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German outward FDI and its policy context

by

Ralph Hirdina and Thomas Jost*

German companies started early to internationalize their operations. They ranked among the top three of foreign investors measured by the value of their outward foreign direct investment (OFDI) stock by the end of 2008.¹ German FDI abroad increased in close connection with the rise of German exports, and received a new stimulus through the further integration of European markets and the opening up of Eastern Europe in the 1990s. After record FDI outflows in the boom years 2006 to 2008, German OFDI dropped markedly in 2009 - but less than in the previous downturn between 2002 and 2003. In recent years, the German Government has continued to provide a sound legal framework for German companies going abroad by creating a wide network of bilateral treaties and offering support as well as information services as the internationalization of the German corporate sector improves the competitiveness of the country's economy and promotes exports.

Trends and developments

Country-level developments

In search of new markets and to support export growth, market-seeking German companies started expanding abroad early in the 1960s and 1970s. In times of strong real appreciations of the German currency and an accompanying loss of price competitiveness, efficiency-seeking FDI in countries with lower wage costs gained importance.² At the end of the 1980s and during the early 1990s, OFDI of German multinational enterprises (MNEs) received a new stimulus from

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¹ UNCTAD, *World Investment Report 2009: Transnational Corporations, Agricultural Production and Development* (New York and Geneva, United Nations, 2009).

² Thomas Jost and Horst Rottmann, "Umfang und Motive deutscher Direktinvestitionen in den Industrieländern," *LIST-Forum für Wirtschafts- und Finanzpolitik*, vol. 30 (2004), pp. 153-166.

the EU Single Market Program and the opening up of the Eastern European economies.³ The European Monetary Union and the introduction of the Euro in 1999 further raised German OFDI. It grew nearly tenfold since 1990, to reach a stock of US\$ 1,450 billion at the end of 2008, making Germany the third largest investor in the world (annex table 1).

In the boom years from 2006 to 2008, annual German OFDI flows climbed to record values of up to US\$ 163 billion in 2007 (annex table 2). The worldwide financial and economic crisis started to dampen this growth in the beginning of the fourth quarter in 2008. In 2009, OFDI fell by 61% (compared to 2007), reaching a total of US\$ 63 billion. The decline in FDI was in line with the worldwide downward trend and paralleled the fall of domestic investments of the corporate sector. Compared to the previous bust in 2002 and 2003, OFDI decreased much less in relative terms, and the 2009 level of outflows was still the seventh highest on record.

In the past, German companies heavily invested abroad in the services sector: it accounted for nearly three quarters of the value of Germany's OFDI stock at the end of 2007, followed by the manufacturing sector (26%) (annex table 3).⁴ Foreign investments in the primary sector (of less than 1%) play only a minor role. In the services sector, the major investments by value (46%) were made in the finance and insurance sector, reflecting the strength of several German banks and insurance companies (which belong to the major players in world financial markets).⁵ The success of Germany in the export of automobiles, machinery and equipment led to strong investments abroad in the sector of trade and repair of motor vehicles and personal as well as consumer goods; these accounted for 17% of the German OFDI stock in the services sector at the end of 2007.⁶

In recent years, German OFDI grew strongly in the electricity, gas and water supply as well as in the transport and telecommunications sectors (annex table 3). The liberalization and privatization process in the European Union network industries led to a wave of large-scale cross-border investments of German MNEs. In the energy and water supply sectors, the OFDI stock grew 15-fold, starting out from a low level of US\$ 4 billion in 2000, to reach US\$ 58 billion in 2007. In the same period, FDI abroad in the transport and telecommunications sectors increased tenfold, from \$7 billion to \$67 billion.⁷

Manufacturing accounts for a quarter of the value of German OFDI. Within the manufacturing sector, German companies heavily invest in chemicals/chemical products, motor vehicles, trailers and semi-trailers, as well as machinery and equipment; they account for 30%, 20% and 10% of all German OFDI in the secondary sector, respectively. Foreign affiliates of German MNEs of the manufacturing sector employ 2.8 million workers - more than half of all people

³ Nigel Pain, "Fiscal policies, European integration and structural changes in the location of German foreign direct investment," in Heinz Herrmann and Robert Lipsey, eds., *Foreign Direct Investment in the Real and Financial Sector of Industrial Countries* (Berlin: Springer, 2003), pp. 96-136.

⁴ FDI stock data of the Deutsche Bundesbank based on a compulsory annual survey of German companies show FDI of German firms according to the sector of the final investment object. These data are published with a time lag of one-and-a-half year. Therefore, detailed stock data are only available as of end of 2007.

⁵ Claudia Buch and Alexander Lipponer, "FDI versus exports: evidence from German banks," *Journal of Banking and Finance*, 31 (2007), pp. 805-826.

⁶ Sebastian Krauthaim, "Export-supporting FDI," *Discussion Paper Series 1: Economic Studies*, No 20/2009, Economic Research Centre, Deutsche Bundesbank.

⁷ Part of the increase in the dollar value of the German outward FDI stock is due to the strong appreciation of the Euro against the US dollar (of 48%) in the period 2000 to 2007.

employed in all German foreign affiliates. The strong growth of employment in foreign affiliates of German firms in the 1990s – mainly resulting from investments in production facilities in new EU member countries (especially in the Czech Republic, Hungary, Poland, and Slovakia) - slowed down in the past decade. But from time to time, criticism arises in the German public as regards possible detrimental effects of German FDI abroad, especially concerning job relocations. In contrast to these fears, the strong increase in German OFDI was only partially motivated by lower wage costs abroad. It was mainly driven by the search for new markets as well as by marketing, distribution and customer service motives.⁸ Overall, German OFDI has strengthened the competitiveness of the German corporate sector and has contributed to investment and employment growth at home.⁹

Foreign investments of German firms are mainly concentrated in developed countries that are also the main target regions for German exports and that offer the factor inputs that German MNEs need for production (especially a highly qualified workforce). Developed countries account for 87% of the value of the OFDI stock (annex table 4). In the past decade, investments of companies abroad grew fastest in the new EU member countries and in certain other countries in Europe (notably the United Kingdom and Switzerland). The EU accounted for more than 57% of the German OFDI stock in 2007. In 2008 and 2009, German FDI in the European neighbor countries continued to be strong. This came partially at the cost of outward investment in North America and other developed countries outside Europe. Whereas OFDI in developing countries grew in line with the growth of total OFDI,¹⁰ FDI outflows to Russia and Ukraine increased considerably during the past decade. The German OFDI stock in both countries grew 17-fold since 2000, to reach roughly US\$ 30 billion in 2007. German investments in this region were mainly driven by several large-scale investments in the energy and gas sectors. Well-equipped with large profits generated in past years, German energy MNEs went east to increase the security of energy supply and to capture new markets.

The corporate players

German MNEs have successfully internationalized their production facilities and operations abroad. Most of the large companies in the chemical, motor vehicle, machinery and equipment, telecommunications, and energy sectors, as well as the major banks and insurance companies, are now operating worldwide (annex table 5). The 30 largest German companies listed at the German stock exchange (the DAX-30) are highly internationalized. They employ more than half of their workforce abroad (in 2008: 57%).¹¹ The largest outward mergers and acquisitions (M&As) in recent years (annex table 6) were made by well-known global players like Volkswagen AG, RWE AG, Siemens AG, Deutsche Telekom AG, and Allianz AG. Not only large German MNEs, but also a growing number of small and medium-sized companies

⁸ In various surveys of the German Industry Federation, German MNEs ranked the market-seeking motive as the most important driver of foreign investments. See e.g. DIHK, "Auslandsinvestitionen in der Industrie: Frühjahr 2010," *Ergebnisse der DIHK-Umfrage bei den Industrie- und Handelskammern* (2010), available at www.dihk.de.

⁹ Deutsche Bundesbank, "German foreign direct investment (FDI) relationships: recent trends and macroeconomic effects," *Deutsche Bundesbank Monthly Report*, September 2006, p. 43-58.

¹⁰ On the determinants of German FDI in developing countries, see Thomas Jost and Peter Nunnenkamp, "Bestimmungsgründe deutscher Direktinvestitionen in Entwicklungs- und Schwellenländern," *Kieler Arbeitspapier* 1124, Kiel Institute for World Economics, 2002.

¹¹ Ernst&Young, "Entwicklung der Dax-30-Unternehmen 2007/08: Eine Analyse wichtiger Bilanzkennzahlen," available at: www.ey.com.

expanded their operations abroad. The total number of foreign affiliates of German companies reached 28,929 and the number of parent companies 6115 at the end of 2007.¹²

Effects of the current global crisis

The global financial crisis and recession seriously affected the German economy. German companies suffered from a sharp decline of exports and falling profits. In 2009, German OFDI fell by 53% against 2008, to reach US\$ 63 billion. The decline in German OFDI in 2009 was mainly due to increased long-term credits of financing affiliates of German companies located in the Netherlands to their parents in Germany that were financed by the emission of securities abroad. These intra-firm financial transactions resulted in net disinvestments abroad via intra-company loans that explained three quarters of the decline in German OFDI abroad.¹³ Despite the difficult economic situation, German equity capital investments abroad remained remarkably strong, declining by only 27% against the record value of 2008 and amounting to US\$ 66 billion in 2009. Especially German energy providers like RWE AG and E.ON AG were very active in cross-border M&As and greenfield investments to expand their market share and to improve their competitive position in foreign markets (annex tables 6 and 7).

The policy scene

There are three main international legal frameworks for German FDI: the European Treaty, Treaties concluded by the European Union and national BITs. German MNEs have concentrated a large part of their OFDI in the EU member states. Therefore, the European treaties are a very important framework for Germany FDI activities. The EU guarantees free trade of goods and services for all members of the European Union and the free movement of capital among EU member states and with third states. In case of violations of these rights, the European Commission can bring a case before the European Court of Justice.¹⁴ The EU has concluded several free trade agreements that contain declarations of supporting FDI flows between the EU and its partner states.¹⁵ Since the Lisbon treaty took effect on December 1, 2009, the EU has gained new competences concerning FDI.¹⁶ However, the practical implications of the Lisbon Treaty for Europe's FDI-policy remain uncertain (e.g. the Lisbon Treaty fails to clarify the exact definition of FDI).¹⁷

The EU and the United States have the most important bilateral trade and investment relations in the world. The United States is the single most important target country for German OFDI.

¹² In the German FDI stock statistics, the reporting threshold was changed several times. Therefore, a consistent time series of the development of the number of foreign affiliates is not available.

¹³ Deutsche Bundesbank, "Die deutsche Zahlungsbilanz für das Jahr 2009," *Monatsbericht* (März 2010), p. 30.

¹⁴ The Treaty of Lisbon, December 1, 2009: Article 34 TEU (ex-Art. 28 TEU), article 56 TEU (ex-Art. 49 TEU), article 63 TEU (ex-Art. 56 TEU), article 258 TEU (ex-Art. 226 TEU) EU; available at: <http://eur-lex.europa.eu/en/treaties/index.htm>.

¹⁵ Jan Ceyskens and Nicola Sekler, "Bilateral investment treaties (BITs) of Germany: effects on economic, social and ecological regulation in host countries and models to implement the responsibility of transnational corporations," *Forschungsprojekt der Hans-Böckler-Stiftung an der Universität Potsdam* (2005), p. 7, available at: www.opus.kobv.de/ubp/volltexte/2005/612/pdf/BITSSStudie.pdf

¹⁶ The Treaty of Lisbon, op. cit.

¹⁷ Daman Vis-Dumbar, "The Lisbon Treaty: implications for Europe's international investment agreements," *Trade Negotiations Insights*, vol. 8, no. 9, November 2009, available at: <http://ictsd.org/i/news/tni/59585/>; José Guimón, "It's time for an EU investment promotion agency," *Columbia FDI Perspectives*, No. 20, March 4, 2010, available at: www.vcc.columbia.edu.

Among the triad of North America, the EU and Japan, FDI flows are not restricted in any way and are not governed by BITs.¹⁸

Already in the 1950s, Germany fully liberalized its capital exports and the German Government recognized the need for a reliable legal framework for OFDI.¹⁹ In 1959, Germany signed its first bilateral investment treaty (BIT) with Pakistan (renewed on December 1, 2009), also became the first BIT worldwide.²⁰ Until March 2010, Germany had signed 138 BITs; it was the leading position in the world - along with Switzerland (116 BITs) and China (123 BITs).²¹ Most of Germany's BITs were concluded in the 1990s, corresponding to the worldwide increase in the number of BITs after the collapse of the former Soviet Unions and its partner states.²² To date, 127 of the 138 signed BITs have been ratified.²³ For German companies, BITs are an important tool for protecting their investment interests abroad. For example, after the terrorist bombing of Mumbai in November 2008, German companies asked for higher security standards in India. The basis for such claims was the BIT with India that came into force in 1998. Volkswagen, a big German car producer, emphasized that its planned investment in India would need high legal investment and security standards.²⁴ In 2009, the new Volkswagen group plant in India started its operation with a production capacity of 110,000 cars per year, the largest greenfield investment of a German company in India ever.

Within these legal frameworks, the German Government offers companies many services and support for FDI in developing countries. The German Government for example gives guarantees for FDI that may fail because of political risks. But those guarantees are only granted in case of a minimum of legal protection for FDI by the host countries - either in form of BITs or a stable legal system.²⁵ The state-owned German bank group "Kreditanstalt für Wiederaufbau" (KfW) and the "Deutsche Investitions- und Entwicklungs mbH" (DEG) offer credits for FDI and corresponding advisory services.²⁶ In 2009, the German Government granted investment guarantees for 76 FDI projects in 24 developing countries, with a total value of US\$ 4.2 billion.²⁷ Beyond that, the German system of foreign chambers of commerce (Deutsche Auslandshandelskammern) helps to make German FDI successful by offering advisory services.²⁸ German foreign chambers of commerce can be found in 120 cities in 80 countries worldwide.²⁹

¹⁸ Ceysens and Sekler, op. cit., p. 24.

¹⁹ Ceysens and Sekler, op. cit., p. 25.

²⁰ Karl P. Sauvant and Lisa E. Sachs, eds., *The Effect of Treaties on Foreign Direct Investment: Bilateral Investment Treaties, Double Taxation Treaties, and Investment Flows* (New York : Oxford University Press, 2009).

²¹ UNCTAD, "Total number of bilateral investment treaties concluded," available at:

www.unctad.org/sections/dite_pcb/docs/bits; Bundesministerium für Wirtschaft und Technologie, "Bilaterale Investitionsförderungs- und Schutzverträge," available at: www.bmwi.de.

²² Ceysens and Sekler, op. cit., p. 23.

²³ Bundesministerium für Wirtschaft und Technologie, op. cit.

²⁴ Volker Müller, "Deutsche Firmen fordern mehr Sicherheit in Indien", *Welt Online*, November 28, 2008, available at: www.welt.de/politik/article2799353/Deutsche-Firmen-fordern-mehr-Sicherheit-in-Indien.html.

²⁵ Bundesministerium für Wirtschaft und Technologie, "Ratgeber für kleine und mittlere Unternehmen", 30.10.2007, available at: www.bmwi.de/BMWi/Navigation/Service.html.

²⁶ Bundesministerium für Wirtschaft und Technologie, op. cit.

²⁷ Bundesministerium für Wirtschaft und Technologie, "Investitions Garantien 2009: Starke Nachfrage auch in der Wirtschaftskrise," Pressemitteilung, January 7, 2010, available at: www.bmwi.de.

²⁸ Deutscher Industrie und Handelskammertag e.v., "Deutsche Außenhandelskammern, Aufgaben," available at: <http://ahk.de/ueber-ahk/ahk-aufgaben/>.

²⁹ Deutscher Industrie und Handelskammertag e.v., "Deutsche Außenhandelskammern, Standorte," available at: <http://ahk.de/ahk-standorte/>.

Outlook

As a highly export-oriented country, Germany will continue to expand its presence in foreign markets via FDI. The pace of recovery of OFDI flows to pre-crisis levels will depend largely on the future development of the economies of Germany's major partner countries in the European Union and North America. East and South-East Asian markets are also expected to play a greater role as destinations for German OFDI in the future. According to a recent survey of the German Industry Federation (DIHK) German companies plan to step up investments in international sales and distribution networks as well as production facilities in key foreign markets in 2010.³⁰

Additional readings

Ceyssens, Jan and Nicola Sekler, "Bilateral investment treaties (BITs) of Germany : effects on economic, social and ecological regulation in host countries and models to implement the responsibility of transnational corporations," *Forschungsprojekt der Hans-Böckler-Stiftung an der Universität Potsdam*, 2005, available at:

<http://opus.kobv.de/ubp/volltexte/2005/612/pdf/BITSSStudie.pdf>.

Deutsche Bundesbank, "German foreign direct investment (FDI) relationships: recent trends and macroeconomic effects," *Deutsche Bundesbank Monthly Report* (September 2006), pp. 43-58, available at:

www.bundesbank.de/download/volkswirtschaft/mba/2006/200609mba_en_foreign.pdf.

Deutsche Bundesbank, "Special statistical publication 10: foreign direct investment stock statistics," available at: www.bundesbank.de/download/statistik/stat_soner/statso10_en.pdf.

Deutsche Bundesbank, "Die deutsche Zahlungsbilanz für das Jahr 2009," *Deutsche Bundesbank Monatsbericht* (März 2009), pp. 17-32, available at:

www.bundesbank.de/download/volkswirtschaft/monatsberichte/2010/201003mb_bbk.pdf.

Jost, Thomas and Horst Rottmann, "Umfang und Motive deutscher Direktinvestitionen in den Industrieländern," *LIST-Forum für Wirtschafts- und Finanzpolitik* (30) (2004), pp. 153-166.

Useful website for FDI flows and stocks statistics

www.bundesbank.de/statistik/statistik_zeitreihen.en.php

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The Vale Columbia Center on Sustainable International Investment (VCC), led by Dr. Karl P. Sauvant, is a joint center of Columbia Law School and The Earth Institute at Columbia University. It seeks to be a leader on issues related to foreign direct investment (FDI) in the global economy. VCC focuses on the analysis and teaching of the implications of FDI for public policy and international investment law.

³⁰ DIHK, op. cit.

Statistical annex

Annex table 1. Germany: outward FDI stock, ^a 1990-2008

(US\$ billion)

Economy	1990	1995	2000	2005	2007	2008
Germany	151.6	268.4	537.8	978.1	1205.1	1450.9 ^b
Memorandum: comparator economies						
United States	430.5	699.0	1,316.2	2,241.7	2,916.9	3,162.0
United Kingdom	229.3	304.9	897.8	1,198.6	1,841.0	1,510.6
France	112.4	204.4	445.1	868.5	1,291.6	1,397.0
Japan	201.4	238.5	278.4	386.6	542.6	680.3

Sources: For Germany, Deutsche Bundesbank, "Special statistical publication 10: foreign direct investment stock statistics," available at: www.bundesbank.de/download/statistik/stat_soner/statso10_en.pdf. For comparator countries, UNCTAD's FDI/TNC database, available at: <http://stats.unctad.org/fdi/>.

^a Due to different statistical recording, the data for the selected economies are not fully comparable.

^b UNCTAD estimate.

Annex table 2. Germany: outward FDI flows, 2000-2009

(US\$ billion)

Economy	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Germany	56.7	39.7	19.0	5.9	20.5	75.9	118.8	162.7	135.2	62.9
Memorandum: comparator economies										
United States	142.6	124.9	134.9	129.4	294.9	15.4	224.2	378.4	311.8	
United Kingdom	233.4	58.9	50.3	62.2	91.0	80.8	86.3	275.5	111.4	
France	177.4	86.8	50.4	53.1	56.7	115.0	121.4	224.7	220.0	
Japan	31.6	38.3	32.8	28.8	31.0	45.8	50.3	73.5	128.0	

Sources: For Germany, Deutsche Bundesbank, "Zahlungsbilanzstatistik, Statistisches Beiheft 3," March 2010, available at: www.bundesbank.de/volkswirtschaft/zahlungsbilanzstatistik/2010/zahlungsbilanzstatistik032010.pdf. For comparator countries, UNCTAD's FDI/TNC database, available at: <http://stats.unctad.org/fdi/>.

Annex table 3. Germany: distribution of outward FDI stock by economic sector and industry, ^a 2000, 2007

(US\$ billion)

Sector/industry	2000	2007
All sectors/industries	537.8	1205.1
Primary	4.8	9.3
Agriculture, hunting, forestry, and fishing	0.6	1.2
Mining, quarrying and petroleum	4.2	8.1
Secondary	165.4	312.3
Food, beverages and tobacco	3.7	7.9
Chemicals and chemical products	49.0	93.7
Rubber and plastic products	5.4	14.4
Other non-metallic mineral products	7.2	19.2
Basic metals	2.3	11.0
Fabricated metal products, except machinery and equipment	4.5	12.7
Machinery and equipment	15.1	32.3
Electrical machinery and apparatus	16.4	21.1
Radio, television and communication equipment	5.7	10.1
Medical, precision and optical instruments	6.5	10.6
Motor vehicles, trailers and semi-trailers	38.8	61.5
Services	367.6	883.4
Electricity, gas, and water supply	3.9	57.7
Trade, repair of motor vehicles, motorcycles and personal and household goods	65.3	152.9
Transport and communication	7.3	66.9
Finance and insurance	215.8	410.5
of which: Monetary Intermediation	56.2	101.7
Other monetary intermediation	126.3	230.7
Insurance and pension funding (except compulsory social security)	24.0	54.1
Real estate, renting and business activities	69.2	182.3
of which: Holding companies	41.6	102.7

Source: Deutsche Bundesbank, "Bestandserhebung über Direktinvestitionen," Statistische Sonderveröffentlichung 10, April 2009, available at: www.bundesbank.de.

^a Primary and secondary (i.e. through dependent holding companies abroad) German direct investment abroad (consolidated), by economic activity of the foreign investment enterprise.

Annex table 4. Germany: geographical distribution of outward FDI stock,^a 2000, 2007
(US\$ billion)

Region/economy	2000	2007
World	537.8	1205.1
Developed economies	479.6	1043.2
Europe	262.4	740.6
Austria	17.1	37.1
Belgium	22.1	50.8
Czech Republic	6.7	29.6
Finland	1.0	7.4
France	30.5	59.9
Hungary	6.6	23.6
Ireland	7.6	17.1
Italy	17.4	38.8
Luxembourg	18.5	57.0
Malta		33.6
Netherlands	33.7	58.4
Poland	7.3	25.9
Spain	12.5	28.1
Sweden	6.1	15.2
Switzerland	15.8	40.8
United Kingdom	50.1	169.0
North America	203.1	277.8
Canada	6.0	12.1
United States	197.1	265.7
Other developed economies	14.1	24.8
Australia	5.0	12.1
Japan	8.9	12.1
Developing economies	54.9	127.0
Africa	4.4	8.8
South-Africa	2.8	6.4
Asia and Oceania	17.5	70.0
China	5.2	20.8
India	1.4	6.0
Singapur	4.5	10.3
Korea, Rep. of	2.8	7.1
Latin America and the Carribean	24.4	48.2
Cayman Islands	3.1	14.1
Brazil	7.9	16.6
South-East Europe and CIS	3.3	34.8
Russia	1.4	23.3
Ukraine	0.3	6.2

Source: Deutsche Bundesbank, "Bestandserhebung über Direktinvestitionen,"
Statistische Sonderveröffentlichung 10, April 2009, available at: www.bundesbank.de.

^a Primary and secondary (i.e. through dependent holding companies abroad) German direct investment abroad (consolidated), by economic activity of the foreign investment enterprise.

Annex table 5. Germany: Top MNEs, ranked by foreign assets, 2008

(US\$ million)

Rank	Name	Industry	Foreign assets	Transnationality Index (2007) ^a
Non-financial MNEs				
1	E.ON AG	Electricity, gas and water	141,168	53.6
2	Volkswagen Group	Motor vehicles	123,677	56.9
3	Siemens AG	Electrical and electronic equipment	110,018	72.0
4	Daimler AG	Motor vehicles	87,927	55.5
5	Deutsche Telekom AG	Telecommunications	95,019	47.8
6	BMW AG	Motor vehicles	63,201	56.2
7	Deutsche Post AG	Transport and storage	72,135	46.4
8	RWE Group	Electricity, gas and water	53,557	42.3
9	BASF AG	Chemicals	43,020	57.9
10	Linde AG	Chemicals	29,847	89.5
11	Metro AG	Retail	24,983	57.8
12	Thyssenkrupp AG	Metal and metal products	30,578	54.5
13	Bayer AG	Pharmaceuticals	26,317	43.8
Financial MNEs				
				Internationalization Index (2007)^b
1	Deutsche Bank AG		3,150,820	74
2	Allianz SE		1,367,062	76
3	Hypo Real Estate Holding		600,363	37
4	Muenchener Rueckversicherung AG		308,179	65

Sources: UNCTAD's FDI/TNC database, available at: <http://stats.unctad.org/fdi/>.

^a UNCTAD's Transnationality Index is the average of the following three ratios: foreign assets to total assets, foreign sales to total sales and foreign employment to total employment.

^b UNCTAD's Internationalization Index is calculated as the number of foreign affiliates divided by the number of all affiliates.

Annex table 6. Germany: main M&A deals, by outward investing firm, 2007-2009

Year	Acquiring company	Target company	Target industry	Target economy	Shares acquired (%)	Transaction value (US\$ million)
2009	RWE AG	Essent NV	Electricity, energy	Netherlands	100.0	10,410.7
2009	E.on AG	Severneftegazprom	Coal, oil, natural gas	Russia	25.0	3,958.7
2009	BASF AG	Ciba Specialty Chemicals	Chemicals	Switzerland	82.9	2,576.3
2009	K+S AG	Morton International Inc	Mining	United States	100.0	1,675.0
2009	Deutsche Telekom AG	OTE SA	Telecommunications	Greece	5.0	1,043.6
2009	Nordzucker AG	Danisco Sugar	Consumer goods	Denmark	100.0	938.6
2009	Munich Re	HSB Group Inc.	Insurance	United States	100.0	739.0
2008	Fresenius SE	APP Pharmaceuticals Inc	Pharmaceutics	United States	100.0	5,628.0
2008	SAP AG	Business Objects SA	Software	United States	78.0	5,511.0
2008	Henkel AG & Co. KGaA	Natl Starch& Chem Co-Adh.	Consumer goods	United States	100.0	5,506.9
2008	Volkswagen AG	Scania AB	Motor vehicles, trucks	Sweden	16.8	4,377.5
2008	Deutsche Telekom AG	OTE SA	Telecommunications	Greece	20.0	4,009.3
2008	Allianz SE	Hartford Fin Svcs Group Inc	Insurance	United States	23.7	2,500.0
2008	Heinrich Bauer Verlag KG	EMAP Consumer Media	Media	United Kingdom	100.0	1,435.1
2007	Allianz SE	AGF	Insurance	France	35.4	11,106.6
2007	Merck KGaA	Serono	Pharmaceutics	Switzerland	66.0	8,560.1
2007	Hypo Real Estate	DEPFA Bk PLC	Banking	Ireland	100.0	7,847.1
2007	E.on AG	OGK-4	Coal, oil, natural gas	Russia	47.4	3,947.3
2007	Siemens Automation	UGS Corp	Electronics	United States	100.0	3,500.0
2007	Tui Travel	First Choice Holidays PLC	Travel industry	United Kingdom	100.0	3,366.9
2007	Eurex AG	Intl Sec Exchange	Financial services	United States	100.0	2,821.4

Source: Thomson ONE Banker, Thomson Reuters.

Annex table 7. Germany: main greenfield projects, by outward investing firm, 2007-2009

(US\$ million)

Year	Company name	Destination economy	Investment	Sector	Business activity
2009	RWE	Netherlands	2,857.6	Coal, oil and natural gas	Electricity
2009	E.on	Equatorial Guinea	1586.0 ^a	Coal, oil and natural gas	Manufacturing
2009	Volkswagen	Spain	1068.7 ^a	Automotive OEM	Manufacturing
2009	Daimler AG	India	1,014.0	Automotive OEM	Manufacturing
2009	Wacker	USA	1,000.0	Chemicals	Manufacturing
2009	Mühlbauer	USA	986.1 ^a	Semiconductors	Manufacturing
2009	BASF	Quatar	899.9 ^a	Chemicals	Manufacturing
2008	ThyssenKrupp (TK)	Brazil	5,200.0	Metals	Manufacturing
2008	Q-Cells AG	Mexico	3,500.0	Electronic components	Manufacturing
2008	RWE	Poland	2,320.0	Coal, oil and natural gas	Electricity
2008	MAN	Russia	2,058.0	Wood products	Manufacturing
2008	Marquard & Bahls	USA	1,800.0	Coal, oil and natural gas	Logistics & distribution
2008	Daimler AG	Hungary	1,239.6	Automotive OEM	Manufacturing
2008	WPD	France	1,200.0	Alternative/renewable energy	Electricity
2007	E.on	Turkey	3,167.7	Coal, oil and natural gas	Manufacturing
2007	Infineon Technologies	Singapore	2,703.0	Semiconductors	Manufacturing
2007	E.On	Belgium	2,197.0	Coal, oil and natural gas	Electricity
2007	Conergy	Australia	1,800.0	Alternative/renewable energy	Electricity
2007	ECE Projekt Management	Romania	1,469.0	Real Estate	Construction
2007	Volkswagen	USA	1,000.0	Automotive OEM	Manufacturing
2007	E.On	Russia	1,000.0	Coal, oil and natural gas	Electricity
2007	Wacker	Singapore	1,000.0	Electronic components	Manufacturing

Source: fDi Intelligence, a service from the Financial Times Ltd.

^a Estimated.