

GAO

Report to the Chairman, Subcommittee  
on Oversight and Investigations,  
Committee on Energy and Commerce,  
House of Representatives

March 1990

FOREIGN  
INVESTMENT

Analyzing National  
Security Concerns



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National Security and  
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The Honorable John D. Dingell, Chairman  
Subcommittee on Oversight and Investigations  
Committee on Energy and Commerce  
House of Representatives

Dear Chairman Dingell:

This is one of a series of reports responding to your request that we examine the effects of foreign direct investment in the United States. This report discusses the national security concerns related to foreign investment and the availability and types of data needed to analyze them.

The first report in this series was Foreign Investment: Federal Data Collection on Foreign Investment in the United States (GAO/NSIAD-90-25BR, October 1989). Other reports are in preparation.

As you requested, we did not obtain formal agency comments on this report, but we did discuss our findings with agency representatives.

Unless you publicly announce its contents earlier, no further distribution of this report will be made until 30 days from its issue date. At that time, we will provide copies to other interested parties.

This report was prepared under the direction of Mr. Allan I. Mendelowitz, Director of Trade, Energy, and Finance Issues, who may be reached on (202) 275-4812. Other major contributors to this report are listed in appendix I.

Sincerely yours,

Frank C. Conahan  
Assistant Comptroller General

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# Executive Summary

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## Purpose

The possibility that key segments of defense-related industries could come under foreign control is one of the central concerns in the debate about increased foreign investment in the United States.

At the request of the Chairman, Subcommittee on Oversight and Investigations of the House Committee on Energy and Commerce, GAO examined national security concerns relating to increased foreign investment in the United States. More specifically, GAO examined

(1) the definition of industry sectors and technologies that are national security related, (2) the government's system for learning of foreign investments before they take place, (3) the difficulties the government encounters in analyzing specific investments, and (4) the broader questions not addressed in the present system of analyzing foreign investments.

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## Background

In response to concerns about the national security implications of foreign investment, in 1988 Congress enacted the Exon-Florio Amendment to the Defense Production Act. This amendment gave the President new authority to investigate and block foreign investments threatening to impair national security. To exercise this blocking authority, the President must find that (1) credible evidence exists that the foreign interest might take action that threatens to impair U.S. security and (2) provisions of law, other than the International Emergency Economic Powers Act, do not provide adequate authority to protect the national security.

The President delegated his authority to review transactions to the existing interagency Committee on Foreign Investment in the United States, which is chaired by the Treasury Department.

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## Results in Brief

National security has not been precisely defined, in terms of identifying specific technologies and firms critical to U.S. defense leadership. The Defense Department can identify its direct contractors, but it cannot systematically identify the firms supplying these contractors or foreign investments in these firms. There is no information base or government agency systematically tracking foreign acquisitions of component suppliers. It is thus difficult to answer the general question of how much of the defense industrial base has been acquired by foreign-owned firms.

As a result of the 1988 amendment, the interagency Committee now receives information on specific foreign investments; and, based on

recent experience, it appears the Committee will have advance knowledge of a wide range of proposed investments relating to national security. However, the Committee is not performing analyses of foreign investment by industry sector. Foreign investments in start-up companies are excluded from review by the Committee, because the Exon-Florio Amendment refers only to mergers and acquisitions of ongoing businesses.

Difficulties experienced by the Committee in analyzing specific investments do not stem from lack of information about the transactions. Rather, they stem from uncertainties about (1) how the investment may affect the future direction of technology transfers, (2) the likelihood of continued supplies to the Defense Department or its direct contractors, and (3) the existence of reliable, alternate suppliers.

Broader concerns about the national security implications of foreign investment are not addressed in the present system of analyzing specific, proposed investments. Important questions persist, for example, about how to preserve the commercial competitiveness of U.S. industry sectors underpinning defense technology leadership, or how to assess overall technology transfer effects.

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## Principal Findings

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### Defining National Security

The defense industrial base supporting national security includes some firms whose business is primarily commercial but whose leading edge technologies are important to U.S. defense technology leadership. These firms may not be direct contractors to the Defense Department and would not necessarily be included in information bases on critical defense suppliers, because the Defense Department cannot systematically identify the firms supplying its direct contractors. Neither the Committee nor any other U.S. government agency systematically tracks foreign investments on a sectoral basis, to provide analyses of whether foreign acquisitions of such commercially driven firms have contributed to any erosion of component suppliers in the defense industrial base.

A key issue is whether the defense industrial base should be defined to include foreign-owned firms which maintain production in the United States. On the one hand, foreign investments can bring new capital and

technology to U.S.-based production facilities. On the other hand, questions can be raised about the long-term consequences of possible technology outflows and dependence on foreign-based decision-making.

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### Advance Knowledge of Foreign Investments

The Committee is the central point for gathering and analyzing information about specific, proposed foreign investments in existing U.S. firms relating to national security. The Exon-Florio Amendment does not specifically require foreign investors to notify the Committee of proposed investments. However, the consequences of not notifying the Committee may be severe, because the investors may risk divestiture orders later. Because of this risk and because the concept of national security is not tightly defined, it is likely that the Committee will have advance knowledge of a wide range of proposed investments.

Investments in start-up companies are not being reviewed by the Committee, because the amendment refers only to mergers, acquisitions, and takeovers of "persons engaged in interstate commerce."

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### Difficulties in Analyzing Investments

The Committee has generally had adequate information to analyze specific investments as provided for by the amendment. Although official government investment statistics do not provide detailed information about defense relationships and alternate suppliers, the Committee has been able to gather needed information from a variety of public and private sources.

The more difficult questions arising in specific cases were those requiring judgments about the likely future behavior of foreign investors. These required assessments of foreign investor intentions regarding technology transfer, continued supply to the Defense Department or its direct contractors, and use of any commercial advantages gained through the investment.

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### Broader Policy Questions

The Committee does not focus on more general questions which have arisen in public debate about the possible effects of foreign investment on the U.S. industry's commercial competitiveness. Yet, for commercially driven industries that are critical to defense technology leadership, important questions persist about (1) how to evaluate the importance of a firm's commercial strength to its defense role, (2) what competitive factors lead U.S. firms to discontinue operations in sectors

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that foreign investors appear to value highly, (3) how to track the direction of technology transfers, and (4) whether and how the U.S. government may need to respond to these competitive factors.

These questions need to be addressed at a higher policy-making level and in a broader context than the case-by-case approach afforded by the Committee.

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## Recommendations

This report contains no recommendations.

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## Agency Comments

As requested, GAO did not obtain official agency comments on its report. However, responsible officials were consulted during the review, and their views were incorporated where appropriate.

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## Abbreviations

CFIUS	Committee on Foreign Investment in the United States
DOD	Department of Defense
GAO	General Accounting Office

# Introduction

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Preserving U.S. industrial capabilities in sectors critical to national security has been a traditional U.S. policy goal. An important concern in the debate on foreign investment in the United States is the possibility that key segments of industries critical to the national security could come under foreign control through foreign investments here.<sup>1</sup> Because U.S. defense strategy relies on the deterrent effects of technological rather than numerical superiority, concern about foreign investment focuses on the U.S. government's ability to identify technologies crucial to defense systems and to act to preserve and promote U.S. leadership in them.

Specific restrictions are in place to protect classified defense information from foreign acquisition and to ensure continued U.S. production of vital defense goods in a crisis. Foreign investments in U.S. firms performing classified defense work are monitored under the Defense Industrial Security Program (based on Executive Orders 10450, 10865, and 11652). Known as Foreign Ownership, Control, or Influence restrictions, these provide authority to restrict or deny foreign access to classified information. Although they do not authorize denials of foreign investments, they can, in effect, deter potential foreign investors who are seeking access to classified information. The possibility that foreign owners might suddenly close down U.S. production of vital defense goods in a crisis is not a major concern, because the U.S. government has statutory authority to ensure production at any facility in the United States. The U.S. government, in addition, prohibits or restricts foreign investment in certain sectors, such as energy resources, coastal and domestic shipping, air transport, and broadcasting.

Foreign investments in U.S. firms producing unclassified but technologically sensitive military and civilian items are not reviewed under the Defense Industrial Security Program. These investments are of principal concern, in terms of questions about

- how to define the range of industry sectors and technologies that are national security related,
- whether investments in crucial segments of such industries would come to the attention of the U.S. government before they take place, and
- whether the government has adequate information on foreign investment to be able to analyze the implications, particularly the technology

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<sup>1</sup>Foreign investment refers to foreign direct investment; that is, investment resulting in foreign ownership or control of 10 percent or more equity interest in a U.S. business.



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transfer effects, of specific investments as they occur and of overall foreign investment levels in a sector.

The basic question, as many have posed it, is whether the U.S. defense industrial base is being gradually "hollowed out" as foreign investment takes place, not necessarily in plants directly producing defense systems, but in the lower tiers of component suppliers producing goods with both military and civilian applications.

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## Exon-Florio Amendment

The congressional response to this concern was the enactment of the Exon-Florio Amendment as part of the Omnibus Trade and Competitiveness Act of 1988 (amending Title VII of the Defense Production Act, 50 U.S.C. App. 2170), which provides presidential authority to investigate and block or suspend new foreign acquisitions or mergers that threaten to impair the national security. This act also formalized an existing government review process, conducted by the interagency Committee on Foreign Investment in the United States (CFIUS).<sup>2</sup>

As of February 1, 1990, only six proposed foreign investments were selected as warranting the complete CFIUS investigation process, out of a total of about 240 investments considered by CFIUS under the Exon-Florio Amendment. Of these six, the President blocked one investment—by ordering a Chinese firm to divest all of its interest in a U.S. aircraft parts manufacturer. None of the other five investments were formally blocked or dissolved, although two were withdrawn once the investigation phase began. (One of these was later resubmitted in a restructured form approved by CFIUS members.) Three of the six investments involved U.S. firms producing high technology electronics components, two involved U.S. aerospace firms, and one involved a U.S. manufacturer of extra-high-voltage transformers. The proposed foreign purchasers were West German, Japanese, Indian, French, Chinese, and a Swiss-Swedish partnership.

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## Objectives, Scope, and Methodology

At the request of the Chairman, Subcommittee on Oversight and Investigations of the House Energy and Commerce Committee, we examined national security concerns relating to increased foreign investment in

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<sup>2</sup>By executive order, the President delegated his authority to review transactions to CFIUS. CFIUS is still chaired by the Treasury Department and has as other members the Departments of State, Commerce, and Defense, the U.S. Trade Representative, the Council of Economic Advisors, the Attorney General, and the Director of the Office of Management and Budget. Other agencies can be brought into CFIUS discussions as appropriate.

the United States. Our objectives were to examine (1) the definition of industry sectors and technologies that are national security related, (2) the government's system for learning of foreign investments before they take place, (3) the difficulties the government encounters in analyzing specific investments, and (4) the broader questions not addressed in the present system for analyzing foreign investments.

To accomplish this, we reviewed relevant literature and talked with representatives of CFIUS member agencies and with academic and industry experts. We focused on the data available in two industry sectors generally agreed to be of national security interest, aerospace and semiconductors, and we examined the CFIUS files to analyze the types of questions arising in the CFIUS process and the availability of data needed to answer these. We did not review CFIUS' decision-making or compliance procedures. We conducted our review from January through October 1989 and updated information in February 1990, in accordance with generally accepted government auditing standards.

As requested, we did not obtain formal agency comments on this report, although we discussed our findings with agency representatives and considered their views in completing this report.

This report is one in a series of recent reports on foreign investment.<sup>3</sup>

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<sup>3</sup>Other reports in this series are Foreign Investment: Federal Data Collection on Foreign Investment in the United States (GAO/NSIAD-90-25BR, Oct. 3, 1989) and Foreign Investment: Analysis of Concerns in the Banking, Petroleum, Chemicals, and Biotechnology Sectors (GAO/NSIAD-90-129, forthcoming).

# Defining National Security

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Concerns have arisen about how broadly to define the industries and technologies that are national security related. A narrow definition would include firms that do the majority of their business with the Department of Defense (DOD) or as subcontractors to DOD prime contractors. A broader definition would include industries and firms whose business is driven by the civilian commercial sector but, because of their leading edge technologies, are important to overall defense technology leadership. Systematic information is available on foreign ownership of DOD's direct contractors, but not on foreign ownership of lower-tier contractors or of commercially driven firms developing technologies critical to defense.

The importance of a broad definition of the defense industrial base and an improved government capability to track developments in this base was highlighted by several recent advisory reports to DOD. For example, the Defense Science Board, in its 1987 report on "Defense Semiconductor Dependency," noted that, despite the semiconductor sector's crucial importance to national defense, DOD business is of relatively small importance to the sector, and advances in the industry are driven principally by commercial considerations. As a result of basically commercial factors, it noted, U.S. semiconductor technology leadership has deteriorated to the point where U.S. defense may become unacceptably dependent on foreign sources for state-of-the-art semiconductor technology. The Defense Policy Advisory Committee on Trade, in its 1986 policy statement on the defense industrial base, also noted (1) the need for a broader concept of the industrial base than simple surge capacity in wartime, (2) the inadequacy of DOD funding and procurement by themselves to ensure sufficient research and development in some sectors, and (3) the need to consider the interrelationships between the industrial base and general U.S. economic and trade policy.

The Exon-Florio Amendment did not define "national security," but the accompanying conference report noted that it is to be interpreted broadly and without limitation to particular industries. The proposed implementing regulations, issued in July 1989, also do not define national security and thus neither encourage nor preclude use of a broad definition of the defense industrial base. In our review of CFIUS cases under Exon-Florio, we did not find evidence that the absence of a specific definition of national security affected CFIUS' ability to investigate investments. As described in Chapter 4, CFIUS can review foreign investments in a broad spectrum of industries.

As a result of the 1988 amendment, CFIUS now receives information on specific foreign investments; and, based on recent experience, it appears that CFIUS will have advance knowledge of a wide range of proposed investments. However, CFIUS is not performing analyses of foreign investment by industry sector.

Such analyses, addressing questions about whether sectors of the defense industrial base are being "hollowed out" by foreign investment, are more difficult to perform. One problem is the lack of systematic information identifying key suppliers to firms considered to be in the defense industrial base. DOD can identify its direct contractors but it cannot systematically identify lower-tier suppliers to its direct contractors and, therefore, cannot keep track of changes in their ownership to provide an information base on foreign acquisitions of these firms. Some of these lower-tier suppliers are commercially driven firms developing technologies valuable to national security.

Representatives of several DOD direct contractors in the aerospace sector told us that they do not systematically track foreign investment in their lower-tier suppliers. For example, a representative of one major contractor told us his company is concerned with quality, price, and delivery experience, and that it could not keep track of changes in ownership in the numerous tiers of its suppliers. For major systems these lower tiers can include thousands of suppliers. The Defense Science Board, in its 1988 study on "The Defense Industrial and Technology Base," found, as well, that neither DOD nor industry has the means of specifically measuring the extent of U.S. dependence on foreign sources for defense components.

One important difficulty in analyzing national security effects is in deciding whether foreign acquisition of a U.S. firm that maintains production in the United States should generate concerns about foreign dependence similar to those raised by U.S. imports. On the one hand, foreign investments can bring new capital and technology to U.S.-based production facilities. On the other hand, foreign control means that decisions affecting research, product choice, and plant modernization can be made abroad. Assessing the foreign owners' intentions regarding the direction of technology transfer and the continuation of advanced research and development programs in the United States can be very difficult, even on a case-by-case basis.

# Advance Knowledge of Foreign Investments

Before the Exon-Florio Amendment was enacted, legitimate questions could be raised about the ability of the government to learn about sensitive foreign investments before they occurred. The amendment does not specifically require foreign investors to notify CFIUS of proposed investments in existing U.S. firms having any bearing on national security. However, the consequences of not notifying CFIUS may be severe, because the investors may risk divestiture orders later. Foreign investors in start-up companies are not subject to the Exon-Florio Amendment and are, therefore, excluded from CFIUS review.

Foreign investors in firms performing classified work are required, under the Defense Industrial Security Program, to provide advance notice to DOD so that arrangements can be made to isolate or to safeguard the classified work.

Under the CFIUS process prior to the amendment's enactment, proposed foreign investments in other U.S. firms would come to U.S. government attention only when those firms voluntarily notified CFIUS. They might also have been indirectly referred to CFIUS as a result of (1) filings with the Securities and Exchange Commission, required when a foreign firm, like any U.S. firm, makes stock purchases of 5 percent, a level considered to signify intent to seek control, (2) pre-merger notifications to the Justice Department and the Federal Trade Commission, which perform antitrust reviews for foreign and domestic acquisitions, and (3) industry or intelligence agency notifications. Before August 1988 the President had the authority to block a foreign acquisition of a U.S. firm through the International Emergency Economic Powers Act (50 U.S.C. 1701-06), but only if the President declared a national emergency in response to an unusual and extraordinary threat to the U.S. national security, foreign policy, or economy.

These types of prior notification, however, could not ensure that all foreign investments in key, high technology U.S. firms would come to the attention of the U.S. government before completion. Filings with the Securities and Exchange Commission are generally required only for publicly traded companies, not for privately owned firms. Filings for antitrust review are not required for transactions involving smaller firms.<sup>4</sup> Some U.S. firms in the semiconductor and aerospace sectors are

<sup>4</sup>Under the Hart-Scott-Rodino Antitrust Improvements Act, notice of the intended acquisition must be made where the following conditions are met: (1) at least one party to the acquisition has \$100 million or more in annual net sales or total assets; (2) the other party has \$10 million or more in annual net sales or total assets; and (3) the acquiring party will hold either 15 percent or \$15 million of the acquired party's voting securities or assets (15 U.S.C. sec. 18a).

small, privately owned companies, and foreign investors would not be required to file with the commission or for antitrust review. Nor would foreign acquisitions of such companies necessarily come to the attention of the government through industry or intelligence sources. Even if foreign investors complied fully in reporting to the Commerce Department under the reporting requirements of the International Investment and Trade In Services Survey Act of 1976<sup>5</sup>, prior notification is not required under the act.

The Exon-Florio Amendment does not specifically require foreign investors to notify CFIUS of their investments in national security related firms. However, the consequences of not notifying CFIUS may be severe, because the parties may risk divestiture orders later. The investment that the President ordered blocked on February 1, 1990, was one that had been completed before CFIUS finished its investigation. Therefore, blocking the investment in this case required divestiture.

The proposed regulations have been criticized as too broad, because they do not provide a clear definition of national security or the criteria to be used in evaluating proposed foreign investments. Consequently, as noted in public comments filed in response to the proposed regulations, attorneys representing potential foreign investors feel compelled to clear most foreign investments with CFIUS before completing the transactions. Thus, at this point, it appears likely that CFIUS will have advance knowledge of a wide range of proposed investments, although only some will receive its full attention. So far, the vast majority of the approximately 240 investments considered by CFIUS since enactment of Exon-Florio have been reported to CFIUS voluntarily, rather than referred by interested agencies.

One type of foreign investment that is excluded from CFIUS review is "greenfield" investment, i.e., investment in start-up companies. As Treasury stated in its proposed regulations, the Exon-Florio Amendment refers only to mergers, acquisitions, and takeovers of "persons engaged in interstate commerce in the United States. Since 'greenfield' investments are not ongoing businesses and therefore not 'persons engaged in interstate commerce', they are not subject to [the amendment]".

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<sup>5</sup>This act (P.L. 94-472, 22 U.S.C. 3101 to 3108, as amended) requires foreign investors to supply information on their investments to the Bureau of Economic Analysis of the Commerce Department. Individual investor responses are considered business proprietary information and only aggregated data are publicly released.

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This exclusion may result in some national security related investments not being reported to CFIUS. One law firm, commenting on the proposed regulations, noted that "this exemption thus potentially removes the Exon-Florio controls on some of the most advanced technologies being developed today." While such start-up investments are generally presumed to be beneficial in bringing new capital and technology into the United States, there are some technology transfer concerns about the possibility that U.S. firms' most skilled scientists and researchers may be hired by these new, foreign-owned companies.

# Difficulties in Analyzing Specific Investments

CFIUS, under the authority delegated to it by the President, is the focal point for government reviews of specific foreign investments relating to national security. Because national security is not specifically defined in law, CFIUS can review investments in a broad spectrum of industry sectors. The President's authority to block an investment, however, is more narrowly defined.

CFIUS has generally had adequate information to analyze specific foreign investments as provided for by the law. Although official government investment statistics do not provide the type of detailed information about defense relationships and alternate suppliers needed by CFIUS in evaluating individual cases, CFIUS has been able to gather needed information from a variety of public and private sources.

In cases where agency views have initially differed, the key concerns related to difficult questions about the desirability of foreign dependence and the potential for technology transfers out of the United States.

Many of the investments reviewed by CFIUS have been in the aerospace or semiconductor sectors, and so we were able to identify the types of questions arising in the review process for these investments and to see how they were answered.

## Guidelines for CFIUS Reviews

CFIUS was created in 1975 by executive order to review foreign investments that "might have major implications for United States national interests." Before the Exon-Florio Amendment was enacted in 1988, CFIUS operated, under the chairmanship of the Treasury Department, on an informal, ad hoc basis, mostly reviewing investments by foreign governments in U.S. firms and never formally making negative determinations about investments.

The Exon-Florio Amendment provided the President with new authority to investigate, block, or suspend foreign mergers, acquisitions, or takeovers that may threaten to impair the national security. It authorizes the President to exercise this blocking authority only if he finds that

(1) there is credible evidence that the foreign interest might take action that threatens to impair the national security, and



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(2) provisions of law, other than the International Emergency Economic Powers Act, do not provide adequate authority to protect the national security.

The amendment also formalizes the CFIUS review process by providing a maximum 90-day review of individual foreign investments. This period includes 30 days to determine whether to initiate an investigation, 45 days to complete an investigation, and a final 15 days for the President to act.

CFIUS issued proposed regulations for implementing the Exon-Florio Amendment in July 1989, but these have not yet been finalized.

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## Government Statistics on Aerospace and Semiconductors

Both aerospace and semiconductors are generally recognized as sectors that drive defense technology and that are crucial to U.S. technological leadership. Yet, under the U.S. government's official foreign investment data system (maintained by the Commerce Department's Bureau of Economic Analysis<sup>11</sup>), data cannot be broken out for either of these sectors. Aerospace is included in the larger category of "Other transportation equipment," and semiconductors fall in the larger "Electronic components and accessories" category. The Commerce Department's International Trade Administration collects public announcements of foreign investments in different sectors (including aerospace and semiconductors) and publishes the data yearly, but this information is not considered complete and does not show cumulative foreign investment positions in the industry sectors. Industry analysts in Commerce's International Trade Administration also may follow foreign investment trends, but their focus is primarily on export promotion.

The Defense Department, as noted in chapter 2, does not have a comprehensive database that would show foreign investments in national security related sectors, although it does track foreign investments in firms doing classified work through the Defense Industrial Security Program. Defense is now attempting to improve its knowledge of the extent of dependence on foreign sources in certain weapons systems, but this effort is focused on identifying imports rather than foreign investments.

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<sup>11</sup>U.S. government foreign investment databases are discussed in *Foreign Investment: Federal Data Collection on Foreign Investment in the United States* (GAO/NSIAD-90-25BR, Oct. 3, 1989).

Industry analysts in the government and private sector told us that, because Commerce data are not useful to them, they rely on private sector data sources when considering investment questions. Some of the private sector data is considered very useful.

Foreign direct investments in the U.S. aerospace sector are generally thought to be minimal, although increasing over the past 1-1/2 years. Other types of technology- and production-sharing arrangements are of relatively greater concern to business and government officials, mostly because of their implications for national security and the aerospace industry's commercial competitiveness.

Foreign investments in the semiconductor sector, however, are considered significant and have been the subject of recent scrutiny in the CFIUS process. As a result, the government's knowledge base in this particular sector has advanced well beyond the officially collected data. It is known, for example, that foreign firms have been active in the semiconductor materials and equipment sector. For example, key manufacturing processes, such as silicon wafer manufacturing and ceramic packaging, are now dominated by foreign-owned firms.

Many industry analysts maintain that segments of the semiconductor industry have been "hollowed out" incrementally as a result not only of foreign acquisitions but also of U.S. firms' difficulties in competing against foreign firms. These commercial competitive factors include superior foreign technologies and product quality, but they also reflect differing U.S. and foreign industry structures. For example, large, vertically integrated Japanese conglomerates can better withstand the steep downturns in business cycles that are characteristic of this industry, because profits earned from consumer product sales can sustain the firms' other operations.

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## Types of Questions Raised by CFIUS

Once an investment comes to the attention of CFIUS, either through self-notification or through agency referral, CFIUS examines the investment to determine whether to initiate a full investigation. For cases selected as warranting a full CFIUS investigation, the same types of questions examined in the initial review are pursued in greater depth.

CFIUS' main interest in reviewing investments has been to learn the nature of the U.S. firm's relationship with defense-related work—i.e., whether it performs classified work for DOD, what contracts it may have with DOD, what percent of its production is defense-related, and what

portion of its research and development is defense related. CFIUS tries to learn whether the foreign purchaser would be acquiring (1) sensitive U.S. technology subject to U.S. export licensing, or (2) control over a scarce supply of goods that bear on national security. It also seeks information on the U.S. and foreign firms' market shares and on the availability of alternate suppliers, both domestic and foreign, for the U.S. firm's product. Occasionally, it needs to evaluate allegations regarding unfair trade or anticompetitive practices on the part of the foreign firm.

Identifying and assessing the new owner's plans for the U.S. firm constitutes another set of CFIUS interests. CFIUS questions foreign investors about their intentions to continue production and research and development in the United States, to pursue particular product lines, to continue supplying DOD, and to relocate U.S. plants. In some cases, specific technical questions arise regarding the nature or uniqueness of the product or technology in question.

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## Sources of Needed Information

Virtually none of the information used in the CFIUS review process came from formal U.S. government statistics on foreign direct investment. Commerce data, even if it were to exist for aerospace and semiconductors, do not provide the kind of detail about defense relationships, the firm's technology, alternate suppliers, or the new owner's intentions that are needed in the review process.

The Defense Department can identify whether the U.S. firm performs classified work, and though it cannot systematically provide information on lower-tier subcontracting, this can be learned for specific firms.

To learn whether there may be "credible evidence" that the foreign interest might take action threatening the national security, Commerce, Defense, and State can search their export control records for licensing and enforcement information, and the intelligence agencies can be called on to check, for example, for known unauthorized technology transfers. The Justice Department, the Federal Trade Commission, and Commerce can provide information regarding evidence of anticompetitive behavior.

Information on alternate suppliers does not readily exist in U.S. government databases but can be obtained from government and private sector industry analysts for some specific products.

Technical questions that arise in the review process can be addressed by consulting government and industry analysts and technical specialists.

CFIUS also seeks information directly from the investing and selling companies through correspondence and discussions, particularly regarding plans for continued U.S. production and research efforts.

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## Difficulties in Deciding Cases

In the several CFIUS cases we examined where agencies raised serious questions about the foreign investment, the key concerns could not be allayed by further investment data collection. Rather, the concerns related to the future consequences of U.S. dependence on foreign-owned suppliers resulting from reduced U.S. commercial competitiveness and technology transfers in some sectors. The following cases illustrate the types of concerns which have been raised by CFIUS members both before and after enactment of the Exon-Florio Amendment.

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## Semiconductor Investments

The 1989 sale to a West German firm of the last major U.S. merchant producer of silicon wafers—the basic element used in semiconductor chips—raised difficult questions about erosion of important parts of the U.S. semiconductor industry. It was also the first full CFIUS investigation to take place under the Exon-Florio Amendment.

At the time of the CFIUS investigation, it was well known that the U.S. firm was the last major U.S. merchant producer of silicon wafers (although some large U.S. electronics firms still have captive units that produce for internal use). It was also public knowledge that Japanese and German firms had purchased other U.S. silicon and wafer fabrication firms in recent years and that, with the sale of this U.S. firm, the share of the world market held by U.S.-owned firms would drop from 14 percent to 4 percent, and their share of the U.S. market would drop from 45 percent to 8 percent. The 1987 Defense Science Board study had already pointed out the importance of semiconductor materials and equipment suppliers in determining the competitive state of the art in the semiconductor industry. It had also revealed that the United States was leading its closest competitor, Japan, in only 1 of the 14 materials and processing technologies the Board had studied.

An additional important issue was the investment's effect on the newly created business-government consortium Sematech, which Congress had authorized in 1987 to promote a U.S. capability to manufacture advanced technology semiconductors. The question was whether the United States needed to have a U.S.-owned firm supplying Sematech. The U.S. firm was not a large supplier directly to the Defense Department, but it was to be a key supplier to Sematech. Questions that arose

related to the possible technology outflow that might result from a foreign firm being a supplier to Sematech, the capability of remaining U.S.-owned firms to supply Sematech, the capabilities of alternate foreign suppliers, and the reliability of continued supplies of wafers to Sematech and to other U.S. semiconductor firms. Answers to some of these questions could be provided by private sources, but some questions required judgments about the future intentions of foreign firms.

The law did not provide a clear basis for blocking the investment, because there was no “credible evidence that the foreign interest might take action that threatens to impair the national security”; nor could other laws, such as export control laws, be shown to be inadequate in protecting the national security. The case did raise questions about what could be cited as credible evidence regarding the future intentions and behavior of foreign investors, particularly those from allied countries. Once an investment case becomes public, it can be awkward for an agency to argue that the foreign firm’s intentions are malevolent, in terms of “threatening” national security, particularly if the foreign firm makes a formal statement of positive intentions.

One other important CFIUS case in the semiconductor sector—occurring in late 1986, before the Exon-Florio Amendment was enacted—involved a Japanese firm’s proposed purchase of a major U.S.-based supplier of semiconductors to DOD. The U.S.-based firm was already foreign owned (by a French oil field services firm). But its acquisition by a large, vertically integrated Japanese electronics firm that competed directly with U.S. firms raised questions about technology transfer, reliability of supply both to DOD and to U.S. businesses (which included a key U.S. supercomputer firm), and effects on the overall commercial competitiveness of the U.S. semiconductor industry.

The U.S.-based firm was known to be losing money, however, and the infusion of capital promised by the acquisition could also have the effect of strengthening the company as a supplier to DOD. Once it became apparent that the investment would be opposed by the Secretary of Commerce on general grounds of unacceptable foreign dependence, the Japanese firm withdrew its purchase offer. No further U.S. government action was needed (although it is not clear what would have been done, since at that time there was no specific statutory authority to block a foreign investment).

The answers to questions raised in the CFIUS process on this case were, again, not the type to be found in formal U.S. government statistics on

foreign direct investment. They required policy judgments about the consequences of dependence on foreign semiconductor firms for both the U.S. civilian and military sectors. Such decisions would require making assumptions about the Japanese firm's intentions regarding the market power and technology transfer that it would gain from the acquisition.

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## Aerospace Investments

Foreign investments in the aerospace sector have also raised technology transfer questions in the CFIUS process. A 1983 aerospace case raised important questions about the technology transfer implications of foreign investment, in terms of foreign access to controlled, but not classified, U.S. technology and the ability of the export control system to monitor such potential transfers. In this case, a large Japanese firm was seeking to acquire a U.S. manufacturer of specialty alloys used in aircraft engines. Opponents of the investment argued that since the technology had never been allowed to be exported and was not included in U.S.-Japan technology-sharing agreements, the Japanese firm should not be allowed simply to purchase the manufacturer.

Particular questions were raised about the ability of the export control system to protect technology acquired through foreign investments. The export control laws do apply to technology transfers resulting from visits of foreign scientists to U.S. plants, but DOD believed that the technology could be transferred because of the difficulty in keeping the Japanese firm's scientists isolated from the U.S. firm's experts. Questions were also raised about whether the technology might leak to the Soviet Union because of concerns as to whether Japan had procedures to protect the technology.

The investment never took place, once Defense Department officials discussed U.S. government concerns with the proposed Japanese investor. But the lack of definitive U.S. policy answers on the technology transfer questions generated an interagency attempt to examine technology transfer issues related to foreign investment. The complexity of the issue and the existence of differing agency viewpoints prevented the interagency group from issuing joint findings or recommendations. A similar attempt to examine technology transfer issues was made by the National Security Council staff in 1986-87 but they, too, were unable to come to specific conclusions.

National security concerns about technology transfer and reliability of supply were raised again in the 1984 acquisition by Japan's largest ball-bearing manufacturer of a U.S. firm considered to be one of the most

important suppliers for missile guidance systems and for major military contractors. Debate about this investment included congressional hearings, and concerns were allayed by the Japanese company's stated commitments to continue investments and research in the plant and to fulfill military contracts.

A 1989 aerospace case, for which a full CFIUS investigation took place, also focused on technology transfer concerns. In this case, a French firm was seeking to buy divisions of a major U.S. aerospace firm whose main business involved producing technologically sensitive items for DOD and the National Aeronautics and Space Administration under classified contracts. Technology transfer concerns were allayed by obtaining from the French firm a detailed plan for observing U.S. export control laws, in addition to limiting foreign access to classified information through DOD's Industrial Security Program.

The one investment that the President ordered blocked was the acquisition of a small, privately owned U.S. aircraft parts producer by a Chinese company controlled by the Chinese aerospace ministry. This investment was different from these other CFIUS cases, in the sense that (1) the foreign investor was controlled by the government of a non-allied country, and (2) a past record of the investor's objectionable activities could be documented, based on classified intelligence reporting, to satisfy the "credible evidence" requirement.

# Broader Policy Questions Persist

The vast majority of cases considered by CFIUS, and of foreign takeovers of U.S. firms in general, have been friendly, not hostile. In some of these takeovers, the U.S. firm had initially sought a domestic buyer, but without success. In the semiconductor sector, it appears that the foreign investing firms were interested in acquiring the U.S. firms because they would fit into their more comprehensive product structure and would also enhance their U.S. market position. Some of the U.S. firms selling out were discontinuing their efforts in the industry segment as a result of low profitability, market uncertainties, or corporate realignments, and the foreign purchaser did assure continued U.S.-based production. Business considerations, understandably, are of primary concern to managers of U.S. firms.

National security questions about specific investments are raised, rather, by government policymakers who try to view the investment from the larger perspective of the country's defense needs. Sometimes these questions are raised only after a sensitive foreign investment is publicly proposed and CFIUS begins a review of it or after a large segment of the industry has already been acquired by foreign firms.

CFIUS' reactive, case-by-case approach does bring out certain investment issues, but it is focused on developing information to meet the law's specific requirements. The President's recent decision to block an investment illustrates that these requirements can be met for certain investments.

But CFIUS is not presently set up to examine other larger questions, such as (1) which industry sectors, technologies, or types of firms to preserve for U.S. ownership, (2) how to evaluate the importance of a U.S. firm's commercial strength to its defense role, (3) why U.S. companies have found it desirable to discontinue operations in certain sensitive sectors, (4) why foreign investors place more value than U.S. firms do on developing predominance in certain high technology sectors, and (5) what parts of the U.S. defense industrial base are being "hollowed out," as foreign investors acquire U.S. firms which are lower-tier suppliers to DOD.

For example, the concerns raised with us by semiconductor industry representatives and industry analysts, as noted below, are not the types of questions on which the CFIUS process has focused. They are not focused strictly on the firms' relationships with DOD. Rather, they reflect concerns about preserving long-term U.S. commercial competitiveness — in the face of foreign firms' competitive business tactics — in order,



over the longer run, to preserve a U.S. production base available for defense needs.

These industry representatives and analysts expressed the following concerns about foreign competitors' practices. They also raised questions about what, if anything, could be done, since the practices are not specifically prohibited under U.S. laws.

- Foreign investors in U.S. semiconductor firms, particularly the Japanese, tend to substitute their own suppliers for U.S. suppliers once the firm is bought. U.S. equipment manufacturers are typically small, but their products are high in value, and so the loss of even one customer is considered important.
- U.S. computer firms' increasing dependence on component parts supplied by their more vertically integrated Japanese competitors raises questions about whether the most advanced design components would be supplied in a timely manner to the U.S. firms.
- Foreign investors have bought U.S. firms not only to enhance their own position and acquire technology but also to deny their U.S. competitors access to this technology.
- The relatively high cost of capital in the United States, together with the increasingly capital-intensive nature of the semiconductor industry, has led U.S. start-up companies to seek foreign funding or business alliances that may entail the transfer of commercially valuable technology.
- It is difficult to track systematically the extent to which research and development efforts of high-tech firms are continued, once a U.S. firm is acquired.

Semiconductor industry concerns remain unanswered, however, about how foreign investments may contribute to the continued erosion of the U.S. semiconductor infrastructure. One recent, proposed Japanese acquisition of a U.S. supplier of critical semiconductor materials illustrates that the current CFIUS process does not resolve commercial concerns.

This acquisition, involving a major U.S. supplier of certain semiconductor materials, underwent the standard 30-day initial CFIUS review, but no CFIUS member requested that it move to the 45-day investigation phase. The U.S. firm was not a direct contractor to DOD, although it was a subcontractor on unclassified work. Alternative foreign or domestic suppliers were available, and there was no evidence the specific buyer would threaten national security. The U.S. firm needed capital to redesign equipment to remain competitive and continue research, and no other U.S. firms had shown interest in acquiring it. One CFIUS participant

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noted that, in his view, the case presented a choice between two undesirable alternatives: (1) foreign ownership, which could mean that fundamental science and technology would shift offshore; or (2) continued business difficulties for the U.S. firm, which would prevent it from aggressively pursuing the next generation of processing equipment.

Although such specific cases may not individually present a threat to national security, the overall decline of U.S. commercial competitiveness in some semiconductor subsectors does generate broader concerns about preserving the U.S.-owned production base.

To some analysts, the commercial health of high-technology sectors is at the heart of the national security issue. The 1987 Defense Science Board study on semiconductors emphasized the importance of U.S. leadership in semiconductor technology to the electronic systems underpinning U.S. military systems. The board noted that leadership in semiconductor technology depends on high-volume commercial production because of the need for commercially derived profits to fund continued research and development and new investments. It also noted that high-volume commercial production itself depends on maintaining U.S. and world market shares. Yet neither Defense nor any other U.S. government agency has responsibility for assuring the commercial viability of the U.S. semiconductor industry. As the board concluded,

“... the principal factor affecting the relative shift in strength of the U.S. and Japanese semiconductor industries is the fact the Japanese established a strategic (long term) goal and effectively brought together all the resources from government, industry and academia, needed to pursue that goal. The U.S., at its own discretion, elected not to pursue such an organized focus and structure, and as a result is finding that it is unable to compete in the marketplace as it has been defined by the Japanese.”

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## Conclusion

A strong U.S. economic base overall, and particularly in high technology, is widely viewed as important to national security and to the military defense structure. Congress has taken steps to promote U.S. high technology leadership, such as helping to fund the research and development activities of Sematech and funding DOD research contracts in high technology fields.

Concern persists about foreign investment, however, because foreign purchases (1) tend to confirm the existing perception that foreign firms value these high-technology sectors more highly than U.S. firms do, and

(2) tend to raise larger questions about the adequacy of U.S. government policy in addressing the variety of factors affecting U.S. commercial competitiveness in sectors critical to national security.

In essence, concern about the national security effects of foreign investment is part of the ongoing public policy debate on the need to preserve U.S. commercial competitiveness in certain sectors. The link between national security and commercial competitiveness concerns is evident if it is recognized that

- the defense industrial base does include industries whose viability depends on commercial success in U.S. and world markets,
- systemic factors—such as the targeted, national development strategies of U.S. competitors, the vertically integrated structure of Japanese semiconductor conglomerates, and differences in costs of capital between countries—in addition to specific trade practices, can affect the commercial competitiveness of U.S. firms, and
- U.S. government agencies covering trade and investment matters are oriented to protecting against certain unfair trade practices or specific investments clearly threatening national security, but they do not have any directive to maintain the commercial viability of an industry sector.

In this sense, preventing the erosion of defense technology leadership is more than a matter of reviewing foreign investments.

CFIUS is carrying out its foreign investment reviews as provided for by the Exon-Florio Amendment, but it cannot be expected to provide answers to the types of questions about preserving commercial competitiveness that need to be addressed at higher policy-making levels.

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