

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigations Nos. 731-TA-761 and 762 (Final)

STATIC RANDOM ACCESS MEMORY SEMICONDUCTORS FROM THE REPUBLIC OF KOREA AND TAIWAN

DETERMINATIONS

On the basis of the record¹ developed in the subject investigations, the United States International Trade Commission determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from the Republic of Korea of static random access memory semiconductors (SRAMs)² that have been found by the Department of Commerce (Commerce) to be sold in the United States at less than fair value (LTFV). The Commission also determines,³ pursuant to section 735(b) of the Act (19 U.S.C. § 1673d(b)), that an industry in the United States is materially injured by reason of imports from Taiwan of SRAMs that have been found by Commerce to be sold in the United States at LTFV.

BACKGROUND

The Commission instituted these investigations effective February 25, 1997, following receipt of a petition filed with the Commission and Commerce by Micron Technology Inc., Boise, ID. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of SRAMs from Korea and Taiwan were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the scheduling of the Commission's investigations and of a public hearing to be held in connection therewith was given by

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

² The products covered by these investigations are synchronous, asynchronous, and specialty SRAMs from Korea and Taiwan, whether assembled or unassembled. Assembled SRAMs include all package types. Unassembled SRAMs include processed wafers or die, uncut die, and cut die. Processed wafers produced in Korea or Taiwan, but packaged, or assembled into memory modules, in a third country, are included in the scope; processed wafers produced in a third country and assembled or packaged in Korea or Taiwan are not included in the scope.

The scope of these investigations includes modules containing SRAMs. Such modules include single in-line processing modules (SIPs), single in-line memory modules (SIMMs), dual in-line memory modules (DIMMs), memory cards, or other collections of SRAMs, whether unmounted or mounted on a circuit board. The scope of these investigations does not include SRAMs that are physically integrated with other components of a motherboard in such a manner as to constitute one inseparable amalgam (i.e., SRAMs soldered onto motherboards).

The SRAMs within the scope of these investigations are classified in statistical reporting numbers 8542.13.8037 through 8542.13.8049, 8473.30.1000 through 8473.30.9000, and 8542.13.8005 of the Harmonized Tariff Schedule of the United States (HTSUS).

³ Vice Chairman Bragg voted in the affirmative, Chairman Miller voted in the negative, and Commissioner Crawford did not participate.

posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of October 16, 1997 (62 FR 53800). The hearing was held in Washington, DC, on February 18, 1998, 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 antidumping duty investigations, we find that an industry in the United States is neither materially injured nor threatened with material injury by reason of imports of static random access memory semiconductors (“SRAMs”) from the Republic of Korea (“Korea”) that have been found by the Department of Commerce (“Commerce”) to be sold at less than fair value (“LTFV”). We also find that an industry in the United States is materially injured by reason of imports of SRAMs from Taiwan that have been found by Commerce to be sold at LTFV.^{4 5}

I. DOMESTIC LIKE PRODUCT AND INDUSTRY

A. Domestic Like Product

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

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

⁴ Chairman Miller, Vice Chairman Bragg, and Commissioner Crawford each voted in the negative with respect to imports from Korea. With respect to imports from Taiwan, Chairman Miller voted in the negative, Vice Chairman Bragg voted in the affirmative, and Commissioner Crawford did not participate.

⁵ Material retardation of the establishment of an industry is not an issue in these investigations.

⁶ 19 U.S.C. § 1677(4)(A).

⁷ 19 U.S.C. § 1677(10).

⁸ See, e.g., Nippon Steel Corp. v. United States, 19 CIT ___, Slip Op. 95-57 at 11 (Apr. 3, 1995). The Commission generally considers a number of factors including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) common manufacturing facilities, production processes and production employees; (5) customer and producer perceptions; and, where appropriate, (6) price. See *id.* at 11 n.4; Timken Co. v. United States, 913 F. Supp. 580, 584 (Ct. Int’l Trade 1996).

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

¹⁰ 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).

being sold at LTFV, the Commission determines what domestic product is like the imported articles Commerce has identified.¹¹

B. Product Description

In these investigations Commerce has defined the imported articles as:

*synchronous, asynchronous, and specialty SRAMs from Korea and Taiwan, whether assembled or unassembled. Assembled SRAMs include all package types. Unassembled SRAMs include processed wafers or die, uncut die, and cut die. Processed wafers produced in Korea and Taiwan, but packaged, or assembled into memory modules, in a third country, are included in the scope; wafers produced in a third country and assembled or packaged in Korea or Taiwan are not included in the scope.*¹²

Commerce provided further that:

*The scope of these investigations includes modules containing SRAMs. Such modules include single in-line processing modules (“SIPs”), single in-line memory modules (“SIMMs”), dual in-line memory modules (“DIMMs”), memory cards, or other collections of SRAMs, whether unmounted or mounted on a circuit board.*¹³

Commerce clarified in its final determinations that the subject merchandise does not include the SRAM content of motherboards.¹⁴

SRAMs are integrated circuits containing thousands or millions of cells that allow data to be stored and retrieved at high speeds.¹⁵ SRAMs vary by access speed (the time required to access data, measured in nanoseconds), density (the number of storage cells), and power consumption.¹⁶ Unlike dynamic random access memory semiconductors (“DRAMs”), SRAMs do not require a periodic

¹¹ Hosiden Corp. v. Advanced Display Manufacturers, 85 F.3d 1561 (Fed. Cir. 1996) (Commission may find single like product corresponding to several different classes or kinds defined by Commerce); Torrington, 747 F. Supp. at 748-752 (affirming Commission determination of six like products in investigations where Commerce found five classes or kinds).

¹² 63 Fed. Reg. 8934, 8934 (Feb. 23, 1998) (Korea); 63 Fed. Reg. 8909, 8910 (Feb. 23, 1998) (Taiwan).

¹³ *Id.*

¹⁴ 63 Fed. Reg. 8934, 8934 (Feb. 23, 1998) (Korea) (“We have determined that the scope of this investigation does not include SRAMs that are physically integrated with other components of a motherboard in such a manner as to constitute one inseparable amalgam (i.e., SRAMs soldered onto motherboards).”); 63 Fed. Reg. 8909, 8910 (Feb. 23, 1998) (Taiwan) (same).

¹⁵ Confidential Staff Report (“CR”) at I-6 to I-8, Public Staff Report (“PR”) at I-6 to I-7.

¹⁶ CR at I-7, PR at I-7 (density); CR at I-6 to I-8, PR at I-6 to I-8 (access speed); CR at I-11, PR at I-10 (power consumption).

electrical pulse to maintain the information they contain.¹⁷ SRAMs thus consume less power than DRAMs of comparable density.¹⁸ An SRAM can also provide a faster access speed than a DRAM.¹⁹ On the other hand, SRAMs are generally more complicated and expensive to produce than DRAMs.²⁰ For these reasons, SRAMs are used instead of DRAMs where faster access speeds or lower power consumption are required.²¹

SRAM manufacture begins with the creation of hundreds of identical circuit patterns on a silicon wafer.²² The development of the design of these circuits is itself a highly technical process that is sometimes performed by companies not involved in the manufacture of SRAMs.²³ The circuitry is created by the repetitive application of a series of photolithographic and chemical processes, which create microscopic channels on the face of the wafer that conduct or inhibit the flow of electricity.²⁴ While still on the wafer, these identical circuit patterns, each of which is a “die” or “chip,” are tested electronically.²⁵ The wafer is then cut into individual dice, each of which is an unassembled (or “uncased” or “unpackaged”) SRAM.²⁶ The dice then undergo assembly and further testing, often at a different facility or by a different company.²⁷ Wafer fabrication requires heavy capital investment, in both research and development of constantly evolving product and process technology, as well as the highly sophisticated equipment required for the manufacture of these complex products.²⁸ The subsequent assembly and test process also requires significant capital investment, but is comparatively more labor intensive.²⁹

C. Domestic Like Product Issue in These Investigations

At issue in these investigations is whether there should be a single domestic like product corresponding to the subject merchandise, as the petitioner argues, or whether, as some of the respondents have argued, there should be separate domestic like products consisting, respectively, of “fast” SRAMs, defined as SRAMs with access speeds of 44 nanoseconds (“ns.”) and faster, and “slow” SRAMs, defined as those with access speeds of 45 ns. and slower.^{30 31} In the preliminary determination,

¹⁷ CR at I-6, PR at I-6.

¹⁸ CR at I-7 to I-8, PR at I-6.

¹⁹ CR and PR at I-6 to I-7.

²⁰ CR and PR at I-6.

²¹ CR and PR at I-6.

²² CR and PR at I-12.

²³ CR at I-12, III-8; PR at I-12 and III-5 to III-6.

²⁴ CR at I-15, PR at I-12.

²⁵ CR at I-15, PR at I-12.

²⁶ CR at I-15, PR at I-12.

²⁷ CR and PR at I-15.

²⁸ CR and PR at I-12, I-15; transcript of March 18, 1997 conference (“conf. tr.”) at 16-19 (Donnelly) (regarding costs of capital investment, research and development, and manufacturing equipment).

²⁹ CR at I-15, I-17; PR at I-12, I-15.

³⁰ During the preliminary phase investigations, a number of Korean and Taiwan respondents argued that the
(continued...)

the Commission found a single domestic like product consisting of all SRAMs, including unassembled SRAMs, assembled SRAMs, and SRAM memory modules, regardless of access speed.³² Despite finding certain differences in end use and limits on interchangeability between SRAMs at the extremes of the access speed continuum, the Commission was unable to discern a clear dividing line between fast SRAMs and slow SRAMs. Based on our examination of the six traditional domestic like product factors, we find a single domestic like product consisting of all SRAMs and SRAM modules for purposes of these final determinations as well.

1. Physical characteristics and uses

Fast and slow SRAMs share the same basic physical characteristics, as both types consist of circuitry and transistors on the face of a silicon wafer.³³ Certain other physical characteristics appear primarily in either slow or fast SRAMs, but they do not characterize either the fast or slow grouping as a whole. For example, synchronous SRAMs have an operating frequency that is synchronized with the clock speed of the controlling unit (usually the microprocessors for which it provides memory).³⁴ Although this synchronized operating frequency is a physical characteristic found almost solely in fast SRAMs, many fast SRAMs are asynchronous, and thus do not have a synchronized operating frequency.³⁵ A low power consumption characteristic appears much more frequently in slow SRAMs, but at least one domestic producer makes fast SRAMs with low power consumption and another producer is developing such a product.³⁶

These differences in access speed and power consumption frequently result in different end uses for fast and slow SRAMs. In general, only fast SRAMs are used as cache memory,³⁷ a special high-speed

³⁰ (...continued)

Commission should find separate domestic like products for fast and slow SRAMs. In the final phase, Korean respondent Samsung Electronics Co., Ltd. and U.S. importer Samsung Semiconductor, Inc. (collectively “Samsung”) again advocated separate domestic like products, although, after Commerce calculated a de minimis dumping margin for it, Samsung did not actively participate in the investigations. The other respondents took no position on the definition of the domestic like product in the final phase of the investigations.

³¹ The Commission’s definition of “fast” and “slow” for purposes of the final determinations is the same as it was in the preliminary determination. The Commission asked the parties in the final phase investigations to comment on whether the terms should be re-defined. A consensus definition did not emerge from those comments, just as it had not from a review of industry publications (as discussed below under “Customer and Producer Perceptions”). CR at I-8 to I-9, PR at I-8. In the absence of a clearly preferable alternative, the Commission again defines fast SRAMs as those with access speeds of 44 ns. or faster, and slow SRAMs as those with access speeds of 45 ns. or slower.

³² Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan, 731-TA-761-762 (Preliminary), Pub. No. 3036 (April 1997) (“Prelim. Det.”) at 10.

³³ CR at I-6 to I-8, PR at I-6 to I-7, I-12.

³⁴ CR at I-7 to I-8, PR at I-7.

³⁵ CR at I-7 to I-8, V-5 and PR at I-7, V-4 (indicating that products examined by the Commission include asynchronous SRAMs of 30 ns. and faster).

³⁶ Transcript of February 18, 1998 hearing (“hearing tr.”) at 96-97 (Black & Cloud), 103-04 (Bruneau).

³⁷ The term “cache” refers to a relatively small, but quickly accessible memory capacity. Computers with cache memory also have a main memory, which is larger, with slower accessibility. More advanced computers function most efficiently when they have cache memory in addition to main memory. Memorandum to the file regarding
(continued...)

capacity that allows computers to operate at designed speeds.³⁸ Slow SRAMs, by virtue of their low power consumption, are favored for use as main memory in battery-operated end uses, such as hand held cell telephones.³⁹ Both fast and slow SRAMs, however, are used in consumer electronics, data and telecommunications equipment, and cellular telephones and pagers.⁴⁰

2. Interchangeability

There is a limited degree of interchangeability between fast and slow SRAMs. A slow SRAM cannot be substituted for a fast one.⁴¹ Under certain circumstances fast SRAMs can be substituted for slow SRAMs. This one-way interchangeability is limited, however, because many of the applications in which slow SRAMs are used require low power consumption, whereas most fast SRAMs consume significantly more power.⁴²

3. Channels of distribution

Both fast and slow SRAMs are sold to original equipment manufacturers (“OEMs”) as well as to a variety of distributors.⁴³ A greater proportion of fast SRAMs is sold to OEMs than to distributors.⁴⁴

4. Production facilities, processes, and employees

The production processes for fast and slow SRAMs are similar.⁴⁵ Both fast and slow SRAMs are produced on silicon wafers, using a mask set and repetitious photolithographic and chemical procedures.⁴⁶ The CMOS process is used to make both fast and slow SRAMs.⁴⁷ Some of the fastest SRAMs are made by the BiCMOS process.⁴⁸ The same production employees produce fast and slow SRAMs in the same production facilities.⁴⁹

5. Customer and producer perceptions

³⁷ (...continued)

Micron plant tour of March 11, 1997.

³⁸ Table I-2, CR at I-11 and I-13 and PR I-10 and I-11.

³⁹ CR at I-7, I-17; PR at I-6, I-15.

⁴⁰ Table I-2, CR at I-13 and PR at I-11.

⁴¹ CR at I-18, PR at I-15 to I-16.

⁴² CR at I-17, PR at I-15 to I-16; hearing tr. at 103-04 (Bruneau), 190-91 (Fischer).

⁴³ CR at I-18 to I-20; PR at I-17.

⁴⁴ CR at I-12 to I-13, PR at I-8 to I-9.

⁴⁵ CR at I-12 to I-17, PR at I-12 to I-15; hearing tr. at 78, 106 (Bruneau).

⁴⁶ CR at I-15, PR at I-12.

⁴⁷ CR and PR at I-7.

⁴⁸ CR and PR at I-7 and E-6.

⁴⁹ Hearing tr. at 78 (Bruneau); CR at I-17, PR at I-15.

Many customers and producers perceive that fast and slow SRAMs are different in terms of access speed.⁵⁰ Customers and producers did not agree, however, on a definition of the “fast” and “slow,” perhaps due to the fact that SRAM access speeds are generally increasing.⁵¹ Some customers perceive the terms “fast” and “slow” as general in nature because their products require SRAMs of very specific access speeds to optimize functionality.⁵²

6. Price

The record is mixed with regard to how much higher priced fast SRAMs are than slow SRAMs. There is evidence that some fast SRAMs are harder to produce and have shorter life spans than slower SRAMs, and thus command up to twice the price of similarly configured slow SRAMs.⁵³ On the other hand, domestic industry representatives testified that the difference was much smaller, although still significant.⁵⁴ Data gathered during these investigations indicates that in 1997 the price of fast and slow SRAMs were very close.⁵⁵ Price reductions in one area of the market can affect other areas, even across product family lines.⁵⁶

7. Conclusion

Based on our examination of the six factors above, we do not find a clear dividing line between SRAMs with access speeds of 44 ns. and faster and SRAMs with access speeds of 45 ns. and slower.⁵⁷ Accordingly, we find a single domestic like product consisting of SRAMs of all access speeds.⁵⁸ Our difficulty in discerning a clear dividing line is due in part to the fact that access speed varies along a continuum. Our difficulty was compounded by the rapid evolution of certain aspects of the product, including, for example, generally increasing access speeds⁵⁹ and the fact that some fast SRAMs operate at lower power-consumption rates.

D. Domestic Industry

⁵⁰ CR at I-18, PR at I-16.

⁵¹ CR at I-8 to I-9, PR at I-8 (indicating definitions proposed by producers and those used by industry publishers); Prehearing Brief of Micron at 11 n.22 (summarizing producer and importer questionnaire responses); and CR at I-8, PR at I-7 (indicating that access speeds are increasing).

⁵² CR at I-18, PR at I-16.

⁵³ CR at I-20 to I-21, PR at I-17 to I-18.

⁵⁴ Hearing tr. at 105-06 (Bruneau), 190-91 (Fischer).

⁵⁵ CR at I-21, V-20; PR at I-18, V-14.

⁵⁶ CR at I-21, PR at I-18; hearing tr. at 65-67 (Commissioner Crawford & Mr. Franciscovich). *See also* Prehearing Brief of Micron at 13-16 (claiming a high correlation between prices of fast and slow SRAMs).

⁵⁷ Based on her examination of the six factors above, Commissioner Crawford finds that the SRAM market is somewhat segmented between fast and slow SRAMs, but not sufficiently segmented to find separate like products.

⁵⁸ The single domestic like product includes unassembled SRAMs, assembled SRAMs, and SRAM memory modules.

⁵⁹ CR at I-8, PR at I-7.

The Commission is directed to consider the impact of the subject imports on the domestic industry, defined as “the producers as a [w]hole of a domestic like product.”⁶⁰ In defining the domestic industry, the Commission’s general practice has been to include in the industry all of the domestic production of the like product, whether toll produced, captively consumed, or sold in the domestic merchant market.⁶¹

Based on our definition of the domestic like product, we define the corresponding domestic industry as all companies that perform the manufacture of unassembled SRAMs and/or perform the assembly and testing of unassembled SRAMs in the United States, as we did in the preliminary determination.^{62 63} Also consistent with our preliminary determination, we do not include in the domestic industry companies whose sole SRAM production activity is to purchase assembled SRAMs and assemble them into SRAM modules. We find that the assembly of purchased assembled SRAMs into SRAM modules does not involve sufficient production-related activity to merit the inclusion of such companies in the domestic industry.⁶⁴

⁶⁰ 19 U.S.C. § 1677(4)(A).

⁶¹ See United States Steel Group v. United States, 873 F. Supp. 673, 682-83 (Ct. Int’l Trade 1994) *aff’d* 96 F.3d 1352 (Fed. Cir. 1996).

⁶² Prelim. Det. at 10 n.56. No party disputed that such companies should be included in the domestic industry. In determining whether a company’s production-related activities are sufficient that it should be included in the domestic industry, the Commission has generally considered the following six factors: (1) the source and extent of the firm’s capital investment, (2) the technical expertise involved in U.S. production activities, (3) the value added to the product in the United States; (4) employment levels; (5) the quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. See Certain Carbon Steel Plate From China, Russia, South Africa, and Ukraine, Invs. Nos. 731-TA-753-756 (Final), Pub. No. 3076 (December 1997) at 10-11. Although *** performs only assembly and testing in the United States, it adds *** value to SRAMs as domestic producers that perform the manufacture of unassembled SRAMs: *** percent for *** versus *** percent for the other domestic producers. CR at VI-10; PR at VI-3. Also, due to the highly automated nature of the assembly and testing activities, a high degree of technical expertise is present. CR at I-15, I-17; PR at I-15. It also indicates a considerable capital investment in the equipment used to perform assembly and testing.

⁶³ Commissioner Crawford does not join the remainder of this section. She gives the benefit of the doubt to petitioner for purposes of this investigation and finds that all domestic companies performing assembly and testing operations should be considered part of the domestic industry. However, she notes the inconsistency of treating assembly and testing operations of a domestic company such as ***, which does not produce wafers or die, as significant enough to be considered domestic production, regardless of the source of the input, while treating the assembly and testing operations of foreign producers as insufficient to transform the origin of the product. Under this approach, an imported SRAM that is assembled and tested in the U.S. becomes the product of a domestic producer, yet a U.S.-produced SRAM assembled and tested abroad and subsequently re-imported does not become a foreign product. The latter is not even counted as an import in this investigation.

⁶⁴ One SRAM module maker indicated that it added *** percent of the value of the module, when measured excluding selling, general, and administrative expenses. CR at VI-10, PR at VI-3. This suggests that module makers do not engage in significant production activities, do not make significant capital investments, or have significant technical expertise, especially when compared to companies that perform the manufacture of unassembled SRAMs or perform the assembly and testing of unassembled SRAMs. No party argued that SRAM module makers should be included in the domestic industry.

It was argued in the final phase of these investigations that we should include in the domestic industry companies that develop in the United States the designs used in some of the subject imports from Taiwan. These companies are known as “fabless” producers because they have no fabrication facility, instead engaging other companies (such as the Taiwan producers in this case) to perform fabrication. The fabless producers argue that they should be included in the domestic industry because design is a significant part of the production process, one that adds significant value to the finished SRAM. We do not include the fabless producers in the domestic industry because they do not produce the domestic like product. SRAM designs, although necessary to SRAM production, do not come within the definition of the domestic like product (which reflects the fact that Commerce did not define the subject merchandise to include SRAM designs).⁶⁵ The designs, moreover, are incorporated into SRAMs that Commerce has included in the subject merchandise, despite a request by the fabless producers that Commerce exclude such SRAMs from the subject merchandise.⁶⁶

E. Related Parties

We have considered whether Motorola should be excluded from the domestic industry under the “related parties” provision of the statute. The statute allows the Commission to exclude certain domestic producers⁶⁷ from the domestic industry for the purposes of an injury determination, if appropriate

⁶⁵ The fabless producers point out correctly that the Commission has considered design to be a production-related activity in a number of past determinations. Although the Commission is not bound by past determinations because each is *sui generis*, we note that in each of those past determinations the company in question in fact produced the domestic like product. See, e.g., Erasable Programmable Read only Memories from Japan, 731-TA-288 (Final), Pub. No. 1927 (December 1986) at 11-12; Dynamic Random Access Memory Semiconductors of 256K and Above from Japan, 731-TA-300 (Preliminary), Pub. No. 1803 (Jan. 1986) at 15; and Dynamic Random Access Semiconductors of One Megabit and Above from the Republic of Korea, 731-TA-556 (Final), Pub. No. 2629 (May 1993) at 17. The Commission examined the companies’ design activities only to determine whether they engaged in sufficient activities related to the production of that domestic like product to be included in the domestic industry. In the present investigations, by contrast, the fabless producers do not engage in the production of a domestic like product.

In fact, the fabless producers present a set of circumstances highly analogous to those of the “jobbers” that the Commission considered in Sweaters Wholly or in Chief Weight of Manmade Fibers from Hong Kong, the Republic of Korea, and Taiwan, 731-TA-448-450 (Final), Pub. No. 2312 (Sept. 1990). The jobbers, like the fabless producers here, produced designs for the domestic like product, but did not produce the domestic like product. The Commission did not include the jobbers in the domestic industry, noting with emphasis that they do not engage in any manufacturing. Sweaters at 25-26. The Commission allowed that it might reach a different decision in a high-technology industry (Sweaters at 25 n.71), but we decline to do so here, because the fabless producers do not produce an article within the definition of the domestic like product.

⁶⁶ 63 Fed. Reg. 8909, 8915-16 (Comment 1) (Feb. 23, 1998).

⁶⁷ A domestic producer may be excluded from the domestic industry if it is either related to the exporters or importers of the subject merchandise, or is itself an importer of the subject merchandise. Parties are considered to be related if one party directly or indirectly controls another party, or if both are controlled by a third party. Direct or indirect control exists when “the party is legally or operationally in a position to exercise restraint or direction over the other party.” 19 U.S.C. § 1677(4)(B).

circumstances exist.⁶⁸ Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each case.⁶⁹

Motorola, a producer of the domestic like product, imported the subject merchandise during the period of investigation.⁷⁰ Thus, Motorola is a "related party," and the Commission may exclude it from the domestic industry if "appropriate circumstances" exist.⁷¹ We do not find that appropriate circumstances exist to exclude Motorola from the industry. The company's interests appear to be those of a producer rather than an importer because the amount of importation is *** relative to its production.⁷² Moreover, the company does not appear to be deriving any benefit from its importation of the subject merchandise and, although it accounts for a *** proportion of domestic production, its inclusion in the domestic industry would not skew the data for the rest of the industry.^{73 74 75}

⁶⁸ 19 U.S.C. § 1677(4)(B).

⁶⁹ See Torrington Co. v. United States, 790 F. Supp. at 1168; Sandvik AB v. United States, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989) *aff'd without opinion*, 904 F.2d 46 (Fed. Cir. 1990); Empire Plow Co. v. United States, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

⁷⁰ Table III-2, CR at III-10 and PR at III-6.

⁷¹ Factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the percentage of domestic production attributable to the importing producer; the reason the U.S. producer has decided to import the product subject to investigation; whether inclusion or exclusion of the related party will skew the data for the rest of the industry; the ratio of import shipments to U.S. production for related producers; and whether the primary interest of the related producer lies in domestic production or importation. See, e.g., Torrington Co. v. United States, 790 F. Supp. 1161 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993). See also Open-End Spun Rayon Singles Yarn from Austria, Inv. No. 731-TA-751 (Preliminary), Pub. No. 2999 at 7, n.39 (Oct. 1996).

⁷² The ratio of Motorola's imports of the subject merchandise to its domestic production was *** percent during the period of investigation. Table III-2, CR at III-10 and PR at III-6.

⁷³ Motorola's operating margins *** those of the overall industry, which showed *** operating *** in 1994 and 1995 and *** in 1996. In 1997, Motorola and the overall industry had operating ***, although those of Motorola were *** Table VI-3, CR at VI-9 and PR at VI-2 (showing, for Motorola, operating results of *** percent for 1994 through 1997 and *** percent for the entire industry for those years). Motorola's *** operating results for 1996 and 1997 compared to the overall industry contradicts the inference that it was sheltered from the effect of subject imports. Motorola accounts for *** percent of domestic production of uncased SRAMs, and *** percent of domestic cased SRAMs. Table III-1, CR at III-3 and PR at III-2.

⁷⁴ Commissioner Crawford notes that while no parties have addressed the question of whether appropriate circumstances exist to exclude the related party ***, there is evidence on the record suggesting that exclusion might be appropriate. However, as exclusion would not affect the outcome of this investigation due to ***'s minimal production levels, Commissioner Crawford joins her colleagues and does not exclude ***. She joins her colleagues' discussion below regarding ***.

⁷⁵ We have also considered whether appropriate circumstances exist to exclude ***, which also import the subject merchandise. In each case, however, the company's domestic production was *** relative to the rest of the domestic industry, or the ratio of its subject imports to its domestic production was *** that we find on this record that appropriate circumstances do not exist to exclude them from the domestic industry. Table III-2, CR at III-10 and PR at III-6 (indicating that the ratio of ***'s imports of subject merchandise to its domestic production was *** percent and that the ratio for *** was *** percent); and Table III-4, CR at III-15 and PR III-9 (indicating that *** accounted for less than *** percent of domestic production during the period of investigation). An additional producer, ***, was identified as an importer of the subject merchandise during the preliminary phase investigations, (continued...)

⁷⁵ (...continued)

due to imports of SRAMs produced by ***. The record in the final phase investigations indicates no subject imports by ***, however, because ***. *Compare* Prehearing report at Table III-2, confidential version at III-10 and public version at III-10 to Table III-2, CR at III-10 and PR at III-6.

II. NEGLIGIBILITY

The Uruguay Round Agreements Act (“URAA”)⁷⁶ amends the statutory provisions pertaining to antidumping duty determinations to require that investigations terminate by operation of law without an injury determination if the Commission finds that the subject imports are negligible.⁷⁷ The provision defining “negligibility”, 19 U.S.C. § 1677(24), provides that imports from a subject country that are less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or self-initiation, as the case may be, shall be deemed negligible. The statute provides, however, that the Commission shall not treat imports as negligible if it determines that there is a potential that imports from a country will imminently account for more than 3 percent of the volume of all such merchandise imported into the United States, or that the aggregate volume of imports from all countries described in clause (ii) will imminently exceed 7 percent of the volume of all such merchandise imported into the United States. However, in these circumstances the statute also expressly requires that such imports “be considered only for the purpose of determining threat of material injury.”⁷⁸

The issue of negligibility was not argued in the preliminary phase of these investigations because subject imports from Taiwan and Korea each clearly exceeded the three percent threshold. In the final phase investigations, however, the issue arose with regard to Korea after Commerce calculated a de minimis dumping margin for Korean respondent Samsung, resulting in the exclusion of that company’s exports from its affirmative finding.⁷⁹

Commission staff calculated that subject imports from Korea accounted for *** percent of all SRAM imports during 1996, the most recent 12-month period preceding the filing of the petition for which data are available, exceeding the three percent threshold by a small margin.^{80 81} The staff used questionnaire responses to calculate both the amount of subject imports from Korea and the total imports.⁸²

The Korean respondents agreed that the Commission should use the questionnaire responses to calculate the quantity of the subject imports from Korea, but argued that questionnaire responses were too unreliable to be used to calculate the total imports because they indicated a volume of total imports that was “over 20 percent” smaller than that derived from official import statistics.⁸³ They argued,

⁷⁶ P.L. 103-463, approved Dec. 8, 1994.

⁷⁷ 19 U.S.C. § § 1673b(a), 1673d(b).

⁷⁸ 19 U.S.C. § 1677(24)(A)(iv).

⁷⁹ In this investigation, Commissioner Crawford gives the benefit of the doubt to petitioners and finds that subject imports from Korea are not negligible.

⁸⁰ CR at IV-5, PR at IV-4.

⁸¹ The imports are measured by the number of bits. The Commission chose bits rather than units, because a single SRAM (one unit) may contain a wide ranging number of bits and because the number of bits per unit increases over time. Prelim. Det. at 16 n.94. No party disputed that the Commission should measure imports in bits. Hearing tr. at 138-40 (House & Walders, representing the Korean respondents), 196-97 (Kaplan, representing the petitioner, Micron).

⁸² CR at IV-5, PR at IV-4.

⁸³ Posthearing brief of Hyundai Electronics Industries Co., Ltd. and Hyundai Electronics America Inc.

(continued...)

therefore, that total imports should be calculated based on estimates of import volumes that Commission staff derived from official import statistics. They argue that the estimates derived from official import statistics indicate that subject imports from Korea were shown to be negligible.

We find that the estimates derived from official import statistics are not more reliable than the data contained in the questionnaire responses. The U.S. Customs Service reported SRAM imports in broad ranges, such as, in the case of HTSUS statistical category 8542.13.8041, SRAMs of 300,000 to 3,000,000 bits.⁸⁴ Although Commission staff derived estimates from these official statistics, estimates they remain. We find the questionnaire responses more reliable under the circumstances. Based on those data, we find that the subject imports from Korea are *** percent of the total SRAM imports, and thus are not less than three percent.^{85 86}

III. CUMULATION

Section 771(7)(G)(I) requires the Commission to cumulate imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with domestic like products in the United States market.⁸⁷ There is no dispute that the petitions on Taiwan and Korea were filed on the same day. The only cumulation issue is whether the subject imports compete with each other and with the domestic like product. In assessing

⁸³ (...continued)

(“Hyundai”) and LG Semicon Co., Ltd. and LG Semicon America, Inc. (“LG Semicon”) at 1.

⁸⁴ CR at H-14, PR at H-12.

⁸⁵ The Korean respondents also argued that the questionnaire responses were unreliable because they were likely to capture a higher percentage of the volume of the subject imports from Korea than of the total imports, because a smaller number of importers handle subject imports from Korea and they are more readily identifiable. As noted above, we do not believe that the questionnaire responses necessarily underreported the total imports simply because they indicated a smaller number of SRAM bit imports than the estimates derived from official import statistics. In fact, the questionnaire responses also indicated a smaller number of SRAM bit imports from all Korean sources (suggesting that any undercounting occurred both in the number of subject imports from Korea and total imports). *Compare* Table H-2, CR at H-6 and PR at H-5 to Table H-4, CR at H-10 and PR at H-8. Approaching from still another angle the question of whether the questionnaires underrepresent total imports, the petitioner argued that, when measured in units (rather than bits), the questionnaire responses report *** percent of the imports reported in the official import statistics. *Compare* Table H-2, CR at H-6 and PR at H-5, to Table H-4, CR at H-10 and PR at H-8. This units-based comparison suggests that any underreporting in the questionnaire responses is insignificant. Assuming, for the sake of argument, that the questionnaire responses captured only *** percent of the actual total imports, we could correct that alleged underreporting by adjusting the figure upward by a corresponding amount. Even using such a revised figure, however, the subject imports from Korea still account for three percent of the total imports. As indicated above, however, we do not find any adjustment necessary because the questionnaire responses are a more reliable source of information in these investigations than the estimates derived from official import statistics.

⁸⁶ We also decline, as we have in the past, to use import data prepared on one basis as to the numerator (the volume of subject imports from the country in question) in the negligibility calculation, while using data prepared on another basis for the denominator (the volume of total imports). *See* Stainless Steel Wire Rod, Invs. Nos. 701-TA-373 and 731-TA-769-775 (Preliminary), Pub. No. 3060 (September 1997) at 14 n.79.

⁸⁷ 19 U.S.C. § 1677(7)(G)(I). There are four exceptions to the cumulation provision, none of which applies to these investigations. *See id.* at 1677(7)(G)(ii).

whether imports compete with each other and with the domestic like product,⁸⁸ the Commission has generally considered four factors, including:

- (1) the degree of fungibility between the imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;⁸⁹
- (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 imports from different countries and the domestic like product; and
- (4) whether the imports are simultaneously present in the market.⁹⁰

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the imports compete with each other and with the domestic like product.⁹¹ Only a "reasonable overlap" of competition is required.⁹²

In the preliminary phase of the investigations, it was argued that fungibility between the subject imports from Korea and Taiwan was limited because the subject imports from Korea were primarily slow SRAMs whereas the subject imports from Taiwan were primarily fast SRAMs. As noted above in section I.C.2, the interchangeability between fast and slow SRAMs is limited. Although the foreign producers did not report their exports by speed in the preliminary phase of the investigations, there was

⁸⁸ The Statement of Administrative Action submitted to Congress in connection with the Uruguay Round Agreements Act (P.L. 103-465, approved Dec. 8, 1994) expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." Uruguay Round Agreements Act, Statement of Administrative Action, H.R. Doc. 103-316, Vol. 1, (1994) ("SAA") at 848 *citing* Fundicao Tupy, S.A. v. United States, 678 F. Supp. 898, 902 (Ct. Int'l Trade 1988), *aff'd* 859 F.2d 915 (Fed. Cir. 1988).

⁸⁹ Commissioner Crawford finds that substitutability, not fungibility, is a more accurate reflection of the statute. Commissioner Crawford is not participating in the investigation regarding subject imports from Taiwan, but she must still consider whether to cumulate the subject imports from Taiwan and Korea for purposes of the determination as to Korea. She finds there is not sufficient substitutability to conclude there is a reasonable overlap of competition between subject imports from Korea and Taiwan. Therefore, she concurs with her colleagues that subject imports from Korea and Taiwan should not be cumulatively assessed. See Dissenting Views of Commissioner Carol T. Crawford in Stainless Steel Bar from Brazil, India, Japan and Spain, Invs. Nos. 731-TA-678, 679, 681, and 682 (Final), for a description of her views on cumulation.

⁹⁰ See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan, Invs. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, Fundicao Tupy, S.A. v. United States, 678 F. Supp. 898 (Ct. Int'l Trade), *aff'd*, 859 F.2d 915 (Fed. Cir. 1988).

⁹¹ See, e.g., Wieland Werke, AG v. United States, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

⁹² See Wieland Werke, 718 F. Supp. at 52 ("Completely overlapping markets are not required."); United States Steel Group v. United States, 873 F. Supp. 673, 685-86 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996).

record evidence that the largest Korean producer, Samsung, produced both fast and slow SRAMs.⁹³ As a result, we found that Korean and Taiwan SRAMs did not fall into separate access speed ranges, and we found a significant degree of fungibility between subject imports from Korea and Taiwan, and between the subject imports and the domestic like product.⁹⁴ Accordingly, we found a reasonable overlap of competition and cumulated the subject imports from Korea and Taiwan.

The record is significantly different in the final phase of these investigations because Samsung's production is no longer considered subject merchandise, and because the parties reported their 1997 shipments by access speed. Among the 1997 shipments, 96.7 percent of subject imports from Korea were 55 ns. or slower, whereas 97.8 percent of subject imports from Taiwan were 34 ns. or faster.⁹⁵ We find only a limited degree of fungibility between the subject imports from Korea and Taiwan, based on the distinctions in access speed that exist for the vast majority of the subject imports, and because interchangeability between SRAMs of different speeds is limited. We find a higher degree of fungibility between the subject imports and the domestic like product because, although nearly all subject imports from Korea are 55 ns. or slower, 19.8 percent of the domestic shipments also fall in that range.⁹⁶ With regard to Taiwan, nearly all the subject imports from Taiwan had access speeds of 34 ns. or faster, as did 78.5 percent of domestic shipments.⁹⁷ We also find that the subject imports and the domestic like product were sold in overlapping geographic markets, were sold through common or similar channels of distribution, and were present in the market simultaneously.⁹⁸ We view these other factors as less probative of competition in this industry, however, than the limited fungibility between the subject imports from Korea and Taiwan. The limited degree of fungibility between the subject imports from Korea and Taiwan is probative, in our view, of a lack of a reasonable overlap of competition, regardless of whether the two import groups are sold in the same markets, when they were sold, or how they were distributed. We find that there is not a reasonable overlap of competition between the subject imports from Korea and Taiwan, and therefore do not cumulate their imports in these investigations. Accordingly, we consider the question of material injury by reason of subject imports from Korea and Taiwan on an individual country basis.

IV. NO MATERIAL INJURY BY REASON OF DUMPED IMPORTS FROM KOREA

In the final phase of an antidumping duty investigation, the Commission determines whether an industry in the United States is materially injured by reason of⁹⁹ the dumped imports under

⁹³ Conf. tr. at 163 (Griffith).

⁹⁴ In the preliminary determination, Commissioner Crawford found a sufficient degree of substitutability between the subject imports from Korea and Taiwan and between the subject imports and the domestic like product to find a reasonable overlap of competition.

⁹⁵ Table I-1, CR at I-10 and PR at I-9.

⁹⁶ Table I-1, CR at I-10 and PR at I-9.

⁹⁷ Table I-1, CR at I-10 and PR at I-9.

⁹⁸ CR at I-18 to I-20 and PR at I-16 to I-17 (channels of distribution); Table IV-5, CR at IV-11 and PR at IV-10 (showing shipments of subject imports from both Korea and Taiwan during each year of the period of investigation).

⁹⁹ Commissioner Crawford notes that the statute requires that the Commission determine whether a domestic industry is "materially injured by reason of" the LTFV imports. She finds that the clear meaning of the statute is to
(continued...)

investigation.¹⁰⁰ In making this determination, the Commission must consider the volume of imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.^{101 102}

In assessing whether a domestic industry is materially injured or threatened with material injury by reason of dumped imports, we consider all relevant economic factors that bear on the state of the industry in the United States.¹⁰³ These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is dispositive and all relevant factors¹⁰⁴ are

⁹⁹ (...continued)

require a determination of whether the domestic industry is materially injured by reason of LTFV imports, not by reason of the LTFV imports among other things. Many, if not most, domestic industries are subject to injury from more than one economic factor. Of these factors, there may be more than one that independently are causing material injury to the domestic industry. It is assumed in the legislative history that the “ITC will consider information which indicates that harm is caused by factors other than less-than-fair-value imports.” S. Rep. No. 96-249 at 75 (1979). However, the legislative history makes it clear that the Commission is not to weigh or prioritize the factors that are independently causing material injury. *Id.* at 74; H.R. Rep. No. 96-317 at 46-47 (1979). The Commission is not to determine if the LTFV imports are “the principal, a substantial or a significant cause of material injury.” S. Rep. No. 96-249 at 74. Rather, it is to determine whether any injury “by reason of” the LTFV imports is material. That is, the Commission must determine if the subject imports are causing material injury to the domestic industry. “When determining the effect of imports on the domestic industry, the Commission must consider all relevant factors that can demonstrate if unfairly traded imports are materially injuring the domestic industry.” S. Rep. No. 100-71 at 116 (1987) (emphasis added); Gerald Metals v. United States, 132 F.3d 716 (Fed. Cir. 1997).

For a detailed description of Commissioner Crawford’s analytical framework, *see* Certain Preserved Mushrooms from Chile, China, India and Indonesia, Inv. Nos. 731-TA-776-779 (Preliminary), USITC Pub. 3086 at 21-22 (February 1998). Both the Court of International Trade and the United States Court of Appeals for the Federal Circuit have held that the “statutory language fits very well” with Commissioner Crawford’s mode of analysis, expressly holding that her mode of analysis comports with the statutory requirements for reaching a determination of material injury by reason of the subject imports. United States Steel Group v. United States, 96 F.3d 1352, 1361 (Fed. Cir. 1996), *aff’g* 873 F. Supp. 673, 694-95 (Ct. Int’l Trade 1994).

¹⁰⁰ 19 U.S.C. § 1673d(b). The statute defines “material injury” as “harm which is not inconsequential, immaterial, or unimportant.” 19 U.S.C. § 1677(7)(A).

¹⁰¹ 19 U.S.C. § 1677(7)(B)(I). The Commission “may consider such other economic factors as are relevant to the determination,” but shall “identify each [such] factor . . . and explain in full its relevance to the determination.” 19 U.S.C. § 1677(7)(B).

¹⁰² Chairman Miller notes that she viewed the trends over the investigation period with some caution. See her dissenting views below.

¹⁰³ 19 U.S.C. § 1677(7)(C)(iii).

¹⁰⁴ As noted previously, Commissioner Crawford recognizes that there may be more than one factor that independently is causing material injury to the domestic industry. Although the Commission may consider causes of injury to the industry other than the LTFV imports, it is not to weigh causes. *See, e.g., Citrosuco Paulista, S.A. v. United States*, 704 F. Supp. 1075, 1101 (Ct. Int’l Trade 1988), S. Rep. No. 96-249 at 74 (1979) and H.R. Rep. No. 96-317 at 46-47 (1979). In this regard, Commissioner Crawford does not interpret the Court of Appeals for the Federal Circuit’s opinion in Gerald Metals to require weighing of causes.

considered “within the context of the business cycle and conditions of competition that are distinctive to the affected industry.”¹⁰⁵

A. Conditions of Competition and the Business Cycle

Several conditions of competition are pertinent to our analysis of the domestic SRAM industry.¹⁰⁶ First, the SRAM market is characterized by the frequent introduction of more advanced versions or generations of the domestic like product, which then tend to replace existing products.¹⁰⁷ The first producer to market a superior product, or to become a qualified supplier of a new product to a major purchaser, often enjoys favorable pricing for a certain period. As other producers enter the market and production efficiencies are achieved, however, prices are driven down, and the product in question changes in character from a high value-added product to a commodity-type product. Price then becomes a primary factor in purchasing decisions.¹⁰⁸

Second, as producers gain experience in the production process and begin using more advanced equipment and techniques, they are able to reduce their cost of production significantly.¹⁰⁹ This process, known as the “learning curve” phenomenon, allows producers to lower their prices.¹¹⁰

Third, SRAM production -- particularly “wafer” or “die” fabrication -- requires substantial and continuous investment. If producers do not maintain these high levels of investment, they are unable to develop new products or lower production costs.¹¹¹

¹⁰⁵ 19 U.S.C. § 1677(7)(C)(iii).

¹⁰⁶ We have also considered first whether to apply the statutory captive production provision for purposes of these determinations. 19 U.S.C. § 1677(7)(C)(iv). No party has argued that the captive production provision applies. We find that SRAMs are not the predominant material input in the production of the downstream products, which include ***, and that therefore the second criterion of the captive production provision is not satisfied. For this reason, we find that the captive production provision does not apply. *See, e.g.*, Table III-1 n.11, CR at III-3 and PR at III-2; Table III-5 n.4, CR at III-16 and PR at III-10; the December 23, 1997 producer’s questionnaire response of *** at section II.10.b, d & e, pages 8-9; and the December 12, 1997 producer’s questionnaire response of *** at section II.10.b, d & e, pages 8-9.

¹⁰⁷ CR at I-20, PR at I-16.

¹⁰⁸ CR at I-20 to I-21, II-7; PR at I-16 to I-18, II-5. Quality and availability were other leading factors cited by purchasers. CR at II-7, V-30 to V-31; PR at II-5, V-16.

¹⁰⁹ Producers can reduce costs by increasing the number of die per wafer (by increasing the size of the wafer and reducing the width of the channels used to create the circuitry on each die) and by increasing the percentage of useable die on each wafer. Conf. tr. at 16-20 (Donnelly).

¹¹⁰ CR at V-1, PR at V-1; hearing tr. at 37-38, 56058 (Finan) (describing the learning curve and estimating that the price per bit falls 38 percent every two years); and conf. tr. at 16-20 (Donnelly) (describing investments intended to lower cost of production).

¹¹¹ Conf. tr. at 15-21 (Donnelly).

Fourth, the demand for SRAMs is a function of the demand for the products in which SRAMs are used.¹¹² Thus, it is a derived demand and it is not greatly affected by changes in SRAM prices.¹¹³ Measured in bits, demand has grown sharply throughout the period of investigation.¹¹⁴ While demand for SRAMs increases in a more or less continuous fashion, supply increases occur in large and discrete increments as producers bring new fabrication facilities (“fabs”) into production.¹¹⁵ Moreover, because a new fab can require up to two years (and over \$1 billion in capital) to construct, SRAM producers must rely on forecasts of demand when deciding whether to increase capacity.¹¹⁶ Where forecasts prove inaccurate, significant “undersupply” or “oversupply” can result.

Such periods of “undersupply” and “oversupply” occurred during the period of investigation. In early 1995, demand for SRAMs was expected to increase sharply in the near future.¹¹⁷ It was widely forecast that approximately 80 percent of new personal computers using Intel’s Pentium microprocessors would be sold with an SRAM cache memory.¹¹⁸ SRAM producers therefore invested in new fabs to meet the expected demand.¹¹⁹ Meanwhile, purchasers built up inventories in anticipation of a shortage, and drove SRAM prices sharply higher.¹²⁰ By mid-1996, however, it became apparent that only about 20 percent of new personal computers with Pentium microprocessors contained SRAM cache memory.¹²¹ As new fabs came online and purchasers drew down or sold off large inventories, SRAM supply expanded and prices fell significantly (falling below 1994 levels in the second half of 1996 and 1997).¹²²

The fifth condition of competition is the presence in the U.S. market of non-subject imports. The non-subject imports increased in market share during the period of investigation and were larger in volume than the subject imports.¹²³ For example, the volume of non-subject imports from Korea was *** that of the subject imports from Korea.¹²⁴ Regarding the non-subject imports from Korea, which are the

¹¹² CR at II-5 to II-6, PR at II-4 to II-5.

¹¹³ CR at II-6, PR at II-5.

¹¹⁴ Apparent U.S. consumption, measured in bits, rose 67.2 percent from 1994 to 1995, 17.4 percent from 1995 to 1996, and 44.9 percent from 1996 to 1997. Table C-1, CR at C-3 and PR at C-3.

¹¹⁵ Conf. tr. at 126 (Reilly), 169 (G. Fischer). The fabs typically produce other types of integrated circuits as well as SRAMs. Conf. tr. at 126 (Reilly).

¹¹⁶ Conf. tr. at 126 (Reilly), 169 (G. Fischer) (two years’ lead time required for fab construction and producers must rely on forecasts of demand); CR at I-15; PR at I-12 (fab construction costs exceed \$1 billion).

¹¹⁷ CR at V-3, PR at V-3; conf. tr. at 127-28 (Reilly).

¹¹⁸ CR at V-3, PR at V-3.

¹¹⁹ CR at V-3, PR at V-1; conf. tr. at 128 (Reilly) (producers gearing up for production in 1995) and 169 (G. Fischer) (new fabs coming on line in 1996).

¹²⁰ CR at V-3, PR at V-1; conf. tr. at 127 (Reilly).

¹²¹ CR at V-3, PR at V-3; Korean respondents’ Postconference Brief at Exhibit 1 (“SRAM module market fading in and out?” at 1, appearing in Electronic Buyers News (June 10, 1996)).

¹²² Tables V-1 and V-6 and Figures V-2 and V-5, CR at V-6 to V-19 and PR at V-5 to V-14 (showing, for the two products on which prices were reported for the 1994-96 period, that prices were lower in the second half of 1996 than in 1994).

¹²³ Table IV-4, CR at IV-9 and PR at IV-8 (market shares); Table IV-3, CR at IV-7 and PR at IV-6 (shipments).

¹²⁴ Table IV-2, CR at IV-3 and PR at IV-2.

only non-subject imports for which pricing data are on the record, they both undersold and oversold the domestic like product, but generally were priced lower than the U.S. product.^{125 126}

The final condition of competition we note is that many producers of SRAMs have the ability to or are presently producing DRAMs as well as other types of integrated circuits.¹²⁷ DRAMs and SRAMs can be produced using the same basic equipment and facilities.¹²⁸ Trends affecting the DRAM market and the market for other integrated circuits can affect the SRAM market.¹²⁹

B. Volume of Subject Imports

Section 771(7)(C)(i) provides that the “Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant.”¹³⁰

Measured in billions of bits, the volume of U.S. shipments of subject imports from Korea rose from *** in 1994 to *** in 1995, but then fell to *** in 1996, and fell by a *** amount to *** in 1997.¹³¹ Overall, the subject imports from Korea were *** higher in 1997 than in 1994. Due to the rapid growth in U.S. apparent consumption, the market share of the subject imports from Korea fell each year during the period of investigation, based on market share measured in bits, and ended at very low levels.^{132 133} The fall is notable both because it is a decline of nearly *** overall and because it accelerated at the end of the period of investigation. Based on the foregoing, we find that the volume of the subject imports from Korea is not significant.¹³⁴

¹²⁵ Compare the prehearing staff report at Tables V-1 to V-6, confidential and public versions at V-5 to V-15 and Samsung’s importer’s questionnaire response (showing prices for non-subject imports) to Tables V-1 to V-6, CR at V-6 to V-16, PR at V-5 to V-13 (showing prices for the domestic like product). See also CR at V-20, PR at V-14.

¹²⁶ Vice Chairman Bragg notes that these non-subject imports were generally priced higher than the subject imports. Compare the prehearing staff report at Tables V-1 to V-6, confidential and public versions at V-5 to V-15 and Samsung’s importer’s questionnaire response (showing prices for non-subject imports) to Tables V-1 to V-6, CR at V-6 to V-16, PR at V-5 to V-13 (showing prices for the subject imports). See also CR at V-20, PR at V-14.

¹²⁷ CR at I-17, PR at I-15.

¹²⁸ See, e.g., conf. tr. at 135-36 (Fischer).

¹²⁹ See conf. tr. at 136-39 (Fischer), hearing tr. at 165-67 (Fischer).

¹³⁰ 19 U.S.C. § 1677(7)(C)(i).

¹³¹ Table IV-3, CR at IV-7 and PR at IV-6.

¹³² The subject imports’ market share fell from *** to *** to *** to *** percent for the years 1994 to 1997, respectively. Table IV-4, CR at IV-9 and PR at IV-8.

¹³³ We believe bits is a more useful measure of market share than value because SRAM values fluctuate sharply as a function of several factors. Additionally, SRAM values tend to decline over time because of the learning curve phenomenon described above in section IV.A.

¹³⁴ Commissioner Crawford joins only in the factual, numerical discussion of the volume of imports here. She does not rely on any analysis of trends in the market share of subject imports or other factors in her determination of material injury by reason of the LTFV imports. She makes her finding of the significance of volume in the context of the price effects and impact of these imports. For the reasons discussed below, she finds that the volume of subject imports is significant in this investigation.

C. Price Effects of Subject Imports

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

(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.¹³⁵

The record establishes that the relative price of products is a critical factor in SRAM sourcing decisions by purchasers.¹³⁶ As previously noted, newly introduced types of SRAMs rapidly become fungible products (among those bearing the same characteristics such as access speed and power consumption), competing largely on the basis of price.¹³⁷ The record also establishes that prices for SRAMs increased overall from 1994 through the first half of 1995 (contrary to the price declines ordinarily suggested by the learning curve phenomenon), then fell sharply during the remainder of the period of investigation.^{138 139}

The subject imports from Korea undersold the domestic like product in 92 percent of comparisons by an average margin of 26.8 percent.¹⁴⁰ We do not find that the underselling is significant, however, because of the small volume of the subject imports and the lack of confirmed lost sales or lost revenues due to competition with these imports.^{141 142}

We also find that the subject imports from Korea have not otherwise suppressed price increases that would have occurred or depressed prices for the domestic like product. We note that the volume of the subject imports, although low throughout the period of investigation, was higher during 1994 and 1995, when prices were rising, than during 1996 and 1997, when prices were falling.

¹³⁵ 19 U.S.C. § 1677(7)(C)(ii).

¹³⁶ CR at I-20, II-7; PR at I-17, II-5.

¹³⁷ CR at I-20, PR at I-17.

¹³⁸ CR at V-20, PR at V-14.

¹³⁹ Commissioner Crawford does not join in the following paragraph.

¹⁴⁰ CR at V-20, PR at V-14.

¹⁴¹ There is one possible lost revenue occurrence, but it was not confirmed whether the price quote at issue was for subject imports from Korea, subject imports from Taiwan, or non-subject (Samsung) imports. Table V-8, CR at V-24 (the twelfth item from the top) and V-28 n.3, PR at V-15.

¹⁴² Chairman Miller agrees that underselling is not significant. She bases her determination, however, not only on the small volume of imports and lack of confirmed lost sales and lost revenues. Chairman Miller finds that price changes for SRAMs reflect broader market conditions for SRAMs, rather than any effect from the subject imports from Korea.

For the foregoing reasons, we find that the subject imports from Korea did not cause significant price effects.¹⁴³

D. Impact of Subject Imports^{144 145 146 147}

¹⁴³ Commissioner Crawford concurs in her colleagues' conclusion that subject imports are not having significant effects on domestic prices for the domestic like product. To evaluate the effects of the dumping on domestic prices, Commissioner Crawford compares domestic prices that existed when the imports were dumped with what domestic prices would have been if the imports had been fairly traded. In most cases, if the subject imports from Korea had not been traded unfairly, their prices in the U.S. market would have increased. In this investigation, the dumping margins for the majority of subject imports from Korea were low. Table H-10, CR at H-18; PR at H-14 and 63 Fed. Reg. 8934, 8946 (Feb. 23, 1998). Thus, prices for the majority of the subject imports likely would have risen only somewhat if they had been priced fairly, and they would have become only somewhat more expensive relative to the domestic product and other alternative sources for the product (e.g., non-subject imports), while the remaining, higher margin subject imports from Korea may have been priced out of the market had they been fairly priced. In such a case, if the products are substitutable, some demand would have shifted away from subject imports and towards the relatively less-expensive products. However, as noted above, there is little overlap of product speeds between subject imports from Korea and domestic products and therefore substitutability between them is low. Also, as discussed in the conditions of competition section above, there is a strong non-subject import presence in the domestic market, from both Korea and elsewhere, and thus there are other sources available to meet any shift in demand away from subject imports. Furthermore, the magnitude of any shift in demand away from the subject imports would be low since the market share of subject imports is low. Finally, competition in the market and available supply would have limited any price effects. The domestic industry had sufficient capacity available to satisfy the demand supplied by subject imports, and domestic producers compete with each other and non-subject imports for domestic sales. For all of these reasons, had subject imports been priced fairly, the increase in demand for the domestic product would not have been significant and domestic prices would not have increased significantly had the subject imports been priced fairly. Even if all demand for subject imports from Korea had been captured by domestic producers, had the Korean subject imports been fairly priced, the increase in demand for the domestic product would not have been significant and domestic prices would not have increased significantly due to the market conditions described above. Therefore, Commissioner Crawford finds that subject imports from Korea are not having significant effects on prices of domestic SRAMs.

¹⁴⁴ As part of its consideration of the impact of imports, the statute as amended by the URAA specifies that the Commission is to consider "the magnitude of the margin of dumping." 19 U.S.C. § 1677(7)(C)(iii)(V). The SAA indicates that the amendment "does not alter the requirement in current law that none of the factors which the Commission considers is necessarily dispositive in the Commission's material injury analysis." SAA at 850. New section 771(35)(C), 19 U.S.C. § 1677(35)(C), defines the "margin of dumping" to be used by the Commission in a final determination as the last margin or margins published by Commerce prior to the closing of the administrative record in the Commission's investigations. In its final determinations (the last margins to be published before the closing of the record in these investigations, Commerce found dumping margins as follows (in percent): Samsung (1.00) (de minimis), Hyundai (5.08), LG Semicon (55.36), all others (5.08). 63 Fed. Reg. 8934, 8946 (Feb. 23, 1998). The Uruguay Round Agreements Act ("URAA") amended title VII of the Tariff Act of 1930 to require the Commission to close its record in a final phase antidumping or countervailing duty investigation on a date certain and to provide all parties with a final opportunity to comment on information obtained in the investigation upon which they previously had no opportunity to comment. The purpose of the statute is to assure all parties an equal opportunity to comment on all information that may form the basis for the Commission's final determination. *See S. Rep. No. 103-412 at 85 (1994)*. 19 U.S.C. § 1677(35)(C)(ii) indicates that the dumping margin to be considered by the Commission is the margin published by Commerce prior to the closing of the Commission's record. Accordingly, we have not considered the slightly revised margins provided to the Commission on the day of the vote, upon which the parties had not commented.

¹⁴⁵ In considering whether the domestic industry is materially injured or threatened with material injury, Chairman Miller has taken note of the magnitude of the margins of dumping for the subject countries. In light of her finding that subject imports have not had significant volume effects relative to consumption in the United States, (continued...)

Section 771(7)(C)(iii) provides that the Commission, in examining the impact of the subject imports on the domestic industry, “shall evaluate all relevant economic factors which have a bearing on the state of the industry,” as described above in the second paragraph of section IV.

The quantity of the domestic industry’s production and shipments rose during each year of the period of investigation.¹⁴⁸ Due to declining prices after 1995, however, the value of domestic shipments has fallen each year since 1995.¹⁴⁹ The domestic industry’s financial performance and investment levels also fell. The domestic industry had operating margins of *** and *** percent in 1994 and 1995, respectively.¹⁵⁰ The industry’s operating margins had declined to *** percent in 1996, however, and became operating losses of *** percent in 1997.¹⁵¹ Likewise, the domestic industry curtailed capital expenditures in 1997 to a level slightly less than half that of either 1995 or 1996.¹⁵² The domestic

¹⁴⁵ (...continued)

and have not had significant price effects, she does not consider these margins to be significant.

¹⁴⁶ Vice Chairman Bragg notes that she does not ordinarily consider the margin of dumping to be of particular significance in evaluating the effects of subject imports on domestic producers. *See Separate and Dissenting Views of Commissioner Lynn M. Bragg in Bicycles from China, Inv. No. 731-TA-731 (Final), USITC Pub. 2968 (June 1996).*

¹⁴⁷ Commissioner Crawford does not make her determination based on industry and import trends. However, she concurs that subject imports are not having a significant impact on the domestic industry. In her analysis of material injury by reason of dumped imports, Commissioner Crawford evaluates the impact on the domestic industry by comparing the state of the industry when the imports were dumped with what the state of the industry would have been had the imports been fairly traded. In assessing the impact of the subject imports on the domestic industry, she considers, among other relevant factors, output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, research and development and other relevant factors as required by 19 U.S.C. § 1677(7)(C)(iii). These factors together either encompass or reflect the volume and price effects of the dumped imports, and so she gauges the impact of the dumping through those effects. In this regard, the impact on the domestic industry’s prices, sales and overall revenues is critical, because the impact on the other industry indicators (e.g., employment, wages, etc.) is derived from this impact. As she noted earlier, Commissioner Crawford finds that the domestic industry would not have been able to increase its prices had subject imports been priced fairly. Even if the entire demand for subject imports shifted to the domestic product, had the subject imports been priced fairly, the increase in demand for the domestic product would not have been significant. Therefore, any increase in the domestic industry’s output and sales would not have been material, and thus the domestic industry would not have been materially better off if the subject imports had been priced fairly. Consequently, Commissioner Crawford determines that the domestic industry is not materially injured by reason of LTFV imports of SRAMs from Korea.

¹⁴⁸ The domestic industry’s production of uncased SRAMs, in billions of bits, increased from 63,904 to 84,366, to 126,317 to 167,663 in 1994 through 1997, respectively. Table III-4, CR at III-15 and PR at III-9. (Uncased SRAMs are the best measure of domestic production because their production volume was *** greater than the production of cased SRAMs and SRAM modules combined.) Table III-4, CR at III-15 and PR at III-9. Domestic producers’ shipments, in billions of bits, were 60,445, 84,030, 92,503, and 135,584 for 1994 through 1997, respectively. Table III-5, CR at III-16 and PR at III-11.

¹⁴⁹ The value of the domestic producers’ shipments were \$889,152,000, \$1,585,320,000, \$1,258,536,000, and \$1,015,480,000 for 1994 through 1997, respectively. Table III-6, CR at III-17 and PR at III-12.

¹⁵⁰ Table VI-3, CR at VI-9 and PR at VI-2.

¹⁵¹ Table VI-3, CR at VI-9 and PR at VI-2.

¹⁵² The domestic industry’s capital expenditures fell from \$541,357,000 in 1995 and \$511,139,000 in 1996, to
(continued...)

industry's research and development expenditures also fell from 1996 to 1997, although the 1997 levels remained higher than in 1994 or 1995.¹⁵³

Despite these unfavorable indications of industry profitability and investment in 1996 and 1997, we find no basis to conclude that these difficulties were by reason of the subject imports from Korea. Consistent with our conclusions that the subject imports from Korea are not significant in volume, and that they have not resulted in significant price effects, we find that they have not affected adversely the domestic industry. As noted above, the volume of the subject imports from Korea declined during the years in which the domestic industry experienced financial reverses. On the basis of the foregoing, we find that the domestic industry producing SRAMs is not experiencing material injury by reason of the subject imports from Korea.

V. NO THREAT OF MATERIAL INJURY BY REASON OF SUBJECT IMPORTS FROM KOREA

A. Cumulation for Purposes of Threat Analysis

In assessing whether a domestic industry is threatened with material injury by reason of imports from two or more countries, the Commission has discretion to cumulate the volume and price effects of such imports if they meet the requirements for cumulation in the context of present material injury.¹⁵⁴ As discussed previously, we find that the requirements for cumulation are not satisfied in the context of present material injury. Accordingly, we do not cumulate for purposes of our threat analysis.

B. Statutory Factors

Section 771(7)(F) of the Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing whether "further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted."¹⁵⁵ The Commission may not make such a determination "on the basis of mere conjecture or supposition," and considers the threat factors "as a whole" in making its determination whether further dumped or subsidized imports are imminent and

¹⁵² (...continued)
\$245,419,000 in 1997. In 1994, capital expenditures were \$236,088,000. Table VI-4, CR at VI-11 and PR at VI-4.

¹⁵³ The domestic industry's research and development expenses fell from \$*** in 1996 to \$*** in 1997. In 1994 and 1996, research and development expenses were \$*** and \$***, respectively. Table VI-4, CR at VI-11 and PR at VI-4.

¹⁵⁴ 19 U.S.C. § 1677(7)(H).

¹⁵⁵ 19 U.S.C. § 1673d(b) and 1677(7)(F)(ii).

whether material injury by reason of imports would occur unless an order is issued.¹⁵⁶ In making our determination, we have considered all statutory factors¹⁵⁷ that are relevant to these investigations.¹⁵⁸

For the reasons discussed below, we determine that the domestic industry is not threatened with material injury by reason of LTFV imports from Korea.

We find the factors concerning possible increases in production capacity and the producers' ability to shift production to be interrelated in this investigation because a variety of semiconductors, including SRAMs, generally can be produced using the same equipment in the same facilities (see section I.C.4 above). There is some evidence that the producers of the subject imports from Korea plan to increase semiconductor capacity in general in the near future.¹⁵⁹ Thus, in theory, that additional capacity could be used to produce SRAMs. We find, however, based on a number of factors, that the additional semiconductor capacity does not indicate that significantly increased imports of SRAMs are imminent. The Korean producers' exports to the United States have fallen each of the past three years. Also, SRAMs represent a relatively minor product line for the Korean producers, and we find no evidence that they intend to expand it vis-a-vis their other semiconductor products. In fact, one Korean producer has indicated that it intends to concentrate in the future on the production of DRAMs, a product in which it perceives itself as a technological leader.¹⁶⁰ Perhaps most importantly, however, the Korean producers reported that their SRAM capacity was lower in 1997 than in 1994, and they project further reductions in the future.¹⁶¹ We find these reported reductions consistent with recent increases in SRAM inventories (discussed below) held by the Korean producers .

Regarding the current economic crisis in Korea, although it may increase the incentive to export, we find that it also restricts the Korean producers' access to the large amounts of capital necessary to expand production, and increases the cost to Korean producers of the foreign production machinery

¹⁵⁶ 19 U.S.C. § 1677(7)(F)(ii). While the language referring to imports being imminent (instead of "actual injury" being imminent and the threat being "real") is a change from the prior provision, the SAA indicates the "new language is fully consistent with the Commission's practice, the existing statutory language, and judicial precedent interpreting the statute." SAA at 854.

¹⁵⁷ The statutory factors have been amended to track more closely the language concerning threat of material injury determinations in the WTO Antidumping Agreement and Subsidies and Countervailing Measures Agreement, although "[n]o substantive change in Commission threat analysis is required." SAA at 855.

¹⁵⁸ 19 U.S.C. § 1677(7)(F)(I). Factor I is inapplicable because these investigations do not involve a countervailable subsidy. Factor VII regarding raw and processed agriculture products is inapplicable to the products at issue. Additionally, there are no known antidumping or countervailing duty findings or remedies in effect in other countries with respect to SRAMs from Korea. CR at VII-2, PR at VII-2. See 19 U.S.C. § 1677(7)(F)(iii)(I).

¹⁵⁹ See citations to trade articles in the Prehearing brief of Micron at 54-55.

¹⁶⁰ Posthearing brief of Hyundai and LG Semicon at 12 (providing what it represents is a quotation from the Feb. 23, 1998 issue of "Electronic News" at 60). There was also contrary evidence, however, at least with regard to one fabrication facility. See Prehearing brief of Micron at 57.

¹⁶¹ Table VII-1, CR at VII-5 and PR at VII-4.

necessary to equip new or upgraded facilities.¹⁶² Additionally, the lack of capital restricts the Korean producers' ability to invest in the research and development of new SRAMs. In fact, as noted previously, nearly all the subject imports from Korea are slow SRAMs, which suggests that these producers are not among the most technologically advanced of SRAM producers.¹⁶³ We note further that the percentage of total Korean shipments that are shipped to the United States has not increased significantly during the period of investigation, from *** percent in 1994 to *** percent in 1997.¹⁶⁴ Nor have exports increased in relation to home market sales over the period of investigation.¹⁶⁵ In sum, despite some evidence of planned increases in semiconductor capacity and the relative ease of production shifting, our analysis of these factors does not lead us to conclude that imminent and significant increases in SRAM exports to the United States are likely.

As indicated above, the volume of subject imports has fallen in quantity each year since 1995 and in terms of U.S. market share each year since 1994. Moreover, these declines occurred from an already low volume base. Accordingly, we find that the volume and market penetration of the subject imports do not indicate a likelihood of substantially increased imports.

In our discussion of no material injury by reason of the subject imports from Korea, we found that subject imports are not having significant effects on domestic prices. We find nothing in the record to indicate that subject imports are likely to have significant price effects in the future.¹⁶⁶

Inventories of the Korean subject merchandise have grown rapidly over the period of investigation. In 1997 they represented *** percent of production and *** percent of shipments.¹⁶⁷ Petitioner and other domestic producers contend that the inventory build up will adversely affect U.S. prices.¹⁶⁸ We find the inventory build up to be significant, but, in the context of Korea's declining exports to the United States, do not view it as indicating a likelihood of imminent and substantially increased SRAM imports.

Several domestic producers indicated that the cumulated subject imports have had negative effects on projected expansions of production capacity, the development of new products, and their financial condition.¹⁶⁹ In only one instance, however, did the domestic producer indicate that the effects were due to the subject imports from Korea in particular.¹⁷⁰ Considering the declining volume of the

¹⁶² CR at VII-4, PR at VII-4.

¹⁶³ See CR at II-4 and PR at II-3 (indicating that only SRAMs from other countries participate in the production of advanced SRAMs).

¹⁶⁴ Table VII-1, CR at VII-6 and PR at VII-4.

¹⁶⁵ Table VII-1, CR at VII-6 and PR at VII-4.

¹⁶⁶ See Timken Co. v. United States, 20 CIT ___, 913 F. Supp 580, 591 n.18 & 592 (1996) (in assessing immediate future harm resulting from domestic price suppression or depression by subject imports, the Commission is permitted to rely on its findings on material injury that subject imports had no "present effect on prices").

¹⁶⁷ Table VII-1, CR at VII-5 to VII-6 and PR at VII-4.

¹⁶⁸ CR at L-5 to L-6, PR at L-3.

¹⁶⁹ CR at L-3 to L-6, PR at L-3.

¹⁷⁰ CR at L-5 and PR at L-3 (comments of ***).

subject imports from Korea and their lack of significant price effects, we do not find they had an actual or potential negative effects on development and production efforts of the domestic industry.

Finally, we find no indication of any "other demonstrable adverse trends" that indicate that there is likely to be material injury by reason of the subject imports.

Evaluating all the statutory factors, we find that further imports of SRAMs from Korea are not imminent and that material injury by reason of the subject imports from Korea would not occur in the absence of an antidumping order. Therefore, we determine that the domestic industry is not threatened with material injury by reason of LTFV imports of SRAMs from Korea.

VI. MATERIAL INJURY BY REASON OF SUBJECT IMPORTS FROM TAIWAN¹⁷¹

A. Conditions of Competition and the Business Cycle

The conditions of competition and circumstances regarding the business cycle are set forth above in the views regarding Korea.

B. Volume of Subject Imports from Taiwan

Section 771(7)(C)(I) provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."¹⁷²

The volume of the subject SRAMs from Taiwan rose, in billions of bits, from *** in 1994 to *** in 1995, to *** in 1996, and *** in 1997.¹⁷³ From 1994 to 1997, the increase is nearly ***.¹⁷⁴ This rapid rate of increase outpaced the already considerable growth in U.S. apparent consumption. As a result, the subject imports from Taiwan also rose in terms of market share during the period of investigation. The market share of the subject imports from Taiwan fell from *** percent in 1994 to *** percent in 1995, but then rose above 1994 levels to *** percent in 1996, and rose by a *** amount to *** percent in 1997.¹⁷⁵ Both in terms of absolute volume and in market share, the largest increases occurred from 1996 to 1997, suggesting an accelerating trend. The foregoing indicates that the volume of the subject imports from Taiwan and the increase in that volume are significant, both in absolute terms and relative to production or consumption in the United States.

C. Price Effects of Subject Imports

¹⁷¹ These constitute the views of Vice Chairman Bragg. Chairman Miller does not join the discussion of material injury by reason of subject imports from Taiwan below (see her dissenting views). Commissioner Crawford did not participate in the investigation regarding the subject imports from Taiwan.

¹⁷² 19 U.S.C. § 1677(7)(C)(I).

¹⁷³ Table IV-5, CR at IV-11 and PR at IV-10.

¹⁷⁴ Measured in value, which as indicated previously is considered a less reliable measure of volume in these investigations, the subject imports from Taiwan increased *** percent from 1994 to 1997. Table C-1, CR at C-3 and PR at C-3.

¹⁷⁵ Table IV-4, CR at IV-9 and PR at IV-8.

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

- (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
- (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.¹⁷⁶

The record establishes that price is a critical factor in purchasing decisions. As previously noted, newly introduced types of SRAMs rapidly become fungible products, competing largely on the basis of price. In such a market, significant underselling by significant and increasing volumes of imports can have a dramatic effect on prices for the domestic like product. The record in this investigation demonstrates that the large and increasing volume of LTFV imports from Taiwan undersold the domestic like product in 161 of 213, or 76 percent of possible price comparisons, at average underselling margins of 21.5 percent.¹⁷⁷ While some of the underselling turned to overselling during 1996 and 1997 for products 3 and 5,¹⁷⁸ Taiwanese imports consistently undersold the domestic product in products 1 and 2.¹⁷⁹ These more recently developed products accounted for a significant percentage of Taiwanese shipments during the latter part of the period of investigation.¹⁸⁰

The record also establishes that, overall, prices for SRAMs increased during the first half of 1995, then generally declined during the remainder of the period of investigation.¹⁸¹ Although oversupply and price declines due to the “learning curve” may have played a role in the declines during the latter part of the period of investigation, the increasing volumes of lower-priced LTFV imports from Taiwan exerted further downward pressure on prices, exacerbating the 1996-1997 price declines. In this regard, prices for the subject merchandise and the domestic like product generally fell in tandem, and the subject merchandise undersold the domestic like product in a significant number of instances, which in a price-sensitive market suggest that the subject imports depressed prices of the domestic like product to a significant degree. In addition, there were a significant number of confirmed lost sale and revenue allegations due to Taiwanese imports.¹⁸²

¹⁷⁶ 19 U.S.C. § 1677(7)(C)(ii).

¹⁷⁷ CR at V-20, PR at V-14.

¹⁷⁸ Taiwanese imports undersold the domestic product in pricing product 3 in 12 out of 12 months in 1994 and 1995; 5 out of 12 months in 1996 and 2 out of 12 months in 1997. Table V-3, CR at V-9 to V-10; PR at V-8 to V-9. Taiwanese imports undersold the domestic product in pricing product 5 in 11 out of 12 months in 1994; 9 out of 12 months in 1995; 5 out of 12 months in 1996; and 4 out of 12 months in 1997. Table V-5, CR at V-13 to V-14 and PR at V-11 to V-12.

¹⁷⁹ Tables V-1 and V-2, CR at V-6 to V-8 and PR at V-5 to V-7.

¹⁸⁰ Product 1 accounted for 20.9 percent of Taiwanese shipments in 1996 and 7.0 percent in 1997, and product 2 accounted for 18.0 percent of Taiwanese shipments in 1997. Table IV-3, CR at IV-7 and PR at IV-6 and Tables V-1 and V-2, CR at V-6 to V-8 and PR at V-5 to V-7.

¹⁸¹ CR at V-6 to V-20, PR at V-5 to V-14 ***.

¹⁸² CR at V-21 to V-28, PR at V-15 to V-16.

Accordingly, in light of the importance of price to purchasers, the evidence that subject imports compete with the domestic like product largely on the basis of price, the dramatic decline in prices for both the domestic like product and subject imports during the period of investigation in the face of significant underselling by the subject imports, and the domestic industry's inability to stem those price declines despite rising demand, the substantial and increasing volumes of LTFV imports from Taiwan that entered the United States during the period of investigation depressed prices for the domestic like product to a significant degree.

D. Impact of Subject Imports ¹⁸³

Section 771(7)(C)(iii) provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry," as described above in the second paragraph of section IV.

As indicated in the discussion of the conditions of competition discussed above, the domestic industry must make substantial ongoing investments in the research and development of new products and process technologies, and make substantial capital investments to upgrade fabrication equipment and facilities, in order to maintain competitiveness. In addition, the failure to expand production facilities portends lost market share, which can lead to an inability to participate in economies of scale to the same extent as larger competitors.¹⁸⁴ To maintain investment, the domestic industry must generate income. Weak financial operating results limit producers' ability to fund the continued investments needed to maintain competitiveness in this rapidly evolving industry.¹⁸⁵

The domestic industry had operating margins of *** and *** percent in 1994 and 1995, respectively.¹⁸⁶ The industry's operating margins had *** at *** percent in 1996, however, and became operating losses of *** percent in 1997.¹⁸⁷ The domestic industry's financial troubles are due in significant part to the price depressing effects of the subject imports from Taiwan on the domestic like product during the period of investigation. A number of market forces set these price declines in motion, including an excess of supply relative to demand that developed in 1996 due to prior industry forecasts that had overestimated future growth in demand. Also adversely affecting the price of the domestic like

¹⁸³ Pursuant to 19 U.S.C. § 1677(7)(C)(iii)(V), the dumping margins for Taiwan producers are those identified by Commerce in its final determination: 113.85 percent for Advanced Microelectronics, BIT, and TI-Acer; 50.58 percent for Alliance; 7.59 percent for ISSI; 93.87 percent for UMC.; 102.88 percent for Winbond; and 41.98 percent for all others. 63 Fed. Reg. 8909, 8933 (Feb. 23, 1998). As noted in the footnote accompanying the discussion of the impact of the subject imports from Korea (section IV.D), the statute requires us to use the margins published in Commerce's final determination, although, as indicated in a previous footnote, Vice Chairman Bragg ordinarily does not consider the margins of dumping to be of particular significance in evaluating the effect of subject imports on domestic producers.

¹⁸⁴ Conf. tr. at 168 (Reilly) (testifying that a small domestic producer went out of the SRAM business because it was too small to generate sufficient capital to invest in a new production facility).

¹⁸⁵ CR at I-20 and PR at I-16 to I-17 (SRAM industry highly cyclical, with short product life cycles); conf. tr. at 21-22 (Donnelly) (domestic producer's capital investments funded out of cash flow, and that dumped imports "dry up [a domestic producer's] capital, [and] ability to generate capital"), 30 (Taylor) (heavy operating losses having a "severe impact" on domestic producer's capital investment plans).

¹⁸⁶ Table VI-3, CR at VI-9 and PR at VI-2.

¹⁸⁷ Table VI-3, CR at VI-9 and PR at VI-2.

product was competition from a growing volume of non-subject imports, some of which are known to have undersold the domestic like product, although generally by lesser amounts than did the subject imports. In addition, however, the subject imports from Taiwan contributed to and exacerbated the price collapse to a significant degree by their increase in volume, both in quantity and in market share, and their significant instances of underselling of SRAM products, particularly during 1996 and 1997. As a result of the domestic industry's worsening financial condition, it curtailed capital expenditures in 1997 to a level slightly less than half that of either 1995 or 1996.¹⁸⁸ The domestic industry's research and development expenditures also fell from 1996 to 1997, although the 1997 levels remained higher than in 1994 or 1995.¹⁸⁹ In sum, the record indicates that continuous heavy investment is critical to the domestic industry, that the industry's financial results were poor in 1997 and indicative of a further downward trend, that the industry's financial condition has resulted in reduced investment, and that the subject imports from Taiwan exacerbated the price collapse that caused the industry's poor financial results. Based on the foregoing, it is determined that the domestic industry is experiencing material injury by reason of the subject imports from Taiwan.

¹⁸⁸ The domestic industry's capital expenditures fell from \$541,357,000 in 1995 and \$511,139,000 in 1996, to \$245,419,000 in 1997. In 1994, capital expenditures were \$236,088,000. Table VI-4, CR at VI-11 and PR at VI-4.

¹⁸⁹ The domestic industry's research and development expenses fell from \$*** in 1996 to \$*** in 1997. In 1994 and 1996, research and development expenses were \$*** and \$***, respectively. Table VI-4, CR at VI-11 and PR at VI-4.

DISSENTING VIEWS OF CHAIRMAN MARCIA E. MILLER

Based on the record in this investigation, I find that an industry in the United States producing static random access memory semiconductors (SRAMs) is neither materially injured nor threatened with material injury by reason of imports of SRAMs from Taiwan that have been found by the Department of Commerce to be sold in the United States at less than fair value. I join the majority views on like product and domestic industry, negligible imports, cumulation, and Conditions of Competition (Sections I, II, III, and IV.a.).

I. NO MATERIAL INJURY BY REASON OF LTFV SRAMS FROM TAIWAN

In analyzing the SRAM industry and the market for these products, I note that I have viewed trends over the investigation period with some caution. The SRAM industry is highly cyclical, characterized by rapid technological advancement, relatively short product life cycles, volatile market conditions, and periods of mismatched supply and demand.¹ It is normal for low volumes and high prices to prevail when a new product is introduced. As the product and market mature, the industry expects to see increased volumes and declining prices.² Thus, an evaluation of industry trends may not be as informative of the effect of the imports as in other investigations.

A. Volume of Subject Imports

Consistent with the characteristics of this industry as described above, U.S. apparent consumption of SRAMs increased substantially during the period examined by the Commission in this investigation. Between 1994 and 1997, U.S. consumption increased threefold from 86.0 billion bits to 244.6 billion bits.³ In absolute volume, both domestic shipments and imports (subject and non-subject) participated in this increase.⁴

In the context of this growing market, U.S. SRAM producers lost considerable market share to imported SRAMs. Between 1994 and 1997, the share of the U.S. market held by domestic SRAMs dropped steadily from 48.9 percent to 34.0 percent. However, the record developed by the Commission in this investigation demonstrates that this market share was lost overwhelmingly to non-subject imports, rather than to subject imports from Taiwan. Between 1994 and 1997, the share of U.S. consumption held by non-subject imports rose from *** to *** percent. Subject imports from Taiwan accounted for a relatively stable share of the market from 1994 through 1996, and then increased their market share somewhat in 1997.⁵

¹ CR at II-1, PR at II-1.

² CR at V-1, PR at V-1.

³ CR at Table IV-3.

⁴ From 1994 to 1997, domestic shipments increased from 42.0 to 83.2 billion bits; shipments of subject imports from Korea increased from *** to *** billion bits; shipments of subject imports from Taiwan increased from *** to *** billion bits; and shipments of non-subject imports increased from *** to *** billion bits. CR at Table IV-3.

⁵ Subject imports from Taiwan accounted for *** percent of the U.S. market in 1994, *** percent in 1995, and *** percent in 1996. In 1997, their market share grew to *** percent. CR at Table IV-4.

Based on this record, I find that the absolute increase in the volume of imports of SRAMs from Taiwan over the period of investigation, from *** to *** billion bits, is significant. However, I note that this increase occurred in the context of substantial growth in domestic consumption and thus resulted in little gain in the market share attributable to subject imports from Taiwan.

B. Price Effects of the Subject Imports

As noted above, in this industry, prices are expected to decline over the product's life cycle. Costs of production and selling prices tend to be high when a new generation of product is introduced and is relatively scarce. As producers move along the learning curve,⁶ production yields increase and defects decrease, lowering production costs, and accordingly, prices. Costs and prices are estimated to decrease by an average 30 to 35 percent for each doubling of production.⁷ Generally, prices tend to follow a steady downward trend after product introduction.⁸

The record of this investigation, however, shows that the price path in the SRAM industry deviated from this expected performance. Several unusual market developments caused SRAM prices to increase strongly through 1995, and then fall in 1996, generally back to and then below the pricing level prevailing in the market in 1994. In 1994 and 1995, forecasts for future demand of SRAMs were strong, largely tied to the expected demand for cache memory in Intel's Pentium microprocessor and other personal computer systems.⁹ In anticipation of widespread SRAM shortages in 1996, purchasers accumulated large inventories, leading to a situation of tight supply, and driving prices in 1995 to a period high. Rather than falling as expected, prices increased by as much as 40 percent during 1995.¹⁰ For several products, prices in 1995 rose above any price level achieved in 1994.¹¹ In addition, because of the strong demand forecasts, producers and new suppliers were adding substantial capacity. When, contrary to these expectations, fewer than 20 percent of personal computer systems required cache memory, purchasers sold off inventories, or required vendors to take returns. Accordingly, starting late in 1995 and into 1996, prices declined sharply. This price decline continued through the end of the period of investigation.

The Commission collected price information for six SRAM products.¹² For domestic producers and importers of SRAMs from Taiwan, products 3 and 5 were the largest in terms of quantities sold (measured in bits).¹³ Both products followed the general price trends discussed above, increasing through the third quarter of 1995, and then falling throughout 1996 and 1997. For product 3, imports

⁶ CR at V-1; PR at V-1.

⁷ *Id.*

⁸ Posthearing brief of Micron, at Attachment 1, Exhibit A (PPB Learning Curve).

⁹ Widespread forecasts were made that up to 80 percent of Pentium microprocessors would use SRAMs. CR at V-1; PR at V-1.

¹⁰ CR at Table V-3, ***.

¹¹ CR at Tables V-3, V-4, V-5, and V-6.

¹² These six products accounted for about *** percent of total U.S. shipments of domestic SRAMs and subject imports from Korea and Taiwan in 1997.

¹³ Products 3 and 5 accounted for a combined *** percent of total U.S. shipments by the domestic producers and the subject imports in 1997. For shipments of SRAMs by domestic producers and importers of SRAMs from Taiwan, these two products accounted for *** and *** percent, respectively, of total 1997 shipments.

from Taiwan were priced below the domestic SRAMs in 1994, by margins ranging from *** percent. In 1995, however, prices for both the domestic and imported product trended upward with the price of the imported product increasing by more than the U.S. product; thus, the margins narrowed.¹⁴ Prices for product 5 moved in a similar manner, although the 1995 increases were not as steep.¹⁵ The price increases in 1995 for both products 3 and 5 reflected the tight supply situation described above. This pattern changed in 1996, when prices for both products 3 and 5 fell sharply. In 1996, however, SRAMs imported from Taiwan were priced above the domestic SRAMs in over half of the months compared. Price declines continued in 1997, and subject imports from Taiwan continued to oversell the domestic product in most instances. These mixed patterns of over- and underselling during the period in which domestic prices were declining consistently indicates that the subject imports were not having significant price effects. Instead, it appears that the domestic price trends reflected the broader market conditions described above.¹⁶

I do not find that the lost sales and lost revenue allegations, despite allegations that were at least in part confirmed, support an affirmative finding of material injury. In many instances, purchasers noted that competition exists between all qualified suppliers, not just those from Taiwan and the United States,¹⁷ and that prices are set on a global basis. Along with price, purchasers noted the importance of qualifying suppliers, delivery times, and volume requirements.¹⁸

Based on my analysis of the record in this investigation, I find that prices of domestic SRAMs were driven by the unusual market conditions discussed earlier. Thus, despite price underselling by the subject imports in the earlier part of the investigation period, I find that SRAMs from Taiwan have not depressed prices to a significant degree, nor do I find that these imports have prevented price increases which otherwise would have occurred, to a significant degree.

C. Impact of the Subject Imports

In assessing the impact of subject imports on the domestic like product, I consider all relevant economic factors which have a bearing on the state of the domestic industry, including but not limited to actual and potential declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; factors affecting domestic prices; actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product; and, the magnitude of the margin of dumping.¹⁹

¹⁴ CR at Table V-3.

¹⁵ CR at Table V-5.

¹⁶ Price comparisons with SRAMs from Taiwan were also possible for products 1, 2, 4, and 6. The results are mixed for these products, but generally, prices declined more or less steadily, and underselling by the subject imports was prevalent, except for products 4 (minuscule quantities) and 6 in 1997. However, I note that, combined, these products accounted for significantly less volume than products 3 and 5.

¹⁷ In fact, two domestic producers were named the most often in Commission questionnaires as being price leaders. CR at V-3 to V-4; PR at V-3.

¹⁸ CR at V-29 to V-34; PR at V-14 to V-16.

¹⁹ 19 U.S.C. § 1677(7)(C)(iii). In its final determination, Commerce found dumping margins for the subject

(continued...)

Production of uncased SRAMs (billion bits) increased during the investigation period, and wafer starts also increased overall, although utilization of the increasing uncased capacity fell over the period.²⁰ Although petitioners stated that capital investments in wafer fabrication plants by a number of producers were either canceled or put on hold due to competition from the subject imports,²¹ overall capital expenditures increased strongly during the earlier part of the investigation period, largely reflecting the strong demand that was forecast at least two years prior, and subsequent investments worldwide to meet that projected demand.²² I find that the decline in these expenditures in 1997 resulted from the unusual market conditions described earlier and not from imports of subject merchandise from Taiwan.

Cased SRAM production fluctuated throughout the period, but in 1997, production was up compared to all previous periods.²³ The volume of domestic shipments of SRAMs and modules almost doubled for the period, and the value also increased overall, but by a much smaller percentage. Value is expected to fall on a unit basis, following the general rule that with additional production experience and improvements in wafer yield and die size, costs of production fall over time. Employment indicators also improved over the period.²⁴

Domestic apparent consumption by volume increased steadily and sharply over the period, while the domestic share of that consumption fell. I note, however, that the largest decline in the domestic industry's share occurred from 1994 to 1995, the year in which the share of subject imports from Taiwan was also falling, and non-subject imports were gaining the most in market share. While the actual increase in the volume of subject SRAMs from Taiwan was significant, these imports were relatively stable in market share terms. Non-subject imports captured the largest share of the domestic market during the period, and accounted for more than half of domestic consumption in 1996 and 1997.^{25 26}

The industry's financial performance in 1994 and 1995 was strong, with double-digit operating income margins. Although still profitable in 1996, net sales value fell, and gross profits declined by almost half. Net sales value declined further in 1997, and gross profits again fell sharply, contributing to a negative operating margin for that year.²⁷ The drop in the domestic industry's operating income in

¹⁹ (...continued)

imports from Taiwan ranging from 7.59 to 113.85 percent. Because I do not find significant volume effects, relative to consumption in the United States, nor significant price effects, I do not consider these margins to be significant.

²⁰ U.S. capacity to produce SRAMs, including uncased, cased, and modules, increased throughout the period; however, I believe that the most appropriate measure of capacity is the ability to produce uncased SRAMS. CR at Table III-3.

²¹ CR at Appendix L.

²² CR at Table VI-4.

²³ CR at Table III-3.

²⁴ The decrease from 1996 to 1997 reflects at least in part the sale in late 1996 of Paradigm's SRAM fab. CR at III-12; PR at III-7.

²⁵ CR at Table IV-4.

²⁶ *Id.* By value, the domestic industry gained an increasing share of the declining value of apparent consumption, accounting for just over half of consumption by value in 1997, while imports from Taiwan accounted for a relatively steady share throughout the period.

²⁷ Operating margins over the period of investigation were *** percent in 1994, *** percent in 1995, *** percent (continued...)

1996, coincides with the lowering expectation for SRAM demand for personal computer systems, and the subsequent sell off of inventories accumulated in 1995 in response to concerns about future supply shortages.

Despite the worsening performance of the domestic industry, I find no basis to conclude that this deterioration was by reason of the subject imports from Taiwan. The most significant and consistent underselling by the subject SRAMs from Taiwan was during the period in which prices were increasing due to the tight supply in 1995, and the subject imports were losing market share. As prices for all SRAMs were falling later in the period, the imports from Taiwan were mostly priced above the domestic SRAMs for those products accounting for the largest share of domestic consumption.

II. NO THREAT OF MATERIAL INJURY BY REASON OF DUMPED IMPORTS

A. Cumulation for Purposes of Threat Analysis

In assessing whether a domestic industry is threatened with material injury by reason of imports from two or more countries, the Commission has discretion to cumulate the volume and price effect of such imports if they meet the requirements for cumulation in the context of present material injury.²⁸ In deciding whether to cumulate for purposes of making a threat determinations, we also consider whether the subject imports are increasing at similar rates and have similar pricing patterns.²⁹ Because I found for purposes of my determination on present material injury that there is not a reasonable overlap of competition between the subject imports from Korea and Taiwan, I decline to cumulate for purposes of my determination with respect to threat of material injury.

B. Statutory Factors

Section 771(7)(F) of the Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing whether “further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted.”³⁰ The Commission may not make such a determination “on the basis of mere conjecture or supposition,” and considers the threat factors “as a whole” in making its determination whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued.³¹ In making my determination, I have considered all statutory factors that are relevant to these investigations.³²

²⁷ (...continued)
in 1996, and *** percent in 1997. CR at Table VI-1.

²⁸ 19 U.S.C. § 1677(7)(H).

²⁹ See Torrington Co. v. United States, 790 F. Supp. 1161 (Ct. Int’l Trade 1992); Metallverken Nederland B.V. v. United States, 728 F. Supp. 730, 741-42 (Ct. Int’l Trade 1989); Asociacion Colombiana de Exportadores de Flores v. United States, 704 F. Supp. 1068, 1072 (Ct. Int’l Trade 1988).

³⁰ 19 U.S.C. §§ 1673(d)(b) and 1677(7)(F)(ii).

³¹ 19 U.S.C. § 1677(7)(F)(ii).

³² 19 U.S.C. § 1677(7)(F)(I). Factor I is inapplicable because this investigation does not involve a countervailable subsidy. Factor VII regarding raw and processed agriculture products is inapplicable to the

(continued...)

For the reasons discussed below, I determine that the domestic industry is not threatened with material injury by reason of LTFV imports from Taiwan.

As was noted in our threat determination with respect to subject imports from Korea, production capacity and producers' ability to shift production are interrelated, because a variety of semiconductors generally can be produced using the same equipment in the same facilities. Information on the industry in Taiwan suggests that producers of SRAMs in Taiwan also produce other memory integrated circuit (IC) products, such as DRAMs and ROMs, communication ICs, information product ICs, and consumer electronics ICs.³³ In 1996, memory ICs accounted for 60 percent of total IC output. Although Taiwan's production of semiconductors is projected to increase, there is no indication that this additional production will be for SRAMs, and several of the foreign producers reported that no capacity is dedicated to SRAMs. In the near term, foreign producers reported a projected sharp decline in both capacity and production of the subject SRAMs for 1998.³⁴ Despite the planned increases over the longer term, as well as the relative ease with which production capacity can be shifted between different types of semiconductors, I do not find evidence that imminent and significant increases in SRAM exports to the United States are likely.

By absolute volume, exports of cased SRAMs to all markets, as well as shipments to the Taiwan home market, increased throughout the investigation period, while exports of uncased SRAMs fluctuated, but generally increased in absolute terms to the home and U.S. markets. As a share of total shipments, however, exports of cased SRAMs to the U.S. market were relatively steady, at *** percent in 1994, *** percent in 1995, *** percent in 1996, and *** percent in 1997. For 1998, producers in Taiwan projected an increase in the total share of shipments to the United States, to *** percent, but a substantial decline in the absolute volume. Exports of uncased SRAMs to the U.S. market declined as a share of total exports, at just *** percent in 1997. I do not find that the volume and market penetration of the subject imports indicates a likelihood of substantially increased imports.

I did not find that the subject imports from Taiwan were having a significant price depressing or suppressing effect on domestic prices for purposes of my determination on present material injury. I find nothing in the record to suggest that these imports are likely to have significant price effects in the future, especially in light of the widespread availability of non-subject imports.

Inventories of subject SRAMs from Taiwan increased over the period, but as a share of total shipments of the subject imports, inventories declined in 1997 to *** percent of shipments, from *** percent in 1996. The declining share of inventories of the subject imports also indicates that substantially increased SRAM imports are unlikely.

As noted in the discussion on Korea, *supra*, certain domestic producers have alleged that cumulated subject imports have had negative effects on projected expansions of production capacity, the development of new products, and their financial condition. Others, however, either reported no negative

³² (...continued)
products at issue. Additionally, there are no known antidumping or countervailing duty findings or remedies in effect in other countries with respect to SRAMs from Taiwan. CR at VII-3, PR at VII-2. See 19 U.S.C. § 1677(7)(F)(iii)(I).

³³ CR at VII-7; PR at VII-5.

³⁴ CR at Table VII-2.

effects on expansion projects or could not attribute any such effects to the subject imports from Taiwan.³⁵ Capital expenditures in new equipment and facilities were strong throughout the period, although there was a decrease in such expenditures in 1997 compared to 1995 and 1996. Research and development expenses *** in 1997, but were *** the level of 1994 and were *** than in 1995.³⁶ I do not find that the subject imports from Taiwan have had an actual or potential negative effect on the development and production efforts of the domestic industry.

Finally, I find no indication of any “other demonstrable adverse trends” that indicates that there is likely to be material injury by reason of the subject imports.

In sum, I do not find that significant increases in imports of SRAMs from Taiwan are imminent, or that material injury would occur by reason of these imports in the absence of an antidumping order. Therefore, I determine that the domestic industry is not threatened with material injury by reason of less than fair value imports of SRAMs from Taiwan.

³⁵ CR at Appendix L.

³⁶ CR at Table VI-4.