Offsets in Defense Trade

By

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[The following material is extracted from the ninth annual report, March 2005, on offsets in defense trade and is prepared pursuant to Section 309 of the *Defense Production Act of 1950*[1] (DPA), as amended. This report covers offset agreements entered into and offset transactions carried out from 1993 through 2003 and their implications for the U.S. industrial base. The Department of Commerce's Bureau of Industry and Security (BIS)[2] has been delegated responsibility for preparing the reports required under Section 309. It also reports of the progress of the newly formed Interagency Team on offsets in defense trade, which is chartered to engage in consultations with foreign governments on eliminating the adverse effects on offsets in defense trade. Finally, the report summarizes the results of Commerce's August 2004 *Supplemental Offsets Report to Congress*. Some of the footnotes and tables have been omitted from this excerpt; however, the footnotes and table numbers remain the same as in the original document. The complete report is available at the following website: http://www.bis.doc.gov/DefenseIndustrialBasePrograms/OSIES/Offsets/Offsets%209%20Final%20Report.pdf.]

Executive Summary

This is the ninth annual report on the impact of offsets in defense trade prepared pursuant to Section 309 of the *Defense Production Act of 1950*,[3] as amended. The report analyzes the impact of offsets on the defense preparedness, industrial competitiveness, employment, and trade of the United States. To assess the impact of offsets in defense trade, the Department of Commerce obtained data from U.S. defense firms involved in defense exports and related offsets and supplemented this information with statistics from the Bureau of the Census and other sources.

Offset Activity

Total offset activity can be measured by the number and value of new offset agreements entered into between U.S. defense contractors and foreign governments in connection with a U.S. defense-related export.

Offset Agreements 2003: U.S. defense contractors reported entering into 32 new offset agreements with 13 countries in 2003. New offset agreements had a total value of $8.9 billion, and were attached to defense export contracts totaling $7.3 billion. The offset requirement equaled 121.8 percent of the value of the defense exports.[4]

European nations received offsets equal to an average of 148.8 percent of the total export values in 2003, up from 94.3 percent in 2002. Without the large sale mentioned in footnote[4], the average for Europe would fall to 103.9 percent for 2003. For non-European nations, the average offset requirement was 48.4 percent in 2003, down from 77.3 percent in 2002.

Offset Agreements 1993-2003: U.S. companies reported entering into 466 offset agreements with 36 countries during the time period from 1993 to 2003. U.S. companies reported export sales totaling $70.9 billion. Offset agreements related to those export contracts were valued at $50.7 billion, or 73.8 percent of the export contract value, up from 65.7 percent for 1993-2002.

1 Codified at 50 U.S.C. app. Section 2099 (2000).
2 On April 18, 2002, the Bureau of Export Administration changed its name to the bureau of Industry and Security.
3 Codified at 50 U.S.C. app.Section 2099 (2000).
4 One large weapon system export in 2003 with an offset percentage of more than 150 percent skewed the data for that year. Without this export and its related offset agreement, the average offset percentage for 2003 for the world would fall to 75.1 percent (from 121.8 percent with the sale).

Sales of aerospace defense systems (i.e., aircraft, engines, and missiles) were valued at $59.6 billion and accounted for 84 percent of the total export contracts.

Over the eleven-year period, European countries alone accounted for 69.6 percent of the value of offset agreements, but less than half (49.1 percent) of the value of related export contracts. European offset demands continued to increase over the eleven-year period. Between 1993 and 2003, European offset demands as a percentage of exports increased by 70.5 percentage points, going from 78.3 percent in 1993 to 148.8 percent in 2003;[5] for the rest of the world, the increase was almost 26 percentage points, rising from 22.5 percent to 48.4 percent. Overall, 73.3 percent of offset agreements (by number) with European countries totaled 100 percent or more of the value of the weapon system export during the period.

By comparison, Middle Eastern countries and most countries in the Pacific area generally demand lower offset levels than European countries. Of the 219 offset agreements with non-European countries, 150 (68.5 percent) had offset percentages of 50 percent or less. Only sixty-nine of the 219 offset agreements (31.5 percent) had percentages of more than 50 percent. Eleven of the sixty-nine (15.9 percent) had offset requirements in excess of 100 percent.

In a country-by-country analysis, Austria led Europe and the rest of the world in terms of its offset requirement percentage. On average, sales of U.S. weapons systems to Austria were associated with offset agreements worth 174.2 percent of the value of the weapon systems. Austria was followed closely by a number of Eastern European countries with offset requirements well above 100 percent. Other countries with offset percentages greater than the value of the weapon systems exported were the Netherlands (120.5 percent), South Africa (116.7 percent), Greece (110.0 percent), and Sweden (103.9 percent).

Offset requirement trends are more representative when viewed as a moving, weighted average.[6] A moving average smoothes out the yearly fluctuations in weapon system sales and related offset agreements. The weighted world trend in offset percentages rose from 52.9 percent to 94.1 percent. For the eleven-year period European offsets had a 35.2 percentage point increase (from 77.8 percent to 113.0 percent); the rest of the world nearly doubled its offset requirements, from 32.4 percent to 60.3 percent.

Transactions

Offset activity can also be measured by the number and value of individual offset transactions carried out in fulfillment of offset agreements during the reporting period.

- Offset Transactions 2003:

U.S. companies reported offset transactions with a total actual value of $3.6 billion in 2003, the highest value reported for the eleven-year period, up from $2.6 billion in 2002. The 2003 figure represents a 38.5 percent increase from the 2002 total. The percentage of the value of offset transactions classified as indirect rose during 2003, reaching 68.6 percent, up from 64.0 percent in 2002. This was the highest percentage classified as indirect transactions for all years in the period. Direct transactions accounted for 31.2 percent of the value of transactions in 2003, the lowest level of direct transactions over the eleven-year period. The remaining 0.2 percent of the value was unspecified.

- Offset Transactions 1993-2003:

5 Ibid.

6 Here, the value of export contracts and offset agreements is totaled for each successive three-year period, beginning with 1993-1995, followed by 1994-1996, and so forth; then the offset percentage is determined. This leads to nine three-year observations over the eleven year reporting period (1993-2003).

For 1993-2003, U.S. companies reported 6,593 offset transactions executed in 46 countries. The actual value of the offset transactions from 1993 to 2003 was $27.1 billion. Indirect offsets accounted for 61.1 percent of the total value of transactions and direct offsets made up 38.1 percent of the value. The remaining 0.8 percent of the value was unspecified.

The categories of Purchases, Subcontracts, and Technology Transfers accounted for the majority of offset transaction activity during 1993-2003; for that eleven-year period, they accounted for 79.9 percent of the total value of offset transactions. Purchases accounted for 39.6 percent of the total value, and subcontracts accounted for 26.6 percent. The value of technology transfer offset transactions was 13.8 percent of the total value. The categories of Miscellaneous, Credit Transfer, Training, Overseas Investment, Co-production, and Licensed Production made up the remaining 20.1 percent of the total value of offset transactions.

The majority of offset transactions fell in the manufacturing sectors; manufacturing-related transactions accounted for $21.9 billion, or 80.8 percent of all transactions. Service-related transactions accounted for $3.2 billion, or 11.8 percent of the total. Financial, insurance, and real estate industries accounted for an additional 4.8 percent of the total value of transactions during the period.

The Role of Multipliers

Multipliers are incentives used by purchasing countries to stimulate particular types of offset transactions. Prime contractors receive added credit toward their obligation above the actual value of the transaction when multipliers are used. In a small number of cases, a negative multiplier is used to discourage certain types of offsets. In Europe, 83 percent of transactions (by number) have no multiplier involved for the prime contractor when fulfilling the offset commitment. For North and South America, 85.5 percent of transactions (by number) have no multiplier involved; for Asia, the figure is 76.6 percent, and 87.9 percent for the Middle East and Africa.

For the small percentage of transactions that did have multipliers, Overseas Investment and Training transactions were most widely used: 44.3 percent of Overseas Investment transactions and 39.3 percent of Training transactions had positive multipliers. The categories of Purchases and Subcontracts together accounted for 73.4 percent of the 6,593 transactions reported over the eleven-year period, but only 8.4 percent of transactions in each of these categories had positive multipliers applied.

Interagency Offset Team

In December 2003, President Bush signed into law a reauthorization of, and amendments to, the DPA. Section 7(c) of P.L. 108-195 amended Section 123(c) of the DPA by requiring the President to designate a chairman of an interagency team to consult with foreign nations on limiting the adverse effects of offsets in defense procurement without damaging the economy or the defense industrial base of the United States, or United States defense production or defense preparedness. The statute provides that the team will be comprised of the Secretaries of Commerce, Defense, Labor, and State, and the United States Trade Representative. On August 6, 2004, the President formally established the Team with the Department of Defense (DoD) as chair. The Secretaries and the U.S. Trade Representative delegated membership on the team to appropriate officials within their departments.

On September 15, 2004, the Defense Department activated a working group to support the consultation process of the interagency team. The working group met three times in 2004:

- September 30;
- November 4; and

- December 7.

The interagency team met on December 8 to review the efforts of the working group. The interagency team reviewed and approved the terms of reference for the team and the working group, a top-level plan of work, and a submission for this annual report to Congress.

The goals of the Interagency Team and Working Group are as follows:

- Establish a plan of work to fulfill the requirements of the statute.
- Identify and define meaning of "effects" of offsets in defense procurement.
- Identify potential strategies for limiting "adverse effects."
- Identify foreign nations and other parties, both domestic and foreign, for consultation.
- Develop methods and objectives of consultation.
- Develop schedule for and engage in consultations.
- Provide annual report to Congress describing meetings and the results of consultations.
- Submit to the President any recommendations that may result from these consultations.

Findings

In the *Eighth Report to Congress on Offsets in Defense Trade*, Commerce reported that Europe's already high offset requirements were rising, but at a slower rate. In 2003, however, Europe's average offset percentage rose significantly to 148.3 percent across North Atlantic Treaty Organization (NATO) and non-NATO countries.[8] Non-European nations, meanwhile, returned to historical offset levels, ranging between 40 and 50 percent of the value of the sale. In 2003, non-European offset percentages averaged 48.4 percent.

In 2003, direct offset transactions (related to weapon systems sold) accounted for just 31.1 percent of the value of all transactions, the lowest percentage for the eleven-year period. Similarly, indirect offsets (not related to weapon systems sold) were 68.9 percent of the value of all transactions, which was the highest percentage for the period. Whether direct or indirect, the great majority of offset transactions fell in the manufacturing sectors; $21.9 billion, or 80.8 percent of all transactions were manufacturing related.

Multipliers are applied to only a small number of offset transactions. For Europe, transactions with a multiplier greater than 1 only accounted for 8.4 percent of the value of all European transactions; the Middle East/Africa, 6.9 percent; Asia, 5.3 percent; and North and South America, 1.5 percent. For each region, multipliers of less than 1 and transactions with no multiplier together accounted for over 90 percent of the value of transactions. It should be noted that transactions with multipliers less than 1 further add to the costs of fulfilling offsets, as countries for certain transactions give less than full credit for offset transactions completed.

BIS estimated the impact on defense productive capacity by combining BIS offsets data with aerospace industry data from the Census Bureau's 2002 Economic Census (2002 is the most recent data published). BIS estimates that 2002 U.S. defense export contracts ($7.4 billion) with offset agreements attached supported 47,122 work-years. This calculation is based on the supposition that this value represents 100 percent U.S. content in all defense exports, which is not necessarily an accurate assumption.

8 One large weapon system export in 2003 with an offset percentage of more than 150 percent skewed the data for that year. Without this export and its related offset agreement, the average offset percentage for 2003 would fall to 75.1 percent (from 121.8 percent with the sale).

Applying the same value added figure used above ($157,173) leads to the loss of 25,450 work-years associated with the agreements entered into in 2002. Based on these calculations, it appears that 2002 defense export sales had a net positive effect on work-years in the defense sector, although the net positive effect was diminished by the offset agreements. It should be noted that the above analysis does not include an additional $338.3 million in 2002 of Technology Transfer, Training, Overseas Investment, and Marketing transactions, because the impact of these transactions on the U.S. defense industrial base is difficult to calculate. Nor does this calculation include consideration of the long-term effects of creating new or enhanced foreign competitors.

Purpose of Report

DPA Section 309(b)(1) requires BIS to identify the cumulative effects of offset agreements on "the full range of domestic defense productive capability with special attention paid to the firms serving as lower-tier subcontractors or suppliers" and "the domestic defense technology base as a consequence of the technology transfers associated with such offset agreements." To address the effects of offsets on defense productive capability, this analysis compares 2002 offset transactions dealing with transportation equipment to 2002 value added data for this industry, as reported in the Census Bureau's most recent Economic Census.[10] Over time, the lost current and future opportunity of offset transactions can negatively affect capacity utilization and, ultimately, domestic productive capability. Value added, in turn, is a measurement of the productive capability of an entire industry, encompassing productivity of labor, efficient capital use, and full production capacity.

No other U.S. government agencies have assessed the impact of offsets on the domestic defense productive capability. Although the Department of Commerce is authorized by the *Defense Production Act* to make recommendations for appropriate remedial action, at this time no recommendations are provided.

1 Background

1.1 Legislation and Regulations

In 1984, the Congress enacted amendments to the DPA, which included the addition of Section 309 addressing offsets in defense trade.[11] Section 309 required the President to submit an annual report on the impact of offsets on the U.S. defense industrial base to the Congress's then-Committee on Banking, Finance, and Urban Affairs of the House of Representatives and the Committee on Banking, Housing, and Urban Affairs of the Senate.[12]

The 1992 amendments to Section 309 of the DPA also reduced the offset agreement reporting threshold from $50 million to $5 million for U.S. firms entering into foreign defense sales contracts subject to offset agreements. Firms are also required to report all offset transactions for which they receive offset credits of $250,000 or more. Every year, U.S. companies report offset agreement and transaction data for the previous calendar year to BIS.

1.2 U.S. Government Policy

The U.S. government policy on offsets in defense trade was developed by an interagency offset team. On April 16, 1990, the President announced a policy on offsets in military exports.[15]

10 This industry was chosen because it was involved in the most frequent and the highest level of offset transactions for 2002. The year 2002 was chosen as a sample because it was the most recent available data for value added from the Economic Census during the preparation of this report.

11 See Pub. L. 98-265, April 17, 1984, 98 Stat. 149.

12 Section 309 of the DPA was amended in 2001 to reflect the change in the name of the House committee to the "Committee on Financial Services of the House of Representatives." See 50 U.S.C. app. ß 2099(a)(1).

15 See April 16, 1990 statement by Press Secretary Fitzwater on offsets in military exports.

In 1992, Congress passed the following provision, which closely reflects the policy announced by the President:[16]

- In General. Recognizing that certain offsets for military exports are economically inefficient and market distorting, and mindful of the need to minimize the adverse effects of offsets in military exports while ensuring that the ability of United States firms to compete for military export sales is not undermined, the following is the policy of the Congress:

  •• No agency of the United States Government shall encourage, enter directly into, or commit United States firms to any offset arrangement in connection with the sale of defense goods or services to foreign governments;

  •• United States Government funds shall not be used to finance offsets in security assistance transactions, except in accordance with policies and procedures that were in existence on March 1, 1992;

  •• Nothing in this section shall prevent agencies of the United States Government from fulfilling obligations incurred through international agreements entered into before March 1, 1992; and

  •• The decision whether to engage in offsets, and the responsibility for negotiating and implementing offset arrangements, reside with the companies involved.

- Presidential Approval of Exceptions. It is the policy of the Congress that the President may approve an exception to the policy stated in subsection (a) after receiving the recommendation of the National Security Council.

- Consultation. It is the policy of the Congress that the President shall designate the Secretary of Defense to lead, in coordination with the Secretary of State, an interagency team to consult with foreign nations on limiting the adverse effects of offsets in defense procurement. The President shall transmit an annual report on the results of these consultations to the Congress as part of the report required under section 309(a) of the DPA.

Provisions in the *Defense Offsets Disclosure Act of 1999*[17] supplemented the offset policy:

- A fair business environment is necessary to advance international trade, economic stability, and development worldwide, is beneficial for American workers and businesses, and is in the United States national interest.

- In some cases, mandated offset requirements can cause economic distortions in international defense trade and undermine fairness and competitiveness, and may cause particular harm to small- and medium-sized businesses.

- The use of offsets may lead to increasing dependence on foreign suppliers for the production of United States weapons systems.

- The offset demands required by some purchasing countries, including some close allies of the United States, equal or exceed the value of the base contract they are intended to offset, mitigating much of the potential economic benefit of the exports.

- Offset demands often unduly distort the prices of defense contracts.

16 Congress incorporated this policy statement into law with the *Defense Production Act Amendments of 1992* (Pub. L. 102-558, Title I, Part C, ß 123, 106 Stat. 4198).
17 See Pub. L. No. 106-113, Div. B, ß 1000(a)(7) 113 Stat. 1536, 1510A-500 to 1501A-505 (1999) (enacting into law Subtitle D of Title XII of Division B of H.R. 3427 (113 Stat. 1501A-500) as introduced on Nov. 17, 1999) (found at 50 U.S.C. App. 2099, Note).

- In some cases, United States contractors are required to provide indirect offsets which can negatively impact nondefense industrial sectors.
- Unilateral efforts by the United States to prohibit offsets may be impractical in the current era of globalization and would severely hinder the competitiveness of the United States defense industry in the global market.

The *Defense Offsets Disclosure Act of 1999* continues with the following declaration of policy:

> It is the policy of the United States to monitor the use of offsets in international defense trade, to promote fairness in such trade, and to ensure that foreign participation in the production of United States weapons systems does not harm the economy of the United States.

1.4 Countries and Regions

Countries and country groups actively requiring offsets in tandem with purchases of U.S. defense systems during the period of 1993-2003, as reported by industry, were divided into four geographic regions:

- Europe;
- Africa and the Middle East;
- North and South America; and
- Asia.

This was done for ease of analysis and in some cases to protect company confidentiality. The countries found in each region are listed in Table 1-1 found on the next page.

2 Statistical Overview

This chapter provides a general overview of offset statistics collected by BIS for the years 1993 through 2003 along with a review of some of the terms used to organize the data for analysis.

The following data points are used to organize and analyze the information collected:

- Offset Agreement:
    - Year;
    - Country;
    - Weapon System;
    - Export Contract Value;
    - Agreement Value - percent; and
        - Agreement Value to Export Value.
- Offset Transaction:
    - Year;
    - Country;
    - Referenced Weapons System;
    - Recipient;
    - Actual Value;
    - Credit Value;
    - Multiplier (credit value - actual value);

Table 1-1: Purchasing Countries and Groups with Offset Agreements (by Region, 1993-2003)

Europe	Middle East and Africa
Austria	Israel
Belgium	Kuwait
Czech Republic	Saudi Arabia
Denmark	South Africa
The European Participating Group (EPG) (Belgium, The Netherlands, Norway)	Turkey
Finland	United Arab Emirates
France	**North and South America**
Germany	Brazil
Greece	Canada
Italy	Chile
Lithuania	
North Atlantic Treaty Organization	**Asia**
Netherlands	Australia
Norway	Indonesia
Poland	Malaysia
Portugal	New Zealand
Romania	Singapore
Slovenia	South Korea
Spain	Taiwan
Sweden	Thailand
Sweden/Norway	
Switzerland	
United Kingdom	

Source: BIS Offsets Database

- Type
  - Category;
  - Description; and
  - Industry Identification.

2.1 General Overview

A summary of offset activity for 1993 through 2003 is provided in Table 2-1.

2.2 Types of Offset Transactions

Table 2-2 presents offset transaction data by offset type (direct, indirect, or unspecified) and the percent distribution for each year from 1993 to 2003. As discussed in Chapter 1, direct offset transactions are those that are directly related to the weapon system that is exported. Indirect transactions are not related to the exported weapon system. A transaction is classified as unspecified when there is not enough information available to determine the whether it is direct or indirect.

Table 2-1 General Summary of Offset Activity, 1993-2003
($ millions)

Year	Export Value	Offset Value	Percent Offset	Companies	Agreements	Countries
1993	$13,957.0	$4,806.7	34.4%	18	30	17
1994	$4,792.4	$2,048.7	42.8$	18	49	20
1995	$7,402.0	$6,034.1	81.5%	19	45	18
1996	$2,987.8	$2,270.7	76.0%	15	50	19
1997	$5,822.8	$3,831.8	65.8%	13	57	19
1998	$3,257.8	$1,846.6	56.7%	11	44	17
1999	$4,681.2	$3,851.4	82.3%	10	45	11
2000	$6,278.3	$5,498.1	87.6%	8	38	14
2001	$7,039.2	$5,497.3	78.1%	11	35	14
2002	$7,406.2	$6,094.8	82.3%	12	41	17
2003	$7,284.9	$8,872.0	121.8%	11	32	13
11 Years	**$70,909.6**	**$50,652.2**	**71.4%**	**39**	**466**	**36**

Offset Transactions

Year	Actual Value	Credit Value	Multiplier*	Companies	Transactions	Countries
1993	$1,815.1	$2,162.1	1.191	24	440	27
1994	$1,891.1	$2,161.5	1.143	21	550	26
1995	$2,713.7	$3,390.9	1.250	20	670	27
1996	$2,731.5	$3,098.9	1.135	21	623	26
1997	$2,725.5	$3,276.2	1.202	18	577	26
1998	$2,364.8	$2,684.6	1.135	19	582	30
1999	$2,080.4	$2,824.1	1.358	13	512	25
2000	$1,998.5	$2,613.0	1.307	14	601	23
2001	$2,588.1	$3,295.7	1.273	15	620	25
2002	$2,616.0	$3,284.5	1.256	17	729	27
2003	$3,565.5	$4,010.6	1.125	16	689	30
11 Years	**$27,090.0**	**$32,802.0**	**1.211**	**42**	**6,593**	**46**

Source: BIS Offsets Database
Note: Due to rounding, totals may not add up precisely.
*Multipliers are used only in a small percentage of the total number of transactions. See Chapter 5 for further discussion.

Table 2-2 also shows the total actual and credit values of the transactions for each year. The credit value is sometimes more than the actual value assigned to transactions; some foreign governments give greater credit as an incentive for certain kinds of offset transactions. This incentive varies by country and by the kind of transaction (i.e., Purchase, Technology Transfer, Investment). The multiplier, also shown in Table 2-2, is the percentage difference between the actual value and the credit value. For the 1993-2003 period, the multiplier is 1.211. This multiplier means that, for the database as a whole, the total credit value of the transactions is 21.1 percent more than the actual value. However, it is important to note that a significant majority of transactions do not include multipliers or have multipliers that provide less than actual credit for the transaction. Offset transaction data and multipliers are more fully discussed in Chapter 5.

2.3 Offset Transaction Categories

In addition to classifying offset transactions by type (direct or indirect), offset transactions are identified by various categories, which more particularly describe the nature of the arrangement or exchange. These categories include:

- Purchases;
- Subcontracts;
- Technology;
- Transfers;
- Credit Assistance;
- Training;
- Overseas Investment;
- Co-production;
- Licensed Production; and
- Miscellaneous.

Table 2-3 presents a summary of offset transactions by category and type for the eleven-year reporting period (1993-2003). Appendix I contains a listing of relevant offset definitions. A brief description of each category follows:

Purchases result in overseas production of goods or services usually for export to the United States. Purchases are always classified as indirect offsets to distinguish them from subcontracts, because the purchases are of items unrelated to the exported defense system. The U.S. exporter may make the purchase, or they can also involve brokering and marketing assistance that result in purchases by a third party. For 1993-2003, Purchases represented 39.6 percent of the actual value of all offset transactions, the largest share of all categories. They made up 64.7 percent of the value of indirect offsets.

Subcontracts result in overseas production of goods or services for use in the production or operation of a U.S. exported defense system subject to an offset agreement. Subcontracts are always classified as direct offsets. During the 1993-2003 reporting period, Subcontracts represented 26.6 percent of the actual value of all offset transactions, and 69.9 percent of the value of all direct offsets.

Technology Transfer includes research and development conducted abroad, exchange programs for personnel, data exchanges, integration of machinery and equipment into a recipient's production facility, technical assistance, education and training, manufacturing know-how, and licensing and patent sharing. Technology Transfer, as used here, is normally accomplished under a commercial arrangement between the U.S. prime contractor and a foreign company. A major subcontractor may also accomplish the Technology Transfer on behalf of the U.S. prime contractor. During the reporting period, 34.9 percent of Technology Transfers were classified as direct offsets and 62.3 percent were indirect offsets; the balance was unspecified. Technology Transfers accounted for approximately 13.8 percent of the actual value of all offset transactions.

Credit Assistance includes direct loans, brokered loans, loan guarantees, assistance in achieving favorable payment terms, credit extensions, and lower interest rates. Credit Assistance transactions accounted for 4.4 percent of the actual value of all transactions for 1993-2003. Credit Assistance is nearly always classified as an indirect offset transaction, with indirect transactions making up 99.6 percent of the actual value of all Credit Assistance for the period.

Table 2-2 Offset Transactions by Type, 1993-2003 ($ millions)							
		Actual Vale			% Distribution		
Year	Total	Direct	Indirect	Unspecified	Direct	Indirect	Unspecified
1993	$1,815.1	$584.2	$1,167.1	$63.9	32.2%	64.3%	3.5%
1994	$1,891.1	$600.7	$1,186.1	$104.3	31.8%	62.7%	5.5%
1995	$2,713.7	$1,064.1	$1,649.6	NR	39.2%	60.8%	NR
1996	$2,731.5	$1,097.5	$1,632.5	$1.4	40.2%	59.8%	0.1%
1997	$2,725.5	$1,030.3	$1,673.8	$21.4	37.8%	61.4%	0.8%
1998	$2,364.8	$1,464.2	$900.5	$0.1	61.9%	38.1%	0.0%
1999	$2,080.4	$690.2	$1,378.7	$11.4	33.2%	66.3%	0.5%
2000	$1,998.5	$779.9	$1,210.7	$7.9	39.0%	60.6%	0.4%
2001	$2,588.1	$949.1	$1,639.0	NR	36.7%	63.3%	NR
2002	$2,616.0	$941.7	$1,673.0	$1.3	36.0%	64.0%	0.1%
2003	$3,565.5	$1,113.0	$2,447.0	$5.6	31.2%	68.6%	0.2%
Total	**$27,090.0**	**$10,314.9**	**$16,557.8**	**$217.3**	**38.1%**	**61.1%**	**0.8%**
		Credit Values			% Distribution		
Year	Total	Direct	Indirect	Unspecified	Direct	Indirect	Unspecified
1993	$2,162.1	$709.3	$1,384.1	$68.7	32.8%	64.0%	3.2%
1994	$2,161.5	$774.1	$1,278.6	$108.8	35.8%	59.2%	5.0%
1995	$3,390.9	$1,257.9	$2,132.9	NR	37.1%	62.9%	NR
1996	$3,098.9	$1,188.7	$1,874.3	$36.0	38.4%	60.5%	1.2%
1997	$3,276.2	$1,171.1	$2,055.4	$49.7	35.7%	62.7%	1.5%
1998	$2,684.6	$1,621.8	$1,060.3	$2.5	60.4%	39.5%	0.1%
1999	$2,824.1	$1,121.8	$1,632.0	$70.3	39.7%	57.8%	2.5%
2000	$2,613.0	$1,135.8	$1,469.2	$7.9	43.5%	56.2%	0.3%
2001	$3,295.7	$1,282.3	$2,013.3	NR	38.9%	61.1%	NR
2002	$3,284.5	$1,111.2	$2,171.9	$1.3	33.8%	66.1%	0.0%
2003	$4,010.6	$1,215.5	$2,783.2	$12.0	30.3%	69.4%	0.3%
Total	**$32,802.0**	**$12,589.5**	**$19,855.2**	**$357.3**	**38.4%**	**60.5%**	**1.1%**

		Multiplier*				Number of Transactions		
Year	Total	Direct	Indirect	Unspecified	Total	Direct	Indirect	Unspecified
1993	1.191	1.214	1.186	1.076	440	133	303	4
1994	1.143	1.289	1.078	1.043	550	157	388	5
1995	1.250	1.182	1.293	NR	670	203	467	NR
1996	1.135	1.083	1.148	25.714	623	220	401	2
1997	1,202	11.137	1.228	2.327	577	200	373	4
1998	1.135	1.108	1.177	19.976	582	237	344	1
1999	1.358	1.625	1.184	6.154	512	200	307	5
2000	1.307	1.456	1.214	1.000	601	208	392	1
2001	1.273	1.351	1.228	NR	620	222	398	NR
2002	1.256	1.180	1.298	1.000	729	194	534	1
2003	1.125	1.092	1.137	2.151	689	179	506	4
Total	**1.211**	**1.221**	**1.199**	**1.644**	**6593**	**2153**	**4413**	**27**

Source: BIS Offsets Database
NR = Non Reported
Due to rounding, totals may not add up precisely.
*Multipliers are used only in a small percentage of the total number of transactions (see Chapter 5 for further discussion).

Training transactions relate to the production, maintenance, or actual use of the exported defense system or a component thereof. Training may be required in areas such as computers, foreign language skills, engineering capabilities, or management. This category can be classified as either direct or indirect offset transactions; by value, 58.7 percent of the value of Training transactions during the reporting period was direct and 41.0 percent was indirect. Training accounted for only 2.5 percent of the total value of offset transactions between 1993 and 2003.

Table 2-3 Offset Transactions by Category and Type, 1993-2003

Transaction	Actual Values in $ Millions				Percent by Column Total			
Category	**Total**	**Direct**	**Indirect**	**Unspecified**	**Total**	**Direct**	**Indirect**	**Unspecified**
Purchases	$10,717.1		$10,717.1		39.6%		64.7%	
Subcontractors	$7,210.1	$7210.1			26.6%	69.6%		
Technology Transfers	$3,724.3	$1,298.6	$2,321.6	$104.1	13.7%	12.5%	14.0%	47.9%
Miscellaneous	$2,016.7	$361.8	$1,645.1	$9.8	7.4%	3.5%	9.9%	4.5%
Credit Assistance	$1,191.3	$5.1	$1,186.2		4.4%	0.05%	7.2%	
Training	$665.7	$390.6	$273.2	$1.9	2.5%	3.8%	1.6%	0.9%
Overseas Investment	$694.0	$215.5	$401.0	$77.5	2.6%	2.1%	2.4%	35.6%
Co-production	$716.0	$716.0			2.6%	6.9%		
Licensed Production	$154.8	$117.2	$13.6	$24.0	0.6%	1.1%	0.1%	11.1%
Total	**$27,090.0**	**$10,314.9**	**$16,557.8**	**$217.3**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Transaction	**Credit Values in $ Millions**				**Percent by Column Total**			
Category	**Total**	**Direct**	**Indirect**	**Unspecified**	**Total**	**Direct**	**Indirect**	**Unspecified**
Purchases	$11,735.9		$11,735.9		35.8%		59.1%	
Subcontractors	$8,133.7	$8,133.7			24.8%	64.6%		
Technology Transfers	$4,868.1	$1,671.0	$3,085.0	$112.1	14.8%	13.3%	15.5%	31.4%
Miscellaneous	$3,031.6	$869.6	$2,089.5	$72.4	9.2%	6.9%	10.5%	20.3%
Credit Assistance	$1,348.5	$70.6	$1,277.9		4.1%	0.6%	6.4%	
Training	$1,173.4	$639.2	$520.9	$13.4	3.6%	5.1%	2.6%	3.7%
Overseas Investment	$1,519.2	$281.1	$1,109.9	$128.2	4.6%	2.2%	5.6%	35.9%
Co-production	$790.1	$790.2		2.4%	6.3%			
Licensed Production	$201.5	$134.1	$36.1	$31.2	0.6%	1.1%	0.2%	8.7%
Total	**$32,802.0**	**$12,589.5**	**$19,855.2**	**$357.3**	**100.0%**	**100.0%**	**100.0%**	**100.0%**
Transaction	**Multiplier***				**Number of Transactions**			
Category	**Total**	**Direct**	**Indirect**	**Unspecified**	**Total**	**Direct**	**Indirect**	**Unspecified**
Purchases	1.095		1.095		3414		3414	
Subcontractors	1.128	1.128			1464	1464		
Technology Transfers	1.307	1.287	1.329	1.077	687	303	374	10
Miscellaneous	1.503	2.404	1.270	7.388	452	96	351	5
Credit Assistance	1.132	13.843	1.077		87	7	80	
Training	1.763	1.636	1.906	7.053	227	107	115	5
Overseas Investment	2.189	1.304	2.768	1.654	98	19	74	5
Co-production	1.103	1.104			132	132		
Licensed Production	1.302	1.144	2.662	1.300	32	25	5	2
Total	**1.211**	**1.211**	**1.199**	**1.644**	**6593**	**2153**	**4413**	**27**

Source: BIS Offsets Database

Note: Due to rounding, totals may not add up precisely.

*Multipliers are used only in a small percentage of the total number of transactions. See Chapter 5 for further discussion.

Overseas Investments include capital invested to establish or expand a subsidiary or joint venture in the foreign country as well as investments in third-party facilities; the latter received the highest multipliers. Overseas Investments accounted for just 2.6 percent of the actual value of all offset transactions; 57.8 percent of Overseas Investment transactions were classified as indirect and 31.1 percent as direct.

Co-production is overseas production based upon a government-to-government agreement that permits a foreign government or producer to acquire the technical information to manufacture all or part of a U.S.-origin defense system. Co-production is always classified as a direct offset. It includes government-to-government licensed production, but excludes licensed production based upon direct commercial arrangements by U.S. manufacturers. Virtually all of the Co-production reported during the 1993-2003 period was aerospace-related.

Co-production accounted for 2.6 percent of the value of offset transactions. Past Co-production transactions have involved constructing major production facilities in foreign countries (primarily at the expense of the foreign government) for the assembly of entire defense systems, such as aircraft, missiles, or ground systems. Co-production arrangements of this kind generally impose a high cost on the foreign government, including up front construction and tooling costs and increased unit costs for limited production runs.[18] Some countries negotiate with prime contractors for production or assembly contracts related to future sales to third countries of the weapon system or system components.

Licensed Production is overseas production of a U.S.-origin defense article. Licensed Production differs from Co-production in that it is based on commercial arrangements between a U.S. manufacturer and a foreign entity as opposed to a government-to-government agreement. In addition, Licensed Production virtually always involves a part or component for a defense system, rather than a complete defense system. Licensed Production is the smallest among the offset categories, accounting for only 0.6 percent of the total value of offset transactions; 75.7 percent of the Licensed Production transactions (by actual value) were directly related to the weapon systems sold.

Miscellaneous transactions include activities such as feasibility studies, marketing assistance, export assistance, administrative support, business plan development, and trade conferences, among others. These varied transactions comprise 7.4 percent of the total.

2.5 Countries and Regions

Table 2-5 is a compilation of the average offset requirements and multipliers for all countries requiring offsets in connection with defense export sales during the 1993-2003 period. The multipliers presented are averages; as mentioned earlier, a significant majority of transactions do not include multipliers or have multipliers that provide credit that is less than their actual value. The countries are divided into four regions: Europe, North and South America, the Middle East and Africa, and Asia. The notation none reported (NR) is used when the offset requirement or multiplier cannot be calculated or was not reported; and withheld (W) is used to protect company confidentiality.

Austria had the largest offset percentages; on average, U.S. weapon systems exports to Austria were associated with offset agreements worth 174.2 percent of the value of the weapon systems. It is interesting to note that Austria also offered the lowest reported multiplier (0.84 a negative multiplier) where multipliers were granted for the offset transactions carried out in fulfillment of the agreements.

Austria was followed closely by a number of Eastern European countries with offset requirements above 100 percent. Other European countries also required offset percentages equal to or greater than the value of the weapon systems exported to them. These countries included

18 Primary examples include an Egyptian co-production facility which,since its 1988 inception, has only contracted enough orders to build half of what the government originally planned and a Japanese co-production program that cost the government nearly two times more per unit than an off-the-shelf purchase. See *Military Aid to Egypt: Tank Co-production Raised Costs and May Not Meet Many Program Goals*, U.S. General Accounting Office, GAO/NSIAD-93-2003, and *U.S. Military Aircraft Co-production with Japan*, U.S. General Accounting Office, GAO/T-NSIAD-89-6.

the Netherlands (120.5 percent), Greece (110.0 percent), Sweden (103.9 percent), Denmark (100.0 percent), and Finland (100.0 percent).

Table 2-5 Countries with Offset Agreements and Transactions by Region, 1993-2003

Europe

Country	% Offsets	Multiplier*
Austria	174.2%	0.84
Belgium	80.1%	1.08
Czech Republic	W	W
Denmark	100.0%	1.17
EPG**	27.8%	1.23
Finland	100.0%	1.07
France	84.6%	1.81
Germany	99.9%	1.00
Greece	110.0%	2.51
Italy	93.8%	1.02
Lithuania	W	NR
Luxembourg	NR	1.00
NATO	55.8%	1.0
Netherlands	120.5%	1.21
Norway	99.5%	1.39
Poland	W	W
Portugal	27.9%	1.99
Romania	NR	W
Slovenia	W	NR
Spain	88.4%	1.23
Sweden	103.9%	1.13
Switzerland	78.1%	1.01
United Kingdom	92.6%	1.01
Region Total	**101.2%**	**1.24**

Middle East and Africa

Country	% Offsets	Multiplier*
Egypt	NR	1.00
Israel	49.2%	1.04
Kuwait	30.4%	2.48
Saudi Arabia	34.9%	NR
South Africa	116.7%	1.00
Turkey	57.1%	1.06
United Arab Emirates	55.3%	2.33
Region Total	**45.1%**	**1.49**

Asia

Country	% Offsets	Multiplier*
Australia	45.6%	1.02
Indonesia	NR	1.21
Malaysia	37.3%	1.12
New Zealand	W	2.97
Singapore	58.3%	2.25
South Korea	63.7%	1.33
Taiwan	21.7%	2.04
Thailand	26.6%	1.60
Region Total	**39.9%**	**1.69**

North and South America

Country	% Offsets	Multiplier*
Brazil	W	W
Canada	83.1%	1.00
Chile	W	W
Region Total	**84.2%**	**1.70**

Source: BIS Offsets Database
Notes: NR = Non Reported
W = With held to protect company proprietary information.
*Multipliers are used only in a small percentage of the total number of transactions. See Chapter 5 for further discussion.
**EPG = European Participating Group (Belgium, The Netherlands, and Norway).

The percent offset averages for the Middle East/Africa and Europe increased since the previous report on offsets in defense trade; since the last report that covered 1993-2002, the Middle East and Africa's percent offset average for the reporting period increased from 44.0 percent to 45.1 percent for 1993-2003. For Europe, the average offset percentage grew from 92.6 percent for 1993-2002 to 101.2 percent for 1993-2003.

The regional offset averages for Asia and North and South America both decreased since the previous report on offsets in defense trade; Asia's average went from 40.0 percent for 1993-2002 to 39.9 percent for 1993-2003. North and South America's average fell from 90.8 percent to 84.2 percent for 1993-2003.

3 Impact of Offsets on the U.S. Defense Industrial Base

The DPA requires that commerce determine the impact of offsets on defense preparedness, industrial competitiveness, employment, and trade of the United States. This chapter discusses the impact of offsets on defense preparedness and employment.

3.1 Defense Preparedness

The relationship of offsets to the defense preparedness of the United States is complex. Exports and the revenue generated by export sales are crucial to producers of U.S. defense systems and, by extension, to U.S. foreign policy and economic interests; almost all purchasers of U.S. defense systems require offset agreements as a condition of the sale. Exports of major defense systems help defray high overhead costs for the U.S. producer and help maintain production facilities and expertise in case they are needed to respond to a national emergency. Exports also provide additional business to many U.S. subcontractors and lower-tier suppliers, promote interoperability of weapon systems between the United States and allied countries, and add positively to U.S. international account balances.

An offset package, particularly one with a high proportion of subcontracting or purchases can negate many of these benefits. U.S. subcontractors and suppliers are displaced by exports that include subcontract or licensed production offsets. More than 80 percent of offset transactions reported fell in the manufacturing sectors of the U.S. economy. Previous incidents indicate that U.S. contractors sometimes develop long-term supplier relationships with overseas subcontractors based on short-term offset requirements.[19] These new relationships can reduce future business opportunities for U.S. subcontractors, with possible consequences for the industrial base. Offsets can also increase spending and capital investment in foreign countries for defense or non-defense industries, helping to create or enhance current and future competitors.

3.2 Employment

While it is difficult to determine precisely the impact of offset agreements and transactions on employment in the U.S. defense sector, BIS has developed an estimate by using employment data collected by the Bureau of the Census. Given that sales of aerospace weapon systems account for nearly 85 percent of the value of defense exports connected with offset agreements, this method appears to provide a reliable estimate.

For 2002, industry reported approximately $7.4 billion in defense export contracts with an offset agreement attached.[20] According to the Economic Census, the value added per employee for the aerospace product and parts manufacturing industry in 2002 was $157,713. Dividing this figure into the defense export sales total results in a total of 47,122 work-years that were supported by defense exports associated with offset agreements.[21]

For 2002, the $7.4 billion in defense export contracts had a related $6.1 billion in offset commitments. Although it takes on average almost seven years of offset transactions to fulfill an offset agreement, in order to more accurately assess the impact of offset transactions on work-years, we compared the export contract to the prime contractor's offset obligation at the time of the sale.

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19 See GAO report on offset activities, *Defense Trade: U.S. Contractors Employ Diverse Activities to Meet Offset Obligations*, December 1998 (GAO/NSIAD-99-35), pp. 4-5.

20 The value added data was taken from the 2002 Economic Census, Manufacturing Industry Series (see http://www.census.gov/econ/census02/index.html). The year 2002 is the most recent year for which value added data was available.

21 This calculation is based on the supposition that this value represents 100 percent U.S. content in all exports, which is not necessarily an accurate assumption.

Subcontracting, purchasing, co-production, and licensing offset transactions are most likely to shift production and sales from U.S. suppliers to overseas firms. Other categories of offset transactions, technology transfer, training, overseas investment, and marketing, in the short or long run, can shift sales from U.S. suppliers as well; however, their impact is more difficult to calculate. Therefore, BIS bases its estimate of employment impacts only on subcontracting, purchasing, co-production, and licensing offset transactions.

Assuming that the offset obligations entered into in 2002 have the same proportions as past offset transactions, then the subcontracting, purchasing, co-production, and licensing portions would account for approximately 66 percent of the total, or about $4 billion. Applying the same value added figure used above ($157,173) leads to the loss of 25,450 work-years associated with the agreements entered into in 2002.

Based on these calculations, it appears that 2002 defense export sales had a net positive effect on employment in the defense sector during 2002, although the net positive effect was diminished by the offset agreements. It should be noted that the above analysis does not include an additional $338.3 million of Technology Transfer, Training, Overseas Investment, and Marketing transactions, because the impact of these transactions on the U.S. defense industrial base is difficult to calculate.

4 Offset Agreements, 1993-2003

4.1 Overview

As was shown in Table 2-1, during the eleven-year period from 1993 to 2003, thirty-nine prime contractors reported that they had entered into 466 offset agreements valued at $50.7 billion. The agreements were signed in connection with defense weapon system exports totaling $70.9 billion to thirty-six different countries. The value of the offset agreements represented 71.4 percent of the total value of the related export contracts during the entire reporting period. The average term for completing the offset agreements was eighty-three months, or just under seven years. Sales of aerospace defense systems (i.e., aircraft, engines, and missiles) were valued at $59.6 billion, 84 percent of all export contracts. In 2003, the percentage of offset agreements to export contracts (by value) reached its highest point during the eleven-year period: 121.8 percent.[23] The lowest percentage was recorded in 1993 at 34.4 percent.[24]

4.2 Concentration of Offset Activity

The data reported by U.S. firms show that a small number of companies, countries, and weapon systems dominated offset agreements between 1993 and 2003. The top five U.S. exporters of thirty-nine companies reporting data on offsets accounted for 82.3 percent of the value of defense export contracts and 85.0 percent of the value of offset agreements during this eleven-year period. This market concentration reflects the high costs of developing and manufacturing defense systems and the small number of firms that have the financial and productive resources to produce them. Each prime contractor coordinated the activities of hundreds, if not thousands, of subcontractors and suppliers that contributed to the systems production, as well as the work of thousands of employees.

23 One large weapon system export in 2003 with an offset percentage of more than 150 percent skewed the data for that year. Without this export and its related offset agreement, the average offset percentage for 2003 would fall to 75.1 percent (from 121.8 percent with the sale). This export also affected the average offset percentage for the entire period. With this sale and offset, the average offset percentage for 1993-2003 is 71.4 percent; without it, the percentage is 66.2 percent.

24 A similar event occurred in 1993, when two large exports with low offset percentages skewed the average offset percentage downward.

Similarly, offsets and related defense system exports appear to be concentrated in a few purchaser countries. The top five countries with a total of thirty-six involved in the reported offset activity, accounted for 56.2 percent of the value of defense systems purchased and 60.1 percent of the value of offset agreements during 1993-2003. The top ten countries of thirty-six total represented 79.1 percent of defense system purchases and 80.1 percent of the offset agreements. In turn, these countries also accounted for the majority of the impact offsets have on the U.S. defense industrial base. In addition, these countries set a visible standard for offset demands for other countries to imitate. The weighted average of the offset percentage required by the top five countries is 66.0 percent.

According to data provided by U.S. prime contractors, the top five weapon systems exported were aircraft systems. These top five exports accounted for 43.1 percent of the value of all export contracts and 43.4 percent of the offset agreements during the reporting period. Nine of the top ten defense systems were aerospace-related; the top ten accounted for 57.0 percent of the export contracts and 59.5 percent of the offset agreements during the eleven-year period.

4.3 Regional Distributions

European countries accounted for the majority of offset activity and weapon system exports during the eleven-year reporting period. Europe accounted for 69.6 percent of the value of offset agreements and 49.1 percent of the value of U.S. defense export contracts. Asian countries ranked second in both categories, with 18.7 percent of the value of offset agreements and 33.5 percent of related U.S. export contract values.

In 2003, however, the Middle East and Africa played a larger role than did Asia. For the first time, the Middle East and Africa share of offsets and sales was greater than Asia's. The region accounted for 20 percent of weapon systems exports and 8.7 percent of the value of new offset agreements. In contrast, Asia made up just 6.9 percent of the value of defense exports and 2.0 percent of the value of new offset agreements.

4.5 Are Offset Demands Increasing?

The data show not only that offset demands are increasing over time, but also that more countries outside Europe are demanding these higher offset percentages. Historically low, offset requirements outside Europe are rising. Two-thirds of the non-European offset agreements valued at 100 percent or more of the export contract value have occurred since 1998. Of the thirty-six agreements with offset requirements of 100 percent or more, thirteen were with Canada and another six were with Turkey. Moreover, in the last three years, countries entering into offset agreements with U.S. firms for the first time have demanded 100 percent or more, emulating their European counterparts.

Agreements entered into by South Korea and Turkey illustrate the growing trend in non-European offset demands. From 1993 to 1998, the average offset requirement by value demanded of U.S. firms by South Korea was 36.5 percent. In contrast, from 1999 to 2003, that average nearly doubled, to 69.6 percent. From 1993 to 1998, offset percentages by value demanded by Turkey of U.S. firms averaged 52.3 percent. However, Turkey's offset requirements rose in 1999-2003 to 60.1 percent.

European offset demands also continued to increase over the eleven-year period, although more slowly than offset demands in the rest of the world. Offset requirements for European countries increased at an annual rate of 6.4 percentage points. For the rest of the world, the average increase in offset percentages was 5.5 percentage points per year. European offset requirements increased an average of 3.2 percentage points each year in the eleven-year period, while non-European demands increased 2.5 percentage points.

Offset requirement trends are more representative when viewed as a moving, weighted average.[25] A moving average smoothes out the yearly fluctuations in weapon system sales and related offset agreements. The weighted world trend in offset percentages rose from 52.9 percent to 94.1 percent. In the same eleven-year period that European offset percentages rose by 35.2 percentage points (from 77.8 percent to 113.0 percent), the rest of the world nearly doubled its offset requirements, from 32.4 percent to 60.3 percent.

Defense offset requirements have increased as the supply of defense systems has exceeded the demand for such items. In the last decade, shrinking worldwide defense expenditures and the overcrowding in the defense supplier sector have forced defense industries in many nations to consolidate. As sales opportunities narrowed, competition for such sales became more intense. Higher-than-normal overhead related to low levels of capacity utilization in defense industries coupled with competitive pressures on prices also have squeezed corporate profits.

On the other hand, foreign purchasing governments are under pressure to sustain their indigenous defense companies or to create new ones (defense and commercial) and, accordingly, are demanding more offsets. Significant public outlays for foreign-made weapon systems become even more controversial, leading to higher offset demands to deflect political pressure and increase domestic economic development. In a growing number of cases, defense purchases are being driven by the competitiveness of the offset package offered rather than the quality and price of the weapon system purchased.

5 Offset Transaction Activity, 1993-2003

An offset agreement typically requires the prime contractor to complete multiple transactions over a period of years to satisfy the requirements of the agreement. Analyzing transactions provides the basis upon which the impacts of offsets on the U.S. defense industrial base are estimated. For the purpose of analysis, offset transactions are grouped by type (i.e., direct, indirect, and unspecified), and then grouped again into of the nine categories: purchases, subcontracts, technology transfer, credit assistance, training, overseas investment, co-production, licensed production, and miscellaneous.

5.1 Overview

From 1993 to 2003, 42 U.S. defense companies reported 6,593 offset transactions with forty-six countries totaling $27.1 billion. The values of offset transactions by type are reflected in Table 5-1. U.S. firms received a total of $32.8 billion in credit (see Table 5-2) toward open offset obligations during the reporting period. The yearly value of offset transactions averaged $2.46 billion.

U.S. companies reported offset transactions with a total actual value of $3.6 billion in 2003, the highest value reported for the eleven-year period, up from $2.6 billion in 2002. The 2003 figure represents a 38.5 percent increase from the 2002 total. The percentage of the value of offset transactions classified as indirect rose during 2003, reaching 68.8 percent, up from 64.0 percent in 2002. This was the highest percentage of indirect for all years in the period. Direct transactions accounted for 31.1 percent of the value of transactions in 2003, the lowest level of direct transactions over the eleven-year period. The remaining 0.1 percent of the value was unspecified.

Table 5-2 shows the countries receiving the most offset transactions, by actual value during 1993-2003, along with the actual and credit values and multipliers for the transactions, and the

25 Here, the value of export contracts and offset agreements is totaled for each successive three-year period, beginning with 1993-1995, followed by 1994-1996, and so forth; then the offset percentage is determined. This leads to nine three-year observations over the eleven-year reporting period (1993-2003).

portion of transactions granted multipliers. The nineteen countries listed in Table 5-2 were the recipients of approximately 96.3 percent of the actual value of all offset transactions from 1993 to 2003. The multipliers for the countries listed ranged from 0.998 for Canada to 2.508 for Greece.

For the reporting period of 1993 to 2003, the United Kingdom and Finland were the two largest recipients of offset transactions, with total actual values of $5.0 billion and $3.2 billion, respectively. The two countries combined accounted for 30.4 percent of the total actual value of offset transactions during the reporting period. However, the United Kingdom and Finland accounted for 25.9 percent of the total credit value, because their multipliers were lower than those of some of the other countries.

Table 5-1 Offset Transactions Analysis
Offset Transaction Comparisons

Data Element	All Transactions
Total Value	$27,090,039,493
Direct Offsets	$10,314,928,359
Indirect Offsets	$16,557,825,885
Unspecified Offsets	$217,285,249
Percent Distribution	
Percent Direct Offsets	38.1%
Percent Indirect Offsets	61.1%
Percent Unspecified Offsets	0.8%

Source: BIS Offsets Database

Table 5-2 Offset Transactions by Countries with Highest Total Actual Value
Total, 1993-2003

Country	Actual Value	Credit Value	multiplier	Percentage of Transactions With Multiplier >1
United Kingdom	$5,008,303,563	$5,037,424,541	1.006	1.0%
Finland	$3,228,137,843	$3,457,807,399	1,071	22.9%
Israel	$3,003,051,089	$3,125,982,392	1.041	5.6%
Netherlands	$1,675,325,707	$2,009,865,606	1.200	10.0%
South Korea	$1,600,049,256	$2,129,274,493	1.331	21.0%
Greece	$1,360,944,494	$3,413,544,611	2.508	43.3%
Switzerland	$1,198,226,265	$1,206,881,646	1.007	1.5%
Canada	$1,133,186,265	$1,131,126,557	0.998	1.8%
Australia	$1,123,016,982	$1,146,113,610	1.021	2.7%
Italy	$1,114,412,777	$1,139,903,777	1.023	4.9%
Spain	$1,055,111,613	$1,295,616,711	1.228	30.6%
Turkey	$878,787,871	$930,518,635	1.059	8.2%
Taiwan	$824,028,358	$1,679,148,369	2.038	43.3%
Germany	$724,241,540	$724,241,540	1.000	0.0%
Norway	$708,482,461	$983,947,765	1,389	25.7%
Denmark	$455,207,245	$534,119,249	1.173	14.3%
France	$438,046,928	$794,754,494	1.814	46.6%
Malaysia	$294,807,399	$329,507,399	1.118	12.0%
Belgium	$256,995,553	$278,442,931	1.083	2.4%
Total	**$26,080,363,210**	**$31,348,221,725**	**1.202**	**12.0%**
All Countries (46)	**$27,090,039,493**	**$32,802,032,552**	**1.211**	**13.0%**

Source: BIS Offsets Database

The fifth column in Table 5-2 shows the percentage of the number of each country's transactions with multipliers greater than one, in other words, offset transactions for which the credit value received was greater than the actual value. France led, with 46.6 percent of the transactions having multipliers greater than one, followed by Greece and Taiwan, both with 43.4 percent. However, these countries are not typical. For all countries, only 13 percent of the transactions had a multiplier greater than one. Conversely, almost 87 percent of the number of transactions had no multiplier (or had a negative multiplier) applied. For the nineteen countries listed in Table 5-2, the overall percentage of transactions with multipliers greater than one was 12 percent, lower than the percentage for all countries (13 percent).

5.3 The Role of Multipliers

Multipliers can make it easier for prime contractors to fulfill their offset obligations. However, further inspection of multipliers by region provides a better understanding of how infrequently multipliers are being utilized by purchasing nations to reward prime contractors for certain types of offset transactions. Table 5-3 highlights the use of multipliers by region as a percentage of the number of all transactions for the 1993-2003 period. In Europe, for example, 83 percent of transactions by number have no multiplier involved for the prime contractor when fulfilling the offset commitment (multiplier = 1). For North and South America, 85.5 percent of transactions by number have no multiplier involved; for Asia, the figure is 76.6 percent, and 87.9 percent for the Middle east and Africa.

Table 5-3 Multipliers by Region, by Number 1993-2003

	% Multipliers < 1	% Multipliers = 1 (No Multiplier)	% Multipliers > 1
Europe	1.5%	83.0%	15.6%
Mid - East and Africa	2.2%	87.9%	9.9%
Asia	1.8%	76.6%	21.6%
North and South America	8.9%	85.5%	5.6%

Source: BIS Offsets Database

In reviewing European multiplier data further, 15.6 percent of the European transactions (by number) have a multiplier greater than one applied to them, and an additional 1.5 percent of transactions with Europe have a multiplier of less than one applied. Multipliers of less than one mean that prime contractors are only credited a portion of the total actual value of a transaction. In Asia, 21.6 percent of the transactions by number have multipliers greater than one applied, while 1.8 percent of transactions have multipliers of less than one. For the Middle East and Africa, only 9.9 percent of transactions have multipliers greater than one applied, while 2.2 percent of transactions have multipliers of less than one. In North and South America, 8.9 percent of transactions by number receive less than full credit.

7 Report of the Interagency Team on Consultation with Foreign Nations on Limiting the Adverse Effects of Offsets in Defense Procurement

7.1 Background

In December 2003, President Bush signed into law a reauthorization of, and amendments to, the DPA. Section 7(c) of P.L. 108-195 amended Section 123(c) of the DPA by requiring the President to designate a chairman of an interagency team to consult with foreign nations on limiting the adverse effects of offsets in defense procurement without damaging the economy or the defense industrial base of the United States, or United States defense production or defense preparedness. The statute provides that the team will be comprised of the Secretaries of Commerce, Defense, Labor, and State, and the United States Trade Representative.

Table 7-1 Composition of the Interagency Team and Working Group		
Department	**Principal**	**Working Group Member**
Commerce	Assistant Secretary for Export Administration	Director, Office of Strategic Industries and Economic Security
Defense	Under Secretary of Defense (Acquisition, Technology and Logistics)	Director, International Cooperation
Labor	Deputy Secretary of Labor	Senior International Economist
State	Principal Deputy Assistant Secretary for Economic and Business Affairs	Economic and Commercial Officer, Office Office of Multilateral Trade Affairs, Bureau of Economic and Business Affairs
United States	Assistant U.S. Trade Representative (WTO and Multilateral Affairs)	Director, International Procurement

The law requires the interagency team to meet quarterly, and to send to Congress an annual report describing the results of the consultations and meetings. The report is to be included as part of the annual assessment to Congress of *Offsets in Defense Trade* that is prepared by the Department of Commerce's Bureau of Industry and Security. On August 6, 2004, President Bush formally established an interagency committee, hereafter referred to as the interagency team, as in the statute, chaired by the Secretary of Defense. The Secretaries and the U.S. Trade Representative delegated membership on the team to appropriate officials within their departments. Within the Department of Defense, chairmanship has been delegated to the Under Secretary of Defense for Acquisition, Technology and Logistics.

On September 15, 2004 the Acting Under Secretary of Defense (Acquisition, Technology and Logistics) activated a working group to support the consultation process of the interagency team. The working group met three times in 2004: September 30, November 4 and December 7. The interagency team met on December 8 to review the efforts of the working group. The interagency team reviewed and approved the terms of reference for the team and the working group, the following top-level plan of work, and this annual report to Congress for 2004.

7.2 Plan of Work

The top-level plan of work will involve the following steps:

- During the 1st Quarter CY 2005, the interagency team will:
  - Develop an offset consultation strategy, which will include the U.S. government's objectives and detailed plan of work to achieve those objectives.
  - Identify domestic and foreign entities for consultation, and
  - Commence consultations with domestic entities, and possibly foreign entities.
- During the 2nd Quarter CY 2005 and continuing beyond, the interagency team will implement the plan of work through continuing consultations with the identified foreign and domestic entities on limiting the adverse effects of offsets in defense procurement.

7.3 Terms of Reference

The interagency team and working group developed the following terms of reference to guide their work. They include the composition of the interagency team and working group; the operation of the team and group; and the goals of the team and group.

Operation of the Interagency Team and Working Group

- The Department of Defense will chair the interagency team and working group.
- The Department of Defense will provide administrative support to the interagency team and working group.
- The interagency team will meet quarterly; the working group will meet as often as the chairman deems necessary.
- A quorum for a meeting of the interagency team or working group will be three of the five members.
- The interagency team and working group will operate by consensus, but dissenting views of a principal may be presented in the annual report.
- The interagency team will provide an annual report to Congress describing the results of meetings and consultations.
- The Department of Commerce principal will ensure that the report is included in their annual assessment to Congress on offsets in defense trade.

Goals of the Interagency Team and Working Group

- Establish a plan of work to fulfill the requirements of the statute.
- Identify and define meaning of effects of offsets in defense procurement.
- Identify potential strategies for limiting adverse effects.
- Identify foreign nations and other parties, both domestic and foreign, for consultation.
- Develop methods and objectives of consultation.
- Develop schedule for and engage in consultations.
- Provide annual report to Congress describing meetings and the results of consultations.
- Submit to the President any recommendations that may result from these consultations.

8 Conclusions

Eleven years of Commerce Department data highlight the sustained increase in foreign governments' offset demands relating to defense trade. European nations continue to lead the world in offset requirements, accounting for 69.6 percent of the value of offset agreements, but less than half (49.1 percent) of the value of related export contracts. Between 1993 and 2003, European offset demands as a percentage of the value of exports increased by 70.5 percentage points, going from 78.3 percent to 148.8 percent; for the rest of the world, the increase was almost 26 percentage points, rising from 22.5 percent to 48.4 percent. Overall, 73.3 percent of offset agreements (by number) with Europe totaled 100 percent or more of the value of the weapon system export during the period.

By comparison, Middle Eastern countries and most countries in the Pacific area generally demand lower offset levels than European countries. Of the 219 offset agreements with non-European countries, 150 (68.5 percent) had offset percentages of 50 percent or less. Only sixty-nine of the offset agreements (31.5 percent) had percentages of more than 50 percent, and eleven of these (15.9 percent) had offset requirements in excess of 100 percent.

An examination of the role of multipliers granted by foreign governments in crediting offset transactions leads to the conclusion that they are used infrequently. In Europe, 83 percent of transactions (by number) have no multiplier involved for the prime contractor when fulfilling the offset commitment. For North and South America, 85.5 percent of transactions (by number) have no multiplier involved; for Asia, the figure is 76.6 percent, and 87.9 percent for the Middle East and Africa.

U.S. companies reported offset transactions with a total actual value of $3.6 billion in 2003, the highest value reported for the eleven-year period. The percentage of the value of offset transactions classified as indirect rose during 2003, reaching 68.6 percent, the highest percentage of indirect for all years in the period. Direct transactions accounted for 31.2 percent of the value of transactions in 2003, the lowest level of direct transactions over the eleven-year period.

The offset transaction categories of purchases, subcontracts, and technology transfers accounted for the majority of offset transaction activity during 1993-2003: for that eleven-year period, they accounted for 79.9 percent of the total value of offset transactions. The majority of offset transactions fell in the manufacturing sectors; $21.9 billion, or 80.8 percent of all transactions were manufacturing-related.

BIS estimates that 2002 U.S. defense export contracts ($7.4 billion) with offset agreements attached supported 47,122 work-years. This calculation is based on the supposition that this value represents 100 percent U.S. content in all exports, which is not necessarily an accurate assumption.

For 2002, the $7.4 billion in defense export contracts had a related $6.1 billion in offset commitments. Subcontracting, purchasing, co-production, and licensing offset transactions are most likely to shift production and sales from U.S. suppliers to overseas firms. Therefore, BIS bases its estimate of employment impacts only on subcontracting, purchasing, co-production, and licensing offset transactions. Assuming that the offset commitments have the same proportion as the offset transactions for 2002, then the subcontracting, purchasing, co-production, and licensing portions would account for approximately 66 percent of total, or about $4 billion. Applying the same value added figure used above ($157,173) leads to the loss of 25,450 work-years associated with the agreements entered into in 2002.

Based on these calculations, it appears that 2002 defense export sales had a net positive effect on employment in the defense sector, although the net positive effect was diminished by the offset agreements. It should be noted that the above analysis does not include an additional $338.3 million of technology transfer, training, overseas investment, and marketing transactions, because the impact of these transactions on the U.S. defense industrial base is difficult to calculate.

While Commerce has not identified any specific recommendations for remedial action concerning offsets in defense trade for this report, the Department is playing an active role in the newly-formed interagency offset team and related working group (see Chapter 7). The team was formed to consult with foreign nations on limiting the adverse effects of offsets in defense procurement without damaging the economy or the defense industrial base of the United States, or United States defense production or defense preparedness. The team has developed a comprehensive action plan and will rely on Commerce's extensive offset database to provide background information on the countries chosen for consultations.