Foreign Direct Investment in U.S. Energy in 2000

This report presents an analysis of foreign direct investment in U.S. energy resources and companies in 2000. Foreign direct investment (FDI) is the ownership or control of 10 percent, or more, of a U.S. business (or asset) by a foreign entity. In this report a U.S. business with at least 10 percent foreign ownership is a "foreign-affiliated company" (FDI affiliate) and the foreign owner holding at least 10 percent ownership is the "parent." The report describes the role of foreign ownership in U.S. energy enterprises with respect to net investment (including net loans), energy operations, capital investment, and financial performance. Additionally, since energy investments are made in a global context, this report examines patterns of direct investment in foreign energy enterprises by U.S.-based companies.

FDI is one measure of the continuing influence or control of foreign investors over the management and disposition of U.S. production assets. However, while holding at least 10 percent ownership of a company may constitute control in that company in the FDI sense, it may not necessarily constitute control over the company. The determination of control is a complex and often subjective process in which many factors in addition to the percentage of ownership must be considered.

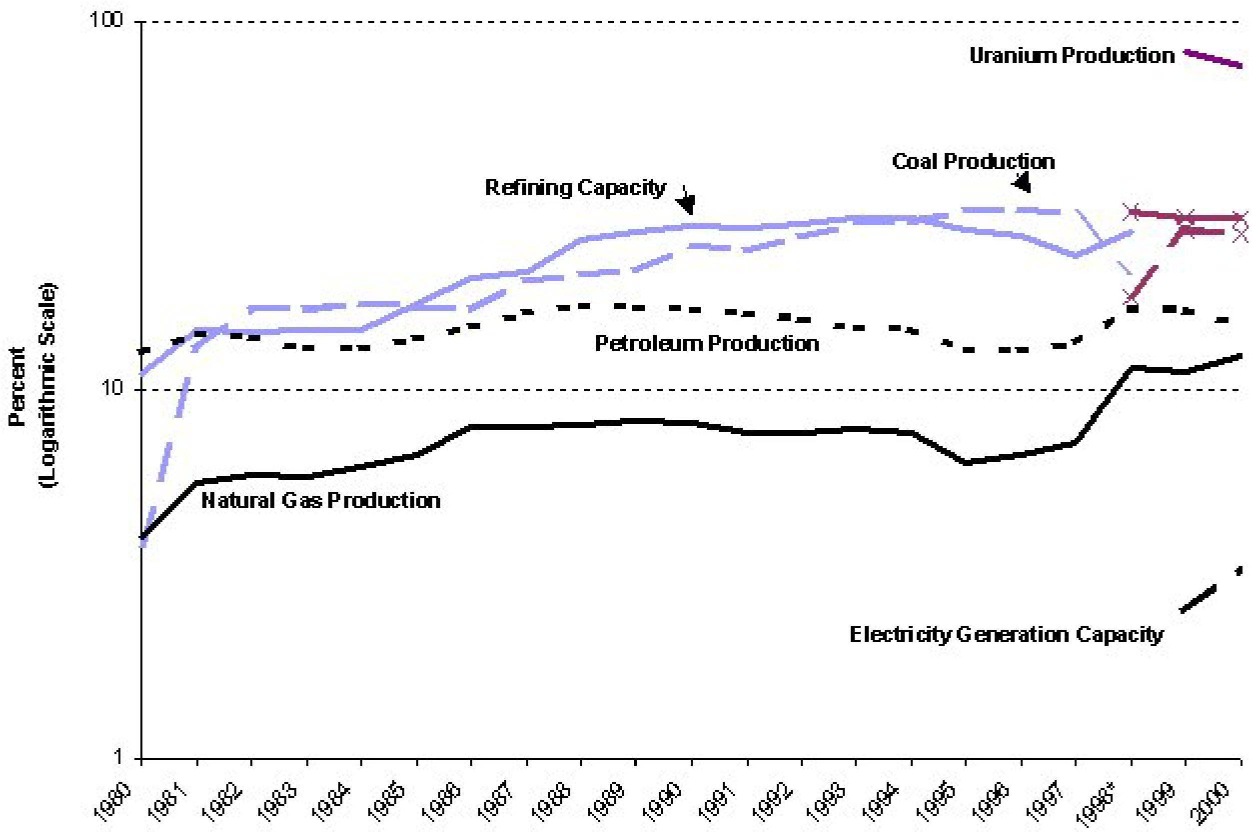
Foreign Affiliates' Role in U.S. Energy Industry Operations

The level of foreign-affiliated companies' involvement in the different sectors of the U.S. energy industry varied substantially in 2000. The FDI affiliates' shares of U.S. oil production decreased while their share of U.S. natural gas production increased in 2000 [Note 1] (Figure 1). In contrast, the FDI affiliates' shares of both refinery capacity and coal production declined slightly (each by less than 1 percentage point) in 2000. Electricity acquisitions continued to grow despite restructuring-motivated divestitures by some companies and resulted in a one-percentage point increase in FDI-affiliate electricity generation capacity in 2000. FDI affiliates' share of uranium production fell slightly in 2000 (after increasing substantially in 1999) as the production of the industry declined more slowly than did production by foreign-affiliated companies, resulting in a 6-percentage point decrease in the FDI-affiliated share to 87 percent of total U.S. uranium production.

FDI Affiliates' Oil Operations Decline and Natural Gas Operations Expand

Oil (crude oil and natural gas liquids) and natural gas (dry) combined production for the FDI affiliates in 2000 was 4 percent lower on a barrels of oil equivalent basis (boe). [Note 2] Meanwhile, total U.S. production increased by almost 1 percent, lowering the boe production shares for the FDI affiliates. Oil production by FDI affiliates fell 8 percent, but natural gas production increased 18 percent in 2000 (Table 1). BP America and Shell Oil are far and away the largest producers of oil and natural gas among FDI affiliate companies, contributing 87 percent to the boe production of FDI affiliates in 2000. Both generally reported declines in oil production as their mutual divestiture of jointly-held Altura Energy to U.S.-based Occidental reduced production levels. [Note 3] Further, Shell Oil, probably also due to the Altura divestiture, reported a decline in its natural gas production (Table 2). However, BP Amoco plc's acquisition of ARCO increased BP America's

Figure 1. Foreign Direct Investment Affiliate Companies' Share of U.S. Production of Oil, Natural Gas, and Coal, and Capacities of Electricity Generation and Petroleum Refining, 1980-2000



*: In 1998, the data sources for refining capacity and coal production changed.
Sources: **1998-2000**: Table 1, Table 2, and Table 4 and the text of this report. **1980-1997**: Energy Information Administration (EIA), "Foreign Direct Investment in U.S. Energy in 1999," Figure 1. Web address: http://www.eia.doe.gov/emeu/finance/fd/fdi1999.pdf.

natural gas production, [Note 4] contributing substantially to its 29-percent increase relative to 1999. Anadarko Petroleum led the smaller FDI affiliate producers with a near doubling of both its oil and natural gas production, largely due to its acquisition of Union Pacific Resources during 2000. [Note 5] The ranks of the smaller producers were thinned during 2000 as Statoil exited the U.S. oil and natural gas production industry, selling its assets to the U.S.-based Kerr-McGee Corporation. [Note 6]

In refinery operations, four major transactions shuffled refineries resulting in a small reduction in the refinery capacity of FDI affiliates (Table 3). Tosco Corporation (a U.S.-based non-FDI affiliate) acquired two refineries from FDI-affiliated companies, Equilon Enterprises' (Netherlands/United Kingdom) 288,300 barrels per day (bpd) Wood River, Illinois refinery, and BP America's (United Kingdom) 250,000 bpd Alliance, Louisiana refinery. However, BP America's domestic crude oil distillation capacity increased 16 percent between 1999 and 2000 with the acquisition of two of ARCO's West Coast refineries with a total capacity of 482,720 bpd. [Note 7] Another significant transaction was the sale of the 58,500 bpd Big Spring, Texas refinery by TotalFinaElf's (France) U.S. affiliate Atofina Petrochemical to Alon USA Energy (the U.S. affiliate of the Israel-based Alon). This transaction refocused TotalFinaElf's U.S. downstream petroleum operations

Table 1. Net Production of Petroleum and Dry Natural Gas in the United States by Foreign Direct Investment Affiliate Companies, 1998-2000

Company	Petroleum (Crude Oil and Natural Gas Liquids) (thousand barrels per day)				Dry Natural Gas (billion cubic feet)			
	1998	1999	2000	1999-2000 Percent Change	1998	1999	2000	1999-2000 Percent Change
BP America[a]	775.3	753.4	687.7	-8.7	897.0	907.0	1,174.0	29.4
Shell Oil	520.5	504.1	419.2	-16.8	674.0	696.0	601.0	-13.6
Anadarko Petroleum	44.9	40.8	74.0	81.3	177.0	170.0	338.0	98.8
Canadian Occidental Petroleum	11.0	8.2	11.0	33.3	35.0	35.0	34.0	-2.9
Meridian Resource	2.4	4.5	10.9	145.2	20.6	22.7	27.7	21.8
BHP Petroleum (Americas)[b]	3.3	4.7	10.0	114.6	5.3	14.4	21.3	47.7
TotalFinaElf	18.0	13.0	9.0	-30.8	117.9	92.0	87.6	-4.8
Louis Dreyfus Natural Gas	9.4	8.1	7.8	-3.3	101.1	108.0	119.9	11.0
Enterprise Oil Gulf of Mexico[c]	0.0	1.2	4.3	261.8	0.0	0.7	2.4	261.8
Chieftain Development International	3.2	4.5	3.4	-24.9	27.0	27.5	20.9	-24.0
Greka Energy[e]	2.6	1.4	2.0	35.6	1.6	0.9	1.8	112.3
Repsol YPF[d]	2.7	1.7	0.5	-73.6	52.0	NA	NA	NM
Consol Energy[f]	0.0	0.0	NA	NM	5.5	16.0	33.5	109.5
Other Companies	0.4	(g)	(g)	NM	0.2	(g)	(g)	NM
Total Foreign-Affiliated	1,393.6	1,345.6	1,239.6	-7.9	2,114.2	2,090.2	2,462.1	17.8
Total United States	8,392	8,107	8,110	0.0	18,708	18,623	18,987	2.0
Percent Foreign-Affiliated	16.6	16.6	15.3		11.3	11.2	13.0	

[a] Includes natural gas consumed in Alaska operations.
[b] For years ending May 31, 1999; June 30, 2000; and June 30, 2001. See BHP Billiton, *Quarterly Production Report*, January 2002, and previous years.
[c] Separate production information for oil production and natural gas production are not provided by company for 2000. Instead, production is provided on barrels of oil equivalent basis (boe), which combines oil and gas production. Separate values for oil production and natural gas production for 2000 are estimated by applying the shares implied by the 1999 production levels for oil and natural gas, which were provided by the company. Thus, the resulting 2000 production values for oil and natural gas are merely instructive due to their inherently speculative nature.
[d]Repsol acquired YPF in 1999 and changed its name to Repsol YPF, S.A.
[e]Greka Petroleum acquired Saba Petroleum in 1999.
[f]Production is for July 1 to June 30 and is assigned to the year in which the period begins. Production does not include equity affiliate production.
(g): Denotes a production level that is less than 0.05.
NA = Not available, NM = Not meaningful.
Note: Totals may not equal sum of components due to independent rounding.
Sources: **Company Data**: Form 10-K and 20-F reports filed with the U.S. Securities and Exchange Commission, annual reports to shareholders, and Herold Financial Database. **U.S. Totals**: Energy Information Administration, *Monthly Energy Review*, DOE/EIA-0035(2002/03) (Washington, DC, March 2002), Tables 3.1a and 4.1.

Table 2. Major Foreign Direct Investment Transactions in U.S. Energy, 2000

Acquisitions
BP Amoco, plc, a United Kingdom-based integrated petroleum refining company, acquired the integrated petroleum company ARCO in a $27.22 billion transaction.
Powergen, a United Kingdom-based electric services company, purchased LG&E Energy, an electric services company, for $5.4 billion.
Anadarko Petroleum, an oil and natural gas producer (owned 10-percent by Sonatrach, the state oil company of Algeria) acquired Union Pacific Resources, an oil and natural gas producer, for $4.4 billion.
National Grid, a United Kingdom-based electric power transmission and distribution company, acquired NEES, an electric power transmission and distribution company, for $3.2 billion.
BP Amoco, plc acquired the balance of Vastar Resources, an oil and natural gas producer, for $1.6 billion.
Divestitures
BP Amoco, plc divested ARCO's Alaskan assets to Phillips Petroleum Company (as a precondition for approval of BP's acquisition of ARCO by the Federal Trade Commission), an integrated petroleum refiner, for $6.8 billion.
BP Amoco, plc and Shell Oil, the U.S. affiliate of Royal Dutch/Shell, divested their entire ownership of Altura Energy, an oil and natural gas producer, to Conoco for a total of $3.6 billion. Royal Dutch/Shell is an integrated energy company based in both the Netherlands and the United Kingdom.
Sithe Energies, an independent power producer that is jointly owned by Vivendi and Marubeni, sold 21 power plants to Reliant Energy, an energy services and delivery company, for a total of $2.1 billion. Vivendi is a France-based media and communications company and Marubeni is a Japan-based conglomerate company with significant holdings in machinery, equipment, and supplies; petroleum and petroleum products; and lumber and construction materials.

Sources: Company press releases and public financial disclosures.

exclusively on petrochemicals. Meanwhile, Alon entered the U.S. market by acquiring a Gulf Coast refinery and the associated motor gasoline retail outlets. Incremental expansion of the crude oil distillation capacity of many companies offset the divestitures by BP America and Equilon, resulting in a 2-percent decline in FDI-affiliated U.S. crude oil distillation capacity in 2000 relative to 1999.

Marketing operations for the FDI affiliates grew in 2000. The number of FDI-affiliate retail outlets increased 2 percent and motor gasoline sales increased by slightly more than 8 percent (Table 4). The most notable variation was the addition of ARCO's 1,500 outlets to BP America, which was part of the larger $27-billion acquisition of most of ARCO's assets by BP Amoco plc. Further, Lukoil's (Russia) purchase of Getty and its almost 1,300 Getty-branded outlets for more than $70 million was the first instance in which a Russian

Table 3. U.S. Refinery Operations of Foreign Direct Investment Affiliate Companies, 1998-2000

Company	Number of Refineries			Total Crude Oil Distillation Capacity (thousand barrels per day)			
	1998	1999*	2000	1998	1999*	2000	1999-2000 Percent Change
BP America	7	7	8	1,420	1,430	1,662	16.3
Motiva Enterprises, LLC[a]	4	4	4	849	852	860	0.9
Eqilon Enterprises, LLC [b]	6	5	4	837	748	469	-37.3
PDV America	5	5	5	700	706	703	-0.4
Deer Park Refining[c]	1	1	1	274	274	275	0.3
Lyondell-CITGO Refining[d]	1	1	1	269	263	250	-4.7
Atofina Petrochemicals Inc.[e]	2	2	1	237	237	179	-24.7
Chalmette Refining LLC[f]	1	1	1	182	190	183	-4.0
Shell Oil	2	2	2	130	135	135	0.0
Neste Trifinery Petroleum	1	1	1	27	27	27	0.0
Transworld Oil USA	1	1	1	15	15	21	39.9
Total Foreign-Affiliated	31	30	29	4,940	4,877	4,763	-2.3
Total United States	153	152	150	16,261	16,512	16,320	-1.2
Percent Foreign-Affiliated	20.3	19.7	19.3	30.4	29.5	29.2	

*: Revised.
[a]Joint venture of Shell Oil and Saudi Refining.
[b]Eqilon Enterprises LLC, was a joint venture of Shell Oil and Texaco. As of March 1, 2002, Equilon has been renamed Shell Oil Products U.S. and is now a wholly owned affiliate of Royal Dutch/Shell following Chevron Texaco's sale of Texaco's share to Royal Dutch/Shell.
[c]Joint venture of Shell Oil and Petróleos Mexicanos.
[d]Joint venture of Lyondell Chemical and PDV America.
[e]Formerly known as Final Oil and Chemical.
[f]Joint venture of ExxonMobil and PDV America.
Note: Values are at the end of the year.
Sources: Energy Information Administration, *Petroleum Supply Annual 2000*, vol. 1, DOE/EIA-0340(2000)/1 (Washington, DC, June 2001), Table 40, and previous issues.

company purchased a publicly-traded U.S. company. [Note 8] Another large transaction involved two FDI-affiliates and thereby had no effect on the net number of FDI-affiliate retail outlets. Atofina Petrochemical (France) sold its supply contracts for 1,682 Fina-branded outlets to Alon USA Energy (Israel). [Note 9] These changes, combined with declines in both the number of U.S. outlets and amount of gasoline sold, resulted in small increases by FDI affiliate companies in both their share of retail outlets and their share of motor gasoline sales.

Table 4. Branded Retail Outlets and Total Gasoline Sales in the United States by Foreign Direct Investment Affiliate Companies, 1998-2000

-	1998	1999	2000
Number of Outlets[a]			
BP America	16,300	15,500	17,300
Motiva Enterprises[b]	14,200	14,200	13,000
Citgo Petroleum	15,079	13,813	13,500
Equilon Enterprises[c]	9,400	9,400	9,000
Atofina Petrochemical[d]	2,375	1,682	0
Lukoil[e]	0	0	1,263
Alon USA Energy	0	0	1,682
Total for Foreign-Affiliated Companies	57,354	54,595	55,745
U.S. Total[f]	180,567	175,941	175,132
Foreign-Affiliated Companies as Percent of U.S. Total	31.8	31.0	31.8
Total Gasoline Sales[g] (thousand barrels per day)			
Foreign-Affiliated Companies[h]	2,721	2,737	2,971
All Companies	8,395	8,550	8,449
Foreign-Affiliated Companies as a Percent of U.S. Total	32.4	32.0	35.2

[a]Includes company-owned outlets and independent dealer outlets (jobbers).
[b]Joint venture between Shell Oil and Saudi Refining Inc. following ChevronTexaco's sale of Texaco's share of the venture on March 1, 2002.
[c]Equilon Enterprises, LLC was a joint venture of Royal Dutch/Shell and Texaco. As of March 1, 2002 Equilon was renamed Shell Oil Products USA following ChevronTexaco's sale of Texaco's share of the joint venture.
[d]Atofina Petrochemical was formerly known as Fina Oil and Chemical.
[e]Lukoil sells motor gasoline in the United States under the "Getty" brandname.
[f]The total includes all establishments selling gasoline at retail.
[g]Gasoline sales by "Prime Suppliers."
[h]Disaggregated company numbers are considered proprietary by the Energy Information Administration.

Sources: **Company station counts and total branded outlets**: *National Petroleum News*, *Market Facts 2000* (Mid-July 2001), and previous issue, and company reports. **Foreign affiliates' sales**: Energy Information Administration, Form EIA-782C, "Monthly Report of Prime Supplier Sales of Petroleum Products Sold for Local Consumption." **All companies' sales**: Energy Information Administration, *Petroleum Marketing Annual 2000*, DOE/EIA-0487(2000) (Washington, DC, August 2001), Table 48, and previous issue.

FDI Affiliates' Electricity Generation Capacity Expands While Coal and Uranium Production Decline

The purchase of PacifiCorp by ScottishPower (United Kingdom) for $10.9 billion in 1999 was the first major purchase of a U.S. electric company by a foreign investor, and it remains the largest. Powergen's (United Kingdom) purchase of LG&E Energy for $5.4 billion in 2000 was the second-largest electricity FDI purchase. Other major FDI-related electricity producers include the Amergen joint venture between Exelon (United States) and British Energy (United Kingdom); and International Power, the U.S. affiliate of International Power plc (United Kingdom). [Note 10] Two other FDI affiliate electricity companies lost that designation during 2000, Orion and Dynegy. Orion issued additional stock, which reduced the ownership share of Mitsubishi Corp. (Japan) below 10 percent. Meanwhile, both Nova Chemicals (Canada) and BG (formerly British Gas, United Kingdom) divested their ownership of Dynegy, leaving Chevron as the remaining direct investor. At the end of 2000, FDI affiliates' electricity generation capacity was 3.3 percent of total U.S. capacity (Figure 1). Of this, more than two-thirds was attributed to LG&E Energy and PacifiCorp.

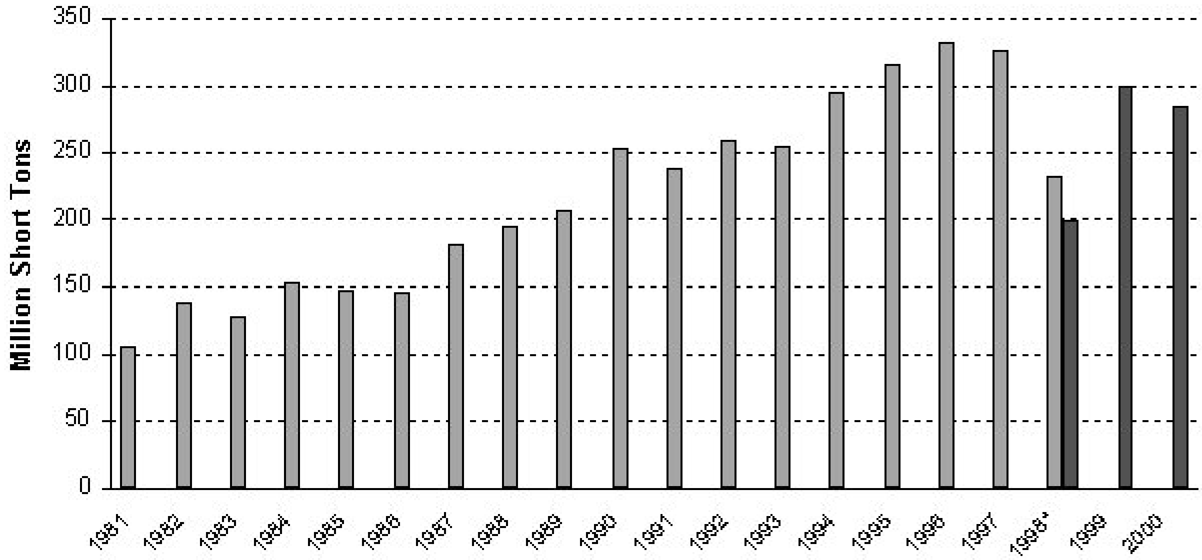
FDI affiliates first ventured into nuclear power in 1999 when Amergen (United Kingdom) purchased Clinton Nuclear Power Station from Illinois Power and Three Mile Island Unit 1 from GPU Inc. During 2000 the trend continued with Amergen's purchase of GPU's Oyster Creek nuclear plant for $10 million. Although agreement on the sale occurred in September 1999, the transaction did not close until almost a year later. The U.S. Nuclear Regulatory Commission approved the transfer of the operating license to Amergen in June 2000, the New Jersey Board of Public Utilities approved the sale in late July 2000, and the sale closed in early August 2000. [Note 11]

Coal production by the foreign-affiliated companies decreased 5 percent in 2000 despite an absence of divestitures (Figure 2). U.S. production declined by a smaller 2 percent and resulted in a small decline in the FDI share of U.S. coal production. Most of the major FDI affiliate coal producers reported declines in coal production in 2000 relative to 1999 (Table 5). The decline was led by Rio Tinto's (Australia/United Kingdom) Kennecott Energy, which reduced production rather than "... pursue low priced sales in the U.S." [Note 12] The second-largest decline in production was reported by the coal mining operations of Scottish Power's (United Kingdom) PacifiCorp, which declined by 20 percent principally due to the sale of the coal mine adjacent to the Centralia Power Plant, which was sold to TransAlta (Canada). [Note 13] Somewhat offsetting these declines were the reported increases by RAG's (Germany) RAG American Coal and Itochu's (Japan) Canyon Fuel. The overall decrease was offset partially by RAG American, which indicated that its production increased due to its 1999 acquisitions. [Note 14]

Among the energy sectors, FDI affiliates are most prominent in uranium concentrate production, accounting for 87 percent of the U.S. total for 2000. Production of uranium concentrate in the United States totaled 4 million pounds in 2000, a decline of 14 percent. The two foreign-affiliated companies are Cameco (Canada), which has two producing plants, and BHP Billiton (Australia), which has one producing plant. All three plants are in situ leaching plants. [Note 15] Cameco's Highland, Wyoming and Crow Butte, Nebraska plants produced a total of 1.7 million pounds in 2000, [Note 16] which was 43 percent of total U.S. production. Cameco continues to be the world's largest producer of uranium. Additionally, Cameco processes uranium and operates four nuclear power plants in Canada. [Note 17]

BHP Billiton's Smith Ranch, Wyoming plant was the only other in situ uranium leaching plant operating at the end of 2000. [Note 18] BHP Billiton is an Australian diversified resources company [Note 19] with significant mining operations (both energy and commodities) and petroleum exploration and development operations.

Figure 2. Production of U.S. Coal by Foreign Direct Investment Affiliate Companies, 1981-2000



*: In 1998, the data sources for coal production changed. Consequently, data from both series are presented for 1998 to illustrate consistent year to year changes.
Sources: **1981-1997**: Energy Information Administration (EIA), "Foreign Direct Investment in U.S. Energy in 1998," Figure 4. Web address: http://tonto.eia.doe.gov/FTPROOT/financial/fdi98.pdf. **1998-2000**: National Mining Association, "2000 Coal Producer Survey," and previous years; [Web address: http://www.nma.org (as of April 2001).] and Arch Coal, 2000 Securities and Exchange Commission on Form 10-K, and previous years.

Capital Spending in Oil and Natural Gas by FDI Affiliates Increases

Capital spending (including exploration and development expenditures) by oil and natural gas companies increased 42 percent in 2000 (Table 6). Most of the increase was due to upstream acquisitions.

Increased upstream capital spending by FDI affiliates in 2000 was largely due to BP Amoco plc's acquisition of ARCO, which more than offset BP Amoco plc's divestiture of Altura Energy. Louis Dreyfus Natural Gas (which has since been acquired by Dominion Resources [Note 20]) more than doubled its upstream capital and exploratory expenditures in 2000 relative to 1999 as it acquired several properties, including most of Costilla Energy's properties. [Note 21] Shell Oil acquired oil and gas properties during the year, much of which was offset by their divestiture of their share of Altura Energy.

Downstream petroleum refining, marketing, and pipeline capital spending by FDI affiliates increased 23 percent in 2000 relative to 1999. PDV America's spending fell by half, but that decline was more than offset by the addition of ARCO to BP America and the consequent 74-percent increase in BP America's downstream capital spending.

Financial Performance of FDI Affiliates in Oil, Natural Gas, and Coal Improves

The financial performance of FDI affiliates in oil, natural gas, and coal improved relative to 1999 as several financial measures increased (Table 7). Revenues increased 73 percent, certainly spurred by BP Amoco plc's

Table 5. U.S. Coal Production by Foreign Direct Investment Affiliate Companies, 1998-2000 (Million Short Tons)

Foreign-Affiliated Company (Parent Company)	1998	1999*	2000	1999-2000 Percent Change
Kennecott Energy (Rio Tinto)	102.6	120.1	106.4	-11.4
Consol Energy (RWE)	74.3	73.1	68.0	-7.0
RAG American Coal (RAG)	NA[a]	59.2	63.4	7.1
PacifiCorp (ScottishPower)	NF	21.0	16.8	-20.0
BHP Minerals (BHP)	15.5	15.9	15.6	-1.9
Canyon Fuel (Itochu)	6.3	10.4	13.3	27.4
Total FDI Companies	**198.7**	**299.7**	**283.5**	**-5.4**
Total United States	**1,117.5**	**1,100.4**	**1,075.5**	**-2.3**
Percent FDI Companies	**17.8**	**27.2**	**26.4**	

*: 1999 data are revised.
[a]Production in 1998 was below threshold for inclusion in the data collection sample.
NA = Not available. NF = Not foreign.
Notes: Most of RAG American Coal's production in 1999 came from mines formerly owned by Cyprus Amax Coal, which was not foreign affiliated in 1998. In 1999 RAG was partially owned by VEBA (now part of E.ON) and and VEW (now part of RWE).
Sources: National Mining Association, "2000 Coal Producer Survey," [Web site: http://www.nma.org (as of March 2002)], and previous issue. **Canyon Fuel**: Arch Coal, 2000 report to Securities and Exchange Commission on Form 10-K, and previous years.

acquisition of ARCO and Anadarko's acquisition of Union Pacific Resources. Further, operating costs increased more slowly, resulting in a more than a doubling of net income. Although cash flow and capital spending both increased by similar percentages, cash flow increased by more than $8 billion while capital spending only increased by $6 billion. Much of the excess cash flow of $2 billion may have been used to reduce company debt as the debt to equity ratio fell more than 7 percentage points.

Although the financial results of the FDI affiliates generally improved in 2000 relative to 1999, a comparison energy group of companies performed better for many of the financial measures considered here. The comparison group is derived from data available from Standard and Poor's PC Compustat Industrial File for the following industries: bituminous coal, lignite mining, crude oil and natural gas exploration and production, and petroleum refining. It includes U.S. companies and foreign companies with no affiliates in the United States, but excludes FDI affiliates. Net income and cash flow both increased by larger percentages for the comparison group than for the group of FDI affiliates. The percentage changes for revenues, capital expenditures, cash dividends, and total assets all increased by lesser percentages for the comparison group than for the FDI affiliate group. The return on equity ratio for the comparison group more than doubled, increasing by 12 percentage points between 1999 and 2000 while the group of FDI affiliates only increased by 6 percentage points over the same period.

Table 6. U.S. Capital and Exploratory Expenditures of Foreign Direct Investment Affiliate Petroleum and Natural Gas Companies, 1998-2000
(Million Nominal Dollars)

Company	Upstream[a]				Company	Downstream[b]			
	1998	1999	2000	1999-2000 Percent Change		1998	1999	2000	1999-2000 Percent Change
BP America	2,207	1,873	3,179	69.7	BP America	809	626	1,092	74.4
Shell Oil	1,765	1,213	1,360	12.1	Equilon Enterprises	651	582	579	-0.5
Nexen Inc.[c]	230	63	154	144.4	Motiva Enterprises	182	310	376	21.3
Louis Dreyfus Natural Gas	226	184	407	121.2	PDV America[e]	230	248	122	-50.8
TotalFinaElf[d]	411	315	363	15.2	TotalFinaElf	82	NA	NA	NM
Chieftain International	94	55	103	87.3	Shell Oil[f]	47	1	4	300.0
Total	**4,933**	**3,703**	**5,566**	50.3	**Total**	**2,001**	**1,767**	**2,173**	23.0

[a]Includes costs incurred in oil and gas acquisition, exploration, development, and production.
[b]Includes costs incurred in petroleum refining and marketing, pipelines, and marine transport.
[c]Nexen was formerly known as Canadian Occidental.
[d]Includes a relatively small amount of capital expenditures in Canada.
[e]Includes additions to investments in Lyondell Petrochemical.
[f]Does not include expenditures at refineries operated by the Chemical Products Division.
NA = Not available. NM = Not meaningful.
Notes: PDV America values taken from its Consolidated Cash Flow Statement.
Sources: Company reports and John S. Herold Financial Database.

Foreign Direct Investment: The International Transactions Accounts

In the United States, the Bureau of Economic Analysis (part of the U.S. Department of Commerce) collects data regarding FDI from companies in the United States that are affiliates of foreign investors. One measure of FDI is the "FDI position," which is the total of all contributions over all years by foreign investors to the net value of ownership in their affiliates in the United States. In addition to equity capital contributions to new and existing FDI affiliates, the FDI position includes earnings reinvested in and loans to U.S.-based affiliates. No adjustment is made to the total for depreciation of the assets. The FDI position is the cumulative amount of FDI at a particular point in time, usually at the end of the year.

Estimates of the FDI position in the total U.S. economy are available using several methodologies; however, the FDI position for individual industries and countries is only estimated on "historical cost." The FDI position estimate based on historical cost is the total value of the tangible assets carried on the books of all of the FDI affiliates, which are derived from the costs of the assets at the time they were acquired.

Table 7. Selected Financial Information for Foreign Direct Investment Affiliate Petroleum, Natural Gas, and Coal Companies, 1998-2000

	Foreign-Affiliated U.S. Petroleum and Natural Gas and Coal Companies[a]				U.S. Petroleum and Natural Gas and Coal Companies Comparison Group[b]			
	1998	1999	2000	1999-2000 Percent Change	1998	1999	2000	1999-2000 Percent Change
Financial Items	(Billion Nominal Dollars)							
Revenues	103.6	120.7	208.8	73.0	331.9	357.7	507.4	41.9
Net Income	4.8	6.2	16.3	162.9	6.1	14.3	39.2	174.1
Cash Flow[c]	14.0	14.4	22.6	56.9	36.7	40.1	70.5	75.8
Capital Expenditures	13.5	10.3	16.3	58.3	46.5	37.4	37.3	-0.3
Cash Dividends	3.2	5.1	5.4	6.7	9.2	10.4	10.9	4.8
Total Assets	134.7	144.3	227.3	57.5	375.5	395.6	442.9	12.0
Financial Ratios	(Percent)							
Return on Equity[d]	7.8	9.3	15.5	--	4.2	9.1	21.2	--
Dividends/Net Income	66.8	81.6	33.1	--	152.7	72.7	27.8	--
Dividends/Cash Flow	23.2	35.1	23.9	--	25.2	25.9	15.5	--
Debt/Equity[e]	40.9	38.9	31.5	--	59.2	22.6	45.5	--

[a]Includes incorporated U.S. petroleum and natural gas and coal companies that were foreign-affiliated at 1998, 1999, and 2000 years-end and for which publicly reported financial information is available. Also includes foreign parents, if affiliate data are not available. The FDI affiliates included are: Arabian American Development, Blue Dolphin Energy, Nexen (fomerly, Canadian Occidental Petroleum), Chieftain International, Dynegy, Louis Dreyfus Natural Gas, Lyondell Chemical, Meridian Resources, Oceanic Exploration, Santa Fe International, and Schlumberger. The foreign-parent companies included are: BP Amoco p.l.c., YPF Sociedad Anónima, and Petsec Energy Ltd., because data for their respective subsidiaries (BP America, Maxus Energy, and Petsec Energy) are not separately disclosed. Forcenergy, Greka Energy, and Shell Oil are excluded from the totals because data for one of the two years are not available.
[b]The comparison group is derived from data available from Standard and Poor's PC Compustat Industrial File for the following four digit (SIC) industries: 1220 (bituminous coal, lignite mining), 1221 (bituminous coal, lignite surface mining), 1311 (crude petroleum and natural gas production), 1381 (oil and gas well drilling), 1382 (oil and gas field exploration), 1389 (oil and gas field services not elsewhere classified), and 2911 (petroleum refining). It includes foreign companies in the PC Compustat Industrial File with no affiliates in the United States but excludes the FDI affiliates or parent companies listed in the previous footnote.
[c]Measured as cash flow from operations.
[d]Defined as net income divided by year-end stockholders' equity.
[e]Defined as year-end long-term debt divided by year-end stockholders' equity.
Note: Percent changes were calculated from unrounded data.
Source: Compiled from Standard and Poor's *Research Insight*, Compustat Industrial File, and company annual reports.

FDI Position in the U.S. Economy Reaches All-Time High

The total FDI position in the U.S. economy based on historical cost [Note 22] was $1.24 trillion at the end of 2000, [Note 23] a 28-percent increase over 1999. Between 1994 and 1999, the total FDI position grew at an average annual rate of 18 percent. The total FDI position at the end of 2000, which is the highest ever, was the result of a record high in net foreign purchases of U.S. companies' securities and debt. Additionally, equity-capital inflows from the many large oil and natural gas acquisitions, especially Western European companies "... was a near record ... ." Further, U.S. liabilities reported by banks and non-banks increased substantially in 2000. [Note 24]

The three industries that were the largest contributors to the increase in the total FDI position in 2000 were petroleum, business services, and insurance. These industries contributed $48, $27, and $26 billion, respectively. [Note 25] The three countries that provided the largest increases in the total FDI position were the United Kingdom, France, and Canada, with increases of $74, $42, and $28 billion, respectively. [Note 26] Increased investment by the United Kingdom was focused on information, manufacturing, and professional, scientific, and technical services. [Note 27] France's increased investment chiefly was in professional, scientific, and technical services and manufacturing. Canada's investment outlay was primarily for computers and electronic products.

Electric Power Role in FDI Position Remains Small but Growing Rapidly

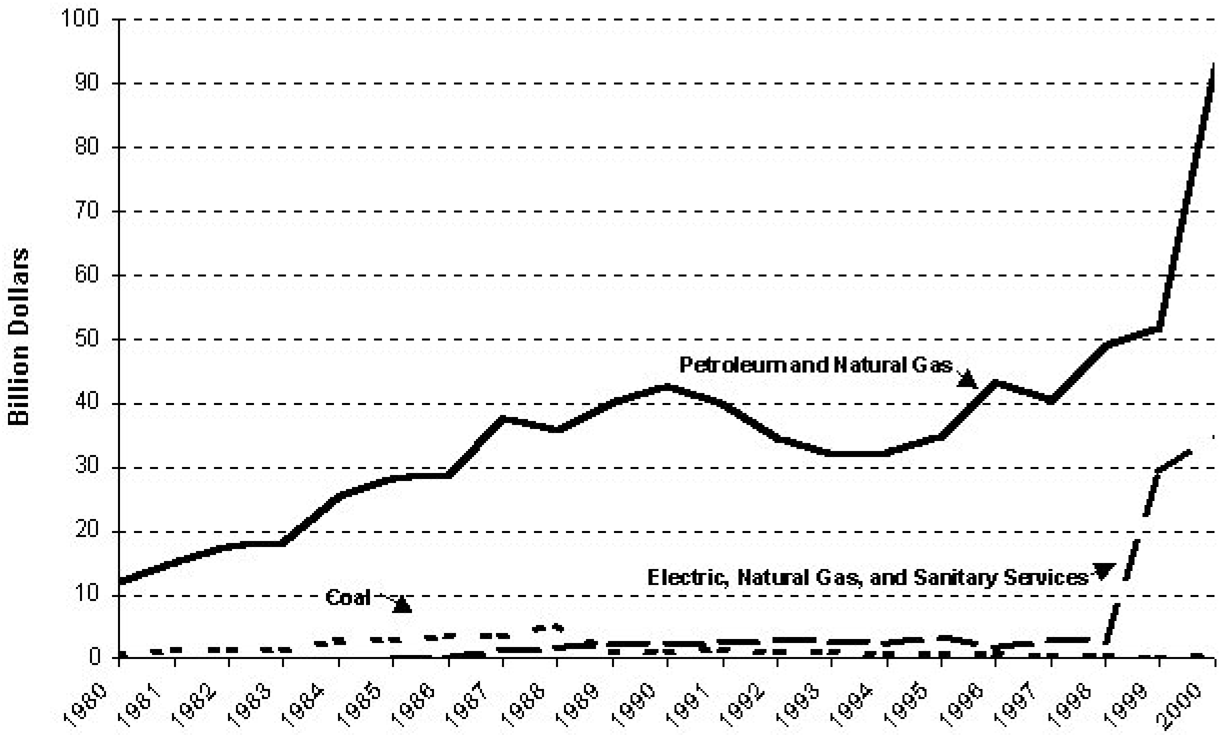
The electric power industry's share of the total FDI position in the United States increased by 19 percent in 2000 (Figure 3). This follows 1999 when FDI position in electric power essentially emerged with ScottishPower's (United Kingdom) purchase of PacifiCorp, [Note 28] increasing from $2.7 billion to $29 billion. (In this report, the industry group of electric, gas, and sanitary services is used as a proxy for the electric power industry because data for electric power are not published separately. However, some publicly available data suggest that electric power constitutes the bulk of the total investment for the group. [Note 29] At the end of 2000, the FDI position in electric, gas, and sanitary services reached 2.8 percent of the total FDI position in the U.S. economy. [Note 30] Before 1999 electric power played a small role in the FDI position. The lack of FDI in U.S. electric power arose in large part from restrictions on foreign investment in the Public Utility Holding Company Act of 1935, which were relaxed by the Energy Policy Act of 1992. [Note 31]

FDI Position in Petroleum and Natural Gas Significant and Growing

The FDI position in the U.S. petroleum and natural gas industry in 2000 reached $93 billion, an increase of 79 percent (Table 8). The 79-percent change (Figure 3) included several transactions with BP Amoco plc's acquisition of ARCO for $27.2 billion leading the way. Further, the sharp increase continued the upward trend in the FDI position in petroleum and natural gas since 1997. The FDI position in petroleum and natural gas declined between 1990 and 1994, but had been growing more slowly than the overall FDI position since 1987 (Figure 4). Between 1999 and 2000, the FDI position in petroleum and natural gas grew 51 percentage points faster than did the overall FDI position, an unprecedented event in recent history.

Most of the growth in the 2000 FDI position in petroleum and natural gas was contributed by the United Kingdom (Table 8), especially BP's acquisition of ARCO. [Note 32] The United Kingdom and the Netherlands

Figure 3. Foreign Direct Investment Position[a] in U.S. Energy Industries (Historical-Cost Basis[b]), 1980-2000



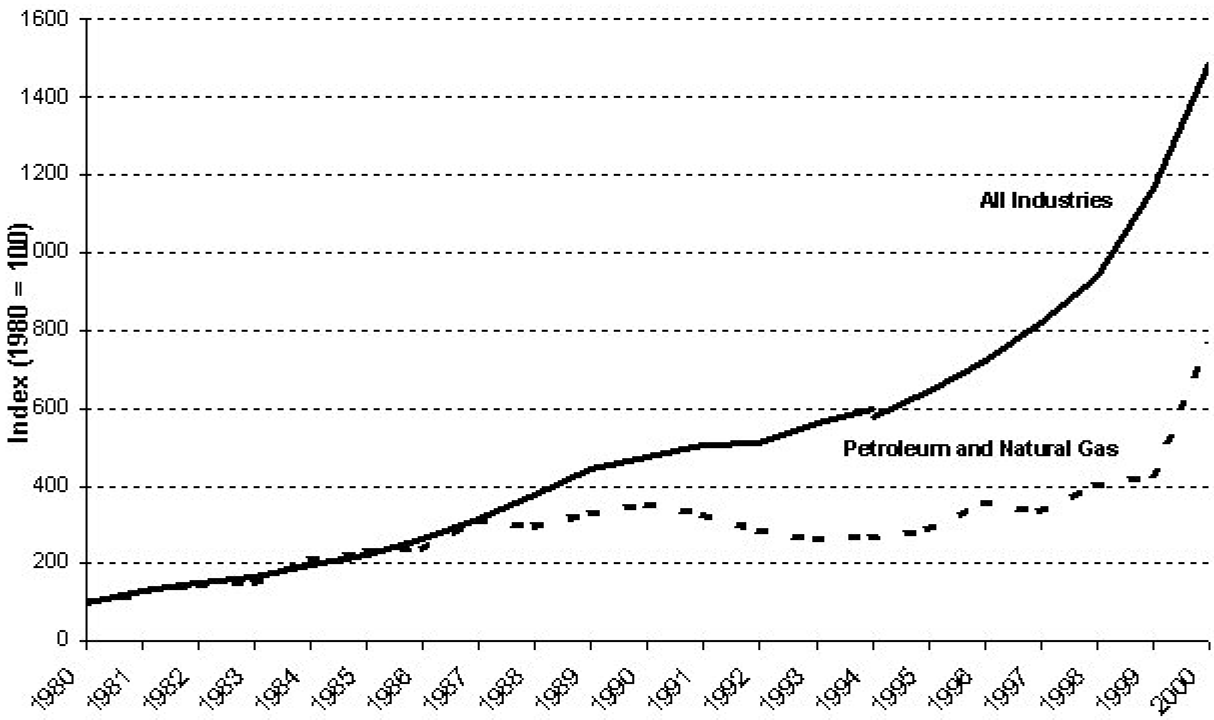
[a]Foreign Direct Investment Position is "... the yearend book value of the foreign parent groups' equity (including retained earnings) in, and net outstanding loans to, their U.S. affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." Source: Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b]Historical Cost Basis simply means that the value of the assets is based on their acquisition cost, which is also known as book value.
Note: When no data point is plotted, the underlying datum was withheld to prevent disclosure of individual company information.
Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, September 2001), Tables 10.2-10.3, and preceding issues.

Table 8. Foreign Direct Investment Position[a] in the U.S. Petroleum and Natural Gas Industry by Selected Countries (Historical-Cost Basis[b]), 1998-2000
(Billion Nominal Dollars)

	1998	1999	2000	2000 Percent Share
All Countries	49.0	51.9	92.9	100.0
Canada	2.5	2.9	4.5	4.9
Europe[c]	43.8	46.8	82.6	88.9
Netherlands	10.4	10.7	13.2	14.2
United Kingdom	29.4	32.4	66.1	71.2
Latin America and OWH[d]	0.9	1.3	1.6	1.7
Africa	0.0	0.0	0.0	0.0
Middle East	0.9	0.8	0.0	0.0
Asia and Pacific	1.0	0.0	0.6	0.6
Addenda				
European Union (15)[e]	42.3	45.8	80.7	86.9
OPEC[e]	0.0	0.4	(d)	NM

[a] Foreign Direct Investment Position is "... the yearend book value of the foreign parent groups' equity (including retained earnings) in, and net outstanding loans to, their U.S. affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." Source: Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b] Historical Cost Basis means that the value of the assets is based on their acquisition cost, which is also known as book value.
[c]Only the most significant of the European countries are included here rather than an exhaustive listing of all European countries contributing to the foreign direct investment position.
[d]Other Western Hemisphere.
[e]The European Union (15) comprises Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal, Spain, Sweden, and the United Kingdom.
[e]OPEC is the Organization of Petroleum Exporting Countries, comprising Algeria, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, Saudi Arabia, the United Arab Emirates, and Venezuela.
(d): Data withheld by the Bureau of Economic Analysis to prevent disclosure of individual company information.
NM = Not meaningful.
Sum of components may not equal total due to independent rounding.
Source: Bureau of Economic Analysis (BEA), "Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, September 2000), Tables 10.2-10.4.

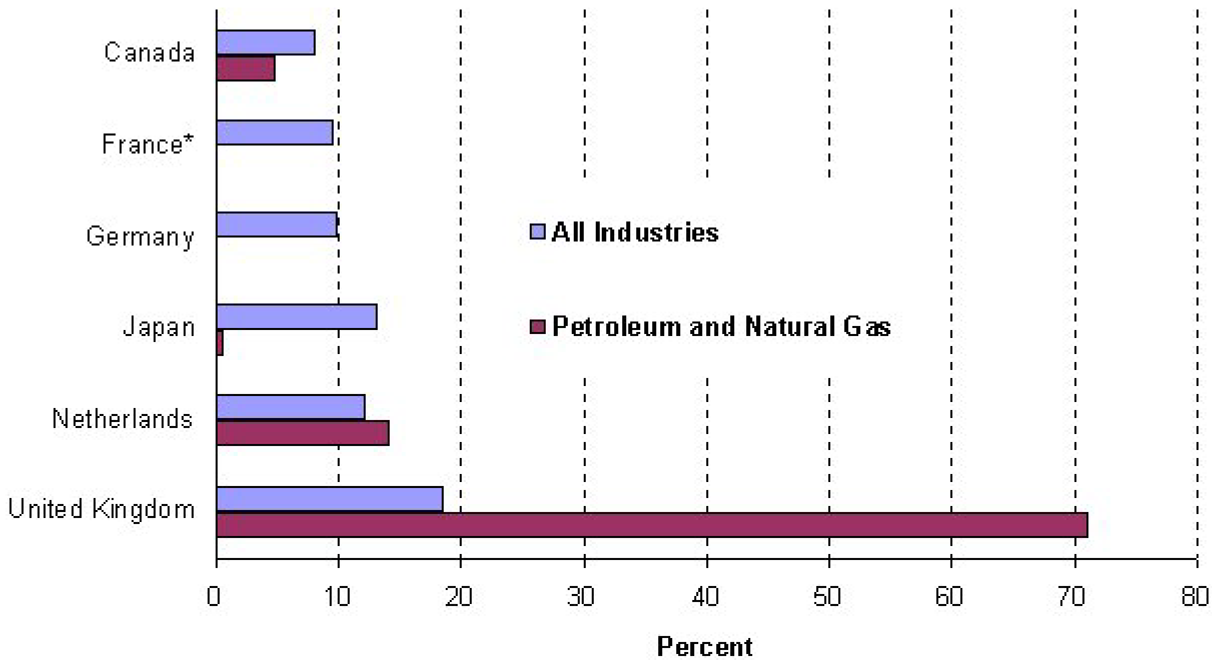
Figure 4. Index of Foreign Direct Investment Position[a] in Petroleum and Natural Gas, and All Industries (Historical-Cost Basis[b]), 1980-2000



[a] Foreign Direct Investment Position is "... the yearend book value of the foreign parent groups' equity (including retained earnings) in, and net outstanding loans to, their U.S. affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." Source: Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b]Historical Cost Basis simply means that the value of the assets is based on their acquisition cost, which is also known as book value.
Note: The "All Industries" series is broken between 1993 and 1994 because its composition changed in 1994.
Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, September 2001), Tables 10.2-10.3, and preceding issue.

accounted for almost all of Europe's 2000 FDI petroleum and natural gas position (Figure 5). The remaining countries with significant roles in the FDI position in petroleum and natural gas are Canada, France, Germany, and Japan, which collectively accounted for 6 percent of the FDI position in petroleum and natural gas. [Note 33] By contrast, Canada, France, Germany, and Japan accounted for 41 percent of the FDI position in all industries in 2000. The United Kingdom and the Netherlands are both home to parent companies linked to major petroleum and natural gas subsidiaries in the United States. BP America and BP Amoco Corp. are both subsidiaries [Note 34] of BP Amoco, plc (United Kingdom) and Shell Oil is a subsidiary of Royal Dutch/Shell (Netherlands/United Kingdom).

Figure 5. Percentage Shares of Foreign Direct Investment Position[a] in U.S. Petroleum and Natural Gas, and All U.S. Industries for Countries with Largest Foreign Direct Investment Position in All Industries, 2000



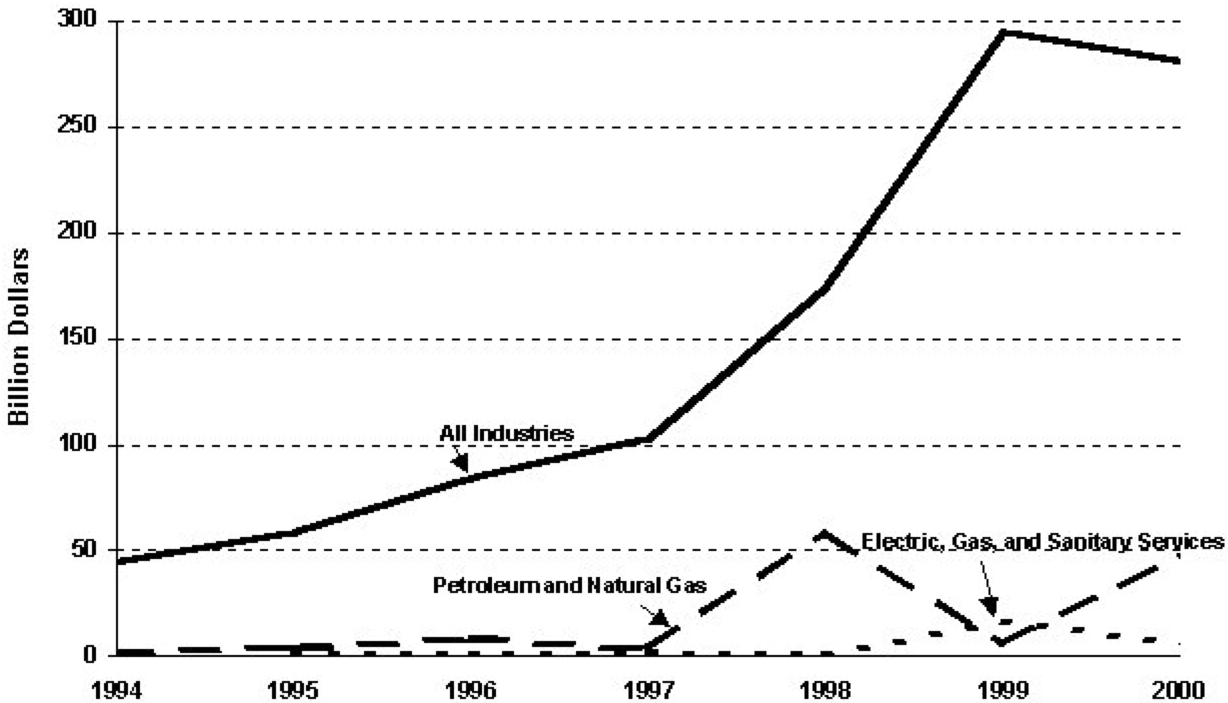
[a] Foreign Direct Investment Position is "... the yearend book value of the foreign parent groups' equity (including retained earnings) in, and net outstanding loans to, their U.S. affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." Source: Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
Note: Germany's share of U.S. petroleum and natural gas is 0.2 percent, which is hardly visible in the figure above.
*: The 2000 FDI position for petroleum and natural gas was not reported for France to prevent disclosure of individual company data.
Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (Washington, DC, September 2001), Table 10.3.

Net FDI Capital Inflows: A Measure of Annual Investment

The change in FDI position, excluding valuation adjustments, is measured by the net flow of capital into the United States from foreign investors to their FDI affiliates. It is composed of equity capital, net loans, and reinvested earnings during the year. [Note 35] The effect of valuation adjustments is occasionally large. [Note 36] Net capital inflows more closely reflect the international capital flows that occur than does the change in FDI position because the former is based on transaction values and the latter is based on book values. Thus, net capital inflows more closely reflect the international capital flows that occur than does the change in FDI position.

In 2000, net FDI capital inflows into the U.S. energy industry from abroad (excluding coal, which was not reported) were $54 billion (Figure 6). The bulk of the difference came from the inflows to petroleum and natural gas, which increased by about 750 percent between 1999 and 2000. From 1994 to 1997, the capital

Figure 6. Net Foreign Direct Investment Capital Inflows for Energy and All Industries (Without Current-Cost Adjustment[a]), 1994-2000



[a]Historical Cost Basis means that the value of the assets is based on their acquisition cost, which is also known as book value.
Note: Inflows to electric, natural gas, and sanitary services were negative in 1994.
Source: Bureau of Economic Analysis, "Foreign Direct Investment in the United States, Detail for Historical-Cost Position and Related Capital and Income Flows, 2000," *Survey of Current Business* (Washington, DC, September 2001), Table 17, and preceding issues.

inflows to petroleum and natural gas varied between $2 and $9 billion. However, since 1998 they have fluctuated dramatically, rising to $59 billion, falling to $6 billion in 1999, and rising to $48 billion in 2000. Interestingly, BP Amoco plc was largely responsible for the two peaks, first merging with Amoco in 1998 in a $53 billion transaction [Note 37] and then acquiring ARCO and Vastar Resources in 2000 for a total of $29 billion. Meanwhile, capital inflows to electric, gas, and sanitary services seem to have undergone a structural change recently, given the trend since 1998. Net capital inflows fluctuated in the vicinity of $1 billion between 1995 and 1998, but were $16 billion in 1999 (chiefly due to two transactions that totaled almost $13 billion [Note 38]) and $6 billion in 2000 (largely due to three transactions that totaled more than $10 billion [Note 39]).

Net capital inflows to the U.S. coal industry for 2000 were suppressed to avoid disclosure of company data. Further, they may have been small, given that there was only one, apparently minor, transaction in which U.S. coal assets were purchased for an undisclosed amount. [Note 40] Capital inflows to coal were negative for four of the five years prior to 1999, but were suppressed in both 1999 and 2000 due to the lack of activity in the industry.

Capital inflows to all U.S. industries averaged just over $50 billion between 1990 and 1997. However, beginning in 1998, they have averaged $250 billion, reaching a high of $295 billion in 1999 before slightly regressing to $281 billion in 2000. Restructuring of U.S. electricity and easing of restrictions on foreign ownership of U.S. electricity assets may be responsible for some of this overall change, as the $10-billion decline of electric, gas, and sanitary services accounts for much of the overall $14-billion decline between 1999 and 2000.

U.S. Companies' Direct Investment Abroad in Energy

The counterpart to FDI in the United States is U.S. direct investment abroad (DIA). [Note 41] In 2000, the DIA position of U.S. overseas investors valued at historical costs increased to $1.2 trillion. [Note 42] The two largest DIA positions were in holding companies and finance companies (except depository institutions) at $288 and $145 billion, respectively. [Note 43] The next three largest industry positions were in petroleum and natural gas, chemicals and allied products, and wholesale trade, at $105, $89, and $88 billion, respectively. Electric power (including natural gas and sanitary services) and coal, had DIA positions of $23 and $1 billion, respectively, which were much smaller than the position in foreign petroleum and natural gas (Figure 7). The three countries with the largest DIA positions in 2000 were the United Kingdom, Canada, and the Netherlands, at $233, $126, and $116 billion, respectively.

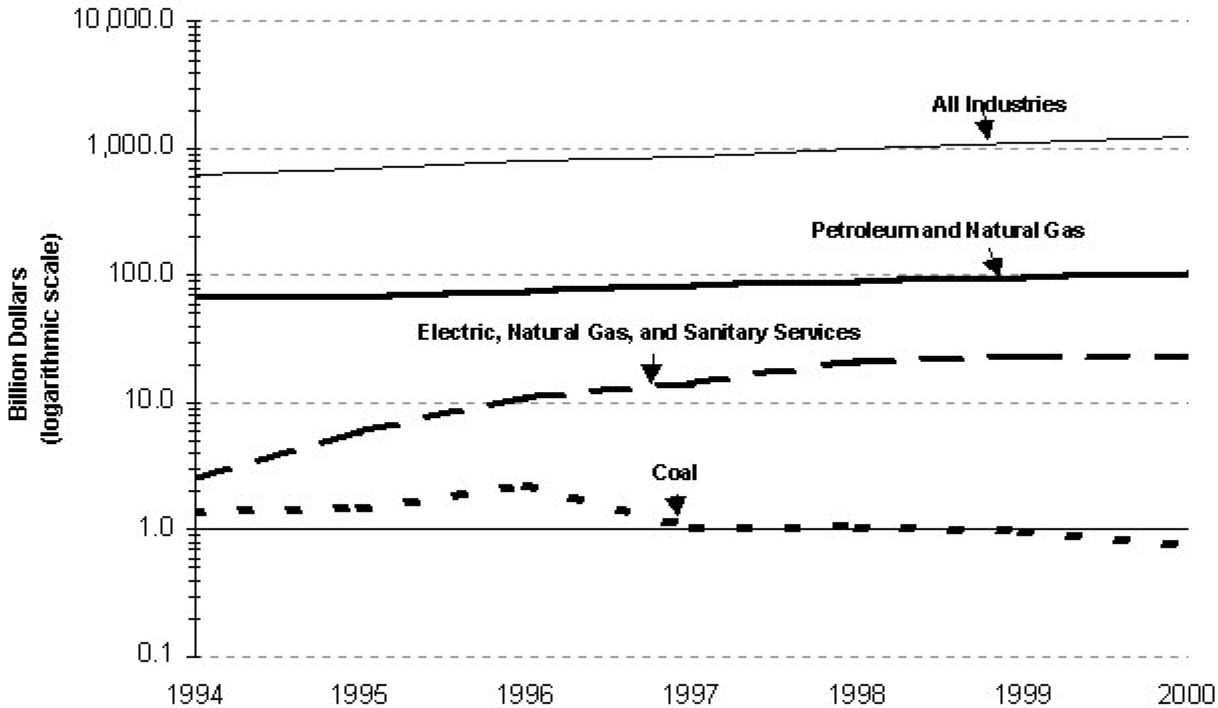
DIA Position in Petroleum and Natural Gas Maintains Upstream Focus

The DIA position in foreign petroleum and natural gas in 2000 was largely in the upstream segment of the industry. The DIA position in oil and natural gas extraction exclusively was $66 billion, almost two-thirds of the $105.5 billion total for petroleum and natural gas (Table 9). [Note 44] The United Kingdom and Canada maintained their positions as the two countries with the largest DIA positions in petroleum and natural gas despite a decline in the United Kingdom's position since 1999. The two countries accounted for a total of 32 percent of the DIA position in petroleum and natural gas in 2000. Canada and Indonesia had the largest absolute increases in their positions, with Canada increasing $2.4 billion and Indonesia increasing $1.2 billion by the end of 2000. Indonesia accounted for more than one-fourth of the position in the Asia and Pacific region. Most regions and countries that are significant targets for U.S. investment in petroleum and natural gas (e.g., Canada and the Asia and Pacific region) receive proportionally more DIA in petroleum and natural gas than they invest in that industry through FDI in the United States. Europe and its constituent countries (i.e., the Netherlands, Norway, and the United Kingdom) received proportionally less DIA investment than they made in FDI investment in 2000 (Table 8).

The FDI position in U.S. petroleum and natural gas increased by a larger amount than did the DIA position in foreign petroleum and natural gas in 2000, principally on the strength of BP Amoco plc's acquisition of ARCO and Vastar. This reversed the general trend between 1990 and 1999 in which the growth in the DIA position in petroleum and natural gas exceeded the growth in FDI in petroleum and natural gas. The resulting difference between the DIA position and the FDI position fell from $46 billion at the end of 1999 to $13 billion at the end of 2000 (Figure 8). Although the FDI position in U.S. petroleum and natural gas grew steadily during most of the 1980's, the growth between 1999 and 2000 was so great that it exceeded the total growth between 1980 and 1999. However, part of the reported growth between 1998 and 2000 is due to valuation adjustments: only an $8-billion increase in total petroleum and natural gas FDI was recorded in 1998 despite BP's $53-billion acquisition of Amoco. [Note 45]

The DIA position in foreign electric, gas, and sanitary services was unchanged between 1999 and 2000, falling only 0.5 percent and presenting a stark contrast to the 166-percent average growth rate between 1992 and 1999. At the end of the year, the DIA position in foreign electric, gas, and sanitary services amounted to about one-

Figure 7. The Direct Investment Abroad Position[a] in Foreign Energy Industries and All Foreign Industries (Historical-Cost Basis[b]), 1994-2000



[a]Direct Investment Position is "... the yearend book value of the ... [U.S.] ... parent groups' equity (including retained earnings) in, and net outstanding loans to, their ... [foreign] ... affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." See, Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b]Historical Cost Basis simply means that the value of the assets is based on their acquisition cost, which is also known as book value.
Source: Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2001), Table 17.

fifth of the position in petroleum and natural gas (Figure 7). The DIA position in coal is so insignificant that a decline of slightly more than $0.2 billion between 1999 and 2000 translated into a 23-percent decline in the amount of DIA investment.

DIA Outflows to Petroleum and Natural Gas Decline and Outflows to Electric Power Negative

Net DIA capital inflows (without current-cost adjustments to earnings) to foreign petroleum and natural gas in 2000 were $10.4 billion, slightly lower than the $11.7 billion of 1999 (Figure 9). For the years 1994 through 2000, net DIA outflows to the industry have ranged between $0.7 and $11.7 billion, with higher values in the more recent years, particularly since 1997. Among the larger contributors to the capital outflows to petroleum and natural gas in 2000 were Kerr-McGee ($0.6 billion for Repsol (Spain) properties in the North Sea), Conoco ($0.5 billion for Norsk Hydro (Norway) properties in the North Sea and $0.2 billion for PetroCanada (Canada) properties in Canada), Williams Companies ($0.5 billion for TransCanada Pipelines (Canada) properties in Venezuela [Note 46]), and Unocal ($0.2 billion for remaining interest in Northrock Resources (Canada) and

Table 9. U.S. Direct Investment Abroad Position[a] in the Foreign Petroleum and Natural Gas Industry, by Selected Countries (Historical-Cost Basis[b]), 1998-2000
(Billion Nominal Dollars)

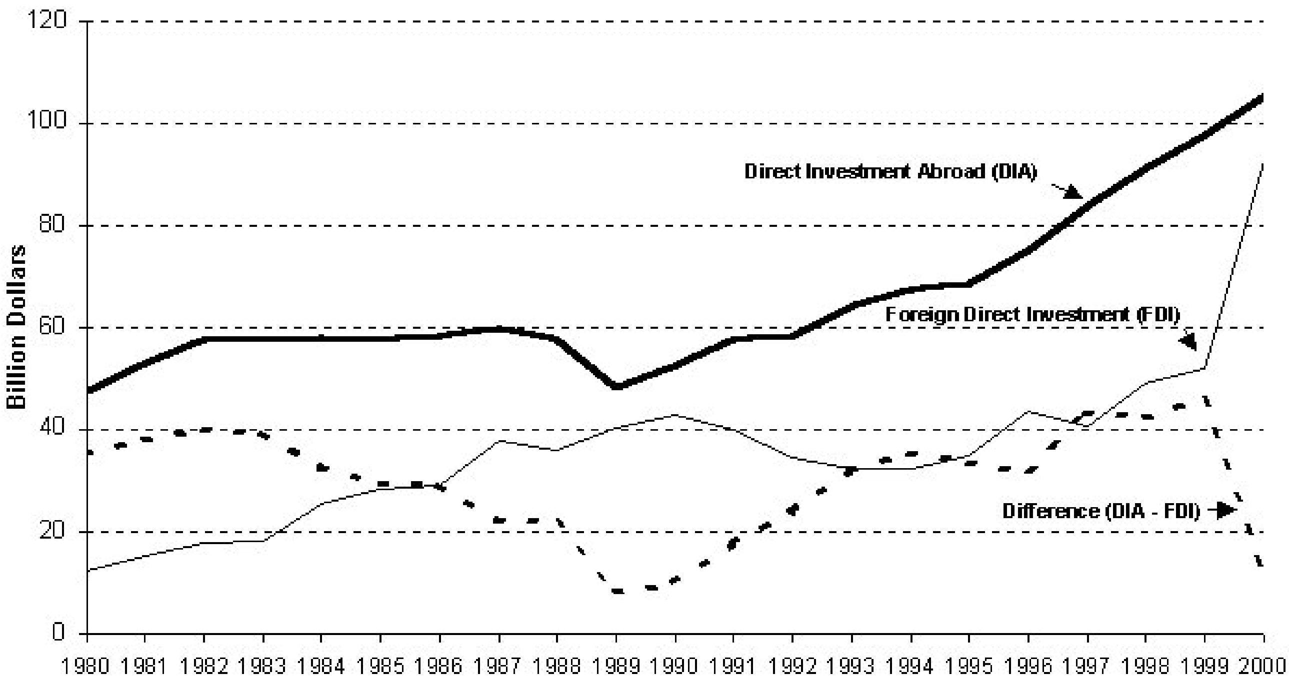
	1998	1999	2000	2000 Percent Share
All Countries	91.2	97.9	105.5	100.0
Canada	12.3	15.6	18.0	17.1
Europe	33.4	33.9	32.6	30.9
Netherlands	2.7	3.4	3.1	3.0
Norway	3.8	4.0	4.2	4.0
United Kingdom	18.4	17.1	15.7	14.9
Latin America and OWH[c]	8.5	9.0	9.1	8.6
Africa	9.8	9.5	10.1	9.6
Middle East	2.7	2.6	2.9	2.7
Asia and Pacific	22.7	24.5	29.7	28.2
Australia	3.9	3.9	7.0	6.6
Indonesia	5.1	7.2	8.4	8.0
Japan	4.4	(b)	(b)	NM

[a]Direct Investment Position is "... the yearend book value of the ... [U.S.] ... parent groups' equity (including retained earnings) in, and net outstanding loans to, their ... [foreign] ... affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." See, Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b]Historical Cost Basis simply means that the value of the assets is based on their acquisition cost, which is also known as book value.
[c]Other Western Hemisphere
(b): Data withheld by the Bureau of Economic Analysis to prevent disclosure of individual company information.
NM = Not meaningful.
Source: Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2000), Tables 10.1-10.3.

$0.2 billion for Indonesian petroleum and natural gas properties). [Note 47] The capital outflows to foreign coal were slightly negative, falling by about $8 million between 1999 and 2000.

Net DIA outflows to electric, gas, and sanitary services in 2000 were a negative $0.4 billion, the first net reduction since before 1994 (Figure 9). U.S. companies' investment in electricity abroad, as measured by DIA

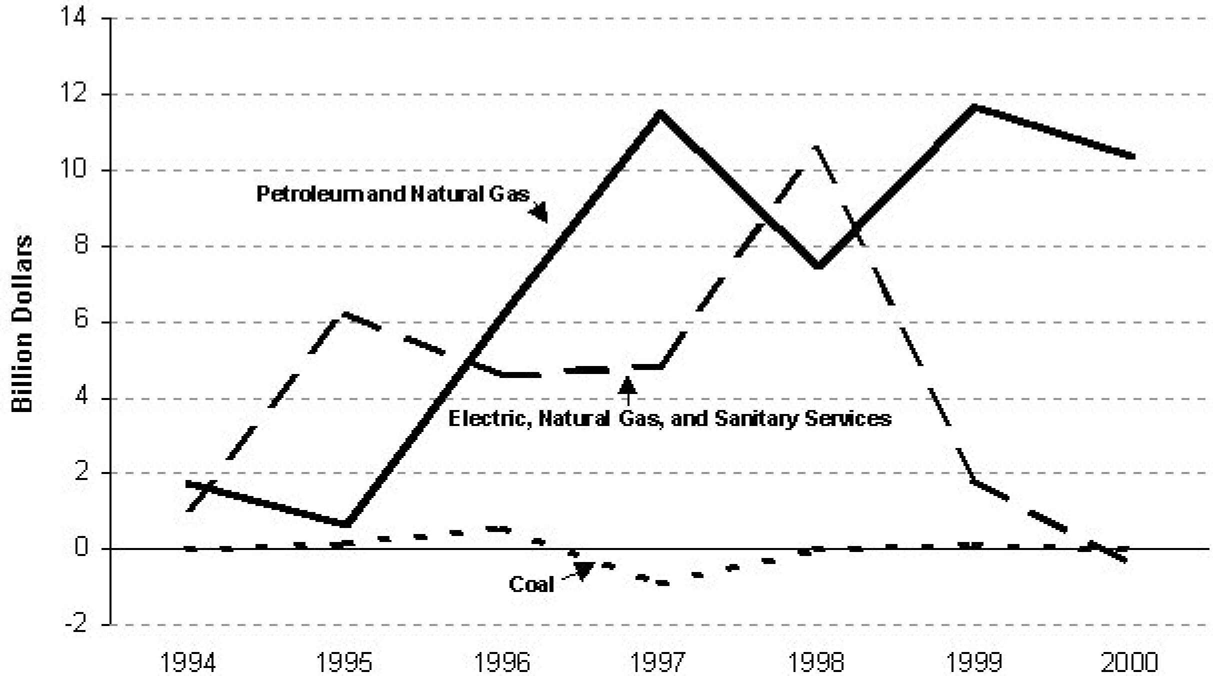
Figure 8. U.S. Direct Investment Abroad Position[a] in the Foreign Oil and Natural Gas Industry and Foreign Direct Investment Position[b] in the U.S. Oil and Gas Industry, 1980-2000



[a] Direct Investment Abroad Position is "... the yearend book value of the ... [U.S.] ... parent groups' equity (including retained earnings) in, and net outstanding loans to, their ... [foreign] ... affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." See, Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
[b] Foreign Direct Investment Position is "the yearend book value of the foreign parent groups' equity (including retained earnings) in, and net outstanding loans to, their U.S. affiliates. In other words, it is the cumulative value of net capital inflows from foreign direct investors. The position at the end of the current year is equal to the position at the end of the previous year plus net capital inflows and valuation adjustments in the current year." Source: Bureau of Economic Analysis, "A Guide to BEA Statistics on Foreign Direct Investment in the United States," *Survey of Current Business* (February 1990).
Source: "Foreign Direct Investment in the United States" and "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2001), Table 17, and previous issues.

outflows, had been relatively large since 1995, exceeding those to petroleum and natural gas in 1995 and 1998. Probably the largest of the publicly reported acquisitions of foreign electric power assets during 2000 was Reliant Energy's acquisition of the 48 percent that it did not already own of the power generation company UNA (Norway) for $1 billion. [Note 48] However, Reliant Energy undertook a series of transactions that generally diminished U.S. DIA in Latin American electricity during 2000, following Reliant's announcement in December 1999 that it would exit Latin American energy. In October 2000 Reliant sold its El Salvadorian assets to AES Corporation (U.S.) [Note 49] and transferred its Colombian assets to Unión Fenosa Desarrollo y Acción Exterior, S.A. (Spain), both for undisclosed amounts. [Note 50] In December Reliant sold 30 percent of its Brazilian electricity assets to AES Corporation and the balance to EDF International S.A. (France) in transactions valued at a total of $430 million. [Note 51] (Note that neither transaction between Reliant and AES

Figure 9. Net Direct Investment Abroad Capital Outflows to Energy Industries (Without Current-Cost Adjustment[a]), 1994-2000



[a] Current-Cost Adjustment means that the capital flows are valued based on acquisition cost, which is the historical cost.
Source: Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (Washington, DC, September 2001), Table 17.

had any effect on U.S. DIA in Latin American electricity because the assets were sold by a U.S. company to another U.S. company.)

Among other year 2000 transactions Alliant Energy acquired four Brazilian electric utilities in January for $347 million. [Note 52] In July, TXU Electric acquired 51 percent of the energy company Stadtwerke Kiel (Germany) for $215 million. [Note 53] UtiliCorp United (since renamed Aquila Inc.) acquired TransAlta Corporation's (Canada) electricity distribution and retail assets for $480 million in August. [Note 54] A final large transaction, which on balance had no effect on DIA electricity, occurred when Southern Company sold its ownership in an Argentinean electricity generation facility to AES Corporation for $205 million. [Note 55]

These net DIA acquisitions in electric power totaled $1.7 billion, significantly more than the negative $0.4-billion estimate for net capital outflows to electric, gas, and sanitary services. Several factors may account for this difference. Net capital outflows are reduced by reverse capital flows, including capital returned to U.S. direct investors through divestitures, loan repayments to U.S. investors, and negative reinvested earnings by U.S. investors. [Note 56] These reverse flows would have offset a portion of the FDI purchases. In addition, some of the DIA acquisitions in electric power and natural gas distribution may have been through foreign holding companies and thus were included as DIA in holding companies, not in electric, gas, and sanitary services.

Conclusion

Foreign investment continued to play an important role in the U.S. energy industry and in the U.S. economy as a whole. The roles played by FDI affiliates in most major types of U.S. energy held steady in 2000. Electric power generating capacity of FDI affiliates increased by less than 1 percent, largely the result of two large acquisitions. Powergen's (United Kingdom) acquisition of LG&E Energy for $5.4 billion and Orion Power Holdings/Mitsubishi's (Japan) acquisition of $1.8 billion of generation assets from Duquesne Light. Liquids production fell by 1.5 percentage points, crude oil refining capacity fell by less than 1 percentage point, and natural gas production increased by a percentage point. Despite BP Amoco plc's acquisition of ARCO and the remaining portion of Vastar Resources that it didn't already own, numerous smaller divestitures offset these large acquisitions.

FDI affiliates significantly decreased their role in U.S. uranium production capacity. Further, uranium production has relatively little significance in the United States when compared to other types of energy. BHP Billiton (Australia) and Cameco (Canada) accounted for 87 percent of U.S. output of uranium, a decrease in the foreign share of 6 percentage points as foreign affiliates' production declined more rapidly than did the industry as a whole.

The flow of foreign capital into the U.S. energy industry in 2000 increased 147 percent relative to 1999, largely due to the almost $29 billion spent by BP Amoco in two transactions. The total inflow for petroleum and natural gas was $48 billion. Meanwhile, net capital inflows to the electric power industry declined from $16 billion in 1999 to $6 billion in 2000, as much smaller transactions occurred in 2000. Further, the total FDI position at the end of 2000 was the highest ever, resulting from a record setting high in net foreign purchases of U.S. securities other than U.S. treasury securities and substantial increases in both equity-capital inflows and U.S. liabilities reported by banks and non-banks.

Endnotes

[1]Oil production fell to 1.2 million barrels per day and natural gas production grew to 2.3 trillion cubic feet per day.
[2]Natural gas is converted to barrels of oil equivalent basis at the rate of 1,000 cubic feet of natural gas equals 0.178 barrels of crude oil.
[3]Based on the 1998 production and reserves numbers reported by the companies, 173 thousand barrels per day of crude oil and natural gas liquids and 132 million cubic feet per day of natural gas was acquired by Occidental from the FDI affiliates BP Amoco (including the production and reserves ARCO sold to Occidental at the same time) and Shell Oil. See Energy Information Administration, "Aspects of Occidental Petroleum's Purchases of Altura Energy and ARCO Long Beach" (April 18, 2000). Web address: http://www.eia.doe.gov/emeu/finance/mergers/oxyindex.html (as of May 15, 2002). For a discussion of acquisitions and divestitures of U.S. energy assets by foreign investors in 2000, see the previously released set of tables containing foreign direct investment acquisitions and divestitures for 2000 at http://www.eia.doe.gov/finance/fdi/advance/adindex.html.
[4]Phillips acquired ARCO's Alaskan assets, which included oil and natural gas reserves and production that were chiefly oil rather than natural gas. See Phillips Petroleum, "Phillips to Acquire All of ARCO's Alaskan Assets for $7 Billion" (March 15, 2000). Web address: http://www.phillips66.com/newsroom/NewsReleases/rel259.html (as of May 15, 2002).
[5]This transaction added oil and natural gas reserves that in 1999 generated production of 71 thousand barrels per day and 994 million cubic feet per day, respectively, in 1999. See Energy Information Administration, "Aspects of the Merger of Anadarko Petroleum and Union Pacific Resources" (July 21, 2000). Web address: http://www.eia.doe.gov/emeu/finance/mergers/andrkupindex.html (as of May 15, 2002).

[6]Statoil ASA, *2000 Annual Report*, p. 23.
[7]ARCO's two Alaska refineries were included in the sale of ARCO's liquids producing properties in Alaska to Phillips Petroleum. The refineries are in Kuparuk and Prudhoe Bay and have crude oil distillation capacities of 14,000 and 15,000 barrels per day, respectively.
[8]*OGJ Online*, "Getty Petroleum Marketing accepts acquisition by Lukoil" (December 7, 2000). Note that the story actually indicates that the Board of Directors of Getty voted to accept Lukoil's offer of $5 per share for Getty, which Lukoil had earlier valued at $71 million. (See *OGJ Online*, "Lukoil acquires Getty in first deal of its kind for a Russian firm" (November 3, 2000).)
[9]See TotalFinaElf, "TotalFinaElf announces agreement for disposal of some US downstream assets" (May 22, 2000). Web address: http://www.statoil.com/inf/svg02304.nsf?opendatabase□=en&app=2000year (June 3, 2002). http://www.totalfinaelf.com/ho/en/library/press/2000/000522.htm (as of May 16, 2002).
[10]International Power plc was created in October 2000 from the international operations which were spun off by National Power plc (United Kingdom). Web address: http://www.internationalpowerplc.com/companyfset.htm (as of March 25, 2002).
[11]Peco Energy, "GPU, Amergen Complete Sale of Oyster Creek Facility" (August 8, 2000). Web address: http://www.peco.com/corp/news_releases_2/20000811-140329.html (as of April 4, 2002).
[12]Rio Tinto, *2000 Annual Review*, p. 4. Web address: http://www.riotinto.com/library/reports_PDFs/2000_financial_annualReview.pdf (as of May 15, 2002).
[13]Scottish Power plc, *Annual Report and Accounts*, Form 20-F 1999-00, p. 22. Web address: http://www.scottishpower.com/ara00/pdf/ara9900.pdf (as of May 15, 2002).
[14]RAG Aktiengesellschaft, *Annual Report 2000*, p. 55. Web address: http://www.rag.de/index.htm (as of May 13, 2002).
[15]Energy Information Administration defines in situ mining as, "The recovery, by chemical leaching, of the valuable components of an orebody without physical extraction of the ore from the ground. Also referred to as "solution mining." See Energy Information Administration, *Uranium Industry Annual 2000*, DOE/EIA-0478(2000) (Washington, DC, May 2001), p. 80. Web address: http://www.eia.doe.gov/cneaf/nuclear/uia/summary/uia_sum.html (as of May 15, 2002).
[16]Cameco Corporation, Crow Butte, Nebraska (web address: http://www.cameco.com/operations/uranium/crow_butte/production.php); and Highland, Wyoming (web address: http://www.cameco.com/operations/uranium/highland/2001_production.php) (both as of May 15, 2002).
[17]Cameco Corporation, Web address: http://www.cameco.com/profile/index.php (as of May 15, 2002).
[18]Energy Information Administration, *Uranium Industry Annual 2000*, DOE/EIA-0478(2000) (Washington, DC, May 2001), Table 7. Web address: http://www.eia.doe.gov/cneaf/nuclear/uia/summary/uia_sum.html (as of May 15, 2002).
[19]BHP Billiton, Web address: http://www.bhpbilliton.com/bb/aboutUs/profile.jsp (as of May 15, 2002).
[20]For more explanation of Dominion Resources' acquisition of Louis Dreyfus Natural Gas, please see, "Aspects of the Proposed Acquisition of Louis Dreyfus Natural Gas by Dominion Resources" (September 25, 2001). Web address: http://www.eia.doe.gov/emeu/finance/mergers/dr_ldindex.html (as of May 13, 2002).
[21]Louis Dreyfus Natural Gas Corp., 2000 U.S. Securities and Exchange Commission Form 10-K filing, p. 5. Web address: http://www.freeedgar.com/search/ViewFilingsData.asp?CIK=912264&Directory=912057&Year=01&SECIndex=7022&Extension=.tst&PathFlag=0&nStartLoc=744&nEndLoc=356055&TextFileSize=356071&DateFiled=3/1/2001&FormType=10-K405&SFType=&SDFiled=&tabletype=1&tablename=&SourcePage=FilingsResults&OEMSource=&UseFrame=1&CompanyName=LOUIS+DREYFUS+NATURAL+GAS+CORP (as of May 15, 2002).
[22]Two other estimates are based on current costs and market values. The estimate of the FDI position at year-end 2000, valuing the portion of the FDI position representing the foreign investors' shares of their FDI affiliates' tangible assets at current cost or replacement cost is $1.4 trillion. The estimate valuing the foreign investors' equity portion of the position at current market value is $2.7 trillion. For a discussion of these two valuation methods, see Harlan King, "The International Investment Position of the United States at Yearend 2000," *Survey of Current Business* (July 2001), pp. 7-15. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/07july/0701iip.pdf (as of May 15, 2002).
[23]Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (September 2001), Table 10.4. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901fdius2k.pdf (as of May 15, 2002).
[24]Harlan King, "The International Investment Position of the United States at Yearend 2000," *Survey of Current Business*, Bureau of Economic Analysis (July 2001), p. 8. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/07july/0701iip.pdf (as of May 15, 2002).
[25]Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (September 2001), Table 17. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901fdius2k.pdf (as of May 15, 2002).

[26]Bureau of Economic Analysis, "Foreign Direct Investment in the United States," *Survey of Current Business* (September 2001), Table 16. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901fdius2k.pdf (as of May 15, 2002).
[27]Ned G. Howenstine, "Foreign Direct Investment in the United States, New Investment in 2000," *Survey of Current Business*, Bureau of Economic Analysis, (June 2001), Table 7.2. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/06June/0601newi.pdf (as of May 15, 2002).
[28]Energy Information Administration, U.S. Energy Assets Attract Foreign Investment in 1999 (March 2001). Web address: http://www.eia.doe.gov/finance/fdi/adindex.html (as of May 15, 2002).
[29]For example, investment in electric services was 61 percent of investment in fixed assets in electric, gas, and sanitary services in the United States, valued at historic cost, for the ten years 1990-1999. Bureau of Economic Analysis, *Historical -Cost Data for Investment in Fixed Assets* (March 2001).
[30]Bureau of Economic Analysis, "Foreign Direct Investment in the United States; Detail for Historical-Cost Position and Related Capital and Income Flows, 2000," *Survey of Current Business* (September 2001), Table 17. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901fdius2k.pdf (as of May 15, 2002).
[31]For further discussion, see "FDI in the U.S. Electric Power Industry," *Performance Profiles of Major Energy Producers 1998* (January 2000). Web address: http://tonto.eia.doe.gov/FTPROOT/financial/020698.pdf (as of May 15, 2002).
[32]Although BP's acquisition of Amoco was approximately twice the value of BP's acquisition of ARCO, the historical value of ARCO was apparently higher than the historical value of Amoco. Consequently, the changes between 1997 and 1998 and between 1999 and 2000 are somewhat unrepresentative of the underlying transactions that occurred in 1998 and 2000, respectively.
[33]The FDI position of France in petroleum and natural gas was suppressed in 2000 to prevent disclosure of individual company data. Achieving the result of a 6-percent share assumes that France contributed all of the FDI position not accounted for by the other countries in Europe with reported positions.
[34]BP America and BP Amoco Corp have since been combined into a single U.S. affiliate called BP America.
[35]FDI capital inflows are net values because equity capital outflows and loans from FDI affiliates to their parents are subtracted from equity capital inflows and loans from parents to their FDI affiliates. The FDI position is also a net value in the sense that capital returned or loan repayments to the parent by the FDI affiliate are subtracted from the total position.
[36] In 1998 the net FDI capital inflows (without a current-cost adjustment) to petroleum and natural gas were $59 billion, but the change in the FDI position (valued at historical cost) was only $9 billion. A large part of the difference arose from the divergent valuations of the merger of British Petroleum (now BP Amoco plc, United Kingdom) and Amoco by the two methods. The capital inflows and transaction values of the merger were $57 billion. But, when the position in petroleum and natural gas was estimated, the transaction value was reduced by $50 billion, largely because the transaction value of the merger far exceeded the book value of the assets exchanged. See, Bureau of Economic Analysis, "Foreign Direct Investment in the United States, 1998," *Survey of Current Business* (September 1999), Table 5.
[37]Energy Information Administration, *Foreign Direct Investment in U.S. Energy in 1998*, (November 2000), p. 1. Web address: http://tonto.eia.doe.gov/FTPROOT/financial/fdi98.pdf (as of May 16, 2002).
[38]Scottish Power acquired PacifiCorp and Vivendi's (France) and Marubeni's (Japan) Sithe Energy acquired GPU assets. See Energy Information Administration, *U.S. Energy Assets Attract Foreign Investment in 1999* (March 23, 2001), Table A2. Web address: http://www.eia.doe.gov/finance/fdi/adindex.html (as of May 15, 2002).
[39]Powergen (United Kingdom) acquired LG&E Energy; National Grid (United Kingdom) acquired assets from NEES, a transmission and distribution company; and Orion Power Holdings (Japan) acquired Duquesne Light generation assets. See Energy Information Administration, *Sharp Increase in Acquisitions by Direct Foreign Investors of U.S. Energy Assets in 2000 Due to Purchase of Integrated U.S. Petroleum Company* (September 27, 2001), Table A2. Web address: http://www.eia.doe.gov/finance/fdi/advance/adindex.html (as of May 15, 2002).
[40]Energy Information Administration, *Sharp Increase in Acquisitions by Direct Foreign Investors of U.S. Energy Assets in 2000 Due to Purchase of Integrated U.S. Petroleum Company* (September 27, 2001), Table A2. Web address: http://www.eia.doe.gov/finance/fdi/advance/adindex.html (as of May 16, 2002).
[41]U.S.-affiliated companies ("DIA affiliates") are foreign businesses in which a U.S. entity holds an ownership interest of 10 percent or more.
[42]Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (September 2001), Table 1. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901USDIA2K.pdf (as of May 15, 2002).
[43]Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (September 2001), Table 17. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901USDIA2K.pdf (as of May 15, 2002).
[44]Bureau of Economic Analysis, "U.S. Direct Investment Abroad," *Survey of Current Business* (September 2001), Table 17. Web address: http://www.bea.doc.gov/bea/ARTICLES/2001/09september/0901USDIA2K.pdf (as of May 15, 2002).
[45]Energy Information Administration, *Foreign Direct Investment in U.S. Energy in 1998*, (November 2000), p. 1. Web

address: http://tonto.eia.doe.gov/FTPROOT/financial/fdi98.pdf (as of May 15, 2002).
[46]Williams Companies, "Williams Acquires Interest in Venezuelan Project" (November 23, 2000). Web address: http://www.williams.com/news/newsreleases/rel628.html (as of May 16, 2002).
[47]Energy Information Administration, *Performance Profiles of Major Energy Producers 2000*, DOE/EIA-0206(2000) (Washington, DC, January 2002), Table 6. Web address: http://www.eia.doe.gov/emeu/perfpro/table6.html (as of May 16, 2002).
[48]Reliant Energy, "Reliant Energy Completes Final Phase of $2.2 Billion UNA Acquisition" (March 1, 2000). Web address: http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=105&STORY=/www/story/03-01-2000/0001154619 (as of May 16, 2002).
[49]Reliant Energy, "Reliant Energy Sells El Salvadorian Interests" (October 5, 2000). Web site: http://www.reliantresources.com/corporate/news/detail/1,3579,CID83,00.html?2id=227285&1id=227037.
[50]Reliant Energy, "Reliant Energy Completes Sale of Brazilian Interests" (October 24, 2000). Web address: http://www.reliantresources.com/corporate/news/detail/1,3579,CID58,00.html?2id=227285&1id=227037.
[51]Reliant Energy, "Reliant Energy Completes Sale of Brazilian Interests," (December 7, 2000). Web address: http://www.reliantresources.com/corporate/news/detail/1,3579,CID12,00.html?2id=227285&1id=227037.
[52]Alliant Energy Corp., *2000 Annual Report*, p. 10. Web address: http://www.alliantenergy.com/investors/ann/2000/ann/letter.htm (as of May 13, 2002).
[53]TXU Electric, "TXU acquires 51 percent of Stadtwerke Kiel in Germany" (July 13, 2000). Web address: http://www.txu.com/us/newsroom/pressrel/detail.asp?ID=248.
[54]UtiliCorp United Inc., *2000 Annual Report*, p. 14. Web address: . http://www.mobular.com/customers/ccbn/7/7/19/index.html (as of May 13, 2002).
[55]Southern Company, "Southern completes sale of Argentina's Alicurá to AES" (August 28, 2000). Web address: http://newsinfo.southernco.com/article.asp?mnuType=sub&mnuItem=ni&id=942&mnuOpco=soco&category=000 (as of May 13, 2002).
[56]Net DIA capital outflows are made up of several components and acquisitions of foreign assets by U.S. investors are only one of them. Each of the other components of DIA capital outflows may include negative elements or reverse DIA capital flows. Divestitures of foreign assets by U.S. direct investors are reverse DIA equity capital flows. An example of such a transaction occurred in 1999, National Power (since renamed International Power, United Kingdom) purchased the supply business of Midlands Electricity Board from GPU and CINergy for $0.3 billion. Loan repayments by DIA affiliates to their U.S. parents, which are not usually publicly reported, are reverse DIA capital flows. Finally negative reinvested earnings are reverse DIA capital flows. Reinvested earnings are negative when DIA affiliates incur losses, distribute earnings to their U.S. parents in excess of the affiliates' current earnings, or when the current-cost adjustments to reinvested earnings exceeds its value before the adjustment.

URL: http://www.eia.doe.gov/emeu/finance/fdi/2000_fdi.pdf