UNITED STATES TARIFF COMMISSION

SHEET GLASS
(BLOWN OR DRAWN FLAT GLASS)

Report to the President on
Investigation No. TEA-I-EX-4 Under
Section 351(d)(3) of the
Trade Expansion Act of 1962

TC Publication 215
Washington, D. C.
September 1967

UNITED STATES TARIFF COMMISSION

Address all communications to

United States Tariff Commission

Washington, D.C. 20436

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(TC28595)

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Note.--The whole of the Commission's report to the President may not be made public since it contains certain information that would result in the disclosure of the operations of individual concerns. This published report is the same as the report to the President, except that the above-mentioned information has been omitted. Such omissions are indicated by asterisks.

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REPORT TO THE PRESIDENT

U.S. Tariff Commission
September 8, 1967

To the President:

This report is made pursuant to section 351(d)(3) of the Trade Expansion Act of 1962 (76 Stat. 900), which provides that--

> Upon petition on behalf of the industry concerned, filed with the Tariff Commission not earlier than the date which is 9 months, and not later than the date which is 6 months, before the date any increase or imposition referred to in paragraph (1) or (2) of subsection (c) is to terminate by reason of the expiration of the applicable period prescribed in paragraph (1) or an extension thereof under paragraph (2), the Tariff Commission shall advise the President of its judgment as to the probable economic effect on such industry of such termination.

Introduction

Following an investigation by the Tariff Commission and reports to the President on May 17, 1961 1/ and January 10, 1962 2/ under section 7 of the Trade Agreements Extension Act of 1951, as amended, the President, by proclamation, 3/ increased the rates of duty applicable to sheet glass. Initially, the increased duties were to become effective after the close of business on April 18, 1962; the President deferred the effective date of the increased duties, however, until the close of business on June 17, 1962. 4/

Since June 1962, when the rates of duty were increased, the Commission has maintained a continuing review of developments with respect

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1/ Cylinder, Crown, and Sheet Glass: Report to the President on Escape-Clause Investigation No. 7-101, TC Publication 17, 1961.

2/ Cylinder, Crown, and Sheet Glass: Report in Response to the President's Request for Information Supplemental to the Report on Escape-Clause Investigation No. 7-101, TC Publication 48, 1962.

3/ Proclamation No. 3455, dated Mar. 19, 1962; 3 CFR, 1962 Supp., p. 35.

4/ Proclamation No. 3458, dated Mar. 27, 1962; 3 CFR, 1962 Supp., p. 40.

to sheet glass. In connection therewith the Tariff Commission has made two annual reports to the President pursuant to section 351(d)(1) of the Trade Expansion Act of 1962, [1/] which provides that--

> So long as any increase in, or imposition of, any duty or other import restriction pursuant to this section or pursuant to section 7 of the Trade Agreements Extension Act of 1951 remains in effect, the Tariff Commission shall keep under review developments with respect to the industry concerned, and shall make annual reports to the President concerning such developments.

On March 30, 1964, the President requested the Commission to conduct an investigation under the provisions of section 351(d)(2) of the Trade Expansion Act of 1962, which provides that--

> Upon request of the President or upon its own motion, the Tariff Commission shall advise the President of its judgment as to the probable economic effect on the industry concerned of the reduction or termination of the increase in, or imposition of, any duty or other import restriction pursuant to this section or section 7 of the Trade Agreements Extension Act of 1951.

A hearing in connection with the investigation was held on June 30 and July 1, 1964; a report was submitted to the President on June 11, 1965. [2/]

1/ Cylinder, Crown, and Sheet Glass: Report to the President (No. TEA-IR-7-63) Under Section 351(d)(1) of the Trade Expansion Act of 1962, TC Publication 110, 1963 and Sheet Glass (Blown or Drawn Flat Glass): Report to the President (No. TEA-IR-7-66) Under Section 351(d)(1) of the Trade Expansion Act of 1962, TC Publication 178, 1966.

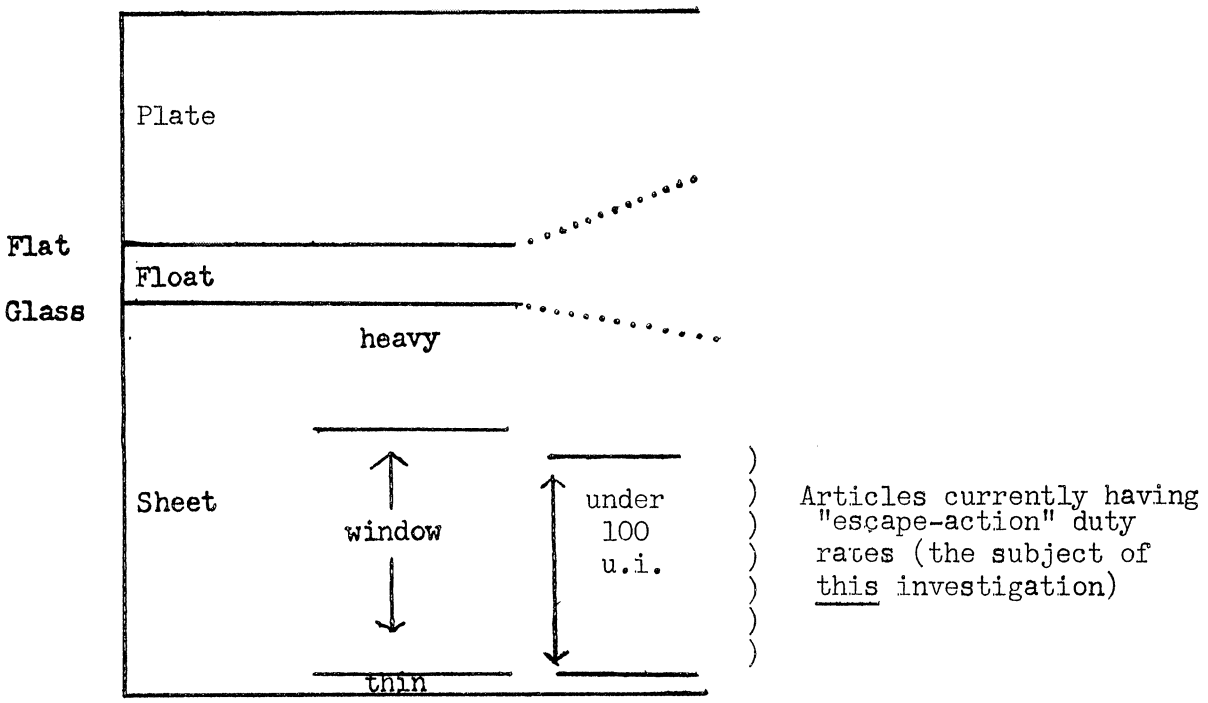
2/ Drawn or Blown Flat Glass (Sheet Glass): Report to the President on Investigation No. TEA-1A-4 Under Section 351(d)(2) of the Trade Expansion Act of 1962, TC Publication 158, 1965. Ordinarily, an annual review on sheet glass would have been submitted on Sept. 28, 1964. Inasmuch as a comprehensive investigation under sec. 351(d)(2) was in progress on that date no annual review report was submitted during 1964. The report submitted pursuant to sec. 351(d)(2) during 1965 was also submitted as the annual review report for that year.

On January 11, 1967, the President, pursuant to the provisions of section 351(c)(1)(A) of the Trade Expansion Act, terminated certain of the increases in the rates that had been imposed pursuant to the escape-clause procedure and reduced the others. The increases that remain in effect are scheduled to terminate at the close of October 11, 1967, by operation of section 351(c)(1)(B), unless they are extended by the President. On April 7, 1967 a petition for extension of the rates currently applicable was filed on behalf of the sheet glass industry. Accordingly, on April 12, 1967, the Commission instituted the instant investigation to determine the probable economic effect on the industry of the termination of the remaining escape-action increases. A public hearing was held on June 20, 1967 in conjunction with the investigation.

Probable Economic Effect of Restoration of
the Concessions on Window Glass

Statement by Commissioners Culliton,
Thunberg, and Clubb

We are concerned in this investigation with the probable economic effect on the sheet glass industry of a reduction in the rates of duty on certain window glass. Window glass is the most important type of sheet glass which is, in turn, a part of a broader complex of products known collectively as flat glass. 1/ The relative importance of the three principal types of transparent flat glass--sheet, plate, and float--is illustrated by the following diagram:



1/ For a more complete discussion of the different types of flat glass and their uses see the section of this report on description and uses.

The space alloted to each type of glass in the diagram is roughly proportionate to the apparent U.S. consumption thereof in 1966 whereas the dotted lines indicate a probable increase in the importance of float glass, at the expense of both plate glass and sheet glass, in the future. The diagram also indicates the relative importance of the three principal types of sheet glass--thin sheet glass, window glass, and heavy sheet glass.

In June 1962, following a finding of injury by the Tariff Commission, the President imposed higher escape-action rates of duty on sheet glass. Float and plate glass were not involved in that action and are not involved here. In January 1967, the President eliminated the higher escape-action rates of duty on a portion of the products of the sheet glass industry (on thin sheet glass, heavy sheet glass, and a small quantity of window glass). On the remaining category, which included almost all of the window glass, and accounts for about three-fifths of the total output of the sheet glass industry, 1/ he reduced, but did not eliminate, the escape-action increases.

In the present investigation, therefore, the Tariff Commission is required to inform the President of the probable economic effect on the sheet glass industry of the elimination of the already reduced escape-action rates on such window glass.

1/ Separate data are not available on the quantity of U.S. shipments of window glass over 100 united inches. Such glass comprised only 6 percent of total window glass imports in 1966, however, and a sample analysis of shipments from one U.S. factory indicated that window glass over 100 united inches constituted a similarly small proportion of its window glass shipments.

The duty reductions that will automatically take effect, unless the modified escape-action rates are extended by the President, amount, on the average, to about 8 percent of the export value of the imported window glass. Such a reduction is particularly significant to this industry because of short- and long-term expectations affecting both supply and demand. The articles on which the duty reduction would take place constitute about three-fifths of the total volume of shipments of the sheet glass industry, which is already in the process of adjusting to duty reductions. Foreign excess capacity, which has been increasing, appears likely to be sustained. Demand for the products of this particular industry is expected to be static or grow only slowly as more attractive substitutes increasingly replace sheet glass. Product substitution influenced by technological change will tend to keep not only the volume, but also the prices, of sheet glass from rising.

While some companies are diversified in other competing glass products, two producers depend exclusively on sheet glass and to a large extent on window glass. Even though the plants of these two companies, as well as some plants of the more diversified firms, are located in distressed areas of the United States, their wage rates are among the highest in American industry. 1/

A duty cut will, therefore, put increased pressures on the industry. The effects of these pressures will be unevenly felt by the firms comprising the industry, and may have a greater effect on the internal makeup of the surviving industry than upon the volume and price structure

1/ U.S. Statistical Abstract, 1966, p. 238.

of the industry as a whole. The duty cut probably would lead to lower profits or additional losses in those firms already at the low end; possibly, to the shut down of some marginal plants (not only those of the non-diversified firms but even of the plants operated by firms which, as firms, will be able to adjust by further rationalization of the production of flat glass); to a further concentration of domestic production; and to a lower manufacturing employment per unit of output.

Despite all these pressures and the resulting adjustments, it is probable that a healthy, but changed, industry would continue to meet the largest portion of the domestic demand for sheet glass at a reasonable rate of profit on both sales and invested capital. As a corollary, of course, imported sheet glass would permanently supply a significant portion of the domestic consumption. Presumably that portion would be somewhat higher and the competitive pressures to keep prices down a little greater than if the higher duty remained. But we do not see, in the light of all the other competitive forces, that the elimination of the duty would be the controlling factor in shaping the future of the industry.

Statement by Commissioner Sutton

In my opinion any further reduction in the rates of duty on imported sheet glass would impair the domestic industry producing these products more seriously than as envisaged by my colleagues. The reasons for the foregoing conclusion are set forth below.

It would be a serious error to dismiss lightly the importance of the escape-action rates of duty of concern in this investigation. The glass to which such duties are applicable (window glass measuring not over 100 united inches) is not inconsequential--either in domestic consumption, production, or imports. Such glass provides the core upon which the viability of the domestic industry depends. In recent years such glass has accounted for about 60 percent of the domestic production of sheet glass and nearly 50 percent of the imports.

The U.S. sheet glass industry is already in a depressed condition. U.S. consumption, production, shipments by the domestic producers, and employment by workers in the domestic industry were all lower in 1966 than in any year since 1961. During the first half of 1967, moreover, consumption and domestic shipments continued to decline. Shipments in January-June 1967 were nearly 20 percent lower than in the comparable period in 1966. Profits earned by the domestic producers were successively lower in 1965 and 1966.

Even in 1966, when the full escape-action rates were still being imposed on imports of all sheet glass, and notwithstanding that consumption had declined, imports increased and achieved the greatest market penetration on record. After January 1967, the competitive position of foreign manufacturers was enhanced by the partial restoration of the trade-agreement rates of duty. Although it is too early to determine fully the effect of the partial restoration of the trade-agreement rates, the increased inroads made by imports during the first half of 1967 mark a further deterioration in the position of the domestic producers.

Major increases in world capacity to produce sheet glass in recent years portend more intensive competition in both the U.S. and foreign markets. Countries that heretofore have been significant exporters of sheet glass (e.g., Belgium, France, Germany, and Japan) can be expected to intensify their sales efforts in the United States, particularly as various less-developed countries become increasingly self-sufficient. Italy, long a major importer of sheet glass, now has capacity to export more than a third of its production. Israel, which completed its first sheet glass plant in 1965, is now able not only to satisfy its home-market requirements but also to export significant quantities. Since 1965 factories have also been completed in Cuba, India, Iran, Malaysia, Taiwan, Thailand, Venezuela, and Yugoslavia. Additional plants are currently under construction in Algeria, Canada, and Hungary. Major plant expansions have been completed since 1965 in Norway, Poland, and Sweden. In view of surplus world capacity to produce sheet glass, a further reduction in the rates of duty would accelerate its importation into the United States.

Such a reduction in duty at this time would be particularly harmful to the domestic industry because of its vulnerability to increasing competition from float glass. Six new U.S. float-glass plants have already gone into production; a seventh is under construction and an eighth is projected. Canada has recently completed, and Mexico is constructing, float-glass facilities having capacities in excess of home market demands. Plants have also been completed recently in Belgium, France, Germany, Italy, Japan, and Spain. Within the last year, establishments in Czechoslovakia and the U.S.S.R. have been licensed to

produce float glass. It is likely, moreover, that further expansion in world capacity to produce float glass will generate competitive pressures that will accelerate the rate at which such glass displaces sheet glass. Accordingly, the maintenance of satisfactory levels of operation by domestic producers of sheet glass will become increasingly difficult.

The modified duties retained in January 1967--i.e., the rates of duty of concern in this investigation--afforded relief primarily to plants and workers in Appalachia, where the production of window glass is concentrated. In view of the continuing depressed conditions in that area, particularly in Clarksburg, West Virginia, [1/] where three sheet glass plants are located, it is imperative that these duties be maintained--at least until the effect of the partial restoration of rates already effective can be ascertained and until economic conditions in these communities have materially improved.

In view of the foregoing considerations, I am of the opinion that the domestic industry producing sheet glass should not be confronted with a further loss of the relief once accorded under section 7 of the Trade Agreements Act.

1/ In May 1967, the latest month for which statistics are available, 7 percent of the civilian labor force in the Clarksburg area was unemployed.

Additional statement by Commissioners Thunberg and Clubb

As stated above, we agree that the restoration of trade-agreement concessions will not seriously affect the sheet glass industry in the aggregate. We note, however, that the industry is undergoing a period of intensified competitive pressures which are likely to strain--perhaps seriously--the financial strength of those operations in the industry which are already on the edge of profitability. Some of these marginal resources are located, as Commissioner Sutton stresses, in the depressed area of Appalachia. If the President authorizes the concession rates to be reestablished, those firms and operations, which were marginal even under more favorable circumstances, may be forced out of business.

Because we feel the industry as a whole is healthy, we share only part of Vice Chairman Sutton's concern about the effects of the restoration of trade-agreement concessions. We are concerned only for that fraction of the industry at the margin of profitability. Without prejudging the facts of any case that may come before the Commission in the future, we note that if imports do increase as a result in major part of trade-agreement concessions, and if marginal firms or workers suffer serious injury as a result in major part of the increased imports, those firms and workers would be eligible for trade-adjustment relief. In gauging the probable economic effects of the termination of escape-clause rates, the President may wish to consider whether such assistance would be a more appropriate, effective, and permanent form of relief in circumstances of highly localized and limited injury than the indefinite continuation of escape-clause rates.

Information Obtained in the Investigation

Summary of recent developments

The U.S. consumption of sheet glass, shipments thereof by U.S. producers, the U.S. production of sheet glass, and the man-hours expended thereon were lower in 1966 than in any other year since 1961. The decline in consumption reflected primarily a downturn in residential construction and automobile production during 1966.

Imports of sheet glass were larger in 1966 than in 1965. Although the total imports in 1966 were smaller than in 1959, 1962, or 1964, the share of apparent consumption supplied by such imports--25.3 percent--was higher than in any other recent year.

Prices of both foreign and domestic sheet glass advanced moderately during 1966. As a result of modifications in the terms of sale of imported sheet glass, the margins by which such glass undersold domestically produced sheet glass were increased slightly.

During 1965-67 a number of changes occurred that have significantly altered the character of competition in the sheet glass industry. These include:

(1) The dismantling by the Ford Motor Co. of one of its two sheet glass furnaces in 1965 and the construction, in its place, of a new float glass furnace that began production in March 1966. The preponderant part of Ford's float glass production has been used in the side and rear windows of automobiles, primarily as a substitute for the sheet glass it produced.

(2) The Blackford Window Glass Co. was sold in February 1966 and the plant was closed shortly thereafter. The new owner attributed the closedown primarily to labor difficulties.

(3) The Fourco Glass Co. was shut down from June 8, 1966 through January 25, 1967 by a strike---the company's second major strike within two years.

(4) PPG Industries, the largest domestic producer of sheet glass, completed construction of a new sheet glass plant (its fifth) in California in March 1967. It was the first U.S. sheet glass plant to be built west of Oklahoma. The company began making shipments from the plant in May 1967.

Description and uses

The imported product covered by this report is sheet glass weighing over 4 ounces per square foot. Such glass is currently identified in the Tariff Schedules of the United States (TSUS) as "drawn or blown flat glass." It was identified under the Tariff Act of 1930 as "cylinder, crown, and sheet glass." 1/

Sheet glass is one of four principal types of flat glass. The other three types, imports of which are not covered by the present investigation, are described briefly below:

Patterned glass, which is also known as cast or rough rolled glass, is a translucent type of flat glass (sometimes containing a wire netting) having irregularities impressed on its surfaces by the rollers used to form the glass. It is generally used in applications where transparency is unnecessary or objectionable, but where light is needed, as in skylights, factory windows, and office partitions.

Plate glass is rolled glass that has been ground and polished. The grinding and polishing make the glass transparent and

1/ Cylinder and crown glass are made by hand production methods, which are now virtually obsolete.

render its surfaces virtually plane and parallel, thereby eliminating the distortion found, in various degrees, in sheet glass. Because of the virtual absence of distortion plate glass commands a considerably higher price than sheet glass. It is used chiefly in automobile windshields; it is also used extensively in the side and rear windows of automobiles, in glazing large openings such as those in store display windows and curtain wall construction, and in high quality mirrors.

Float glass 1/ is a new type of transparent flat glass having plane and parallel surfaces virtually comparable to those of plate glass. The parallel surfaces of float glass, however, are obtained by floating the layer of molten glass (which, as in the plate glass manufacturing process, is initially formed by rolling) over molten tin rather than by physical grinding and polishing. Float glass also has been used primarily by the automobile industry, where it has replaced both plate glass and heavy sheet glass to a significant extent, but it also is being used increasingly in mirrors and in general glazing operations.

Sheet glass is a transparent flat glass product made by machine drawing, and having a smooth fire polished surface. Its use in new building construction accounts for the bulk of the U.S. consumption of sheet glass; replacement glazing, automobile production, and mirror manufacture also account for significant quantities. Other uses are in picture frames, pinball machine covers, lighting fixtures, appliance parts, and photographic dry plates. Sheet glass has three major subclassifications, based on its thickness. The respective products and their uses are as follows:

1/ The technique of manufacturing float glass was developed by a British firm--Pilkington Bros., Ltd. It was first produced in commercial quantities in 1959 and was first imported into the United States in 1960. The first U.S. float-glass-production facilities began operations in 1964. Six float glass plants are now in operation, and plans for at least two more have been announced by U.S. producers.

(1) Thin sheet glass (weighing over 4 but not over 16 ounces per square foot) is used in miscellaneous applications such as picture glass, microscope-slide glass, photographic dry plates, and small mirrors. It has also been used to a limited extent in small-size and/or low-quality storm windows.

(2) Window glass (weighing over 16 ounces but not over 28 ounces per square foot) is used chiefly for glazing windows, doors, and storm sash in residential construction. It is also used in making laminated glass (safety glass consisting of sheets of glass with a plastic interlayer), pinball machine covers, and double-glazed insulating units.

(3) Heavy sheet glass (weighing over 28 ounces per square foot) is used to glaze large openings such as glass patio doors and the glass panels frequently found adjacent to them. Heavy sheet glass is often tempered (specially toughened) and, in that form, is used extensively in the side and rear windows of many automobiles.

U.S. tariff treatment

All sheet glass [1/] except that weighing over 16 ounces but not over 28 ounces per square foot (window glass) and measuring not over 100 united inches, [2/] is currently dutiable at trade-agreement rates restored by the President on January 11, 1967--i.e., the rates that had been in effect immediately preceding the imposition of the escape-

1/ Sheet glass weighing not over 4 ounces per square foot (TSUS item 541.01), which is commonly known as ribbon glass, was not affected by the escape action in 1962 and, therefore, is not considered in this report. Such glass accounts for only an insignificant portion of total imports, production, and consumption of sheet glass.

2/ A united inch is a unit of linear measure used in the flat glass industry to describe the sum of the length and the width of a rectangularly shaped piece of sheet glass.

action increases in 1962 (table 1). [1] Sheet glass weighing over 16 ounces but not over 28 ounces per square foot and measuring not over 100 united inches (which generally accounts for about half of the U.S. production and imports of sheet glass) is dutiable at the modified escape-action rates [2] proclaimed by the President on January 11, 1967.

The rates of duty currently applicable to ordinary sheet glass, imported from countries eligible to receive most-favored-nation (MFN) tariff treatment, [3] are specific rates that range from 0.7 cents to 1.5 cents per pound. Imports of colored or special sheet glass weighing over 16 ounces per square foot, which have constituted a minor part--less than 2 percent--of annual imports, are subject to the same specific rates as ordinary sheet glass plus a duty of 2.5 percent ad valorem. [4] The specific rates of duty currently applicable to MFN

1/ These rates are provided for in TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, and 544.17 (pt.). Before Aug. 31, 1963, the tariff treatment for imported sheet glass was provided for under par. 219 of the Tariff Act of 1930 (with an additional duty if colored or processed imposed under par. 224). With the implementation of the TSUS on Aug. 31, 1963, the nomenclature was modified slightly to bring the tariff provisions into closer conformity with trade practice.

2/ These rates are provided in items 923.31-923.77 of part 2A of the appendix to the TSUS. In this report the term full escape-action rates will be used to describe the rates of duty that were imposed by the President pursuant to the escape-clause procedure and that were in effect from June 17, 1962 to Jan. 10, 1967. The term modified escape-action rates will be used to describe the currently applicable rates of duty on window glass measuring not over 100 united inches, which were proclaimed by the President on Jan. 11, 1967.

3/ Sheet glass imported from countries or areas designated as Communist dominated or controlled is subject to higher rates of duty (shown in the "statutory rate" column of table 1) than that imported from countries eligible for MFN tariff treatment.

4/ Colored or special sheet glass weighing not over 16 ounces per square foot is subject to a higher specific rate of duty than ordinary sheet glass of comparable thickness; it is not subject to any additional ad valorem rate.

imports were equivalent to 18 percent ad valorem, based on such imports during January-June 1967.

In June 1962, pursuant to the escape-clause procedure, the President increased the rates of duty on imported sheet glass. The specific rates of duty imposed on all imports of sheet glass dutiable at MFN rates of duty in 1961 were equivalent to 14 percent ad valorem. The percentage increase in the rates in 1962 varied from 71 to 150 percent depending on the thickness and surface area of the glass, but on the average the rates were approximately doubled.

In January 1967 the President restored the concession rates of duty on thin sheet glass, on window glass measuring over 100 united inches, and on heavy sheet glass. 1/ The rates of duty on window glass measuring not over 100 united inches were reduced somewhat, but the escape-action increases were not completely eliminated.

The average ad valorem equivalents of the specific duties that were imposed on imported sheet glass dutiable at MFN rates (the full escape-action rates) in 1966 are compared below with the average ad valorem equivalents of the duties that would have been collected if the modified escape-action rates currently in effect had been imposed, and with those of the concession rates: 2/

1/ Hereinafter in this report the term thin sheet glass will denote glass weighing not over 16 ounces per square foot, window glass will denote glass weighing over 16 ounces but not over 28 ounces per square foot, and heavy sheet glass will denote glass weighing over 28 ounces per square foot.

2/ The average ad valorem equivalents of the duties imposed on sheet glass in Jan.-June 1967, in 1966, and in selected earlier years are shown in greater detail in table 2.

(Percent)

Item	Sheet glass weighing--			
	Not over 16 oz. per sq. ft.	Over 16 but not over 28 oz. per sq. ft.	Over 28 oz. per sq. ft.	All weights
Average ad valorem equivalent of:				
Duties actually collected (based on full escape-action rates)	17.1	27.7	45.4	32.7
Duties that would have been collected if the modified escape-action rates had been in effect	12.0	23.3	20.2	20.5
Duties that would have been collected if the concession rates had been in effect	12.0	15.7	20.2	16.8

The average of the duties on all sheet glass was reduced in January 1967 by more than one-third, as reflected by the decline in the average ad valorem equivalents (based on imports in 1966) from 32.7 percent to 20.5 percent. Termination of the modified escape-action rates on October 11, 1967, would result in a further reduction of approximately 18 percent.

The modification of the escape-action rate in January 1967 resulted in an average reduction of about 16 percent in the duties imposed on window glass alone (again based on imports in 1966). A further reduction of approximately 33 percent will occur if the modified escape-action duties on window glass expire.

U.S. consumption

Changes in the apparent consumption of sheet glass have followed closely cyclical changes in the industries from which the demand for sheet glass is derived. New building construction has been the principal consuming industry (accounting for some 60 percent of consumption); the automobile industry has been a smaller, but significant, user of sheet glass.

The apparent U.S. consumption of sheet glass, which varied little during 1962-65, declined in 1966 to the lowest level since 1961 (table 3). The decline is attributable primarily to the downturn in activity that occurred in the residential construction and automobile industries during 1966 (table 4). Preliminary data indicate that apparent consumption during January-June 1967 was considerably below that during the comparable period of 1966 (table 3), reflecting a continuing low level of activity in the residential construction and automobile industries.

The apparent consumption of sheet glass was substantially greater in 1962 than in 1960-61, reflecting concurrent large increases in both residential construction and automobile production in that year; the more modest advance in consumption in 1963, on the other hand, reflected a reduced rate of expansion in those industries. The relative stability of consumption during 1963-65 is attributable to the countervailing effects of decreasing residential construction and increasing automobile production.

Thin sheet glass.--Thin sheet glass accounted for 4 percent, by weight, of the apparent consumption of sheet glass in 1966 (table 5). The consumption of thin sheet glass, which had risen sharply during 1961-65, declined significantly in 1966. The annual consumption increased from 1961 through 1965, as manufacturers of storm windows increasingly substituted thin sheet glass for window glass. Later, an increase in the price of thin glass relative to that of window glass caused many of those manufacturers to shift back to window glass, with the result that the consumption of thin glass declined accordingly. Preliminary data indicate that the consumption of thin sheet glass declined sharply during the first half of 1967.

Window glass.--Window glass accounted for 60 percent, by weight, of the apparent consumption of sheet glass in 1966 (table 5). The decline in the consumption of window glass between 1965 and 1966 was somewhat smaller than that in residential construction, the principal determinant of such consumption, because of the increased use of such glass by industries not directly geared to residential construction (e.g., lighting fixtures and appliances) and because of the moderating influence of replacement demand. Preliminary data indicate that the consumption of window glass continued to decline during the first half of 1967, reflecting primarily the depressed level of residential construction. 1/

1/ Private housing starts during the first 5 months of 1967 totaled 474,300 units--a decline of 17 percent from the 571,000 units started during the comparable period of 1966.

Heavy sheet glass.--Heavy sheet glass accounted for 36 percent, by weight, of the apparent consumption of sheet glass in 1966 (table 5). The apparent consumption of heavy sheet glass declined in 1966 for the third consecutive year. The decline of 12 percent in 1966, however, was substantially greater than the modest declines of 1 percent in each of the years 1964 and 1965. At least three factors contributed to the reduced consumption in 1966: (1) the aforementioned decline in automobile production, (2) the partial substitution by the Ford Motor Co. of float glass for heavy sheet glass in automobile windows, and (3) the severe decline in residential construction on the West Coast, where heavy sheet glass has been used in construction more extensively than in the rest of the country. Preliminary data indicate that the consumption of heavy sheet glass during January-June 1967 was 20 to 25 percent below that during the comparable period of 1966.

Competition between sheet glass and other products.--Throughout the 1950's, sheet glass made substantial inroads in applications that had formerly used preponderantly plate glass. By 1960 sheet glass was being used in the side and rear windows of many automobiles. Sheet glass also found increasing acceptance, at the expense of plate glass, in commercial construction and in the manufacture of mirrors. Since approximately 1960, however, the advantages afforded by the continuing improvement in the quality of sheet glass have been offset by a

progressive narrowing in the price differential between plate glass and sheet glass. 1/ The result was an apparent equilibrium during 1960-65 in the market shares held by each.

In October 1964 float glass was introduced to the U.S. market by a domestic producer. 2/ Since then float glass for the construction and mirror trades has been offered for sale at prices identical to those prevailing for plate glass. The principal market for both plate and float glass, however, has been the automobile industry. Since the prices to this industry are negotiated, and since such prices relate to glass

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1/ The Bureau of Labor Statistics publishes monthly price indexes on single strength window glass and on 1/4-inch plate glass. The annual averages of those monthly indexes during the years 1961-66 and the average for Jan.-Apr. 1967 are shown below (1957-59=100):

	1961	1962	1963	1964	1965	1966	Jan.-Apr. 1967
Window glass----	97.0	100.6	105.4	114.8	113.1	113.1	116.2
Plate glass----	91.5	86.9	83.8	83.7	81.4	79.8	83.2

2/ * * *

in an advanced state of manufacture (i.e., laminated windshields or tempered side windows), the price charged for float glass for automotive use cannot be obtained on a basis comparable to that at which plate glass or sheet glass is sold.

Before 1966 almost all of the float glass used by the automobile industry was used by General Motors in lieu of the 1/4-inch tempered plate glass that it had previously used exclusively. In 1966, however, Ford Motor Co. began substituting 1/4-inch tempered float glass for tempered heavy sheet glass in its automobiles. * * *

U.S. producers

In June 1967, 6 firms operating 14 establishments accounted for virtually all of the U.S. production of sheet glass. Not only is sheet glass the sole product of 9 of these establishments, but it also constitutes the bulk of the output of 4 others. 1/ Four of the 6 firms mentioned above conduct multiproduct operations, preponderantly in establishments other than those in which sheet glass is produced; the other 2 firms produce sheet glass only. 2/ Three of the 6 firms accounted

1/ In 3 of the 4 plants the only other production activity is the further fabrication (i.e., tempering) of a portion of the sheet glass output.

2/ The 2 firms that produce only sheet glass are the Rolland and Harding Glass Cos. These are two different corporations, but they function in the marketplace as a single company known as the Fourco Glass Co.

for nearly 90 percent (based on weight) of the U.S. producers' shipments of sheet glass in 1966. 1/

Four of the 14 establishments producing sheet glass are located in West Virginia, 2 each are located in Pennsylvania and Oklahoma, and 1 each in California, Ohio, Illinois, Tennessee, Louisiana, and Arkansas.

U.S. producers' shipments, production, and inventories

Shipments of sheet glass by the U.S. producers in 1966 (1,383 million pounds) were lower than in any year since 1961. Shipments in 1966 were 9 percent below those in the preceding year, reflecting both the significant decline in domestic consumption and a reduction in the share of the market supplied by the domestic producers. The value of the U.S. producers' shipments of sheet glass 2/ during 1961-66 ranged from $107.4 million (in 1961) to $143.9 million (in 1964) and averaged $129.5 million.

In 1966 the U.S. producers' share of the market was 74.7 percent, the lowest on record. The following factors contributed to their altered position: (1) a strike of 7-1/2 months at the Fourco Glass Co. in 1966, (2) increased sales activity by some foreign manufacturers in inland areas (e.g., Chicago, Minneapolis, St. Paul), and (3) a slight increase in the margin by which imported glass undersold domestic glass in coastal areas as a result of changes in the terms of sale for imported sheet glass.

Shipments of sheet glass during January-June 1967--571 million pounds--were lower than those in the comparable period of each of the

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1/ * * *

2/ Does not include data on the value of shipments (consisting preponderantly of intracompany transfers) of sheet glass by Ford Motor Co.

years 1964 through 1966 (table 6). The decline of 19 percent from the comparable period in 1966 was about proportionate to the declines occurring in both residential construction and automobile production.

U.S. producers reported to the Commission the value of their shipments (including intracompany transfers) of sheet glass to each important class of customer. The relative importance of shipments to each class of customer is shown below for 1961 and for 1963-66:

Customer classification 1/	Percent of total value of shipments and transfers				
	1961	1963	1964	1965	1966
Shipments (including intracompany transfers) to: 2/					
Distributors, jobbers, wholesalers, and contractors	45.3	40.4	39.8	36.8	37.6
Sash and door manufacturers	23.7	25.1	26.3	27.8	24.8
Temperers	9.4	17.9	13.5	16.4	15.2
Laminators	4.0	2.3	2.9	1.8	2.2
Multiple-glazed-insulating-unit manufacturers	4.0	4.2	4.1	4.2	5.4
Mirror manufacturers	4.8	4.3	4.9	4.9	4.9
Other accounts 3/	8.8	5.8	8.5	8.1	9.9
Total	100.0	100.0	100.0	100.0	100.0

1/ Classified according to principal function.
2/ Intracompany transfers are classified according to the purpose for which the glass was transferred (e.g., for tempering, laminating, or distribution). The value of intracompany transfers amounted to roughly 20 percent of the total value of annual shipments in the years indicated.
3/ Includes manufacturers of jalousies, counter-dividers, lighting fixture parts, novelties, picture frames, appliance parts, and microscope slides.

U.S. producers' shipments of sheet glass, by major thickness categories, are discussed below.

Thin sheet glass.--In 1966 domestic shipments of thin sheet glass, which generally account for less than 2 percent of total shipments of sheet glass, increased slightly (from 24 million pounds in 1965 to 25 million pounds), notwithstanding a significant decline in the consumption of such glass (table 5). Shipments of thin sheet glass during January-June 1967, however, were less than half of those during the first half of 1966 (table 6).

Window glass.--Shipments of window glass by the U.S. producers in 1966 were 862 million pounds--5 percent less than the 910 million pounds shipped during 1965 and 5 percent less than the average quantity shipped during 1962-65. The decline in window glass shipments is probably attributable about equally to the decline in the consumption of such glass, and to a reduction in the share of apparent consumption of such glass supplied by the domestic industry--from 81 percent in 1965 to 77 percent in 1966. * * * Shipments of window glass during January-June 1967 were 13 percent lower than those during the corresponding period of 1966 (table 6).

Heavy sheet glass.--Shipments of heavy sheet glass by the U.S. producers in 1966--488 million pounds--were 18 percent smaller than those in 1965--594 million pounds. The decline is attributable to a substantial reduction (12 percent) that occurred in the apparent consumption of heavy sheet glass, as well as to a significant decline (from 80 to 74 percent) in the share of the market for such glass supplied by the U.S. producers. Shipments of heavy sheet glass during January-June

1967 were 25 percent lower than those during the comparable period of 1966 (table 6).

Variations in the annual production of sheet glass have generally corresponded closely with changes in the U.S. producers' annual shipments (including intracompany transfers) which, in turn, have closely reflected changes in annual consumption. Data on the U.S. production of sheet glass, together with an index of the U.S. producers' capacity to produce sheet glass, are shown in the following tabulation for the years 1955-66:

Year	Index of capacity 1/	Production 2/	
		Quantity	Index
	1957-59=100	Million pounds	1957-59=100
1955	89	1,572	119
1956	93	1,661	125
1957	98	1,268	96
1958	98	1,084	82
1959	103	1,627	123
1960	105	1,288	97
1961	109	1,233	93
1962	110	1,503	113
1963	112	1,519	115
1964	113	1,554	117
1965	113	1,556	117
1966	114	1,379	104

1/ This index of theoretical capacity is based on the output that would have been achieved if all installed tanks and drawing machines available for use each year had been in operation continuously throughout the year.

2/ The ratio of production to theoretical capacity in 1957-59 was 54 percent, or 100 for the purpose of this index.

The U.S. production of sheet glass in 1966 was 11 percent lower than in 1965 and was the lowest in any year since 1961. The decline in production in 1966 was slightly greater than that in producers' shipments.

The domestic industry's capacity to produce sheet glass has increased almost annually since 1955. The rate of increase, however, has declined substantially since 1961 as increases in capacity arising from the modernization and expansion of some plants have been partly offset by the dismantling of furnaces (e.g., Ford Motor Co.) or other plants (Blackford Window Glass Co.). The industry's aggregate capacity increased substantially in early 1967, with the completion of the first new sheet glass plant since 1959. The ratio of production to capacity, which was relatively stable during 1962-65, declined in 1966 to its lowest level since 1961.

The proportionately greater decline in production than in shipments during 1966 resulted in a significant reduction in U.S. producers' yearend inventories. U.S. producers' yearend inventories of sheet glass for the years 1961 through 1966 are shown in the following tabulation.

Year	Inventories as of December 31 1/ (million pounds)
1961	102
1962	160
1963	132
1964	164
1965	180
1966	141

1/ Includes only inventories of glass inspected for defects and cut to the size in which it is intended to be sold; does not include inventories of glass intended to be recut before shipment.

Employment in U.S. establishments

The number of workers employed and the man-hours expended in the production of sheet glass during the period 1961-66 varied with both the level of production and changes in technology. The annual average number of production and related workers employed ranged from a low of 6,261 in 1966 to 7,385 in 1962 (table 7). Indexes of the U.S. production of sheet glass, of man-hours worked in the production of sheet glass, and of output per man-hour, for the years 1961-66 are shown in the following tabulation (1957-59=100):

Year	Production	Man-hours	Output per man-hour
1961	93	91	102
1962	113	107	106
1963	115	104	111
1964	117	102	115
1965	117	103	114
1966	104	92	114

The total man-hours worked on sheet glass increased from 12.8 million in 1961 to 15 million in 1962 (table 7), as production increased markedly. Such employment declined to 14.5 and 14.3 million man-hours in 1963 and 1964, respectively, despite slightly increased production in each of those years. This decline reflected a significant increase in output per man-hour, which is attributable to improvements in technology and to economies of production achieved by the high levels of operation. In 1965 the man-hours worked increased slightly to 14.4 million, accompanying a proportionately smaller increase in production. Employment declined sharply to 12.7 million man-hours in 1966, concomitant with a major downturn in

production; output per man-hour, however, remained stable. The increase in output per man-hour in the sheet glass industry between 1961 and 1966 (12 percent) was somewhat less than that in the private non-farm economy (17 percent). 1/

Products other than sheet glass were produced in 4 of the 14 establishments that manufactured sheet glass in 1966. In 3 of the 4 establishments only a small number of workers produced other products; in the other establishment those working on other products accounted for the preponderant share of the total employment. The share of total man-hours worked in the 14 establishments that was accounted for by the manufacture of other products ranged from 22 percent in each of the years 1962-64 to 28 percent in 1966.

U.S. imports

In 1966 U.S. imports of sheet glass (465 million pounds) exceeded those in 1965 by 9 percent and supplied 25 percent of the apparent domestic consumption (table 5). The imports increased not only absolutely, but also relative to domestic consumption. During the year the principal foreign producers changed their method of quoting prices from an ex-dock basis (duty-paid) to a delivered-price basis (including duty, customs brokerage, wharfage charges, and freight), thereby making it more convenient and attractive to import, particularly to buyers in inland markets. Belgium, West Germany, and Japan continued to be the major suppliers.

1/ Annual Report of the Council of Economic Advisors, January 19, 1967, table B-31 in the appendix.

Imports at MFN rates.--The preponderant share of the sheet glass imported into the United States is dutiable at MFN rates. Most of this glass is comparable in quality to that produced domestically. Between 1961 and 1966, annual imports of sheet glass at MFN rates fluctuated irregularly and ranged from 350 million pounds in 1961 to 446 million pounds in 1964 (table 8). The escape action in 1962 apparently had little effect on the share of the market supplied by MFN imports; the average annual share supplied by such imports decreased only slightly between 1958-61 and 1963-66--from 22 to 21 percent. Such imports supplied 21 percent of the market in 1961 and 23 percent in 1966.

In 3 of the past 5 years MFN imports varied directly with changes in the apparent consumption, as shown in the following series of indexes:

	Index (1957-59=100) of--	
Year	MFN imports	Apparent consumption
1961----------	106	99
1962----------	131	115
1963----------	114	118
1964----------	135	121
1965----------	117	118
1966----------	128	111

The volume of imports decreased with the low level of building construction in 1961, then increased with the upturn in construction in 1962. The higher imports in 1962 also reflected efforts by importers to enter as much glass as possible prior to the increase in the rates of duty. In 1963, however, MFN imports were 13 percent lower than in 1962, notwithstanding the continued increase in the consumption of sheet

glass. Various factors contributed to this decline, including the increase in the duties, the high level of inventories in the hands of importers at the end of 1962, and a dock strike. In 1964 MFN imports were 18 percent above those in 1963, reflecting the increased demand and threatened shortages of domestically produced glass resulting in part from a prolonged strike at the Fourco Glass Co. Principally as a result of dock strikes and a decline in residential construction, imports in 1965 were 13 percent below those in 1964. Despite the continued decline in the consumption of sheet glass during 1966 following the downturn in residential building and automobile production, imports exceeded those in 1965 by 9 percent. Contributing factors were an increased price differential between imported and domestic glass, a second strike at the Fourco Glass Co., and the closing of the Blackford Window Glass Co.

Imports during January-June 1967 were 13 percent below those during the comparable period in 1966 (table 8). The ratio of imports to consumption, however, increased somewhat from the earlier period because of the proportionately greater decline in domestic shipments.

Thin sheet glass.--Imports at MFN rates supplied the major share of the thin sheet glass consumed each year from 1961 through 1966. Imports of such glass reached a peak of 57 million pounds in 1965 and declined (by 21 percent) to 45 million pounds in 1966 (table 9).

Window glass.--Annual imports of window glass at MFN rates fluctuated irregularly from 1961-66 (table 9); they were 11 percent greater in 1966 than in 1965, despite the decline in the consumption of such glass. The ratio of the imports of window glass to the consumption of such glass

increased from 19 percent in 1965 to 22 percent in 1966. Imports of window glass measuring not over 100 united inches (table 10) accounted for 94 percent of the total imports of window glass at MFN rates in 1966.

Heavy sheet glass.--Imports of heavy sheet glass at MFN rates were 18 percent greater in 1966 than in 1965. Such imports were considerably greater during the period 1962-66 than in the preceding five-year period, despite the fact that most such imports were subject to by far the largest increases in duties pursuant to the escape action. Whereas annual imports of heavy sheet glass averaged 167 million pounds during 1962-66, they had averaged only 97 million pounds during 1957-61. The increase in imports, notwithstanding the high duty, reflects the strong demand for such glass arising from the expanded use of heavy sheet glass in patio doors and picture windows and for tempered glass.

Colored and specially processed sheet glass.--Annual imports of colored and specially processed sheet glass have increased significantly during the last several years, but such glass still constitutes a very small part (less than 2 percent in 1966) of total imports.

Imports by sources.--In 1966 sheet glass was imported at MFN rates from 31 countries. West European countries and Japan were the principal sources, but other countries (e.g., Israel, Taiwan, Canada, Poland, and Korea) also supplied substantial quantities. Belgium, the major supplier, increased its share from 32 percent of U.S. total imports in 1965 to 34 percent in 1966; in the same period West Germany continued to supply 12 percent of the total and Japan's share declined from 16 percent to 12

percent (table 8). Other important sources were the United Kingdom, Italy, and France.

Imports at full rates.--Imports of sheet glass from Communist-dominated countries (at full rates of duty), although small, have increased substantially in recent years. Imports from such countries in 1966, consisting principally of window glass, were 5 percent greater than in 1965 and supplied 2 percent of the domestic market (table 3). Most of the glass imported from Communist-dominated countries has been inferior in quality to U.S.-produced sheet glass. The U.S.S.R., Czechoslovakia, and Rumania have been the chief suppliers.

Prices

The published prices of both domestic and imported sheet glass ranged from 19 to 24 percent higher on May 1, 1967, than those prevailing during 1960-61, before the escape action (table 11). Individual price changes during the period varied with the thickness and surface area of the glass, the quantities purchased, the location of the customer, and the type of packing utilized. Partly offsetting these higher prices, however, were several changes in pricing practices; their effect, which cannot be readily quantified, was to reduce the weighted average price of sheet glass. These changes include the offering of special discounts for glass in extra large and/or modified containers, special discounts for extra large volume orders, very substantial discounts for glass of certain dimensions that is especially economical to manufacture, increases in freight allowances, and a reduction in the

minimum unit of sale, as well as the elimination of certain fractional cutting charges.

Moreover, the prices charged for sheet glass to customers located west of Denver, Colo., were reduced by 6 percent in early 1967 as a result of the commencement of sheet glass production on the West Coast. Before 1967 both domestic and foreign manufacturers had maintained separate price schedules for the West Coast, charging prices there that were 6 percent higher than those charged in the rest of the country.

In July 1967 the domestic producers announced a price increase of 7-1/2 percent on both thin sheet glass and window glass packed in 50-foot and 100-foot boxes. The increase applied to roughly 25 percent of aggregate sheet glass shipments. Sales agents of the principal foreign suppliers subsequently announced comparable increases.

Comparison of prices of domestic and West European glass.--On May 1, 1967, the duty-paid delivered cost to direct-factory buyers 1/ in New York City 2/ of West European single-strength glass (the most

1/ Direct-factory buyers are those distributors, jobbers, fabricators, and processors selected by the individual producers as the only concerns that can buy sheet glass directly from the factory. Other concerns desiring to purchase sheet glass must purchase their glass from the direct-factory buyers at higher prices. Sales agents for the principal foreign manufacturers generally sell only to firms previously recognized by the domestic producers as direct-factory buyers.

2/ Inasmuch as both domestically produced and imported sheet glass are currently sold on a delivered-price basis (including duty, customs brokerage, wharfage charges, and freight), the price differential is typical of that prevailing in most coastal cities. Sales to some inland points, however, are actually made on a partial freight allowance basis.

important thickness of sheet glass) was about 4 to 7 percent [1/] below that of comparable domestic glass (table 11). This differential was slightly greater than that which prevailed throughout much of 1966, but was only about half of that which existed before the escape action.

On November 1, 1966 and May 1, 1967 the duty-paid delivered cost of West European heavy sheet glass was approximately 7 percent below that of comparable domestic glass. The differential on those dates was greater than at any time since the escape action, but was approximately 2 percent less than that which existed during the two years prior to the escape action.

Published U.S. prices of Japanese glass are virtually identical to those of West European glass. * * * Sheet glass from countries other than West Europe and Japan is generally sold at prices ranging from 3 percent (e.g., Sweden and Finland) to 20 percent (the undocumented prices reportedly offered by some East European suppliers) below the quoted West European prices.

1/ The price differential for strictly comparable (19 oz. vs. 19 oz.) glass is generally 4 percent. Approximately 75 percent of the imports of single-strength glass, however, consist of 18-oz. glass, which is generally priced 7 percent below 19-oz. domestically produced glass. (The U.S. producers do not offer 18-oz. glass. They offered such glass for sale in mid-1965 but withdrew it from the market in early 1966.)

Profit-and-loss experience of domestic producers

Profit-and-loss data for 1961-64 were received from 6 U.S. firms [1] that produce sheet glass. Five of them [2] reported data for 1965 and 1966. Those reporting profit-and-loss data for the period 1961 through 1966 account for more than 90 percent of the domestic production of sheet glass.

The aggregate net sales (including intracompany transfers) [3] of sheet glass by the 6 firms increased from $107.4 million in 1961 to $122 million in 1962, to $130.9 million in 1963, and to $143.9 million in 1964. Net sales by the 5 firms that reported data for 1965 and 1966 decreased slightly from * * * in 1964 to $141.3 million in 1965. Aggregate net sales of the 5 firms declined further to $131.6 million in 1966.

The 6 firms reported net profits of $690,000 (equal to 0.6 percent of sales) in 1961, $2.8 million (equal to 2.3 percent of sales) in 1962, $11.2 million (equal to 8.5 percent of sales) in 1963, and $18.1 million (equal to 12.6 percent of sales in 1964. The net profits of the 5 firms that reported data were $13.2 million (equal to 9.3 percent of sales) in 1965, and $6.8 million (equal to 5.1 percent of sales) in 1966. Three of the 6 firms reported losses in 1961; 2 of the 6 firms reported losses in

1/ The only firm producing significant quantities of sheet glass that did not submit profit-and-loss data was the Ford Motor Co. * * *

2/ The Blackford Window Glass Co. ceased operations in February 1966. No data are available for the years 1965-66. The net sales of the company were less than 2 percent of the aggregate net sales of the industry in 1965 and were insignificant in 1966.

3/ In recent years intracompany transfers have accounted for about 20 percent of aggregate net sales.

1962; one firm reported losses in 1963 while 3 reported losses in 1964. Two of the 5 firms that reported in 1965 and 1966 incurred losses.

The improvement in aggregate sales by the industry and in its net operating profits in 1962 and 1963 reflected annual increases both in the volume of shipments and in prices. Sales and profits increased in 1964, notwithstanding a slight reduction in the volume of shipments, owing primarily to price increases that occurred in late 1963 and early 1964. A substantial increase in productivity during the period 1961-64 contributed significantly to the increased profits in the industry.

Although the volume of shipments remained virtually unchanged from 1964 to 1965, the value of shipments declined slightly and net operating profits declined substantially; these declines are attributable primarily to price reductions that occurred during the early part of 1965. Sales and profits declined further in 1966, principally because of the reduced volume of shipments.

Appendix A - Statistical Tables

Table 1.--Sheet glass weighing over 4 ounces per square foot: U.S. rates of duty provided in the Tariff Schedules of the United States (TSUS) 1/

(In cents per pound and percent ad valorem)

TSUS item	Article	Appendix item 2/	Statutory rate 3/	Trade-agreement rate 4/	Escape-action rate 5/	Currently applicable rate 6/
	Glass (including blown or drawn glass, but excluding cast or rolled glass and excluding pressed or molded glass) (whether or not containing wire netting), in rectangles, not ground, not polished and not otherwise processed, weighing over 4 oz. per sq. ft., provided for in TSUS items 542.11-.98, inclusive:					
	Ordinary glass:					
	Weighing over 4 oz. but not over 12 oz. per sq. ft.:					
542.11	Measuring not over 40 united inches		1.5¢	0.7¢	1.3¢	0.7¢
542.13	Measuring over 40 united inches		1.9¢	.9¢	1.6¢	.9¢
	Weighing over 12 oz. but not over 16 oz. per sq. ft.:					
542.21	Measuring not over 40 united inches		2.1¢	1.0¢	1.3¢	1.0¢
542.23	Measuring over 40 but not over 60 united inches		2.4¢	1.1¢	1.6¢	1.1¢
542.25	Measuring over 60 united inches		2.5¢	1.2¢	1.9¢	1.2¢
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:					
542.31	Measuring not over 40 united inches	923.31	1.5¢	.7¢	1.3¢	1.1¢
542.33	Measuring over 40 but not over 60 united inches	923.33	1.9¢	.9¢	1.6¢	1.5¢
542.35	Measuring over 60 but not over 100 united inches	923.35	2.4¢	1.1¢	1.9¢	1.5¢
542.37	Measuring over 100 united inches	923.37	2.8¢	1.4¢	2.4¢	1.4¢
	Weighing over 28 oz. per sq. ft.:					
542.42	Not over 2-2/3 sq. ft. in area		1.5¢	.7¢	1.3¢	.7¢
542.44	Over 2-2/3 but not over 7 sq. ft. in area		1.9¢	.9¢	1.6¢	.9¢
542.46	Over 7 but not over 15 sq. ft. in area		2.4¢	1.1¢	1.9¢	1.1¢
542.48	Over 15 sq. ft. in area		2.8¢	1.4¢	2.4¢ or 3.5¢ 7/	1.4¢
	Colored or special glass:					
542.57	Weighing over 4 oz. but not over 12 oz. per sq. ft.		4.0¢	1.7¢	2.2¢	1.7¢
542.67	Weighing over 12 oz. but not over 16 oz. per sq. ft.		13.0¢	6.0¢	9.0¢	6.0¢
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:					
542.71	Measuring not over 40 united inches	923.71	1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	1.1¢ + 2.5%
542.73	Measuring over 40 but not over 60 united inches	923.73	1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	1.5¢ + 2.5%
542.75	Measuring over 60 but not over 100 united inches	923.75	2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.5¢ + 2.5%
542.77	Measuring over 100 united inches	923.77	2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%	1.4¢ + 2.5%
	Weighing over 28 oz. per sq. ft.:					
542.92	Not over 2-2/3 sq. ft. in area		1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	0.7¢ + 2.5%
542.94	Over 2-2/3 but not over 7 sq. ft. in area		1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	0.9¢ + 2.5%
542.96	Over 7 but not over 15 sq. ft. in area		2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.1¢ + 2.5%
542.98	Over 15 sq. ft. in area		2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5% or 3.5¢ + 2.5% 7/	1.4¢ + 2.5%
544.17	Glass, cut to other than rectangular shape, and glass, whether in rectangles or cut to other than rectangular shape, subjected to processing, all the foregoing glass provided for in TSUS item 544.17 if drawn or blown and not containing wire netting and not surface ground or polished		60%	15%	22.5%	15%

1/ The rates of duty provided in the TSUS and the TSUS appendix were placed in effect Aug. 31, 1963, by Presidential Proclamation No. 3548.

2/ The description of these articles and the rates of duty currently applicable are shown in the TSUS appendix.

3/ Rates of duty currently applied to the products of countries or areas designated as Communist dominated or controlled.

4/ The most recent rates of duty placed in effect as a result of a concession granted under the General Agreement on Tariffs and Trade, as modified by proclamation of the TSUS. The rates provided in the concession were in effect until June 17, 1962.

5/ Rates of duty placed in effect June 17, 1962, by Presidential Proclamation No. 3455 under the escape-clause procedure, as modified by proclamation of the TSUS. These rates were superseded by the rates which were placed in effect by Presidential Proclamation No. 3762 on January 11, 1967.

6/ Rates of duty placed in effect on January 11, 1967 by Presidential Proclamation No. 3762 of that date. The rates of duty applicable to TSUS appendix items 923.31, 923.33, 923.35, 923.71, 923.73, and 923.75 are higher than the trade-agreement rates and are therefore temporary. The rates applicable to all other TSUS items are the trade-agreement rates.

7/ The escape-action rate on sheet glass weighing over 28 ounces per square foot and measuring over 15 but not over 16-2/3 sq. ft. in area was 2.4¢ per lb. (plus 2.5% ad valorem if colored or special); that on sheet glass weighing over 28 oz. per sq. ft. and measuring over 16-2/3 sq. ft. in area was 3.5¢ per lb. (plus 2.5% ad valorem if colored or special).

Table 1.--Sheet glass weighing over 4 ounces per square foot: U.S. rates of duty provided in the Tariff Schedules of the United States (TSUS) 1/

(In cents per pound and percent ad valorem)

TSUS item	Article	Appendix item 2/	Statutory rate 3/	Trade-agreement rate 4/	Escape-action rate 5/	Currently applicable rate 6/
	Glass (including blown or drawn glass, but excluding cast or rolled glass and excluding pressed or molded glass) (whether or not containing wire netting), in rectangles, not ground, not polished and not otherwise processed, weighing over 4 oz. per sq. ft., provided for in TSUS items 542.11-.98, inclusive:					
	Ordinary glass:					
	Weighing over 4 oz. but not over 12 oz. per sq. ft.:					
542.11	Measuring not over 40 united inches		1.5¢	0.7¢	1.3¢	0.7¢
542.13	Measuring over 40 united inches		1.9¢	.9¢	1.6¢	.9¢
	Weighing over 12 oz. but not over 16 oz. per sq. ft.:					
542.21	Measuring not over 40 united inches		2.1¢	1.0¢	1.3¢	1.0¢
542.23	Measuring over 40 but not over 60 united inches		2.4¢	1.1¢	1.6¢	1.1¢
542.25	Measuring over 60 united inches		2.5¢	1.2¢	1.9¢	1.2¢
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:					
542.31	Measuring not over 40 united inches	923.31	1.5¢	.7¢	1.3¢	1.1¢
542.33	Measuring over 40 but not over 60 united inches	923.33	1.9¢	.9¢	1.6¢	1.5¢
542.35	Measuring over 60 but not over 100 united inches	923.35	2.4¢	1.1¢	1.9¢	1.5¢
542.37	Measuring over 100 united inches	923.37	2.8¢	1.4¢	2.4¢	1.4¢
	Weighing over 28 oz. per sq. ft.:					
542.42	Not over 2-2/3 sq. ft. in area		1.5¢	.7¢	1.3¢	.7¢
542.44	Over 2-2/3 but not over 7 sq. ft. in area		1.9¢	.9¢	1.6¢	.9¢
542.46	Over 7 but not over 15 sq. ft. in area		2.4¢	1.1¢	1.9¢	1.1¢
542.48	Over 15 sq. ft. in area		2.8¢	1.4¢	2.4¢ or 3.5¢ 7/	1.4¢
	Colored or special glass:					
542.57	Weighing over 4 oz. but not over 12 oz. per sq. ft.		4.0¢	1.7¢	2.2¢	1.7¢
542.67	Weighing over 12 oz. but not over 16 oz. per sq. ft.		13.0¢	6.0¢	9.0¢	6.0¢
	Weighing over 16 oz. but not over 28 oz. per sq. ft.:					
542.71	Measuring not over 40 united inches	923.71	1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	1.1¢ + 2.5%
542.73	Measuring over 40 but not over 60 united inches	923.73	1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	1.5¢ + 2.5%
542.75	Measuring over 60 but not over 100 united inches	923.75	2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.5¢ + 2.5%
542.77	Measuring over 100 united inches	923.77	2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5%	1.4¢ + 2.5%
	Weighing over 28 oz. per sq. ft.:					
542.92	Not over 2-2/3 sq. ft. in area		1.5¢ + 5%	0.7¢ + 2.5%	1.3¢ + 2.5%	0.7¢ + 2.5%
542.94	Over 2-2/3 but not over 7 sq. ft. in area		1.9¢ + 5%	0.9¢ + 2.5%	1.6¢ + 2.5%	0.9¢ + 2.5%
542.96	Over 7 but not over 15 sq. ft. in area		2.4¢ + 5%	1.1¢ + 2.5%	1.9¢ + 2.5%	1.1¢ + 2.5%
542.98	Over 15 sq. ft. in area		2.8¢ + 5%	1.4¢ + 2.5%	2.4¢ + 2.5% or 3.5¢ + 2.5% 7/	1.4¢ + 2.5%
544.17	Glass, cut to other than rectangular shape, and glass, whether in rectangles or cut to other than rectangular shape, subjected to processing, all the foregoing glass provided for in TSUS item 544.17 if drawn or blown and not containing wire netting and not surface ground or polished		60%	15%	22.5%	15%

1/ The rates of duty provided in the TSUS and the TSUS appendix were placed in effect Aug. 31, 1963, by Presidential Proclamation No. 3548.

2/ The description of these articles and the rates of duty currently applicable are shown in the TSUS appendix.

3/ Rates of duty currently applied to the products of countries or areas designated as Communist dominated or controlled.

4/ The most recent rates of duty placed in effect as a result of a concession granted under the General Agreement on Tariffs and Trade, as modified by proclamation of the TSUS. The rates provided in the concession were in effect until June 17, 1962.

5/ Rates of duty placed in effect June 17, 1962, by Presidential Proclamation No. 3455 under the escape-clause procedure, as modified by proclamation of the TSUS. These rates were superseded by the rates which were placed in effect by Presidential Proclamation No. 3762 on January 11, 1967.

6/ Rates of duty placed in effect on January 11, 1967 by Presidential Proclamation No. 3762 of that date. The rates of duty applicable to TSUS appendix items 923.31, 923.33, 923.35, 923.71, 923.73, and 923.75 are higher than the trade-agreement rates and are therefore temporary. The rates applicable to all other TSUS items are the trade-agreement rates.

7/ The escape-action rate on sheet glass weighing over 28 ounces per square foot and measuring over 15 but not over 16-2/3 sq. ft. in area was 2.4¢ per lb. (plus 2.5% ad valorem if colored or special); that on sheet glass weighing over 28 oz. per sq. ft. and measuring over 16-2/3 sq. ft. in area was 3.5¢ per lb. (plus 2.5% ad valorem if colored or special).

Table 2.--Sheet glass weighing over 4 ounces per square foot: Average ad valorem equivalents of U.S. specific rates of duty 1/ imposed on sheet glass entitled to most-favored-nation tariff treatment, imported during 1961, 1963-66, and January-June 1967.

Description	Average ad valorem equivalents					
	1961 2/	1963 2/	1964	1965	1966	Jan.-June 1967 3/
Sheet glass weighing not over 28 ounces per square foot and measuring in united inches--	Percent	Percent	Percent	Percent	Percent	Percent
Not over 40	8.3	17.6	18.3	18.2	17.5	12.4
Over 40 but not over 60	13.3	27.8	26.2	28.2	28.6	23.6
Over 60 but not over 100	14.6	29.3	27.2	28.4	28.7	20.5
Over 100	17.1	31.2	30.6	33.5	33.8	17.9
Sheet glass weighing over 28 ounces per square foot and measuring in square feet--						
Not over 2-2/3	11.4	25.2	22.9	23.2	22.7	12.8
Over 2-2/3 but not over 7	12.1	25.4	25.1	26.4	27.3	13.4
Over 7 but not over 15	14.3	27.9	27.0	29.8	30.3	14.8
Over 15	17.2	56.9	53.6	59.4	57.6	18.8

1/ The ad valorem equivalents shown here do not include the 2½ percent ad valorem additional rate of duty applicable to sheet glass when bent, beveled, colored, etc.

2/ The TSUS nomenclature for sheet glass which was placed in effect on Aug. 31, 1963, differs somewhat from the nomenclature provided in the Tariff Act of 1930. The ad valorem equivalents for the periods prior to Aug. 31, 1963, are therefore partially estimated.

3/ Based on the modified escape-action rates which became effective on Jan. 11, 1967.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3.--Sheet Glass: 1/ Shipments by U.S. producers, U.S. exports of domestic merchandise, U.S. imports for consumption, and apparent U.S. consumption, 1959-66 and January-June 1964-67

Item	1959	1960	1961	1962	1963	1964	1965	1966	Jan.-June 1964	Jan.-June 1965	Jan.-June 1966	Jan.-June 1967
	Quantity (million pounds)											
Shipments by U.S. producers	1,580.0	1,265.7	1,273.8	1,443.2	1,556.0	1,530.0	1,532.1	1,383.4	701.5	658.9	701.1	571.4
U.S. exports 2/	3.2	4.3	3.0	3.5	3.9	4.2	4.0	9.0	2.1	2.0	2.2	6.2
U.S. imports for consumption--												
At most-favored-nation rates of duty 3/	491.4	391.3	350.0	435.0	376.3	446.3	389.3	425.0	216.4	186.1	208.4	178.4
At full rates of duty	15.6	19.2	25.4	35.6	17.5	32.3	38.4	40.4	13.9	16.2	16.0	17.2
Total (all rates of duty)	507.0	410.5	375.4	470.6	393.8	478.6	427.7	465.4	230.3	202.3	224.4	195.6
Apparent U.S. consumption	2,083.8	1,671.9	1,646.2	1,910.3	1,945.9	2,004.4	1,955.8	1,839.8	938.7	859.2	923.3	760.8
	Percent of U.S. consumption											
Share supplied by--												
Shipments 4/ by U.S. producers	75.7	75.4	77.2	75.4	79.8	76.1	78.1	74.7	75.5	76.5	75.7	74.3
U.S. imports for consumption--												
At most-favored-nation rates of duty	23.6	23.4	21.3	22.8	19.3	22.3	19.9	23.1	23.0	21.6	22.6	23.4
At full rates of duty	.7	1.2	1.5	1.8	.9	1.6	2.0	2.2	1.5	1.9	1.7	2.3
Total (all rates of duty)	24.3	24.6	22.8	24.6	20.2	23.9	21.9	25.3	24.5	23.5	24.3	25.7

1/ Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, 544.17 (pt.), and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37 and 542.71-542.77.

2/ Official statistics are reported in square feet and have been converted to pounds at the ratio of 1 sq. ft.=1.16 pounds. Data do not include colored glass; it is believed, however, that exports of colored glass are considerably smaller than exports of glass not colored.

3/ Includes imported float glass, beginning in 1960 through Aug. 31, 1963; the quantity of float glass imported is very small compared with that of total imports of sheet glass.

4/ Less exports.

Source: Compiled from official statistics of the U.S. Department of Commerce, and from information submitted to the U.S. Tariff Commission by the U.S. producers.

Table 4.--Indexes of U.S. producers' shipments of sheet glass, apparent U.S. consumption of sheet glass, and selected U.S. business indicators, 1955-66

(1957-59=100)

Year	U.S. producers' shipments of sheet glass 1/	Apparent U.S. consumption of sheet glass 2/	Selected U.S. business indicators			
			Total industrial production 3/	Residential construction		Automobile production 6/
				Housing starts 4/	Value 5/	
1955	121	111	91	119	110	139
1956	120	115	100	98	98	103
1957	95	89	101	89	91	112
1958	85	86	94	100	96	80
1959	120	126	106	111	113	108
1960	96	101	109	92	99	131
1961	97	99	110	97	99	109
1962	110	115	118	107	109	136
1963	118	118	124	117	112	150
1964	116	121	132	113	111	151
1965	116	118	143	110	109	183
1966	105	111	156	89	97	170

1/ Based on the number of pounds shipped; includes exports.

2/ Based on the number of pounds of U.S. producers' shipments, less exports, plus imports for consumption.

3/ Based on the Federal Reserve Index of Quantity Output; includes durable and nondurable goods, mining, and utilities.

4/ Based on the number of public and private, nonfarm, new housing starts.

5/ Based on the value of public residential and nonfarm private residential construction put in place, adjusted to constant dollars.

6/ Based on the Federal Reserve Index of Quantity Output.

Source: Computed from official statistics of the U.S. Department of Commerce and the Board of Governors of the Federal Reserve System, and from data supplied to the U.S. Tariff Commission by the domestic producers of sheet glass.

Table 5.--Sheet glass: [1] Shipments by U.S. producers, [2] and U.S. imports for consumption, by thickness (weight per square foot) and by kinds, 1961-66

Item	Weighing per square foot--							Total			
	Less than 16 ounces, total or average	16 ounces or more, but not over 28 ounces			Over 28 ounces			Clear	Colored	Processed	Total or average
		Clear	Colored	Total or average	Clear	Colored	Total or average				
1961											
U.S. shipments---1,000 pounds--	20,322	789,744	10,730	800,474	387,846	61,654	449,500	1,198,412	72,384	3/	1,270,796
U.S. imports---do---	30,772	270,775	864	271,639	71,795	317	72,112	371,458	3,022	950	375,430
Apparent U.S. consumption---do---	51,594	1,060,519	11,594	1,072,113	459,641	61,971	521,612	1,569,870	4/	4/	1,646,226
Ratio of imports to consumption---percent--	59.6	25.5	7.5	25.3	15.6	0.5	13.8	23.7	4/	4/	22.2
1962											
U.S. shipments---1,000 pounds--	25,462	881,870	8,816	890,686	466,552	57,014	523,566	1,373,884	65,830	3/	1,439,714
U.S. imports---do---	40,165	261,777	612	262,389	165,769	536	166,305	466,400	2,238	1,916	470,554
Apparent U.S. consumption---do---	65,627	1,143,647	9,428	1,153,075	632,321	57,550	689,871	1,840,284	4/	4/	1,910,268
Ratio of imports to consumption---percent--	61.2	22.9	6.5	22.8	26.2	0.9	24.1	25.3	4/	4/	24.6
1963											
U.S. shipments---1,000 pounds--	25,462	915,226	9,628	924,854	545,490	56,260	601,750	1,486,178	65,888	3/	1,552,066
U.S. imports---do---	38,325	200,633	945	201,578	162,902	728	163,630	389,371	3,292	1,161	393,824
Apparent U.S. consumption---do---	63,787	1,115,859	10,564	1,126,423	708,392	56,988	765,380	1,875,549	4/	4/	1,945,881
Ratio of imports to consumption---percent--	60.1	18.0	8.9	17.9	23.0	1.3	21.4	20.8	4/	4/	20.2
1964											
U.S. shipments---1,000 pounds--	30,102	904,654	12,702	917,356	547,520	31,262	578,782	1,482,276	43,964	3/	1,526,240
U.S. imports---do---	52,033	244,755	1,188	245,943	177,550	1,384	178,934	473,699	3,212	1,724	478,635
Apparent U.S. consumption---do---	82,135	1,149,409	13,890	1,163,299	725,070	32,646	757,716	1,955,975	4/	4/	2,004,875
Ratio of imports to consumption---percent--	63.3	21.3	8.6	21.1	24.5	4.2	23.6	24.2	4/	4/	23.9
1965											
U.S. shipments---1,000 pounds--	23,954	892,339	17,806	910,145	549,260	44,544	593,804	1,465,553	62,350	3/	1,527,903
U.S. imports---do---	58,640	212,570	1,168	213,738	151,516	1,428	152,944	421,910	3,413	2,455	427,778
Apparent U.S. consumption---do---	82,594	1,104,909	18,974	1,123,883	700,776	45,972	746,748	1,887,463	4/	4/	1,955,681
Ratio of imports to consumption---percent--	71.0	19.2	6.2	19.0	21.6	3.1	20.5	22.4	4/	4/	21.9
1966											
U.S. shipments---1,000 pounds--	24,824	818,766	42,978	861,744	461,100	26,796	487,896	1,304,690	69,774	3/	1,374,464
U.S. imports---do---	48,059	239,973	1,301	241,274	170,949	2,271	173,220	457,384	5,169	2,926	465,479
Apparent U.S. consumption---do---	72,883	1,058,739	44,279	1,103,018	632,049	29,067	661,116	1,762,074	4/	4/	1,839,943
Ratio of imports to consumption---percent--	65.9	22.7	2.9	21.9	27.0	7.8	26.2	26.0	4/	4/	25.3

1/ Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, 544.17 (pt.), and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37 and 542.71-542.77.

2/ Excludes exports. Exports have been deducted from U.S. shipments of clear glass weighing 16 ounces or more, but not over 28 ounces per square foot.

3/ Data included under total colored glass in order to avoid disclosure of the operations of the individual producers.

4/ Not applicable.

Source: Compiled from official statistics of the U.S. Department of Commerce and from information submitted to the U.S. Tariff Commission by the producers.

Table 6.--Sheet glass: U.S. production and shipments by U.S. producers, January-June 1964-67

(In millions of pounds)

Period	Production	Shipments of glass weighing per square foot--			
		Not over 16 ounces	Over 16 ounces but not over 28 ounces	Over 28 ounces	Total all weights
January-June:					
1964	742	13	418	280	711
1965	713	14	373	272	659
1966	733	16	422	263	701
1967	735	7	366	198	571

Source: Compiled from data submitted to the U.S. Tariff Commission by the U.S. producers.

Table 7.--Employment in U.S. establishments in which sheet glass was produced, 1961-66

Item	1961	1962	1963	1964	1965	1966
All employees, average number	9,979	10,922	10,657	10,938	11,018	10,365
Production and related workers making--						
All products:						
Average number	8,572	9,505	9,109	9,369	9,348	8,636
Man-hours worked----------1,000 hours--	17,046	19,291	18,644	18,447	19,461	17,733
Sheet glass:						
Average number 1/	6,420	7,385	7,110	7,261	6,935	6,261
Man-hours worked----------1,000 hours--	12,775	14,994	14,542	14,301	14,438	12,848
Other products:						
Average number 1/	2,152	2,120	1,999	2,108	2,413	2,375
Man-hours worked----------1,000 hours--	4,271	4,297	4,102	4,146	5,023	4,885

1/ Estimated.

Source: Compiled from data submitted to the U.S. Tariff Commission by U.S. producers.

Table 8.--Sheet glass: 1/ U.S. imports for consumption, by principal sources, 1961-66 and January-June 1965-67

Country	1961	1962	1963	1964	1965	1966	Jan.-June 1965	Jan.-June 1966	Jan.-June 1967
	Quantity (1,000 pounds)								
Belgium	107,846	153,650	114,324	148,037	123,162	143,954	55,805	71,904	59,762
West Germany	39,599	49,204	44,463	46,198	45,603	53,079	20,907	25,698	23,978
Japan	58,008	59,357	67,045	78,416	63,212	50,871	29,662	27,077	19,502
United Kingdom 2/	44,636	51,511	30,339	25,527	30,449	38,241	14,380	19,969	17,786
Italy	7,234	6,602	4,772	16,982	22,508	33,573	11,504	14,608	10,425
France	30,993	35,684	31,625	30,947	22,494	20,926	12,491	9,915	8,225
Finland	7,728	10,715	12,286	16,804	13,281	15,118	7,535	8,203	4,481
Sweden	18,975	12,340	11,021	10,769	9,171	4,029	5,441	2,660	831
All other	35,007	55,925	60,475	72,647	59,457	65,242	28,352	28,379	33,415
Total	350,026	434,988	376,350	446,327	389,337	425,033	186,077	208,413	178,405
Communist-dominated countries at full rates of duty	25,404	35,566	17,474	32,308	38,441	40,447	16,243	16,034	17,156
Grand total	375,430	470,554	393,824	478,635	427,778	465,480	202,320	224,447	195,561
	Value (1,000 dollars)								
Belgium	7,364	9,924	7,025	9,795	7,482	8,834	3,514	4,273	4,204
West Germany	3,551	3,880	3,335	3,535	3,403	4,104	1,666	1,836	2,323
Japan	4,246	4,112	4,160	5,477	4,240	3,733	2,003	1,890	1,702
United Kingdom 2/	3,444	3,360	1,980	1,671	1,927	2,287	921	1,128	1,229
Italy	560	440	288	1,077	1,233	1,717	659	738	688
France	2,955	2,928	2,476	2,292	1,728	1,958	912	928	941
Finland	443	571	662	874	746	886	414	474	288
Sweden	1,272	828	624	629	547	250	340	161	57
All other	2,302	3,237	3,310	4,120	3,304	3,489	1,569	1,559	1,834
Total	26,137	29,280	23,860	29,470	24,610	27,258	11,998	12,987	13,266
Communist-dominated countries at full rates of duty	905	1,208	617	1,271	1,446	1,663	593	634	673
Grand total	27,042	30,488	24,477	30,741	26,056	28,921	12,591	13,621	13,939

1/ Prior to Aug. 31, 1963, dutiable under par. 219 or pars. 219 and 224 of the Tariff Act of 1930. Currently dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, 544.17 (pt.), and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37 and 542.71-542.77.

2/ Imports of float glass, which began in 1960, are included through Aug. 31, 1963; the quantity of float glass imported is very small compared with that of total imports of sheet glass.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 9.--Sheet glass: 1/ U.S. imports for consumption entered at most-favored-nation rates of duty, by tariff provisions, 1964-66

(In thousands of pounds)

Item	1964	1965	1966
Sheet glass weighing over 4 but not over 12 oz. per sq. ft. and measuring in united inches--			
Not over 40	2,108	2,742	4,067
Over 40	-	1	107
Total, weighing not over 12 oz. per sq. ft	2,108	2,743	4,174
Sheet glass weighing over 12 but not over 16 oz. per sq. ft. and measuring in united inches--			
Not over 40	20,499	25,436	23,958
Over 40 but not over 60	21,687	23,278	12,065
Over 60	7,456	5,350	5,068
Total, weighing over 12 but not over 16 oz. per sq. ft	49,642	54,064	41,091
Sheet glass weighing over 16 but not over 28 oz. per sq. ft. and measuring in united inches--			
Not over 40	36,631	32,807	42,034
Over 40 but not over 60	95,748	77,964	86,830
Over 60 but not over 100	83,874	69,167	70,522
Over 100	10,953	10,277	12,239
Total, weighing over 16 but not over 28 oz. per sq. ft	227,206	190,215	211,625
Sheet glass weighing over 28 oz. per sq. ft. and measuring in sq. ft.--			
Not over 2-2/3	20,390	16,111	17,719
Over 2-2/3 but not over 7	20,009	14,507	30,235
Over 7 but not over 15	15,054	15,975	18,926
Over 15 but not over 16-2/3	11,708	6,259	5,381
Over 16-2/3	98,485	87,008	92,957
Total, weighing over 28 oz. per sq. ft	165,646	139,860	165,218
Grand total at most-favored-nation rates of duty	444,602	386,882	422,108

1/ Dutiable under TSUS items 542.11-542.25, 542.42-542.67, 542.92-542.98, and TSUS appendix items 923.31-923.77, inclusive. Imports dutiable under the TSUS appendix items are reported statistically under TSUSA items 542.31-542.37, and 542.71-542.77.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 10.--Sheet glass weighing over 16 but not over 28 ounces per square foot and measuring not over 100 united inches: 1/ U.S. imports for consumption, by principal sources, 1964-66 and January-June 1965-67

Country	1964	1965	1966	January-June--		
				1965	1966	1967
	Quantity (1,000 pounds)					
Belgium	61,195	48,073	51,695	23,099	31,376	21,334
Japan	40,258	30,767	25,035	16,155	16,136	11,733
Italy	6,197	7,882	21,588	2,851	7,853	8,344
West Germany	15,183	15,492	20,822	7,313	10,963	11,997
United Kingdom	10,092	14,711	11,684	7,419	4,351	12,006
Israel	6,813	5,943	10,577	2,770	3,179	5,471
Taiwan	6,172	7,585	9,390	3,450	5,068	6,593
France	14,058	7,955	8,827	5,207	4,598	3,774
Finland	7,595	6,823	8,685	4,063	4,772	3,645
All other	48,690	34,707	31,083	18,741	15,493	11,266
Total	216,253	179,938	199,386	91,068	103,789	96,163
Communist dominated countries at full rates of duty	18,497	23,397	29,456	9,537	10,104	13,634
Grand total	234,750	203,335	228,842	100,605	113,893	109,797
	Value (1,000 dollars)					
Belgium	3,883	2,813	3,061	1,407	1,804	1,462
Japan	2,930	2,142	1,808	1,105	1,120	962
Italy	418	451	1,093	184	393	529
West Germany	1,129	1,114	1,515	574	745	870
United Kingdom	684	952	775	481	270	820
Israel	387	305	419	148	158	266
Taiwan	354	475	581	224	314	528
France	963	572	619	386	318	333
Finland	395	363	474	211	259	228
All other	2,753	1,843	1,650	1,040	837	405
Total	13,896	11,030	11,995	5,760	6,218	6,403
Communist dominated countries at full rates of duty	827	1,002	1,255	420	428	553
Grand total	14,723	12,032	13,250	6,180	6,646	6,956

1/ Dutiable in accordance with escape-clause provisions under TSUS appendix items 923.31, 923.33, 923.35, 923.71, 923.73, and 923.75. Such imports are reported statistically under TSUSA items 542.3120-542.3570 and 542.7100-542.7500, inclusive.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 11.--Delivered prices of representative sizes of domestic and West European sheet glass to direct-factory buyers 1/ in New York City on selected dates, 1960-67

Description and date	Delivered price of domestic glass	Delivered price of West European glass	Amount or percent by which the West European glass was lower in delivered price than the domestic	
Single strength "B" (19 ounces): Over 50, not over 60 united inches:	Per 100 sq. ft.	Per 100 sq. ft.	Per 100 sq. ft.	Percent
Nov. 1, 1960	$9.38	$8.64	$0.74	7.9
May 1, 1961	9.38	8.64	.74	7.9
Nov. 1, 1961	9.38	8.64	.74	7.9
May 1, 1962	9.85	8.64	2/ 1.21	2/ 12.3
Nov. 1, 1962	9.85	9.50	.35	3.6
May 1, 1963	9.85	9.32	.53	5.4
Nov. 1, 1963	10.53	9.94	.59	5.6
May 1, 1964	11.06	10.41	.65	5.9
Nov. 1, 1964	11.06	10.41	.65	5.9
May 1, 1965	10.95	10.21	.74	6.8
Nov. 1, 1965	10.73	10.21	.52	4.8
May 1, 1966	10.61	10.40	.21	2.0
Nov. 1, 1966	11.15	10.71	.44	3.9
May 1, 1967	11.15	10.71	.44	3.9
Heavy sheet "B" (3/16 inches): Over 16-2/3, not over 25 square feet:				
Nov. 1, 1960	24.48	22.31	2.17	8.9
May 1, 1961	24.48	22.31	2.17	8.9
Nov. 1, 1961	24.48	22.31	2.17	8.9
May 1, 1962	25.71	22.31	2/ 3.40	2/ 13.2
Nov. 1, 1962	25.71	24.54	1.17	4.6
May 1, 1963	25.71	24.54	1.17	4.6
Nov. 1, 1963	26.99	25.72	1.27	4.7
May 1, 1964	26.99	25.72	1.27	4.7
Nov. 1, 1964	26.99	25.72	1.27	4.7
May 1, 1965	26.72	25.23	1.49	5.6
Nov. 1, 1965	26.72	25.23	1.49	5.6
May 1, 1966	27.92	26.32	1.60	5.7
Nov. 1, 1966	29.35	27.29	2.06	7.0
May 1, 1967	29.35	27.29	2.06	7.0

1/ Direct-factory buyers are those distributors, jobbers, fabricators, and processors selected by the individual producers as the only concerns that can buy sheet glass directly from the factory. Other concerns desiring to purchase sheet glass, in carload lots, must purchase their glass from the direct-factory buyers at higher prices. Sales agents for the principal foreign manufacturers generally sell only to firms previously recognized by the domestic producers as direct-factory buyers.

2/ In effect for about 2 months.

Source: Compiled from manufacturers' and sales agents' pricelists.

Note.--Prices reflect payment discounts and discounts for packing in standard pallets. Prices do not reflect special discounts for large volume orders, shipments of special stock sizes, or shipments in extra heavy pallets. Customs brokerage, loading, and trucking charges have been added to the prices of the imported glass in effect on Nov. 1, 1962 through May 1, 1966.

Table 12.--Sheet glass: Profit-and-loss experience of domestic producers 1/ on their sheet glass operations for 1961-66

Year	Net sales and intracompany transfers	Net operating profit or (loss) before income taxes	Ratio of net operating profit or (loss) to net sales
	1,000 dollars	1,000 dollars	Percent
1961 2/	107,390	690	0.6
1962 2/	121,962	2,831	2.3
1963 2/	130,938	11,164	8.5
1964	143,885	18,095	12.6
1965 3/	141,261	13,173	9.3
1966 3/	131,595	6,755	5.1

1/ Includes data on all companies that produce significant quantities of sheet glass, except the Ford Motor Co. * * *

2/ Net operating profits or (losses) before income taxes have been revised from previous reports.

3/ Does not include data on the Blackford Window Glass Co., which ceased operations in February 1966. Blackford accounted for less than 2 percent of the industry's aggregate sales in 1965.

Source: Compiled from information submitted to the U.S. Tariff Commission by the domestic producers.