,739
Canada	98,711	44,934	11,889	5,125	3,035	14,315
Colombia	29,463	33,412	25,350	16,639	15,723	13,030
Mexico	28,425	39,529	32,608	26,083	23,708	16,597
Peru	17,584	13,987	14,655	9,894	9,784	10,447
China	10,530	19,452	27,535	25,337	20,863	18,179
All other destination markets	298,698	287,319	299,388	196,484	157,130	137,763
Total Korea exports	1,139,585	795,802	624,720	444,074	432,901	545,742

Table continued on next page.

¹⁷ Data are likely overstated and include out-of-scope and excluded products (commercial washers and stacked washer-dryers).

Table IV-15--Continued**Residential and commercial washers: Exports from Korea by destination market, 2012-17**

Item	Calendar year					
	2012	2013	2014	2015	2016	2017
	Unit value (dollars per unit)					
Korea's exports to the United States	454	502	496	622	555	550
Korea's exports to other major destination markets.--						
Taiwan	350	365	388	359	365	402
Saudi Arabia	454	485	487	485	513	516
Iran	326	356	678	526	599	612
Canada	443	466	531	672	567	480
Colombia	420	351	426	442	465	450
Mexico	295	367	480	509	453	580
Peru	376	377	395	426	421	374
China	486	568	594	571	564	663
All other destination markets	390	396	392	424	453	482
Total Korea exports	412	431	433	470	484	516
	Share of quantity (percent)					
Korea's exports to the United States	40.8	30.1	19.9	14.2	26.2	45.2
Korea's exports to other major destination markets.--						
Taiwan	2.8	4.7	5.8	7.9	9.5	6.9
Saudi Arabia	2.1	3.8	4.1	9.1	6.3	4.3
Iran	10.1	1.9	1.0	2.5	2.4	3.1
Canada	8.1	5.2	1.6	0.8	0.6	2.8
Colombia	2.5	5.2	4.1	4.0	3.8	2.7
Mexico	3.5	5.8	4.7	5.4	5.9	2.7
Peru	1.7	2.0	2.6	2.5	2.6	2.6
China	0.8	1.9	3.2	4.7	4.1	2.6
All other destination markets	27.7	39.3	53.0	49.0	38.7	27.1
Total Korea exports	100.0	100.0	100.0	100.0	100.0	100.0

Note.--Data are likely overstated and include out-of-scope and excluded products (commercial washers and stacked washer-dryers).

Source: Official Korean exports statistics under HTS subheadings 8450.20 as reported by Korea Customs and Trade Development Institution in the IHS/GTA database, accessed November 2, 2018.

THE INDUSTRY IN MEXICO

The Commission issued foreign producers' or exporters' questionnaires to five firms believed to produce and/or export LRWs from Mexico. Usable responses to the Commission's questionnaire were received from four firms: Electrolux Home Products de Mexico, SA de CV ("Electrolux Mexico"), Controladora Mabe, S.A. de C.V. ("Mabe"), Samsung Electronics Digital Appliances Mexico, S.A. de C.V. ("Samsung Mexico"), and Whirlpool Overseas Manufacturing

Sarl (“Whirlpool Mexico”).¹⁸ Responding Mexican producers’ exports to the United States accounted for all U.S. imports of LRWs from Mexico in 2017. ***, which accounted for *** exports the United States from Mexico in 2017, exported ***.¹⁹ Samsung Mexico ceased exporting LRWs to the United States in 2012 and retooled its facility to service the markets in Mexico and South America.²⁰ Similarly, Whirlpool Mexico ceased exports to the United States in 2012 and shifted production at its facility to smaller washers for the Mexican and Central American markets.²¹ Table IV-16 presents information on the LRW operations of the responding producers and exporters in Mexico.

Table IV-16
LRWs: Summary data for producers in Mexico, 2017

Firm	Production (units)	Share of reported production (percent)	Exports to the United States (units)	Share of reported exports to the United States (percent)	Total shipments (units)	Share of firm's total shipments exported to the United States (percent)
Electrolux Mexico	***	***	***	***	***	***
Mabe	***	***	***	***	***	***
Samsung Mexico	***	***	***	***	***	***
Whirlpool Mexico	***	***	***	***	***	***
Total	***	***	***	***	***	***

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

Changes in operations

As presented in table IV-17, producers in Mexico reported several operational and organizational changes since January 1, 2012. Whirlpool noted that in 2012, it moved its front load LRW production from its facility in Mexico to its facility in Clyde, Ohio.²² Whirlpool’s facility in Mexico currently produces washers for Mexican and Central American markets that are different sizes (smaller) and different configurations than those produced for the U.S. market.²³ Samsung stated that it shifted its LRW production in 2012 from its facility in Mexico to China, and shifted production at its facility in Mexico to dryers and smaller capacity washers for Mexican and South American markets.²⁴

¹⁸ Daewoo México, the other Mexican firm that was sent a questionnaire, did not provide a response.

¹⁹ *** stated that it ***. Email from ***, March 14, 2019.

²⁰ Hearing transcript, p. 213 (Park). Samsung Mexico stated that this facility produces ***. Samsung’s posthearing brief, p. 9 and responses to Commissioners’ questions, p. 3.

²¹ Hearing transcript, p. 74 (Tubman), pp. 84-85 (Tubman), and p. 85 (Liotine).

²² Hearing transcript, p. 74 (Tubman).

²³ Hearing transcript, p. 85 (Liotine).

²⁴ Hearing transcript, pp. 188, 213 (Park).

Table IV-17

LRWs: Mexico producers' reported changes in operations, since January 1, 2012

* * * * *

Operations on LRWs

Table IV-18 presents aggregate production, capacity, shipments, and inventory data for responding firms in Mexico. The capacity of producers in Mexico declined by *** percent between 2012 and 2017, with the majority of the decline in 2014, when ***. Capacity was *** percent higher in January-September 2018 compared with January-September 2017. Production decreased by *** percent between 2012 and 2015, then increased by *** percent between 2015 and 2017, ending *** percent lower in 2017 than in 2012, and was *** percent lower in January-September 2018 compared with January-September 2017.²⁵ Capacity utilization fluctuated during 2012-15, and then increased in 2016 and 2017, ending *** percentage points higher in 2017 than in 2012, but were *** percentage points lower in January-September 2018 compared with January-September 2017.

Home market shipments increased as a share of total shipments, reaching its apex in 2015 before declining, but ending *** percentage points higher in 2017 than in 2012. In contrast, exports as a share of total shipments declined, reaching its lowest in 2015, before increasing, ending *** percentage points lower in 2017 than in 2012. Exports to the United States share of total shipments fluctuated over the period ending *** percent lower in 2017 than in 2012, with the largest decline in 2013 when ***. While exports to the United States declined from being the largest share of total shipments in 2012 to the third largest in 2017, exports to Central and South America as a share of total shipments increased *** percentage points between 2012 and 2017, to become the second largest share of total shipments. ***.

End-of-period inventories, which were largely held by ***, increased by *** percent between 2012 and 2017, and were *** percent and *** percent higher as a share of production and total shipments, respectively, over the same period.

Table IV-18

LRWs: Data on industry in Mexico, 2012-17, January to September 2017, and January to September 2018

* * * * *

Alternative products

As shown in table IV-19, responding firms in Mexico produced other products on the same equipment and machinery used to produce LRWs. ***, the share of production of other products (including ***) increased, while the share represented by LRWs declined.

²⁵ Producers in Mexico reported constraints on production including ***.

Table IV-19

LRWs: Mexico producers' overall capacity and production on the same equipment as subject production, 2012-17, January to September 2017, and January to September 2018

* * * * *

Exports

According to GTA, the leading export markets for residential and commercial washers from Mexico are the United States, Colombia, and Canada (table IV-20).²⁶ During 2017, the United States was the top export market for residential and commercial washers from Mexico, accounting for 44.4 percent, followed by the Colombia, accounting for 11.7 percent.

Table IV-20

Residential and commercial washers: Exports from Mexico by destination market, 2012-17

Item	Calendar year					
	2012	2013	2014	2015	2016	2017
	Quantity (units)					
Mexico's exports to the United States	640,895	528,134	523,937	468,311	488,753	460,158
Mexico's exports to other major destination markets.--						
Colombia	208,975	206,576	286,372	249,532	162,951	121,375
Canada	16,785	5,474	51,100	50,794	61,556	110,866
Chile	73,544	81,045	122,438	119,341	110,709	73,505
Ecuador	36,396	34,330	51,897	33,004	27,204	55,638
Peru	41,913	91,529	160,477	116,628	107,630	47,399
Guatemala	15,889	16,780	23,638	33,530	24,758	27,992
El Salvador	12,304	12,211	13,568	18,579	14,990	23,818
Costa Rica	15,791	21,930	16,615	27,168	22,652	23,774
All other destination markets	113,016	110,018	98,398	118,885	107,322	92,795
Total Mexico exports	1,175,508	1,108,027	1,348,440	1,235,772	1,128,525	1,037,320
	Value (1,000 dollars)					
Mexico's exports to the United States	327,919	264,446	259,590	247,631	240,877	222,898
Mexico's exports to other major destination markets.--						
Colombia	55,408	55,128	75,931	60,279	35,139	29,091
Canada	6,113	2,831	22,749	24,723	20,994	33,112
Chile	19,745	21,625	30,651	26,915	22,215	37,531
Ecuador	9,398	9,829	13,531	8,244	5,657	12,254
Peru	11,189	26,390	40,885	26,571	21,390	9,934
Guatemala	4,115	4,258	5,908	7,567	5,292	6,574
El Salvador	3,105	3,025	3,187	4,119	3,116	5,432
Costa Rica	4,429	6,150	4,624	6,696	5,240	6,398
All other destination markets	34,112	55,763	27,949	38,203	48,121	29,919
Total Mexico exports	475,534	449,446	485,006	450,949	408,041	393,144

Table continued on next page.

²⁶ Data are likely overstated and include out-of-scope products (such as commercial washers and stacked washer-dryers).

Table IV-20--Continued

Residential and commercial washers: Exports from Mexico by destination market, 2012-17

Item	Calendar year					
	2012	2013	2014	2015	2016	2017
	Unit value (dollars per unit)					
Mexico's exports to the United States	512	501	495	529	493	484
Mexico's exports to other major destination markets.--						
Colombia	265	267	265	242	216	240
Canada	364	517	445	487	341	299
Chile	268	267	250	226	201	511
Ecuador	258	286	261	250	208	220
Peru	267	288	255	228	199	210
Guatemala	259	254	250	226	214	235
El Salvador	252	248	235	222	208	228
Costa Rica	281	280	278	246	231	269
All other destination markets	302	507	284	321	448	322
Total Mexico exports	405	406	360	365	362	379
	Share of quantity (percent)					
Mexico's exports to the United States	54.5	47.7	38.9	37.9	43.3	44.4
Mexico's exports to other major destination markets.--						
Colombia	17.8	18.6	21.2	20.2	14.4	11.7
Canada	1.4	0.5	3.8	4.1	5.5	10.7
Chile	6.3	7.3	9.1	9.7	9.8	7.1
Ecuador	3.1	3.1	3.8	2.7	2.4	5.4
Peru	3.6	8.3	11.9	9.4	9.5	4.6
Guatemala	1.4	1.5	1.8	2.7	2.2	2.7
El Salvador	1.0	1.1	1.0	1.5	1.3	2.3
Costa Rica	1.3	2.0	1.2	2.2	2.0	2.3
All other destination markets	9.6	9.9	7.3	9.6	9.5	8.9
Total Mexico exports	100.0	100.0	100.0	100.0	100.0	100.0

Note.--Data are likely overstated and include out-of-scope and excluded products (commercial washers and stacked washer-dryers)

Source: Official Mexican exports statistics under HTS subheadings 8450.20 as reported by INEGI in the IHS/GTA database, accessed November 2, 2018.

SUBJECT COUNTRIES COMBINED

Table IV-21 presents summary data on LRWs operations of the reporting subject producers in Korea and Mexico.

Table IV-21
LRWs: Data on the industry in Korea and Mexico, 2012-17, January to September 2017, and
January to September 2018

Item	Calendar year						January to September	
	2012	2013	2014	2015	2016	2017	2017	2018
	Quantity (units)							
Capacity	7,423,040	6,100,799	3,792,412	3,871,762	3,593,079	3,543,583	2,672,951	2,593,759
Production	3,744,509	2,580,366	2,275,903	1,993,817	2,142,644	2,289,340	1,721,962	1,500,168
End-of-period inventories	***	***	***	***	***	***	***	***
Shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	1,063,372	1,073,877	1,140,016	1,188,296	1,165,716	1,021,151	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
Other NAFTA countries	***	***	***	***	***	***	***	***
Central and South America	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Total exports	2,622,678	1,580,217	1,116,001	786,353	949,290	1,235,322	***	***
Total shipments	3,686,050	2,654,094	2,256,017	1,974,649	2,115,006	2,256,473	1,578,174	1,454,926
	Value (1,000 dollars)							
Shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	506,649	498,258	550,713	525,090	507,573	486,571	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
Other NAFTA countries	***	***	***	***	***	***	***	***
Central and South America	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Total exports	1,191,039	760,171	502,812	361,186	409,098	558,322	***	***
Total shipments	1,697,688	1,258,429	1,053,525	886,276	916,671	1,044,893	732,075	722,242

Table continued on next page.

Table IV-21--Continued
LRWs: Data on the industry in Korea and Mexico, 2012-17, January to September 2017, and
January to September 2018

Item	Calendar year						January to September	
	2012	2013	2014	2015	2016	2017	2017	2018
	Unit value (dollars per unit)							
Shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	476	464	483	442	435	476	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
Other NAFTA countries	***	***	***	***	***	***	***	***
Central and South America	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Total exports	454	481	451	459	431	452	***	***
Total shipments	461	474	467	449	433	463	464	496
	Ratios and shares (percent)							
Capacity utilization	50.4	42.3	60.0	51.5	59.6	64.6	64.4	57.8
Inventories/production	***	***	***	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***	***	***	***
Share of total shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	28.8	40.5	50.5	60.2	55.1	45.3	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
Other NAFTA countries	***	***	***	***	***	***	***	***
Central and South America	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Total exports	71.2	59.5	49.5	39.8	44.9	54.7	***	***
Total shipments	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.

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

Based on available information, LRWs from Korea and Mexico have not been subject to other antidumping or countervailing duty investigations outside the United States.

GLOBAL MARKET

Table I-22 presents the largest global export sources of LRWs during 2012-17. In 2012, Korea was the leading global exporter of LRWs, followed by Mexico. Exports from these countries began to decline in 2013, following the issuance of antidumping duty orders on LRWs from Korea and Mexico and the countervailing duty order on LRWs from Korea. In addition, in 2012 and 2013, LG and Samsung moved LRW production for the U.S. market from Korea to China. Samsung also moved LRW production from Mexico to China. As a result, China became the largest global supplier of LRWs during 2014-2016. More recently, LG and Samsung moved LRW production from China to Thailand and Vietnam.^{27 28}

²⁷ Comprehensive export data for Vietnam in 2017 are not available; see table I-10 for U.S. import trends of LRWs from Thailand and Vietnam. *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, pp. IV-16-20.

²⁸ In response to the Commission's questions regarding Samsung's foreign facilities and the costs of moving/re-tooling equipment, Samsung stated in its posthearing brief that its factories in Mexico and Korea produced washers for not only the U.S. market but also other countries. Each factory has kept most facilities and uses them to produce washers for other markets, as well as other laundry products. Samsung reported that the equipment in those factories was largely retained, and that Samsung reviews the efficiency of its global operates and ***. For example, Samsung states that ***. Samsung also notes that moving equipment is unusual, and would be much more difficult for the types of metal presses and injection molding equipment installed at its new plant in Newberry, South Carolina. Samsung's posthearing brief, Samsung Responses to Commission Questions, p. 2-3. As stated at the hearing, some of the presses have to be sunk in twenty feet of concrete so the machine does not vibrate or move around. Hearing transcript, p. 199 (Shor).

Table IV-22**Residential and commercial washers: Global exports by major sources, 2012-18**

Item	2012	2013	2014	2015	2016	2017	2018
Value (1,000 dollars)							
Korea (subject)	1,139,585	795,802	624,720	444,074	432,901	545,742	380,016
Mexico (subject)	475,534	449,446	485,006	450,949	408,041	393,144	312,174
China	258,438	681,382	901,381	1,072,438	906,598	539,501	596,765
United States	325,672	307,202	330,865	382,902	312,418	331,080	327,939
Thailand	188,727	236,433	280,003	302,460	309,135	435,734	392,746
Vietnam	33	37	26	3	262,696	750,669	N/A
Germany	73,125	85,291	87,995	80,547	81,593	82,861	N/A
Czech Republic	47,084	52,591	58,082	73,455	75,981	99,393	107,766
Sweden	48,218	61,551	63,269	58,518	60,818	63,587	N/A
Spain	38,972	38,144	44,400	46,613	48,277	61,763	N/A
Italy	15,708	23,082	28,048	27,064	29,911	28,393	N/A
All other	146,044	160,432	175,850	136,667	142,789	N/A	N/A
Total	2,747,749	2,885,239	3,071,722	2,994,877	2,758,970	N/A	N/A

Note.--Comprehensive data for 2017 are not available, as a number of countries have not yet published 2017 or 2018 trade data.

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

Note.--Data are likely overstated and include out-of-scope and excluded products (commercial washers and stacked washer-dryers)

Source: Global Trade Information Services, Inc., Global Trade Atlas, HS subheading 845020 ("Household- Or Laundry-Type Washing Machines, With A Dry Linen Capacity Exceeding 10 Kg") retrieved March 14, 2019.

LRW consumption outside the United States

Two responding foreign producers from Mexico reported an increase in demand in their home market, while one foreign producer from Mexico reported fluctuation. Two responding foreign producers from Mexico also reported an increase in demand in other markets outside of the United States, while one foreign producer from Mexico reported fluctuation. Two responding foreign producers from Korea reported an increase in demand in their home market, and one foreign producer from Korea reported an increase in demand in other markets outside of the United States. Both foreign producers from Korea reported that demand in the U.S. market increased during 2012-17.

A plurality of purchasers indicated that demand fluctuated or experienced no change since 2013 in countries outside the United States. Reporting purchasers anticipate this trend to continue.

Prices

Most producers and importers had no knowledge of prices in non-U.S. markets. Producer *** stated that prices are generally higher in the U.S. and Canadian markets after the implementation of tariffs by both countries, but *** has not seen any relevant impact in other

markets outside of the United States. Foreign producer *** stated that LRW prices in the United States are higher relative to other markets.

Global supply and demand factors

According to foreign producer ***, major factors that could impact future supply and demand in the Korean market is the revitalization of the Korean housing market. *** also states that it expects demand in the U.S. market to increase due to the replacement of existing LRWs and the revitalization of the U.S. housing market.

The LRW industries in Asia

In its 2017 safeguard investigation, the Commission received foreign producers'/exporters' responses from LRW producers in China, Korea, Thailand, and Vietnam.²⁹ There is no known production of LRWs in Asia outside of these countries.

The industry in China

According to the Commission report in the Section 201 safeguard investigation, four suppliers from China exported LRWs to the United States in 2016. These four firms included Nanjing LG PANDA Appliances Col., Ltd., Whirlpool (China) Co., Ltd., Suzhou Samsung Electronics Co., Ltd., and Suzhou Samsung Electronics Co., Ltd.-Export.³⁰ ***. More recently, LG and Samsung moved LRW production from China to Thailand and Vietnam. According to LG, after it shifted LRW production from China to Thailand and Vietnam, the production line space ***.³¹ According to GTA, the leading export markets for washers from China are the United States, Japan, Mexico, Brazil, and Canada. In 2018, the United States was the top export market for washers from China, accounting for 17.9 percent of total exports, followed by Brazil, accounting for 9.6 percent.³²

The industry in Thailand

During the period of review, several companies had LRW manufacturing operations in Thailand. The three firms include Electrolux Thailand Co., Ltd ("Electrolux Thailand"), Thai Samsung Electronics Co., Ltd. ("Samsung Thailand"), and LG Electronics Thailand Co., Ltd. ("LG

²⁹ *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, pp. IV-12.

³⁰ *Ibid.*

³¹ LG's posthearing brief, p. 14.

³² HS 8450.20 covers household- or laundry-type washing machines, each with a dry linen capacity exceeding 10kg. This heading includes LRWs, stacked washer/dryer units having an integral frame, washing machines with payment systems for vended laundry operations, and washing machines for commercial laundry operations.

Thailand”).³³ LG stated that its Thailand operations produces washers for the U.S. market, but following the shift of LRW production from Thailand to the United States, LG will ***.³⁴ According to LG, from 2012-19 it invested approximately *** in *** of its existing LRW factory in Thailand. LG’s ***.³⁵ According to GTA, the leading export markets for washers from Thailand are the United States, South Korea, Ecuador, and Vietnam. In 2018, the United States was the top export market for washers from Thailand, accounting for 19 percent of total exports, followed by South Korea, accounting for 8.5 percent.³⁶

The industry in Vietnam

During the period of review, two companies had LRW manufacturing operations in Vietnam: LG Electronics Vietnam Haiphong Co., Ltd. and Samsung Electronics HCMC CE Complex Co., Ltd.³⁷ LG stated that it is still producing washers for the U.S. market, but following the shift of LRW production from Vietnam to the United States, it plans to ***.³⁸ According to LG, from 2012-19 it invested approximately *** in *** of its existing LRW factory in Vietnam. LG’s ***.³⁹ LG’s ***.⁴⁰ According to GTA, the leading export markets for washers from Vietnam are the U.S., Papua New Guinea, and South Korea. In 2016, the United States was the top export market for washers from Thailand, accounting for 99.5 percent of total exports.⁴¹

OTHER RESIDENTIAL WASHER INDUSTRIES

Whirlpool, LG, and Samsung, as well as Electrolux, are global producers of LRWs. These companies principally export to the United States, but also export to Canada, Mexico, Latin America, Australia, as well as Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, and Iraq. These companies also produce out-of-scope residential washers, as well as residential dryers.

³³ *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, p. IV-27.

³⁴ LG’s posthearing brief, p. 14.

³⁵ LG’s posthearing brief, Attachment A, p. 8-9.

³⁶ HS 8450.20 covers household- or laundry-type washing machines, each with a dry linen capacity exceeding 10kg. This heading includes LRWs, stacked washer/dryer units having an integral frame, washing machines with payment systems for vended laundry operations, and washing machines for commercial laundry operations.

³⁷ *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, p. IV-33.

³⁸ LG’s posthearing brief, p. 14.

³⁹ LG’s posthearing brief, Attachment A, p. 8-9.

⁴⁰ *Ibid.*, p. 9.

⁴¹ Comprehensive export data for Vietnam in 2017 are not available. HS 8450.20 covers household- or laundry-type washing machines, each with a dry linen capacity exceeding 10kg. This heading includes LRWs, stacked washer/dryer units having an integral frame, washing machines with payment systems for vended laundry operations, and washing machines for commercial laundry operations.

The major producers of LRWs also compete in other countries against regional producers of residential washers. In Europe, such companies include Miele & Cie. KG, BSH Hausgeräte GmbH of the Bosch Group (Germany), and the Gorenje Group (Slovenia). Much of the residential washer production has relocated from Western Europe to Eastern Europe (principally to Poland, Slovakia, and Serbia). In China, major residential washer producers include Hisense Kelon Electrical Holdings Co. Ltd. of the Hisense Group, Midea Group, TCL Corporation, and the Haier Group. In Japan, Panasonic is a major residential washer producer, but has shifted production to Southeast Asia. In Turkey, the company Arçelik A.Ş. is a major regional Middle East producer of residential washers.⁴²

⁴² *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, pp. IV-16-20.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

Raw materials used to produce LRWs include cold-rolled and stainless steel, copper, aluminum, plastic, propylene, crude oil, and rubber.¹ Raw material costs, as a share of U.S. producers' total cost of goods sold (COGS), were relatively stable in a range of *** to *** percent during 2012 to 2017.

The price of steel fluctuated during January 2012 through December 2018 (figure V-1). Prices of stainless steel cold-rolled sheet peaked in April 2012, declined irregularly by nearly *** percent through February 2016, and then increased irregularly by nearly *** percent through December 2018. Overall, the price of stainless steel cold-rolled sheet decreased by *** percent from January 2012 to December 2018. Prices of cold-rolled coil increased irregularly from 2012 through December 2018; it declined by nearly *** percent through January 2016, then increased by nearly *** to its peak in July 2018, and then declined by *** percent through December 2018. Overall, the price of cold-rolled coil increased by *** percent from January 2012 to December 2018.

Figure V-1

Raw material costs: U.S. price indexes of cold-rolled steel coil and stainless steel cold-rolled sheet, monthly, January 2012-December 2018

* * * * *

Two U.S. producers, two importers, and three foreign producers reported that raw material costs fluctuated since January 1, 2012, and two U.S. producers, one importer, and two foreign producers reported that raw material costs increased. *** stated that section 232 tariffs have resulted in increased steel costs, and that section 301 tariffs have resulted in increased costs for certain electronics imported from China. *** stated that steel costs have increased since 2017 because of tariffs, resulting in it raising its LRW prices in April 2018. *** stated that raw material costs are related to oil prices, which have declined but not by enough to affect *** U.S. sales prices.

¹ *Large Residential Washers from Korea and Mexico, Inv. Nos. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Pub 4378, February 2013, p. V-1.

Impact of section 232 tariffs on steel and aluminum

U.S. producers and importers were asked how the announcement of the section 232 investigations and implementation of the section 232 tariffs on steel and aluminum impacted raw material costs for LRWs. Only *** stated that the investigation's announcement impacted raw material costs, stating that steel and aluminum prices began to rise significantly. Most firms, with the exception of ***, reported that the implementation of the section 232 tariffs impacted raw material costs for LRWs.² *** stated that prices for cold-rolled steel and stainless steel sheet are significant cost drivers in its LRW operation.³ *** stated that steel and aluminum prices have continued to rise significantly, impacting LRWs production costs, and that it is not clear that domestic steel and aluminum suppliers can satisfy the domestic market demand.⁴ *** stated that the section 232 measure on steel has disrupted the availability of imported and domestic steel, leading to significant price increases for steel.⁵ *** stated that steel and aluminum raw material prices have increased.

Impact of section 301 tariffs on Chinese-origin products

With respect to section 301 tariffs, *** stated that it purchases a variety of LRW components that are subject to section 301 measures, including ***. It continued that, in addition to the actual duties paid on these LRW components, the section 301 measures have also increased market pricing for domestically sourced components.⁶ *** stated that cost increases have occurred both for items it imports and sources domestically. It gave examples of affected components, including ***.⁷ *** stated that it ***. It ***.⁸ *** stated that it ***.⁹

Transportation costs to the U.S. market

Transportation costs for LRWs shipped from subject countries to the United States averaged 6.2 percent for Korea and 0.3 percent for Mexico during 2017. These estimates were

² ***. ***. It ***. *** posthearing brief, Attachment A – Answers to Commission Questions, pp. 2-6.

³ *** stated that it consumes a variety of primary steel inputs, such as cold-rolled steel and stainless steel, that it ***. *** posthearing brief, Part II - Answers to Commission questions, p. II-48.

⁴ See also, *** posthearing brief, p. 3.

⁵ *** stated that it ***. It continued that another ***. *** posthearing brief, Responses to Commissioners' questions, p. 2.

⁶ *** posthearing brief, Part II - Answers to Commission questions, pp. II-48-49 and Attachment H.

⁷ *** posthearing brief, pp. 3-4.

⁸ *** posthearing brief, Attachment A – Answers to Commission Questions, pp. 2-6 and exhibit 1.

⁹ *** posthearing brief, Responses to Commissioners' questions, pp. 2 and 11.

derived from official import data and represent the transportation and other charges on imports.¹⁰

U.S. inland transportation costs

All responding U.S. producers and importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from 2 to 6 percent of total delivered cost while most responding importers reported costs of 2 to 3 percent.¹¹

PRICING PRACTICES¹²

Pricing methods

U.S. producers and importers reported using all specified pricing methods. As presented in table V-1, U.S. producers and importers sell through transaction-by-transaction negotiations, contracts, price lists, and other methods.

Table V-1

LRWs: U.S. producers' and importers' reported price setting methods, by number of responding firms¹

Method	U.S. producers	Importers
Transaction-by-transaction	2	3
Contract	2	2
Set price list	2	1
Other	1	3
Responding firms	3	4

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.

¹⁰ The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2017 and then dividing by the customs value based on the HTS subheading 8450.20.0040 and 8450.20.0080.

¹¹ Importer *** reported inland transportation costs of *** percent; it imports ***.

¹² *** reported identical responses in their U.S. producers' and importers' questionnaires regarding pricing practices, with the exception of *** response to price setting (it did not report *** sales in its importer questionnaire). Staff has consolidated the respective responses and *** responses are presented in this section as *** and *** is presented as an ***. *** did not respond to these questions in its *** response because ***.

Importer *** stated that it uses price lists only as a reference starting price for negotiations. It also stated that most of its customers negotiate prices for matching dryers at the same time. U.S. producer *** stated that it ***.

As shown in table V-2, U.S. producers *** reported selling most of their LRWs ***, and *** reported selling ***. Importer *** reported selling its LRWs *** and importer *** reported selling *** of its LRWs in 2017 through spot sales.¹³

Table V-2
LRWs: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2017

* * * * *

No firms reported that their contracts were indexed to raw material costs. *** long-term contracts ***. *** long-term contracts typically ***.

*** short-term contracts ***. *** short-term contracts ***.

Samsung stated that the bulk of its sales to retailers are based on ***. ***. The negotiated margin percentage typically remains fixed for the life of the product but can be adjusted if the MAP changes and ***. In addition, *** stated that many retailers negotiate promotional support up front, which is typically paid when the retailer sells the product to the consumer. Lastly, *** stated that its ultimate price to the retailer is not known at the time of a flooring decision, typically changes weekly, and depends on a myriad of overlapping rebate and promotional payments.

Eleven purchasers reported that they purchase LRWs daily, 11 purchase weekly, and 1 purchases monthly. All 25 responding purchasers reported that they did not expect their purchasing patterns to change in the next two years. Most responding purchasers (18 of 23) contact 1 to 5 suppliers before making a purchase.

Sales terms

*** reported that it quotes prices on an f.o.b. basis, *** reported they quote prices on a delivered basis, and *** reported quoting on both an f.o.b. and delivered basis. Purchasers rated delivery and payment terms as comparable between U.S. produced LRWs and LRWs imported from Korea and Mexico.

Discounts and promotional prices

Discounts on prices of LRWs fall into two categories: direct discounts (i.e., discounts, incentives, rebates, and other adjustments that are tied to a specific product being sold) and

¹³ Importer *** did not report shares of its 2017 sales by contract type because it “is concerned that the question relating to contracts do not elicit a full or accurate depiction of how prices to purchasers are established for washers.” However, it reported that its annual contracts do not include price renegotiation or meet-or-release provisions. *** also only reported importing *** in 2017.

indirect discounts that are not tied to a specific product (i.e., allocated discounts, incentives, allowances, rebates tied to some broad performance measure or volume discounts based on multiple products, including different white goods and electronic products).¹⁴

Three U.S. producers, *** offer quantity, total volume, and promotional discounts, and two U.S. producers (***) offer sale incentives, cooperative advertising allowances, and co-marketing funds. *** also offers **. *** also offers **. *** offers **. Four responding importers offer promotional discounts; three offer total volume discounts, sales incentives, and cooperative advertising allowances; and two offer co-marketing funds. *** offer total volume discounts, promotional discounts, cooperative advertising allowances, and co-marketing funds. *** also offers sales incentives.

Responding purchasers reported that 5 to 100 percent of their sales were made at promotional prices in 2017, with 14 of 19 purchasers reporting 50 percent or more. Purchasers *** reported 90 percent or more of their sales were made at promotional prices and *** reported 50-60 percent. Purchasers were also asked if the volume of LRWs sold each year at promotional prices had changed since January 1, 2012. Fourteen (including ***) reported that the volume decreased, 8 (including ***) reported that the volume of LRWs sold at promotional prices had remained the same, and 3 reported that the volume increased.

Price leadership

Seventeen purchasers reported one or more price leaders including Whirlpool (reported by 15 firms), Samsung (9), LG (6), and GE (2). A number of purchasers reported that Whirlpool was the first supplier to increase prices, one purchaser (***) reported that Samsung makes “aggressive price moves around the holidays and changing them last minute to undercut competition,” and one purchaser (***) reported that Whirlpool is a price leader for agitator based top load LRWs and Samsung and LG are price leaders for impeller based top load and front load LRWs.

Cross-product and cross-supplier impact

Purchasers were asked a number of questions about the impact of features, competing suppliers’ price and product offerings, and drive options on prices of LRWs. As discussed below, most purchasers reported that the availability and/or price of highly featured LRWs affect the volume of sales of less featured LRWs. However, most firms reported that price reductions on either highly featured LRWs or less featured LRWs sometimes or never affect the prices of the other category of LRWs. Purchasers also agreed that the price they are willing to pay for offerings from any particular supplier is influenced by prices and/or features offered by competing suppliers. Most purchasers also reported that belt drive and direct drive LRWs

¹⁴ *Large Residential Washers from China, Investigation No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. V-6.

compete with each other, but most purchasers reported that competition from belt drive LRWs does not affect the prices of direct drive LRWs.

Cross-product impact

Eighteen of 25 responding purchasers reported that the availability and/or price of highly featured LRWs affect the sales of less featured LRWs. Several purchasers stated that customers want the best or most features they can get at the lowest price and sales of less featured LRWs will decline if a highly featured LRW is discounted to the price of the less featured LRW. Purchaser *** stated that the availability of a highly featured washer at a price equal to or lower than a less featured washer would negatively impact the volume of the lower featured washer but that customers also consider manufacturer reputation, potential failure rates of highly featured washers, and perceived cleaning ability of less featured washers. Purchaser *** stated that less featured LRWs usually are more affordable than full featured LRWs, with a majority of purchases being duress buys. It continued that full featured LRWs may help sales of less featured units. Purchaser *** stated that a highly featured LRW is the primary purchasing criteria for some customers while lower prices despite fewer features is the primary consideration for other customers.

Most purchasers reported that price reductions of imported highly featured LRWs sometimes affect the price of less featured top load washers produced in the United States. Most purchasers also reported that price reductions of less featured LRWs produced in the United States sometimes or never affect the price of imported highly featured top load washers (table V-3). *** reported sometimes and *** reported never on both questions.

Table V-3
LRWs: Firms' responses regarding frequency price reductions affect the price of highly featured LRW models and less featured LRW models

Frequency price reductions of	Always	Frequently	Sometimes	Never
Imported highly featured LRW affect price of less featured U.S. produced top load LRWs				
Imported top load from Korea	1	3	14	6
Imported top load from Mexico	1	1	10	9
Imported front load from Korea	1	3	13	7
Imported front load from Mexico	1	---	11	9
Less featured U.S. produced top load LRWs affect price of imported highly featured LRWs				
Imported top load from Korea	---	1	13	10
Imported top load from Mexico	---	---	10	11
Imported front load from Korea	---	2	11	11
Imported front load from Mexico	---	---	10	11

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

Purchasers *** reported they are unsure of the exact direction of the price effects. Purchaser *** stated that the price difference between less featured LRWs, such as a standard agitator top load washer, and highly featured models is significant and that most of the time, price promotions are not deep enough to impact the lower end of the price spectrum.

Purchaser *** stated that price reductions on imported highly featured LRWs force prices of domestic less featured top load LRWs down to maintain the “good, better, best” logic in each suppliers line-up. Purchaser *** stated that the effect varies based on depth of the discounts during key promotional periods irrespective of the country of origin. Purchaser *** stated that these price reductions disrupt the line logic within the agitator washer offering. Purchaser *** stated price reductions of highly featured LRWs imported from Korea affect the price of less featured domestic LRWs because customers may purchase an imported highly featured LRW if there are more features offered at a similar price. However, it reported that a price reduction in less featured top load domestic LRWs never affects the price of highly featured LRWs imported from Korea because they are “different products, budgets, and customers.” Purchaser *** stated that two different sets of customers are interested in either highly featured LRWs or less featured top load washers from the United States and that price changes in one category don’t materially affect the other category. Purchaser *** stated that domestic suppliers must respond by reducing prices even lower on lower featured units.

Cross-supplier impact

Twenty-two of 25 responding purchasers reported that the price they are willing to pay for offerings from any particular supplier is influenced by prices and/or features offered by competing suppliers. Purchaser *** stated that it conducts accelerated line reviews and strategic sourcing initiatives for *** products and that it awards business based upon innovation, quality, and cost. Purchaser *** stated that if the units are similarly featured, and offer the same color and functionality from different manufacturers, then pricing is very relevant because it has limited SKUs and does not wish to duplicate offerings across brands, especially for highly featured, colored sets. Purchaser *** stated that, as a distributor, there needs to be consistency of pricing features in the marketplace, so that consumers can “understand a step-up strategy.” It reported that models with similar features will usually end up within \$100 of each other, and units priced too high above the market for their feature set will not sell. Purchaser *** stated that it analyzes all products, features, and pricing to determine the best price/margins and rent-to-own payments that best meet its customers’ needs. Purchaser *** stated that the prices of competing brands are used to evaluate the prices of particular suppliers. Purchaser *** stated that price is important, but factors such as design, innovation, and exceptional quality are required for a successful program. Purchaser *** reported that it tries to offer customers a full range of choices of both features and price points. Purchaser *** stated it negotiates prices based on the market value of features and benefits.

Drive type

*** sold direct drive LRWs while *** sold belt drive LRWs in the U.S. market at various points during 2012-17. Purchasers were asked if belt-driven top load and front load LRWs compete with direct drive top load and front load LRWs and if the price of belt-driven LRWs affect the price of direct drive LRWs. Sixteen of 25 responding purchasers reported that belt-driven front load LRWs compete with direct drive front load LRWs, seven of which reported that belt driven front load washers affect the price of direct drive front load washers. Sixteen of

24 responding purchasers reported that belt-driven top load LRWs compete with direct drive top load LRWs, six of which reported that belt driven top load LRWs affect the price of direct drive top load LRWs. Purchaser *** stated that these products are similar in product design and comparable pricing must exist to be able to compete. Purchasers *** stated that customers do not know one from the other.¹⁵

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 LRWs products shipped to unrelated U.S. customers during January 2012 to September 2018.^{16 17} Data were requested net of all discounts, both direct and indirect, and specifications for all SKUs reported under each pricing product were also requested.

Product 1.--Top loading, Energy Star rated washer; impeller; rated DOE capacity greater than or equal to 5.7 cubic feet; water heater included, steam cycle included; lid includes clear or tinted window; electronic controls, non-white finish.

Product 2.--Top loading, Energy Star rated washer; impeller; rated DOE capacity greater than or equal to 4.7 cubic feet but less than 5.2 cubic feet; no water heater included; no steam cycle included; lid includes clear or tinted window; white finish.

Product 3.--Front loading, Energy Star rated washer; rated DOE capacity greater than or equal to 4.2 cubic feet but less than 4.7 cubic feet; water heater included; steam cycle(s) included; no LCD/LED display; white finish.

Product 4.--Front loading, Energy Star rated washer; rated DOE capacity greater than or equal to 3.7 cubic feet but less than 4.2 cubic feet; no water heater included; no steam cycle(s) included; no LCD/LED display; white finish.

¹⁵ *** submitted a purchaser questionnaire ***.

¹⁶ Firms were requested to report f.o.b. factory and f.o.b. port sales values and were instructed to deduct all U.S.-inland transportation costs from their sales values.

¹⁷ Parties provided comments on pricing product definitions. Whirlpool accepted product 2 as is and product 3 with the deletion of direct drives. Staff also added Whirlpool's smaller capacity range front loading and top loading products. LG proposed five pricing products. Staff accepted two of the proposed pricing products but maintained the water heater and impellor only characteristics, changed references to LCD display to LCD/LED display for clarity, and added two products in non-white finishes. Samsung did not provide comments on pricing product definitions.

Product 5.--Front loading, Energy Star rated washer; rated DOE capacity greater than or equal to 4.8 cubic feet but less than 5.3 cubic feet; water heater included, steam cycle(s) included; no LCD/LED display; non-white finish.

Product 6.-- Top loading, Energy Star rated washer; impeller; rated DOE capacity greater than or equal to 3.7 cubic feet but less than 4.2 cubic feet; no water heater included; no steam cycle included; lid includes clear or tinted window; white finish.

Two U.S. producers, ***, and one importer, ***, provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.^{18 19} Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of LRWs and approximately *** percent of U.S. shipments of subject imports from Korea in 2017.

Price data for products 1-3 and 5-6 are presented in tables V-4 to V-8 and figures V-2 to V-6.²⁰ No pricing data was reported for LRWs imported from Mexico.²¹

Table V-4

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 1,¹ and margins of underselling/(overselling), by quarters, January 2012-September 2018

* * * * *

Table V-5

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 2,¹ and margins of underselling/(overselling), by quarters, January 2012-September 2018

* * * * *

Table V-6

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 3,¹ and margins of underselling/(overselling), by quarters, January 2012-September 2018

* * * * *

Table V-7

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 5,¹ and margins of underselling/(overselling), by quarters, January 2012-September 2018

* * * * *



¹⁸ Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

¹⁹ Producer *** reported ***. Staff ***.

²⁰ Neither U.S. producers nor importers reported pricing data for product 4.

²¹ Importer ***. Importer ***. While drive type was not defined in the pricing product definitions, *** may not have imported *** meeting the other product characteristics listed.

Table V-8

LRWs: Weighted-average f.o.b. prices and quantities of domestic and imported product 6,¹ and margins of underselling/(overselling), by quarters, January 2012-September 2018

* * * * *

Figure V-2

LRWs: Weighted-average prices and quantities of domestic and imported product 1,¹ by quarters, January 2012-September 2018

* * * * *

Figure V-3

LRWs: Weighted-average prices and quantities of domestic and imported product 2,¹ by quarters, January 2012-September 2018

* * * * *

Figure V-4

LRWs: Weighted-average prices and quantities of domestic and imported product 3,¹ by quarters, January 2012-September 2018

* * * * *

Figure V-5

LRWs: Weighted-average prices and quantities of domestic and imported product 5,¹ by quarters, January 2012-September 2018

* * * * *

Figure V-6

LRWs: Weighted-average prices and quantities of domestic and imported product 6,¹ by quarters, January 2012-September 2018

* * * * *

Price trends

Price data was not present in every quarter for every product, and the first quarter of reported U.S. prices was not the same as the first quarter of reported import prices, making trend analysis difficult. In general, prices changes were mixed during January 2012-September 2018. Table V-9 summarizes the price trends, by country and by product. As shown in the table, domestic prices ranged from a *** percent decline to a *** percent increase during January 2012-September 2018 while import prices ranged from a *** percent decrease to a *** percent increase.

Table V-9

LRWs: Summary of weighted-average f.o.b. prices for products 1-3 and 5-6 from the United States, Korea, and Mexico

* * * * *

Price comparisons

As shown in table V-10, prices for LRWs imported from Korea were below those for U.S.-produced product in 8 of 16 instances; margins of underselling ranged from *** to *** percent. In the remaining 8 instances, prices for LRWs from Korea were between *** and *** percent above prices for the domestic product.

Table V-10

LRWs: Instances of underselling/overselling and the range and average of margins, by product and by country, January 2012-September 2018¹

Source	Underselling				
	Number of quarters	Quantity ¹ (units)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Korea	8	***	***	***	***
Mexico	---	***	***	***	***
Total	8	***	***	***	***
Source	(Overselling)				
	Number of quarters	Quantity ¹ (units)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Korea	8	***	***	***	***
Mexico	---	***	***	***	***
Total	8	***	***	***	***

¹ In the original investigations, subject imports from Korea were priced lower than domestic product in *** of *** comparisons, with underselling margins ranging from *** to *** percent; and subject imports from Mexico were priced lower than domestic product in *** of *** comparisons, with underselling margins ranging from *** to *** percent. *Large residential washers from Korea and Mexico, Inv. Nos. 701-TA-488 and 731-TA-1199-1200 (Final)*, USITC Staff Report, INV-LL-005, January 2013, p. V-46.

In *Large Residential Washers from China*, prices for LRWs from China were below those for U.S.-produced LRWs in 100 of 111 instances, with margins of underselling ranging from 0.1 to 41.6 percent. *Large Residential Washers from China, Inv. No. 731-TA-1306 (Final)*, USITC Publication 4666, January 2017, p. V-14 and table V-17. In *Large Residential Washers*, prices for imported LRWs were below those for U.S. produced product in 70 of 92 instances. *Large Residential Washers, Inv. No. TA-201-076*, USITC Publication 4745, December 2017, p. V-28 and table V-20.

Note.— No pricing data was reported for product 4. No pricing data were reported for Mexico. No Korean pricing data were reported for products 3 and 5.

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

Purchasers' perceptions of relative price trends

Purchasers were asked how the prices of LRWs from the United States had changed relative to the prices of LRWs from Korea and Mexico since January 1, 2012. Twenty-one purchasers reported the price of domestically produced LRWs had changed, 17 reported prices for LRWs imported from Korea had changed, and 14 reported prices of LRWs imported from Mexico had changed. Thirteen purchasers reported that the price of imports from Korea had changed by the same amount relative to U.S.-produced LRWs, five reported that the U.S.-produced LRWs were priced higher, and two reported that LRWs from the United States were priced lower than imports of LRWs from Korea. Ten purchasers reported that the price of imports from Mexico had changed by the same amount relative to U.S.-produced LRWs, three reported that the U.S.-produced LRWs were priced higher, and one reported that LRWs from the United States were priced lower than imports of LRWs from Mexico.

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
83 FR 100 January 2, 2018	<i>Initiation of Five-Year (Sunset) Reviews</i>	https://www.govinfo.gov/content/pkg/FR-2018-01-02/pdf/2017-28261.pdf
83 FR 145 January 2, 2018	<i>Certain Large Residential Washers From Korea and Mexico; Institution of Five-Year Reviews</i>	https://www.govinfo.gov/content/pkg/FR-2018-01-02/pdf/2017-28238.pdf
83 FR 18347 April 26, 2018	<i>Certain Large Residential Washers From Korea and Mexico; Notice of Commission Determination To Conduct Full Five-Year Reviews</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-04-26/pdf/2018-08791.pdf
83 FR 19222 May 2, 2018	<i>Large Residential Washers From the Republic of Korea: Final Results of Expedited First Sunset Review of the Countervailing Duty Order</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-05-02/pdf/2018-09310.pdf
83 FR 21764 May 10, 2018	<i>Large Residential Washers From Mexico: Final Results of the Expedited First Five-Year Sunset Review of the Antidumping Duty Order</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-05-10/pdf/2018-09948.pdf
83 FR 46757 September 14, 2018	<i>Large Residential Washers From Korea and Mexico; Scheduling of a Full Five-Year Review</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-09-14/pdf/2018-19987.pdf
83 FR 52803 October 18, 2018	<i>Large Residential Washers From the Republic of Korea: Final Results of the First Five-Year Sunset Review of the Antidumping Duty Order</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-10-18/pdf/2018-22635.pdf
84 FR 2926 February 8, 2019	<i>Certain Large Residential Washers From Korea and Mexico; Revised Schedule for Full Five-Year Reviews</i>	https://www.govinfo.gov/content/pkg/FR-2019-02-08/pdf/2019-01634.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

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

Subject: Certain Large Residential Washers from Korea and Mexico
Inv. Nos.: 701-TA-488 and 731-TA-1199-1200 (Review)
Date and Time: February 21, 2019 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

STATE GOVERNMENT WITNESSES:

The Honorable Bill Reineke, State Representative, Ohio House of Representatives, 88th District, Ohio

The Honorable Bob Rolfe, Commissioner, Tennessee Department of Economic and Community Development

The Honorable Lydia Mihalik, Director, Ohio Development Services Agency

EMBASSY APPEARANCE:

**Embassy of the Republic of Korea
Washington, DC**

Yeo Han-Koo, Minister-Counselor

OPENING REMARKS:

In Support of Continuation of Orders (**Myles S. Getlan**, Cassidy Levy Kent (USA) LLP)
In Opposition to Continuation of Orders (**Michael T. Shor**, Arnold & Porter Kaye Scholer LLP)

**In Support of the Continuation of
Antidumping and Countervailing Duty Orders:**

Cassidy Levy Kent (USA) LLP
Washington, DC
on behalf of

Whirlpool Corporation

Joseph Liotine, President, North America Region, Whirlpool Corporation

Casey Tubman, General Manager, North America Region, Laundry Products, Whirlpool Corporation

Jack A. Levy)
Myles S. Getlan) – OF COUNSEL
Mary Jane Alves)

TRADEWINS LLC
Washington, DC
on behalf of

Haier US Appliance Solutions d/b/a GE Appliances (“GEA”)

Michael Mattingly, Executive Direction,
Clothes Care, GEA

Sheridan S. McKinney)
) – OF COUNSEL
John R. Magnus)

**In Opposition to the Continuation of
Antidumping and Countervailing Duty Orders:**

Curtis, Mallet-Prevost, Colt & Mosle LLP
Washington, DC
on behalf of

LG Electronics, Inc.
LG Electronics USA, Inc.
(collectively “LGE”)

John Toohey, Director of Strategy, LGEUS

Andrew Kim, Director of Laundry Product Management, LGEUS

Theodore Myers, Innovation Team Leader, LGETN

**In Opposition to the Continuation of
Antidumping and Countervailing Duty Orders (continued):**

Richard Wingate, Vice President and General Counsel,
LGEUS

Daniel Klett, Principal, Capital Trade Inc.

Charles Anderson, Principal, Capital Trade Inc.

Daniel L. Porter)
James P. Durling)
) – OF COUNSEL
Gina M. Colarusso)
Kimberly A. Reynolds)

Arnold & Porter Kaye Scholer LLP
Washington, DC
on behalf of

Samsung Electronics Co., Ltd.
Samsung Electronics Digital Appliances Mexico (SEDAM)
Samsung Electronics America (SEA)
Samsung Electronics Home Appliance America (SEHA)
(collectively “Samsung”)

Thomas Komaromi, General Counsel, SEHA

Michael T. Shor)
) – OF COUNSEL
J. David Park)

REBUTTAL/CLOSING REMARKS:

In Support of Continuation of Orders (**Jack A. Levy**, Cassidy Levy Kent (USA) LLP)
In Opposition to Continuation of Orders (**Michael T. Shor**, Arnold & Porter Kaye Scholer LLP;
and **Daniel L. Porter**, Curtis, Mallet-Prevost, Colt & Mosle LLP)

APPENDIX C
SUMMARY DATA

Table C-1: LRWs: Summary data concerning the U.S. market.....	C-3
Table C-2: LRWs: Summary data concerning the U.S. market, excluding Samsung	C-3

Table C-1

LRWs: Summary data concerning the U.S. market, 2012-17, January to September 2017, and January to September 2018

* * * * *

Table C-2

LRWs: Summary data concerning the U.S. market, excluding U.S. producer Samsung, 2012-17, January to September 2017, and January to September 2018

* * * * *

HISTORICAL DATA

Table C-1

LRWs: Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-2

Front-load LRWs: Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-3

Top-load LRWs: Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-4

Conventional top-load residential washers (less than 3.7 cubic feet in capacity): Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-5

High-efficiency top-load residential washers (less than 3.7 cubic feet in capacity): Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-6

LRWs (including TLs less than 3.7 cubic feet): Summary data concerning the U.S. market, 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-7

LRWs (including TLs less than 3.7 cubic feet): Summary data concerning the U.S. market (excluding Electrolux from domestic industry), 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-8

All LRWs except for conventional top-load residential washers less than 3.7 cubic feet: Summary data concerning the U.S. market (excluding Electrolux from domestic industry), 2009-11, January-June 2011, and January-June 2012

* * * * *

Table C-9

HE Top load LRWs (including TLs less than 3.7 cubic feet): Summary data concerning the U.S. market (excluding Electrolux from domestic industry), 2009-11, January-June 2011, and January-June 2012

* * * * *

APPENDIX D

**COMMENTS REGARDING THE EFFECTS OF THE ORDERS AND THE LIKELY EFFECTS
OF REVOCATION**

Table D-1

LRWs: Firms' narratives on the impact of the order(s) and the likely impact of revocation

* * * * *

APPENDIX E

IMPACT OF THE SAFEGUARD MEASURE

Table E-1

LRWs: U.S. producers' responses regarding the impact of the safeguard measure on firm and market

* * * * *

Table E-2

LRWs: U.S. producers' responses regarding the specific effects of the safeguard measure

* * * * *

Table E-3

LRWs: U.S. producers' responses regarding the changes to competitive outlook due to the safeguard measure

* * * * *

Table E-4

LRWs: U.S. importers' responses regarding the impact of the safeguard measure on firm and market

* * * * *

Table E-5

LRWs: U.S. importers' responses regarding the specific effects of the safeguard measure

* * * * *

Table E-6

LRWs: U.S. importers' responses regarding the changes to competitive outlook due to the safeguard measure

* * * * *

Table E-7

LRWs: U.S. purchasers' responses regarding the impact of the safeguard measure on firm and market

* * * * *

Table E-8

LRWs: U.S. purchasers' responses regarding the specific effects of the safeguard measure

* * * * *

Table E-9
LRWs: U.S. purchasers' responses regarding the changes to competitive outlook due to the
safeguard measure

* * * * *

