

# **PROJECT FINANCE TRENDS:**

Key players, regions, and sectors

**A paper prepared for Focus on Finance  
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## 1. INTRODUCTION

Project finance, also known as limited- or non- recourse finance, is a method of funding projects in which repayment of debt (such as loans or bonds) is based on the revenue generated by that project. If the project fails to be viable, creditors do not have recourse to the sponsors' own funds for repayment of debt, and sponsors are not expected to spend extra money to cover shortfalls in revenue. (A sponsor is the party wishing to develop the project.) Most project finance transactions rely heavily on debt, with corporate sponsors typically providing only 20-40% funds necessary (equity) to finance a project.

**This method of financing is mostly used for new construction projects such as hydroelectric dams, oil and gas pipelines, and telecommunications infrastructure**, as well as for large industrial complexes, such as (petro)chemical plants, electricity plants and pulp & paper mills. It became very popular in the middle and late 1990s as method of development finance that attracted private investment into viable projects in emerging and developing countries. Governments liked project finance because it allowed private money to fund particular development needs; corporations preferred it because it allowed them to finance projects off their balance sheets. Bankers and investors found the project finance structure appealing because it allowed them to diversify their portfolios while sharing risks between many participants. Finally, NGOs became interested in project finance because it was a common financing method for many controversial development projects.

### 1.1 The project finance cycle

The cycle for project finance is often quite long; sometimes it takes years to consummate a project-financed deal. Therefore, there are several financial phases in a project: first may be a *pre-investment* period, where governments and/or potential investors perform feasibility studies. If a project is deemed to be feasible, a tender period typically follows; a project is *in tender* when the government authority has issued bidding or tender specifications, but has not yet awarded the contract to a sponsor. When the project is a private initiative, the tender phase is replaced by a phase in which the sponsor needs to obtain necessary governments permits, concessions, etc. Once a contract is awarded or all permits obtained, the sponsor then mandates a bank to put together a financial package that will allow the sponsor to draw down money from debt facilities such as loans or bonds. During this period, a project is considered to be *in finance*.

Two key steps during the financing phase are when the project reaches financial close, and when the project is signed. Transactions are *closed* when loan agreements between the borrower and the top-tier banks are finalized. After this, the top-tier banks will try to distribute part of the debt they have taken upon them to lower-tier banks. A deal is *signed* when all debt facilities, including those provided by lower-tier participating banks have been finalized and money is available for drawdown. As a result, during the financing cycle a deal can be closed but not yet signed.

## 1.2 Purpose and use of this survey

The purpose of this survey is to identify the key trends in project finance since 1998 on a regional and sectoral basis. The survey also identifies the financial institutions – both public and private – that are key players in these markets. Information provided in this report should be used for NGO strategy purposes only. **Because the analysis and league tables have not been verified by Dealogic, the report and its contents should not be widely re-published and disseminated.** If NGOs confront banks with this data, they should closely examine its limitations in terms of methodology as well as the context of the rankings. For example, the sectoral data only applies to closed and signed deals from 1998 – April 2003, so it is possible that a particular bank may not have any active project finance transactions currently. Similarly NGOs should be mindful that although ING bank, for example, ranked #3 in Eastern European gas project financing, it was actually only involved in one transaction.

## 1.3 Structure of report

The report begins with project finance trends on a geographical basis, beginning with a global perspective, then examining Emerging market countries, and the poorer Developing Countries. The report then examines project finance trends in various regions, and identifies the most popular types of transactions and the influential financial institutions for those regions.

The second half of the report examines key industrial sectors of interest to NGOs: gasfield development & pipelines, hydropower, mining, oilfield development & pipelines, pulp & paper, and finally wind farms. For each industrial sector, the leading banks are identified, along with the top regions. Additional information on the top banks in particular regions and sectors (e.g. top Latin America mining banks) are also provided.

## 1.4 Methodology

This information provided in this report relies on data from the ProjectWare, a product of Dealogic, a financial data gathering service based in London. Information provided in the ProjectWare database is imperfect, and is not always up-to-date. There are several assumptions and limitations that underpin the information provided in this report.

### *Timeframe*

The bank rankings in this report cover deals from January 1998 to April 2003. Because of the long financing cycle (described above) as of January 1, 1998, there were 30 projects had reached financial close, but not been signed. These projects were not included in the datasets. Also, NGOs should note that 2003 data only applies to the first four months of the year.

### *Rankings/ League Tables*

The rankings of “top banks” are based on ProjectWare league tables. ProjectWare uses various assumptions regarding how to calculate the value of various types of financial participation in transactions. For example, banks have been ranked on the basis of the total deal

value of the projects they finance, not necessarily only on the amount they directly lend. This approach allows banks to also be ranked on the basis of other financial contributions, including insurance and equity contributions. (Financial advising is not counted in the rankings.) Where dollar values have been specifically assigned among banks, those numbers are counted towards the bank's "total amount financed" figures; where they are not, the value of the tranche is split evenly among the syndicate. When a financial institution provides political risk insurance, ProjectWare calculates the institution's contribution as 10% of its potential exposure if it were to pay out on a policy.

With respect to financial arranging, the rankings may be confusing. First, the job of a financial arranger is to mobilize a debt package that often involves other banks; usually the arranger does not actually provide all the debt itself. But the ProjectWare league tables calculate rankings based on the entire amount of debt the bank arranged (or helped to arrange) in that tranche. In some cases, this has the effect of making a bank's financial arranging numbers higher than its "total amount financed" figure. Second, not all arrangers are equal: ProjectWare "gives more credit" to mandated arrangers than arrangers and co-arrangers. Finally, when figures are given for the number of financial arrangements, it refers to the number of projects arranged, not the number of tranches. (Often a bank may arrange several tranches for one project. The total project financing is sometimes divided up in separate tranches with each having a distinct interest rate, maturity, etc.)

Where banks are ranked in terms of their dominance, the rankings are based on closed and signed deals. In contrast, when countries and regions are ranked, it is calculated on basis of the total value of all projects, both in finance and those that have been signed.

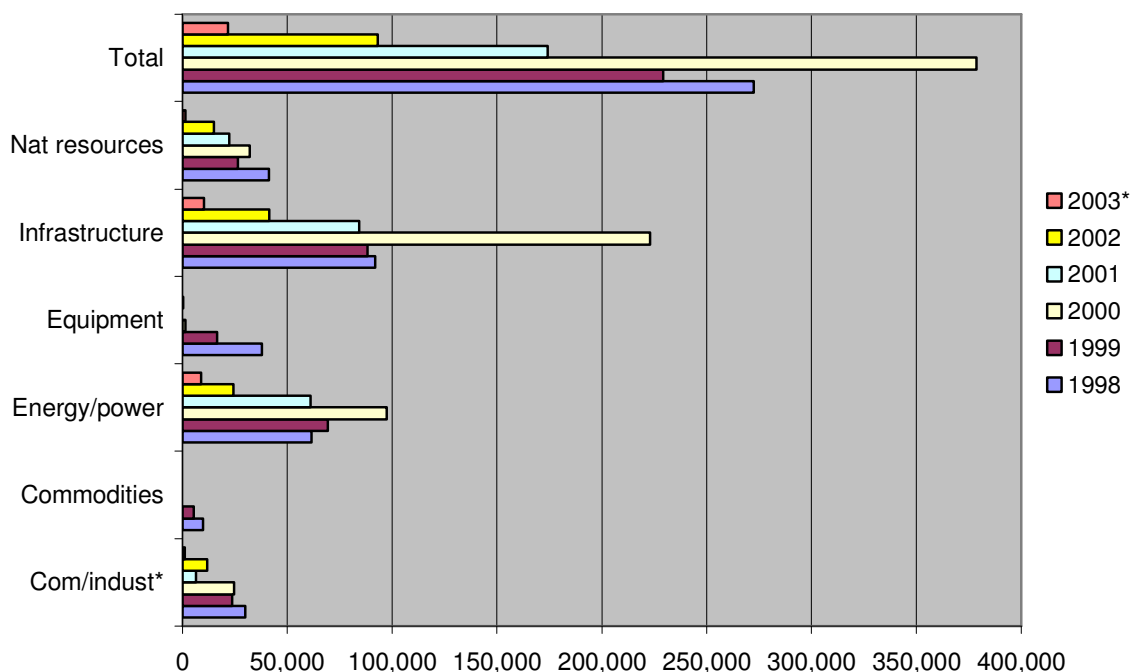
### *Country Classifications*

For purposes of this report, "Emerging Market" countries are defined as those listed on the 2003 OECD Development Assistance Committee (DAC) list of Official Aid Recipients. This category is relatively broad, encompassing very poor countries such as Chad, higher income countries such as Bahrain, central and eastern European countries, newly independent states of the former Soviet Union and more advanced developing countries such as Qatar. The DAC classifications can be found in Appendix I. When the term "Developing Countries" is used, it refers to the poorer countries listed in Part I of the DAC list.

A list of regional classifications can be found in Appendix II. It should be noted that for this survey the Western European countries of Gibraltar, Malta and Cyprus are included in Eastern Europe.

## 2. GLOBAL PROJECT FINANCE

**Global Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003**



\* Commercial/ industrial projects. Also note that in this chart, as with all charts in this report, 2003 data only covers four months from January – April 2003.

**The global project finance market has been steadily declining after reaching a 5-year peak in 2000.** In 2000, US \$378.7 billion worth of deals were signed and closed, with the majority of transactions occurring in the infrastructure sector -- in particular for telecommunications projects. But as the technology bubble burst in 2001, telecom deals declined sharply, dragging the entire project finance market down with it. However, it should be noted that the decline in project finance also has been consistent with the general downturn in global economic growth.

Investment banks are responding to this downturn in several ways: some have downsized their project finance teams, others starting to demand that project sponsors contribute more up-front equity, and finally banks are looking to financial advising contracts rather than increasing their lending exposure.<sup>1</sup> **Potential reforms posed by Basle II** (changing the way banks assess their risk and capital adequacy per the New Basle Capital Accord) **could further weaken the project finance market, particularly in higher-risk Emerging and Developing economies.** Basle II would require many banks to charge project finance transactions at a higher rate, which

<sup>1</sup> "Energy Banking; Still Pretty Tough," *Petroleum Economist*, 10 June 2003

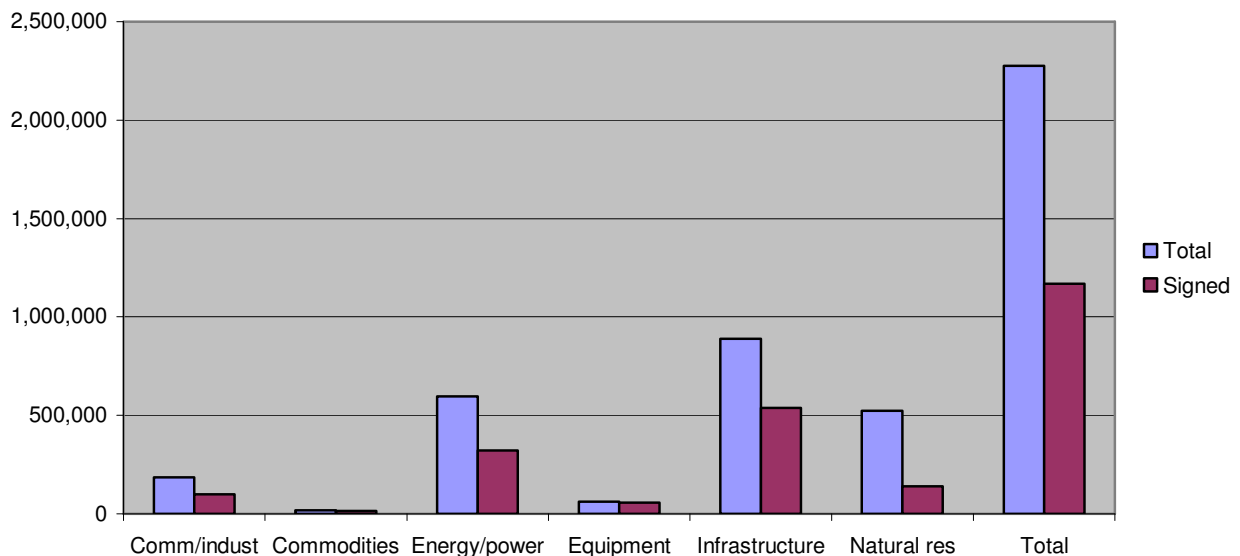
would thus force banks to classify most project finance deals as uneconomic from a capital perspective.<sup>2</sup>

As mentioned in the introduction, the project finance cycle is relatively long, with some projects languishing for years due to a variety of reasons – for example, economic or political conditions may force governments to put proposed projects on hold, or sponsors may take months gathering the equity needed to form the basis for a viable debt package. The graph below indicates that there was a total of US \$2.3 trillion worth of projects (in tender, in finance, or in the pre-approval stage) in the Dealogic database during 1998 – April 2003, although only about US \$1.1 trillion were been closed and signed.

## 2.1 Top Sectors

Among the various industries, the natural resource sector had a particularly high ratio of total v. closed and signed deals, while equipment transactions were more successful. Equipment transactions probably have a high success rate because such deals may be embedded as parts of larger project finance deals that are successfully entering the construction phase.

**Global Project Finance Deals  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003**



As noted, **the sector drawing the most global project finance dollars during the past five years has been infrastructure.** Infrastructure particularly began dominating the project finance market in 1999, when it began being consistently ranked as the top sector both in terms of number of deals and dollars signed. Driven by the boom in the high technology business, telecoms represented anywhere from a quarter to a half of infrastructure financing from 1998-2001. The second most popular sector was energy and power industry, which ranked as the

<sup>2</sup> Ashley, Paul, "Asset class under assault," *EuroMoney*, 1 Aug 2003.



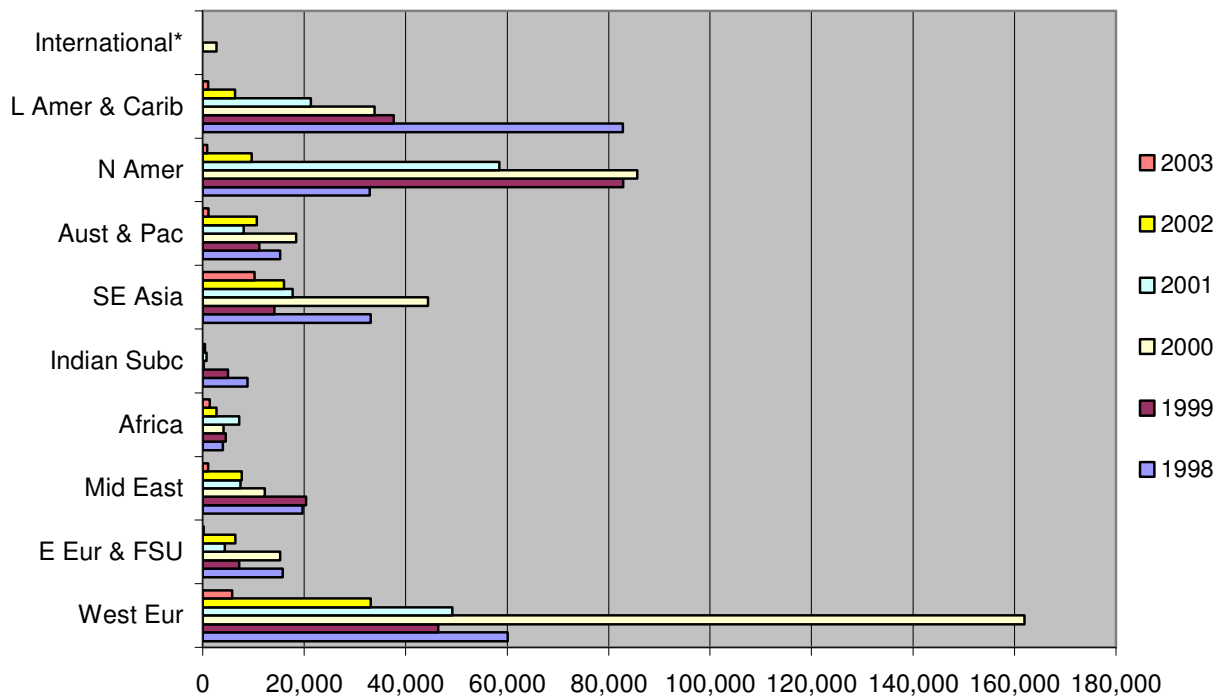
second strongest sector both in terms of dollar value and deal numbers. Wind projects are included in this sector, and during the past five years the number of signed wind power deals has fluctuated.

For some sectors, such as pulp and paper (considered a part of the commercial/ industrial sector), and natural resource exploration, project finance has never been the most common financing method. Rather, these activities rely more heavily on reinvestment of corporate earnings or traditional forms of on-balance sheet debt, such as bank loans or corporate general obligation bonds. However, in developing countries mining companies often finance hard-rocking mining operations in a non-recourse fashion, as do pulp and paper companies.

## 2.2 Top regions

In the mid- to late-1990s, project finance was touted as a way of bringing precious development dollars to the emerging markets. Although it became well-known as a vehicle for development finance, it also has been widely used in the developed world. **Western Europe has actually been the most popular region for project finance, followed by North America. The next most popular project finance destinations were Latin America/ Caribbean and Southeast Asia.** Although developed countries received the lion's share of project finance dollars in the past five years, NGOs have focused their attention on the project finance market because this type financing is commonly used for controversial mega-projects in the developing and emerging economies.

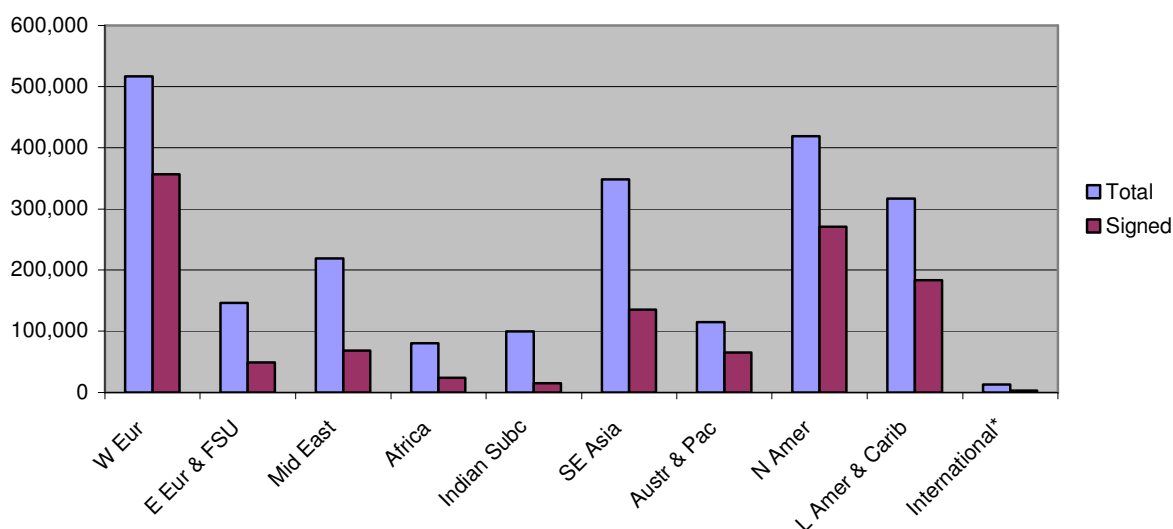
Global Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003



\* The International category includes a signed US\$1.8 billion submarine cable project between several Latin American countries and another signed submarine cable network valued at US\$884 million.

Again, comparing total deals with those that were closed and signed between 1998 – April 2003, industrialized regions tended to have a higher ratio of successfully completed deals based on dollar value. Rates in Western Europe tended to be about 69%, and rates in North America were about 64%. Other regions with completion ratios of over 50% (again based on the dollar value of the transactions, not number of deals) included Latin America and the Australia/Pacific regions. Signing and closing rates during this period were lowest in India, the Middle East and Eastern Europe.

**Global Project Finance Deals  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003**



\* International includes both signed and in finance projects: a US\$645 million Australia-Asia submarine cable that was in finance, a signed US\$1.8 billion Latin America submarine fiber optic network, an in-tender US\$440 million gas pipeline in Latin America, an in-tender US\$1.2 billion satellite project in Africa, a signed US\$884 million Asian undersea cable, an in-tender US\$1.6 billion Asian cable, and a US\$7 billion Asian gas pipeline.

## 2.3 Top banks

**Citigroup ranked as the world's top global project finance bank**, in terms of total amount of financing arranged and provided. The top 12 global project finance banks based on the dollar value of signed deals in the period January 1998 to April 2003 were:

Bank	Country	Amt. US\$ million	Percent
Citigroup Inc	USA	40,346.54	1.91
JP Morgan Chase & Co	USA	37,592.33	1.78
Bank of America Corp	USA	23,286.92	1.10
ABN Amro Holding NV	Netherlands	19,261.80	0.91
WestLB AG	Germany	18,970.00	0.90
Deutsche Bank AG	Germany	18,590.89	0.88
Mizuho Holdings Inc	Japan	17,987.23	0.85
BNP Paribas SA	France	17,458.50	0.83
Credit Suisse First Boston (CSFB)	Switzerland	17,258.51	0.82

Société Générale	France	17,180.94	0.81
Barclays plc	UK	16,902.33	0.80
Dresdner Kleinwort Wasserstein (DKW)	Germany	15,705.03	0.74
Royal Bank of Scotland Group plc	UK	14,924.39	0.71

However, this ranking changes if sorted by number of signed deals, which is an indicator of how active a bank is in the project finance market. Sorted in this manner, **HypoVereinsbank completed the highest number of transactions**, while Crédit Lyonnais and Royal Bank of Scotland join the list. JP Morgan Chase decreases in importance.

Bank	Country	No. deals
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	491
Citigroup Inc	USA	475
Crédit Lyonnais SA	France	390
BNP Paribas SA	France	388
Mizuho Holdings Inc	Japan	384
ABN Amro Holding NV	Netherlands	374
WestLB AG	Germany	335
Société Générale	France	324
Dresdner Kleinwort Wasserstein (DKW)	Germany	322
JP Morgan Chase & Co	USA	302
Deutsche Bank AG	Germany	283
Royal Bank of Scotland Group plc	UK	277

Another key role in project financing is arranging. The financial arranger is the institution responsible for putting together the debt package. It may also be responsible for initiating the transaction with the borrower, and for organizing the underwriting and placing it in the primary market. The following league table is calculated by splitting the value of debt tranche between the arrangers, and assigning higher sums to the mandated (or lead) arranger. In many cases, the bank does not actually provide the debt, but rather is responsible for placing it. **JPMorgan Chase is the leading global arranger of project-financed transactions.** Note that although JPMorgan Chase led the way in financial arranging, Citigroup, based on its overall top ranking, provided more financing through other roles, such as participating in loan syndicates.

Bank	Country	Amt. US\$ m	No. deals
JP Morgan Chase & Co	USA	47,205.28	212
Citigroup Inc	USA	39,686.89	306
Bank of America Corp	USA	27,345.56	175
Société Generale	France	23,072.02	208
ABN Amro Holding NV	Netherlands	22,288.39	237
Deutsche Bank AG	Germany	21,552.52	188
WestLB AG	Germany	20,881.26	193
BNP Paribas SA	France	19,447.16	198
Barclays plc	UK	17,120.59	156
Dresdner Kleinwort Wasserstein (DKW)	Germany	17,107.01	156
Credit Suisse First Boston (CSFB)	Switzerland	15,950.52	79
Crédit Lyonnais SA	France	13,409.59	200

### 3. EMERGING MARKET ECONOMIES

In the 1990s, project finance was one of the most popular ways that private investment reached large-scale development projects in emerging markets. (See Appendix I for a list of Emerging Market Economies.) But by 2002, project finance flows were down, as were private capital flows to emerging markets generally. According to the Institute for International Finance, private capital flows to these countries were estimated at \$110.2 billion in 2002, the lowest figures in 10 years.

#### **Emerging Market Economies' External Financing (billions of dollars)**

*Forecasts, data for recent years and comparison with early and mid 1990s*

*Source: Institute of International Finance*

*(Sept 2002 for 1992 – 2001 data; May 2003 for 2002 – 2003 data)*

	1992	1996	1999	2000	2001	2002e	2003f
Current account balance	-51.0	-95.5	29.3	48.0	29.2	60.9	29.8
External financing, net:							
<b>Private inflows, net</b>	<b>124.0</b>	<b>335.0</b>	<b>153.2</b>	<b>187.6</b>	<b>126.0</b>	<b>110.2</b>	<b>139.1</b>
Equity investment, net	46.9	127.7	168.3	149.6	145.8	107.8	115.1
Direct equity, net	31.1	92.3	148.9	135.3	134.6	111.0	108.8
Portfolio equity, net	15.8	35.3	19.4	14.4	11.1	-3.2	6.3
Private creditors, net	77.0	207.4	-15.1	37.9	-19.7	2.4	24.0
Commercial banks	31.5	123.8	-51.5	-0.3	-26.4	-10.1	-1.1
Non-banks, net	45.6	83.6	36.4	38.2	6.7	12.4	25.1
<b>Official inflows, net</b>	<b>35.4</b>	<b>4.3</b>	<b>12.6</b>	<b>-4.0</b>	<b>14.0</b>	<b>1.5</b>	<b>3.2</b>
IFIs	7.4	7.0	2.3	2.3	23.7	12.6	12.5
Bilateral creditors	28.0	-2.7	10.2	-6.3	-9.7	-11.1	-9.3
Resident lending/other, net	-60.1	-158.1	-140.2	-161.2	-84.1	-30.5	-35.8
Reserves (- = increase)	-48.3	-85.7	-54.9	-70.3	-85.2	-142.0	136.4

F = forecast; E= estimate

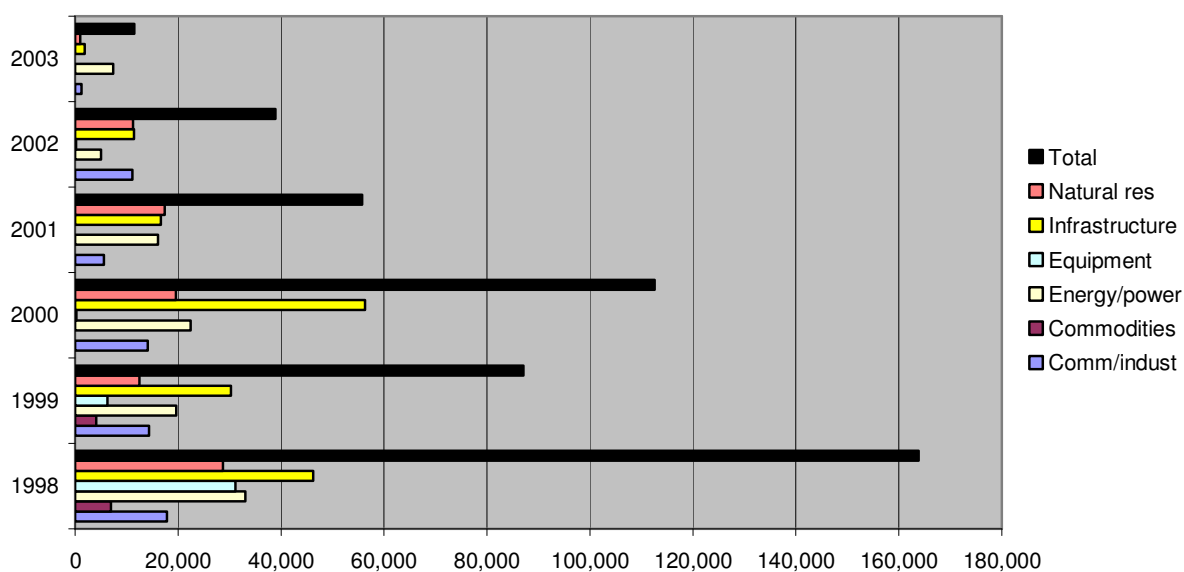
**Consistent with these financial trends, project financing for emerging markets also hit a five-year high in 2000, and has been steadily decreasing ever since.** Comparative data for project finance are not available before 1998, because the quality of financial information gathered by Dealogic for these years is relatively poor.

But macroeconomic trends are only one reason for the downturn in project financing. In the past several years, political risks in Emerging Markets have also scared off potential investors. In well-known cases like the Dabhol power plant in India and the Meizhou Wan project in China, governments have refused to meet their payment obligations. “Severe foreign exchange crises in the host country, national political instability, changes in government, allegations of corruption in obtaining contracts, and economic problems resulting in overestimated need for power” are cited common reasons for non-commercial project failure. Exacerbating this problem is the fact that in some projects, the effectiveness of political risk insurance was undermined by broader political interests (e.g. interest in global “counter-terrorism” caused the United States to not insist that the Indonesian government honor payments to US power companies and export credit agencies).<sup>3</sup>

### 3.1 Top sectors

**In the emerging market economies, the sectors that attracted the most investment were infrastructure, natural resources and energy/power.** Telecom transactions dominated the infrastructure sector, accounting for 207 of the 388 signed deals since 1998. Telecom deals were so popular that they accounted for about 23% of all project finance dollars flowing into emerging markets in the past five years.

**Emerging & Developing Country Project Finance Deals Closed & Signed, in US\$ millions**

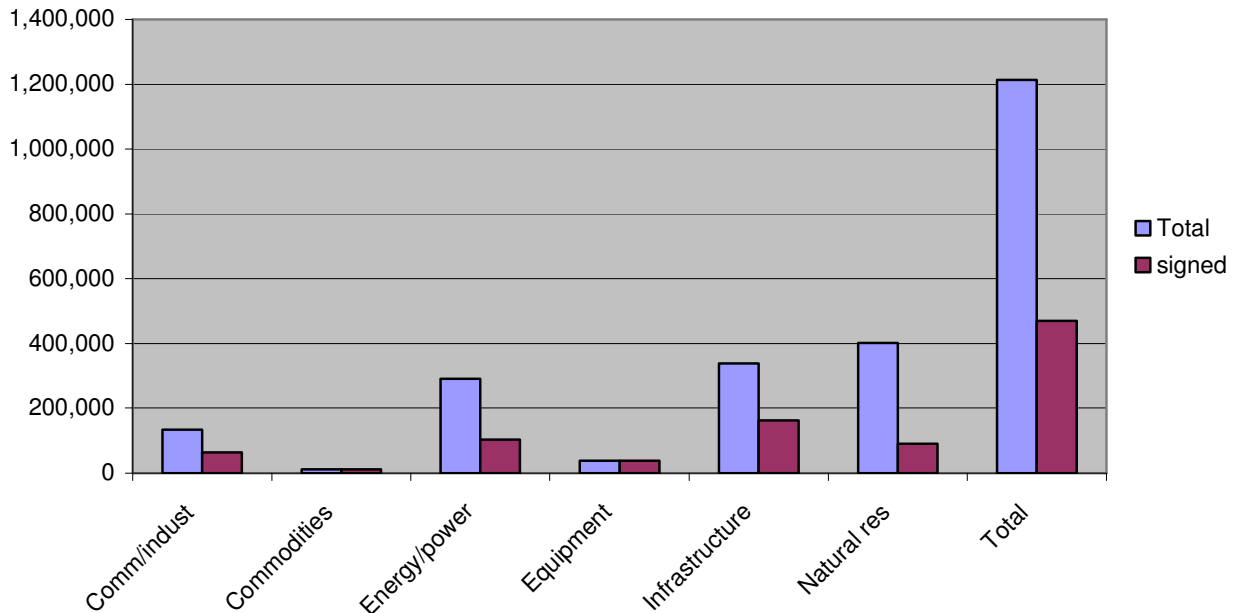


In the natural resources sector, mining projects (57) were most common, followed by oil exploration/development (44) and oil/liquid natural gas refinery (38) deals. However, in terms

<sup>3</sup> Worenklein, Jacob J. “The global crises in power and infrastructure: lessons learned and new directions,” *Journal of Structured and Project Finance*, 22 March 2003.

of project finance dollars, oil field development attracted the most amount of money at about \$25.6 billion, followed by refineries (\$22 billion) and mines (\$15.2 billion).

### Emerging Market & Developing Country Project Finance Deals Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003



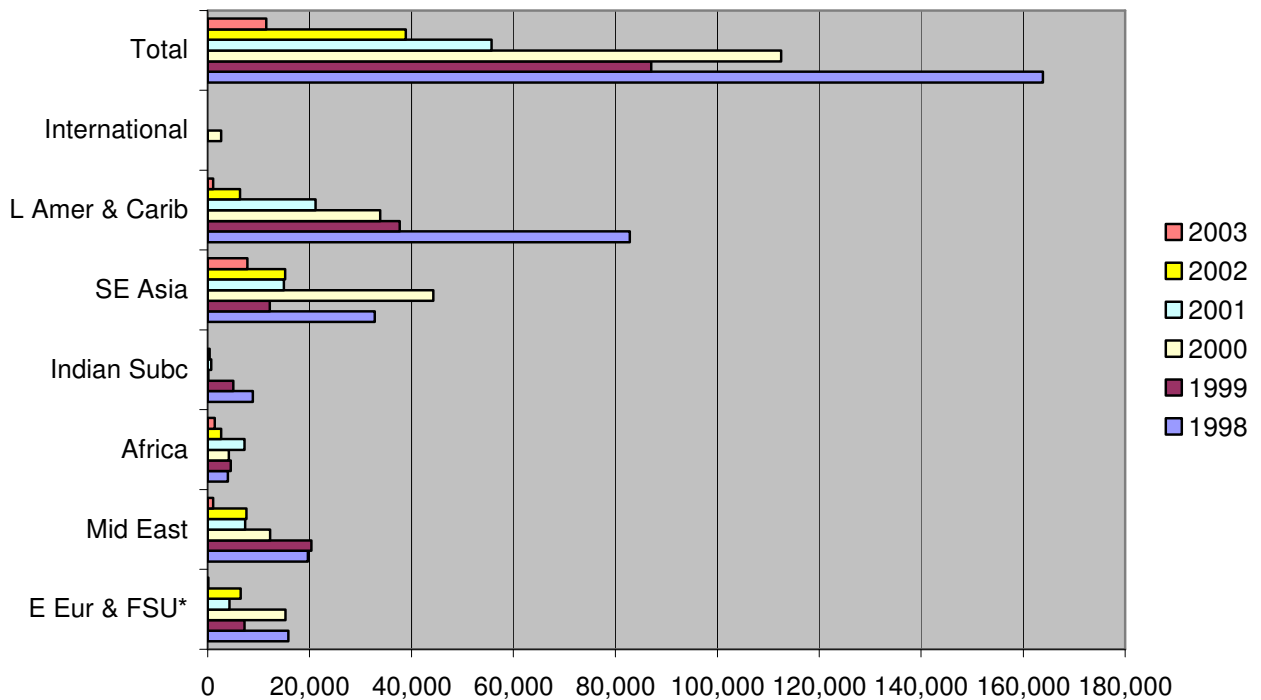
Projects in the Global North tended to have higher completion rates than in the Global South. In the emerging markets, the proportion of deals that were closed and signed compared to total deals was about 38%, in dollar terms. Natural resources deals tended to have the lowest rate of signing and closure, at 23%; while energy deals fared better at about 36%. Almost half of all commercial/ industrial ventures and infrastructure projects (by dollar value) succeeded.

### 3.2 Top regions

**The emerging market countries that received the most project finance dollars were Latin America, followed by Southeast Asia.** Within Latin America and the Caribbean, Brazil was by far the dominant country, both in terms of number of deals signed and dollars invested. In fact, Brazil was the destination country for about 18% of all project finance investment flowing into all emerging markets combined. Coming in a distant second was Chile, which attracted almost \$18 billion in financing for 45 signed deals (compared to Brazil's \$85.8 billion for 156 deals).

In Southeast Asia, Taiwan attracted the largest amount of project finance (US\$30.1 b), followed by China (US\$27.1 billion) and Hong Kong (US\$23.3 billion). China had by far the greatest number of signed deals (105), accounting for about 30% of all the deals signed in Southeast Asia. Taiwan followed with 94 completed deals.

## Emerging & Developing Country Project Finance Deals in US\$ millions, 1988 - Apr 2003

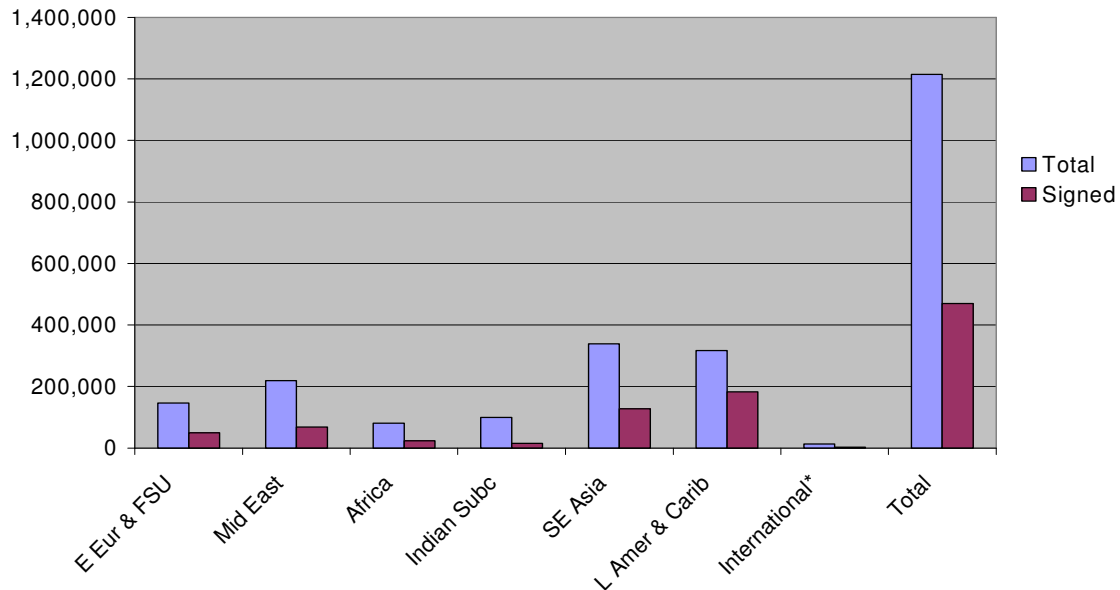


\* Note that the Western European countries of Gibraltar, Cyprus and Malta are classified by the OECD DAC as Emerging Markets. This report classifies these three countries as a part of Eastern Europe.

\* Latin America does not include the country of Guadalupe

As expressed in the chart, over the last five years project finance has generally decreased. In Latin America, this decrease has been quite steady, given the financial crises that have shaken the region. In Southeast Asia, the Asian financial crisis also contributed to a drop in project finance from 1998 to 1999, but investment rebounded in 2000. Project finance flows to Africa, which has never been attractive to private investors, remained at a steady and low rate.

## Emerging & Developing Country Project Finance Deals Total v. Closed & Signed, in US\$ millions



\* International total deals include a signed \$1.8 billion fiber-optic network in Latin America, a \$440 in tender Latin American gas pipeline, an in tender \$1.2m satellite (telecom) in Africa, a signed \$884m undersea cable in Asia, an in tender \$1.06b underwater cable network in Asia, and an \$7b in tender gas pipeline in Asia.

As mentioned, in the emerging markets, the completion rate for projects has been about 38% in dollar terms. The regions with the highest rates of signing and closing for the last five years have been Latin America (58%) and Southeast Asia (38%). Eastern Europe, the Middle East, and Africa all had completion rates of 30-35%, while project finance investment had the lowest rate of signing and closing in the Indian Subcontinent (15%).

### 3.3 Top banks

**In the past five years, Citigroup dominated project finance in the emerging markets,** closing and arranging the highest number of deals, and accounting for about 5% of the dollars flowing into the project finance market. Citigroup has been a longtime leader in project finance, and currently is one of the only active US banks in this market, after Bank of America reportedly exited this business in February 2002. Moreover, Citibank, along with Credit Suisse First Boston and Société Générale, are the only project finance banks with significant operations across the US, Europe, Latin America and Asia.<sup>4</sup>

The Japanese government-affiliated JBIC ranked a distant second, but it provided only about 60% of the project dollars that Citigroup did. JPMorganChase came in third in terms of total dollars provided, and was the second most important in arranging deals in the emerging markets.

<sup>4</sup> "Euromoney Awards for Excellence 2002: The world's best project finance house" *EuroMoney*, July 2002.



The project finance bank rankings by total dollar amount of signed deals are:

<b>Bank</b>	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Citigroup Inc	USA	18,000.49	5.20
Japan Bank for International Cooperation (JBIC)*	Japan	10,772.64	3.11
JP Morgan Chase & Co	USA	8,927.04	2.58
ABN Amro Holding NV	Netherlands	7,829.67	2.26
WestLB AG	Germany	7,183.82	2.07
Mizuho Holdings Inc	Japan	7,097.85	2.05
BNP Paribas SA	France	7,052.19	2.04
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,533.23	1.89
Deutsche Bank AG	Germany	6,147.57	1.77
World Bank*	Supranational	5,696.19	1.64
HSBC Holdings plc	UK	5,669.36	1.64
Dresdner Kleinwort Wasserstein (DKW)	Germany	5,362.51	1.55

\* JBIC includes the Japan Bank for International Cooperation and the Japan Export-Import Bank. The World Bank includes the International Bank for Reconstruction and Development, the International Development Association, the International Finance Corporation, and the Multilateral Investment Guarantee Agency.

The top project finance banks by number of signed transactions in emerging market countries were:

<b>Bank</b>	<b>Country</b>	<b>No. deals</b>
Citigroup Inc	USA	279
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	239
BNP Paribas SA	France	198
ABN Amro Holding NV	Netherlands	188
Dresdner Kleinwort Wasserstein (DKW)	Germany	175
Mizuho Holdings Inc	Japan	167
WestLB AG	Germany	162
Société Générale	France	162
KBC Bank NV	Belgium	142
Deutsche Bank AG	Germany	136
Crédit Lyonnais SA	France	136
Crédit Agricole Indosuez	France	133
Mitsubishi Tokyo Financial Group Inc	Japan	127

When accounting for the amount of financing that was mobilized through financial arranging, the top project finance banks in the emerging markets are:

Bank	Country	Amt. US\$ m	No. deals
Citigroup Inc	USA	18,774.52	199
JP Morgan Chase & Co	USA	15,951.60	95
Japan Bank for International Cooperation (JBIC)	Japan	13,221.42	52
ABN Amro Holding NV	Netherlands	8,757.97	136
WestLB AG	Germany	8,436.44	106
Deutsche Bank AG	Germany	7,407.98	92
BNP Paribas SA	France	6,814.68	111
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,496.18	45
World Bank	Supranational	6,045.20	82
Bank of Taiwan	Taiwan	5,877.22	17
Dresdner Kleinwort Wasserstein (DKW)	Germany	5,670.90	93

### 3.4 Public versus private financiers

Historically, private financiers have played a more important role in Emerging Market project finance transactions compared with public financial institutions. For example, as indicated in the tables above, the World Bank Group did not play a relatively dominant role in Emerging Market project finance – it ranked 10<sup>th</sup> in terms of total financing, 9<sup>th</sup> in terms of signed deals arranged, and participated in fewer than 100 transactions over the last five years. In contrast banks like Citigroup and HypoVereinsbank participated in well over 200 deals.

Similarly, Export Credit Agencies (ECAs) were only involved in 143, or 11% of all signed project-financed transactions in the richer Emerging Market countries since 1998. On a dollar basis, ECAs provided about US\$26,448 million, or almost 6%, of the financing for these deals. In the poorer Developing Countries, ECAs were involved in almost 15% of the projects, and provided almost 7% of the financing for signed transactions.

**Despite the relatively less important role of public financial institutions in Emerging Market project finance, development bank and ECA involvement may increase in the future.** As noted, the Basle II capital adequacy requirements may deter private banks from the project finance market based on the (mistaken) notion that project finance is riskier than traditional corporate lending. If so, liquidity in this market will be reduced, potentially resulting in a greater role for development banks and export credit agencies in Emerging Market project finance.<sup>5</sup>

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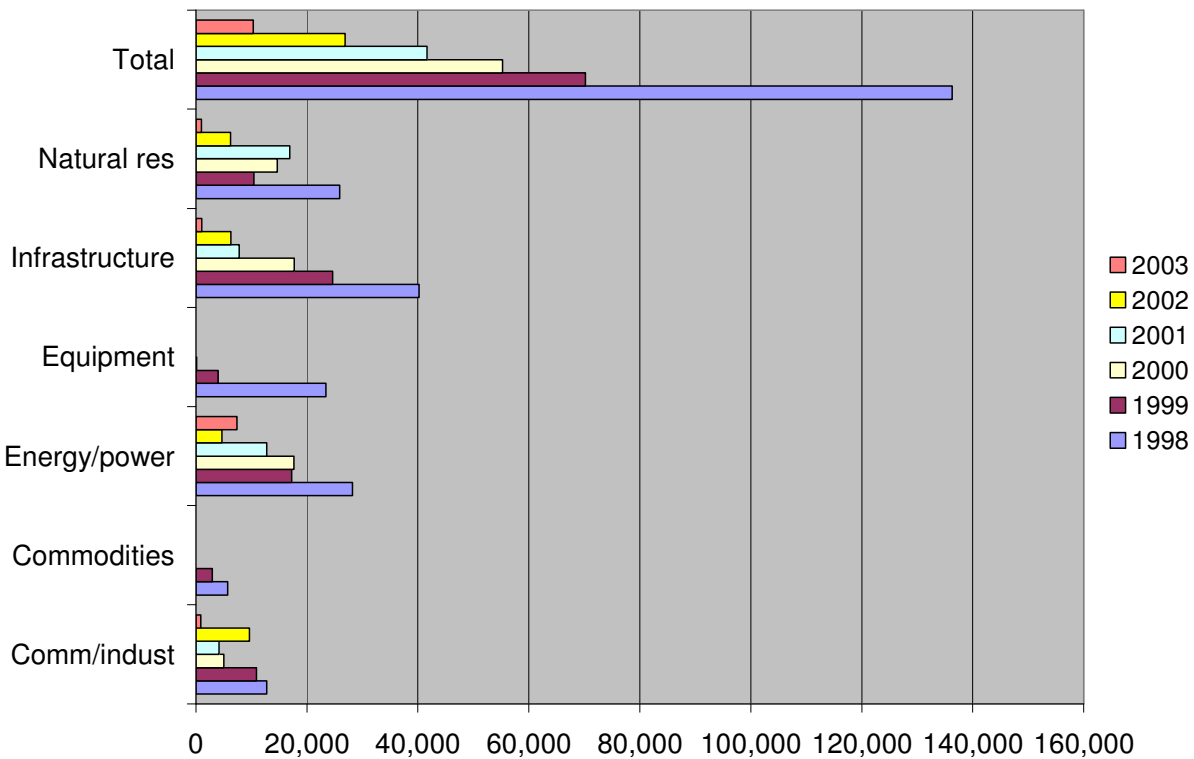
<sup>5</sup> Ashley, Paul, “Asset class under assault,” *EuroMoney*, 1 Aug 2003.

## 4. THE DEVELOPING COUNTRIES

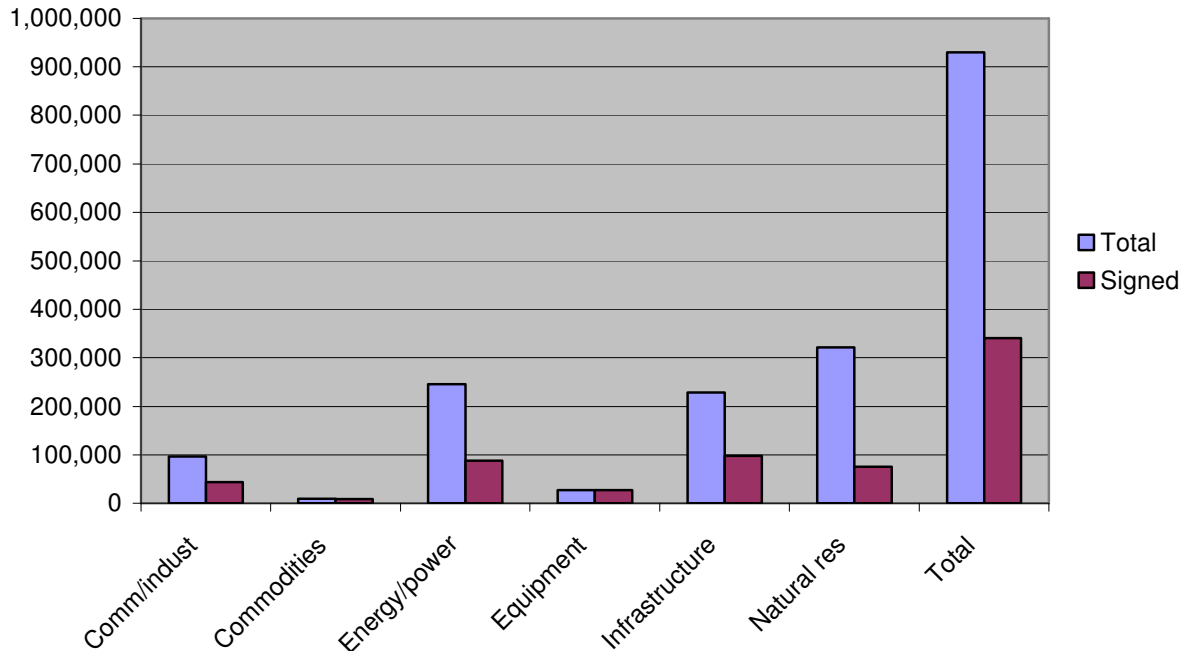
The OECD's DAC list of "Part One" Developing Countries is relatively broad, encompassing very poor countries such as Chad and higher income countries such as Bahrain. (See Appendix I.) But project finance trends for Developing Countries mirrored that in the broader Developing and Emerging Market countries. The reason for this is because almost all of Latin America, which dominated Emerging Markets project finance generally, can be found on the DAC's Part One list.

### 4.1 Top Sectors

**Developing Country Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003**



**Developing Country Project Finance Deals  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003**



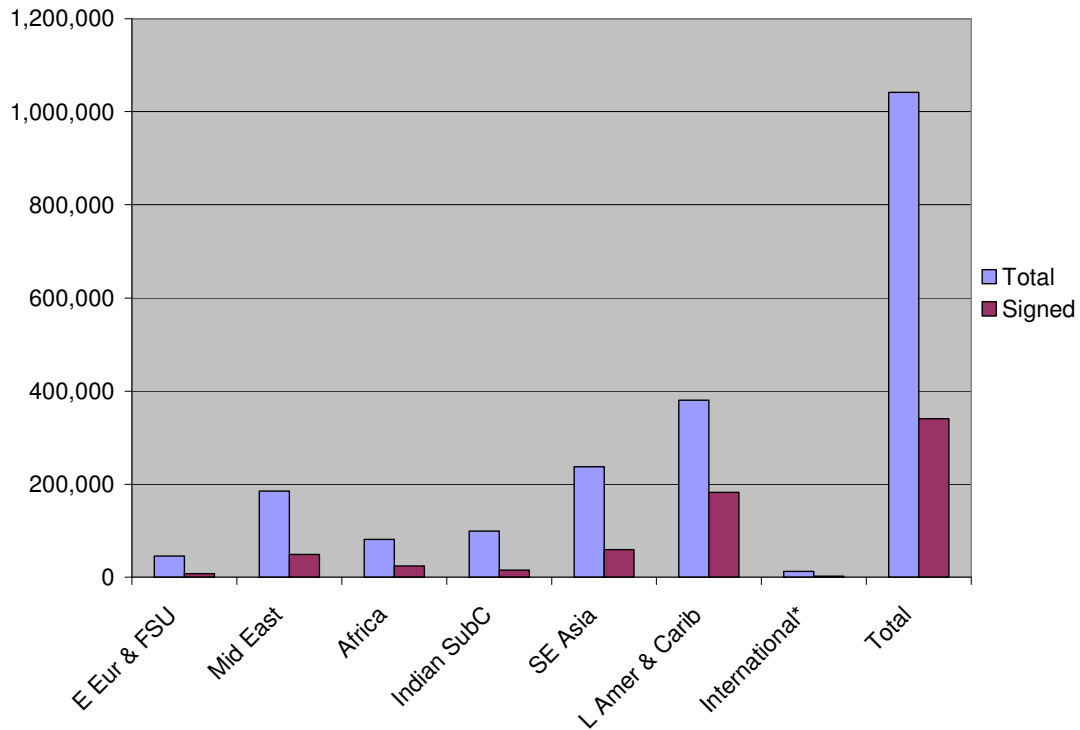
**Developing Countries witnessed a steady decline in project finance dollars over the past five years. The most popular sector was infrastructure, which waned steadily in keeping with the overall project finance trend. Energy/power represented the second most important sector in Developing Countries. This sector has also decreased steadily but it may make a comeback in 2003. The natural resource sector, which drew the third highest amount of project finance dollars, was bit more stable. This steadiness may be attributed to the fact that even amidst weak economics in developing countries, international investors continue to be interested natural resources such as oil, gas and gold.**

In the infrastructure sector, telecom deals were by far the most important in terms of number of deals signed and volume of capital. In fact, telecom transactions accounted for about 21% of all project finance dollars in signed Developing Country project finance transactions. In the natural resources sector, oilfield development attracted US\$24.8 billion in financing; oil refinery/ liquid natural gas projects accounted for US\$17 billion in project finance dollars, followed by mining at US \$15 b. In terms of numbers of transactions, signed mining projects were most numerous (55), followed by oil exploration/development (39) and then refining (29).

#### **4.2 Top regions**

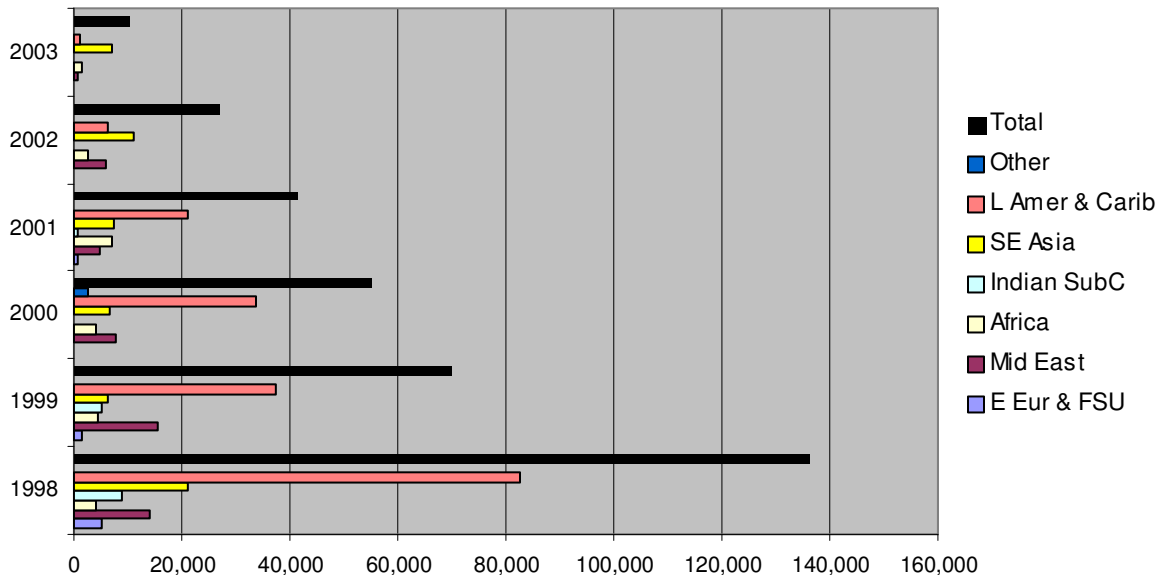
The five-year project finance trend in the poorer Developing Countries looks very similar to that for the combined Emerging Markets (which combines both more advanced countries and less developed ones). Project finance in the poorer regions has generally decreased: in Latin

**Developing Country Project Finance Deals  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003**



\* International total deals include a signed US\$1.8 billion fiber-optic network in Latin America, a US\$440 million in-tender Latin American gas pipeline, an in-tender US\$1.2 billion satellite (telecom) in Africa, a signed US\$884 million undersea cable in Asia, an in-tender US\$1.06 billion underwater cable network in Asia, and a US\$7 billion in-tender gas pipeline in Asia.

**Developing Country Signed & Closed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003**



America, which during the past several years suffered through financial crises, this decrease has been quite steady. In Southeast Asia, the Asian financial crisis dampened foreign investment flows in 1998 to 1999, but investment started picking up again in 2000. As always, the project finance trends in Africa, which has never been a hot destination for foreign investment, remained steady and low.

The completion rate for project finance deals in Developing Countries was 33%, a bit lower than the 38% signing and closing rate in the broader Emerging Markets category. Otherwise, the completion figures on a dollar value basis basically remain similar to that in the Emerging Markets rates – with Latin America as the region with the highest rates of signing and closing for the last five years, and the Indian Subcontinent as the region with the lowest.

### 4.3 Top banks

**Citigroup again is a project finance leader in developing countries.** The leading developing country banks in terms of total financing for deals signed from 1998 are:

Bank	Country	US\$ millions	Percent
Citigroup Inc	USA	13,958.50	5.58
Japan Bank for International Cooperation (JBIC)	Japan	10,151.19	4.06
JP Morgan Chase & Co	USA	7,346.65	2.94
ABN Amro Holding NV	Netherlands	6,687.70	2.67
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,533.23	2.61
Deutsche Bank AG	Germany	5,497.00	2.20
World Bank	Supranational	5,486.57	2.19
WestLB AG	Germany	5,408.12	2.16
Mizuho Holdings Inc	Japan	4,954.65	1.98
BNP Paribas SA	France	4,614.86	1.84
Dresdner Kleinwort Wasserstein (DKW)	Germany	4,356.85	1.74
Société Generale	France	4,037.70	1.61

This ranking does represent a slight change from the top project finance banks for the broader Emerging Market countries. Although the top four rankings remain the same (Citigroup, JBIC, JPMorganChase, ABN Amro), some financial institutions such as BNDES, Deutsche Bank, the World Bank, and Société Generale moved up or onto the Developing Country list, reflecting their relatively stronger presence in poorer countries. In contrast, HSBC moved off the list, taking 20<sup>th</sup> place among banks active in developing countries.

The rankings also reveal how much of a bank's investments in Emerging Markets occur in poorer Part One countries: 76% of Citibank's transactions in these markets occur in the poorer countries, compared with 60% of HypoVereinsbank's, and 75% of BNP's. Banks with even higher rates of investing in the poorer countries include ABN-Amro and Dresdner Bank, which invests 82% of its Emerging Market project finance money in Part One countries; as well as Société Generale at 80%, and Mizuho at 78%.

When sorting by number of signed transactions, the rankings change considerably – **although public financial institutions such as the World Bank and JBIC may provide large**

**amounts of project finance money to developing countries, they actually are involved in far fewer transactions.** Banks that are very active in developing countries, but provide relatively smaller dollar amounts, include BNP Paribas, HypoVereinsbank and Société Generale.

<b>Bank</b>	<b>Country</b>	<b>No. deals</b>
Citigroup Inc	USA	212
ABN Amro Holding NV	Netherlands	154
BNP Paribas SA	France	149
Dresdner Kleinwort Wasserstein (DKW)	Germany	144
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	141
Société Generale	France	131
Mizuho Holdings Inc	Japan	130
WestLB AG	Germany	117
Deutsche Bank AG	Germany	106
Mitsubishi Tokyo Financial Group Inc	Japan	100
Crédit Agricole Indosuez	France	99
JP Morgan Chase & Co	USA	97

**When it comes to the important job of arranging deals in the developing countries, JPMorganChase moves to the top of the list.** Also, Bank of America joins the list of top twelve banks, although reportedly it closed its project finance operations in 2003.

<b>Bank</b>	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
JP Morgan Chase & Co	USA	14,042.59	77
Citigroup Inc	USA	13,185.73	144
Japan Bank for International Cooperation (JBIC)	Japan	12,375.42	48
ABN Amro Holding NV	Netherlands	7,304.10	111
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,496.18	45
Deutsche Bank AG	Germany	6,434.81	73
WestLB AG	Germany	5,953.26	81
World Bank	Supranational	5,834.12	75
Bank of America Corp	USA	4,469.52	56
Société Generale	France	4,253.45	91
BNP Paribas SA	France	4,168.29	77
Dresdner Kleinwort Wasserstein (DKW)	Germany	3,953.60	77

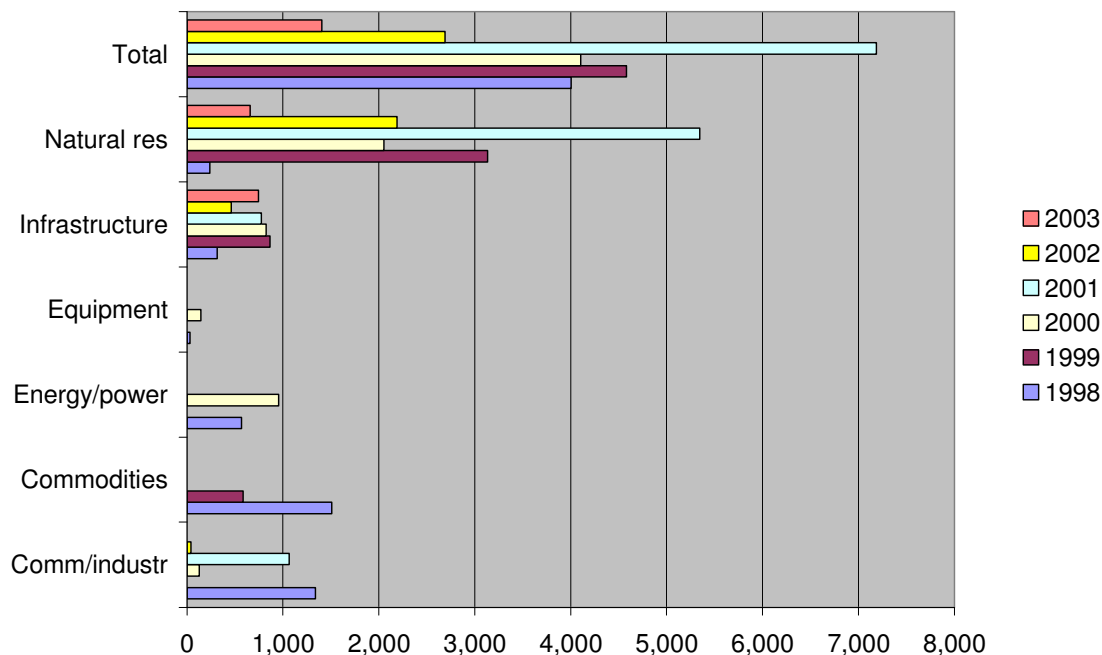
## 5. SUB-SAHARAN AFRICA

In Sub-Saharan Africa, where foreign investment is relatively scarce, the dollar value of project finance transactions peaked in 2001. (See Appendix II for a list of countries classified as Sub-Saharan Africa.) **Natural resources is the dominant sector in Africa**, accounting for 81% of project finance dollars in 2002, from a low of just 6% in 1998. A key reason for the strong dominance of natural resource deals in Africa is the fact that these transactions tended to be more expensive, averaging US\$332 million (for 41 projects). African infrastructure projects, by comparison, only averaged US\$128 million but accounted for 31 signed projects.

### 5.1 Top sectors

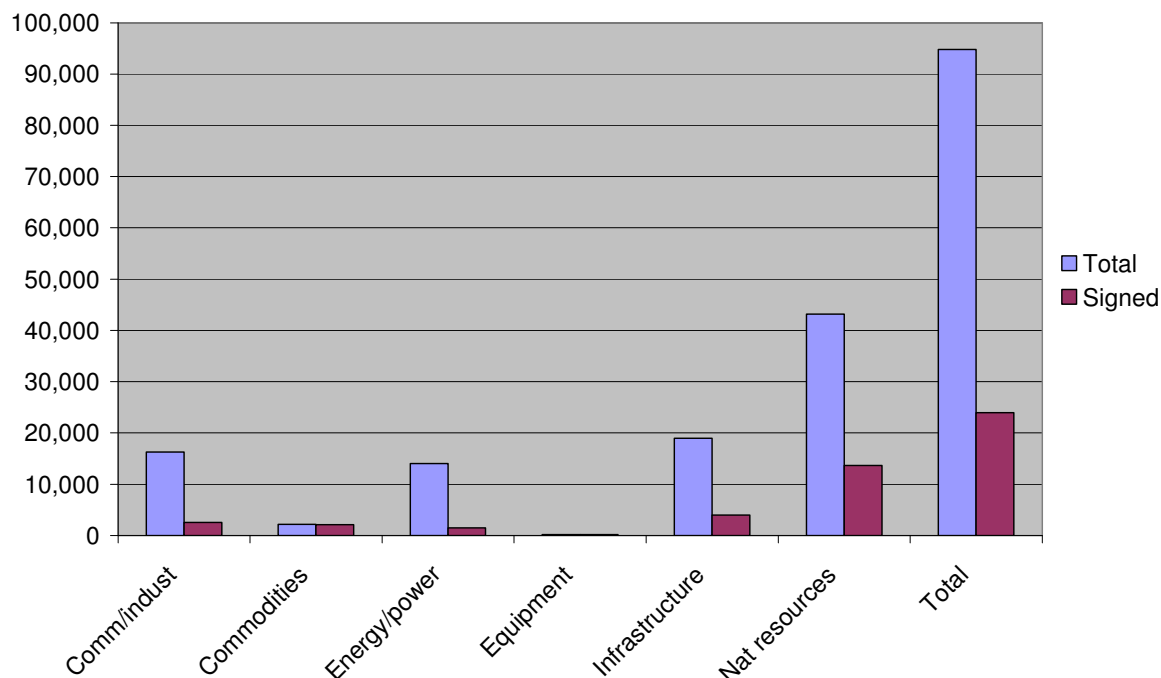
Among the natural resources sector, mining projects drew the highest numbers of project finance dollars (US\$4.01 billion), followed closely by oil pipelines (US\$4 billion) and oil/liquid natural gas refining (US\$3.3 billion). In percentage terms, signed mining and oil pipeline deals together accounted for over a third of the value of African project finance deals since 1998. Extraction projects generate hard currency and top the list; those generating soft or domestic currency, such as power, attract markedly less interest from project financiers.

Africa Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003





**Africa Project Finance Deals**  
**Total v. Closed & Signed, in US\$ millions, 1998 - Apr**  
**2003**



In the last five years, 32% of natural resources projects in Africa (measured in terms of dollar value, not numbers of transactions) reached financial closure and signing.

## 5.2 Top countries

Since 1998, Sub-Saharan African countries signed 100 deals totaling US\$29 billion. **By far, South Africa received the largest share of project finance investment**, both in terms of dollars invested as well as numbers of projects. Nigeria attracted the second highest number of project finance dollars, with six relatively expensive oil-related projects.

	<b>Amt. m</b>	<b>Pcnt.</b>	<b>No. deals</b>
South Africa	5,091.42	21.24	28
Nigeria	4,090.00	17.06	6
Chad	4,000.00	16.68	1
Angola	2,550.00	10.64	7
Mozambique	2,410.00	10.05	3
Tanzania	1,182.10	4.93	7
Zambia	1,179.50	4.92	7
Cote d'Ivoire	936.00	3.90	5
Ghana	486.00	2.03	4
Kenya	305.00	1.27	4
Cameroon	239.77	1.00	2
Mali	198.00	0.83	2

Namibia	187.50	0.78	2
Guinea	155.00	0.65	3
Congo	133.40	0.56	3
Mauritius	110.00	0.46	1
Ethiopia	103.70	0.43	1
Zimbabwe	102.93	0.43	3
Uganda	102.00	0.43	2
Senegal	97.96	0.41	2
Libya	70.00	0.29	1
Botswana	65.80	0.27	1
Congo (Zaire)	60.00	0.25	2
Benin	55.00	0.23	1
Burkina Faso	42.30	0.18	1
Gabon	21.00	0.09	1
Total	23,974.38	100.00	100

### 5.3 Top banks

Although the **First Rand Bank** provided the most financing to signed project finance deals since 1998, it should be noted that **in Africa, with its emphasis on resource extraction projects, corporations provide a critical source of capital for project finance transactions.** For example, ExxonMobil, Petronas, and ChevronTexaco have each committed US\$1 billion to the Chad-Cameroon oil pipeline (signed in 2001), which actually puts these oil companies ahead of all public and private banks in terms of project financing. Among the top banks in sub-Saharan Africa, two are public financial institutions: the World Bank and the European Investment Bank. The First Rand Bank, the World Bank and the CDC Group all contributed equity to deals, as well as debt, guarantees, and other financial products, boosting their participation in this sector.

Bank	Country	Amt. US\$ m	Percent
First Rand Bank	South Africa	982.65	5.27
World Bank	Supranational	913.73	4.90
ABN Amro Holding NV	Netherlands	793.40	4.25
BNP Paribas SA	France	570.42	3.06
Citigroup Inc	USA	488.34	2.62
Standard Bank Investment Corp Ltd	South Africa	427.12	2.29
Société Generale	France	417.44	2.24
Nedcor Investment Bank Ltd	South Africa	375.78	2.02
Crédit Lyonnais SA	France	341.67	1.83
CDC Group plc	UK	340.99	1.83
European Investment Bank	Supranational	320.59	1.72
ING Groep NV	Netherlands	311.78	1.67

When ranking banks by number of signed deals, First Rand Bank still is the front runner, but several private banks enter the top 12 field, including HypoVereinsbank, Barclays, and ABSA Bank of South Africa. The banks that drop out include the European Investment Bank and UK-based CDC Group; the World Bank drops in importance from #2 to #8, and Standard Bank Corporation shoots up to second from sixth place.

<b>Bank</b>	<b>Country</b>	<b>No. deals</b>
First Rand Bank	South Africa	24
Standard Bank Investment Corp Ltd	South Africa	18
BNP Paribas SA	France	16
Société Generale	France	16
Crédit Lyonnais SA	France	16
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	16
Citigroup Inc	USA	15
World Bank	Supranational	13
ABN Amro Holding NV	Netherlands	12
ABSA Bank Ltd	South Africa	12
Nedcor Investment Bank Ltd	South Africa	10
ING Groep NV	Netherlands	10
Barclays plc	UK	10

**With respect to the important role of financial arranging, non-African banks become relatively less important,** because international banks have the advantage of using their relationships and connections with other banks to mobilize capital. Coming in at the top of the rankings is ABN-Amro, and Union Bank of Switzerland (UBS). It is important to note that UBS was not a top bank in terms of numbers of deals or total financing provided, so this bank played a particularly important role in catalyzing debt from other financiers.

<b>Bank</b>	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
ABN Amro Holding NV	Netherlands	885.88	10
UBS AG	Switzerland	862.08	5
First Rand Bank	South Africa	804.36	15
World Bank	Supranational	730.73	10
BNP Paribas SA	France	701.85	11
Citigroup Inc	USA	620.33	10
Banque Belgoise SA (Fortis)	Belgium	544.50	5
Standard Bank Investment Corp Ltd	South Africa	452.62	12
Deutsche Bank AG	Germany	407.55	7
Nedcor Investment Bank Ltd	South Africa	376.35	7
Barclays plc	UK	357.13	6
ING Groep NV	Netherlands	314.50	7

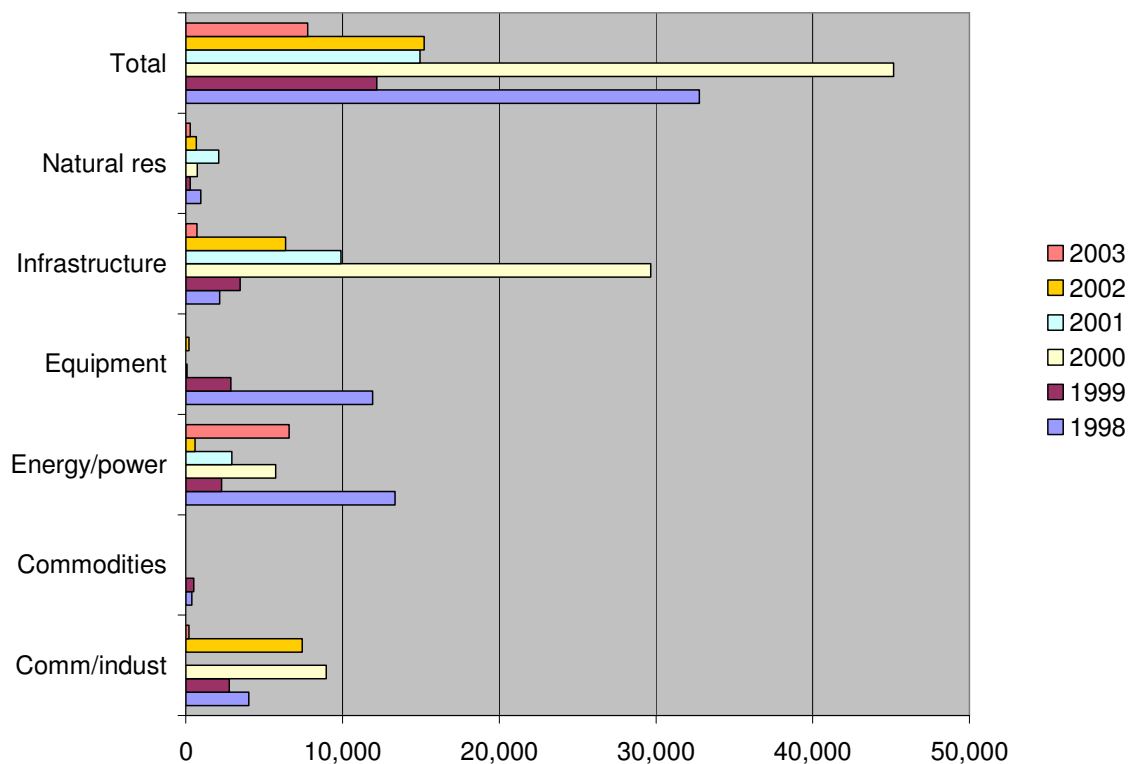
## 6. EMERGING MARKET ASIA

Asia was one of the most popular regions for project finance. Project finance investment reached a high in 2000, after a few thin years post-Asia financial crisis.

### 6.1 Top sectors

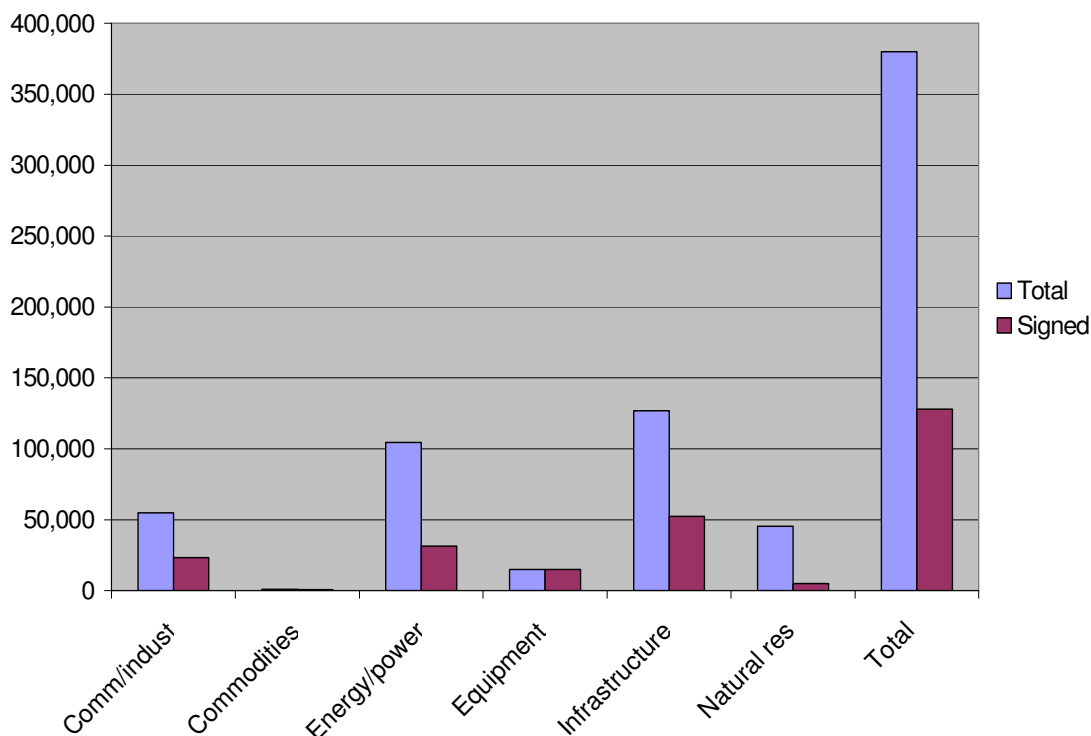
**The leading sector in Emerging Markets Asia was infrastructure**, which since 1998 has accounted for 40% of the signed deals in the region. (See Appendix II for a list of countries classified as Emerging Markets Asia.) Within this sector, foreign investment mostly supported telecom and rail projects. The next leading sector was energy/power (about 25%) followed by commercial/ industrial projects (about 18%).

Asia Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003



In Emerging Market Asia, about 34% of project financing was closed and signed in the last five years. For the popular infrastructure sector, the rate was 41%, while in the energy and power sector, it was about 30%.

**Asia Project Finance Deals**  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003



## 6.2 Top countries

15 countries in Southeast Asia were project finance destinations during the last five years. **China was host to about a third of the project finance deals, but only received about 21% of the project finance dollars.**

	Amt. US\$ m	Percent	No. projects
Taiwan	30,134.33	23.54	48
China	27,105.56	21.17	105
Hong Kong	23,333.43	18.23	29
Malaysia	9,385.99	7.33	26
Thailand	8,528.94	6.66	29
South Korea	7,445.92	5.82	30
Philippines	7,444.30	5.81	22
Singapore	6,623.54	5.17	27
Indonesia	5,435.42	4.25	13
International Asia*	884.00	0.69	1
Papua New Guinea	790.00	0.62	4
Vietnam	497.85	0.39	7
Laos	199.00	0.16	2
Brunei	190.00	0.15	1
Fiji	23.80	0.02	1
<b>Total</b>	<b>128,022.07</b>	<b>100.00</b>	<b>345</b>

The International deal was an undersea fiber optic cable, which traversed eight Asian countries.

### 6.3 Top banks

The leading project finance banks in Emerging Market Asia were led by Citigroup, which ranked first in dollars as well as numbers of deals, followed by Hong Kong Shanghai Bank. JBIC ranks third in terms of dollar amounts, but it is the only public bank based in the industrialized world that made the Top 12 ranking. Three Chinese banks were included in the list of top Asian banks, but they all financed relatively small number of expensive projects. Analysts predict that Chinese banks may become more influential players in the regional project finance market. Their foreign currency capabilities already make it relatively difficult for international banks to gain a share of the project financing market within China.<sup>6</sup>

Bank	Country	Amt. US\$ m	Percent
Citigroup Inc	USA	5,197.76	4.90
HSBC Holdings plc	UK	3,998.04	3.77
Japan Bank for International Cooperation (JBIC)	Japan	3,370.02	3.18
Industrial & Commercial Bank of China	China	2,825.00	2.66
Mizuho Holdings Inc	Japan	2,803.31	2.64
Bank of Taiwan	Taiwan	2,454.33	2.31
BNP Paribas SA	France	2,453.04	2.31
Bank of China	China	2,063.20	1.94
China Construction Bank	China	1,862.24	1.76
Mitsubishi Tokyo Financial Group Inc	Japan	1,729.55	1.63
JP Morgan Chase & Co	USA	1,569.96	1.48
Crédit Agricole Indosuez	France	1,555.18	1.47

When ranking by number of deals, Citigroup still tops the list, and Hong Kong Shanghai Bank moves down. BNP makes a dramatic jump in importance, and new banks like Sumitomo, KBC, Crédit Lyonnais, Commerzbank, Société Generale, and HypoVereinsbank replace the Chinese banks, as well as JBIC and JPMorganChase.

Bank	Country	No. Deals
Citigroup Inc	USA	65
BNP Paribas SA	France	56
Mizuho Holdings Inc	Japan	55
Mitsubishi Tokyo Financial Group Inc	Japan	47
Crédit Agricole Indosuez	France	44
Sumitomo Mitsui Banking Corp	Japan	43
HSBC Holdings plc	UK	42
KBC Bank NV	Belgium	39
Crédit Lyonnais SA	France	38
Commerzbank AG	Germany	38
Société Generale	France	37
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	37

<sup>6</sup> Jones, Dominic, "Greenback glories: Chinese banks could become the new powerhouses of the Asian project market," *Project Finance*, 1 October 2002.

**When examining the critical job of arranging, a completely new player tops the list of leading Emerging Market Asia banks: Bank of Taiwan.** Also new to the top arrangers list is Taiwan-based Chiao Tung Bank, and West LB. Again, note that the ranking is based on amount of financing mobilized rather than the amount of money actually contributed.

<b>Bank</b>	<b>Country</b>	<b>US\$ million</b>	<b>No. deals</b>
Bank of Taiwan	Taiwan	5,877.22	17
Citigroup Inc	USA	5,861.40	60
International Commercial Bank of China	Taiwan	4,697.58	11
HSBC Holdings plc	UK	4,341.90	38
Japan Bank for International Cooperation (JBIC)	Japan	4,021.30	17
Chiao Tung Bank	Taiwan	3,974.97	3
Industrial & Commercial Bank of China	China	2,922.74	12
Mizuho Holdings Inc	Japan	2,593.95	38
BNP Paribas SA	France	2,406.36	34
Crédit Agricole Indosuez	France	2,299.34	32
WestLB AG	Germany	1,959.79	22
Bank of China	China	1,912.88	16

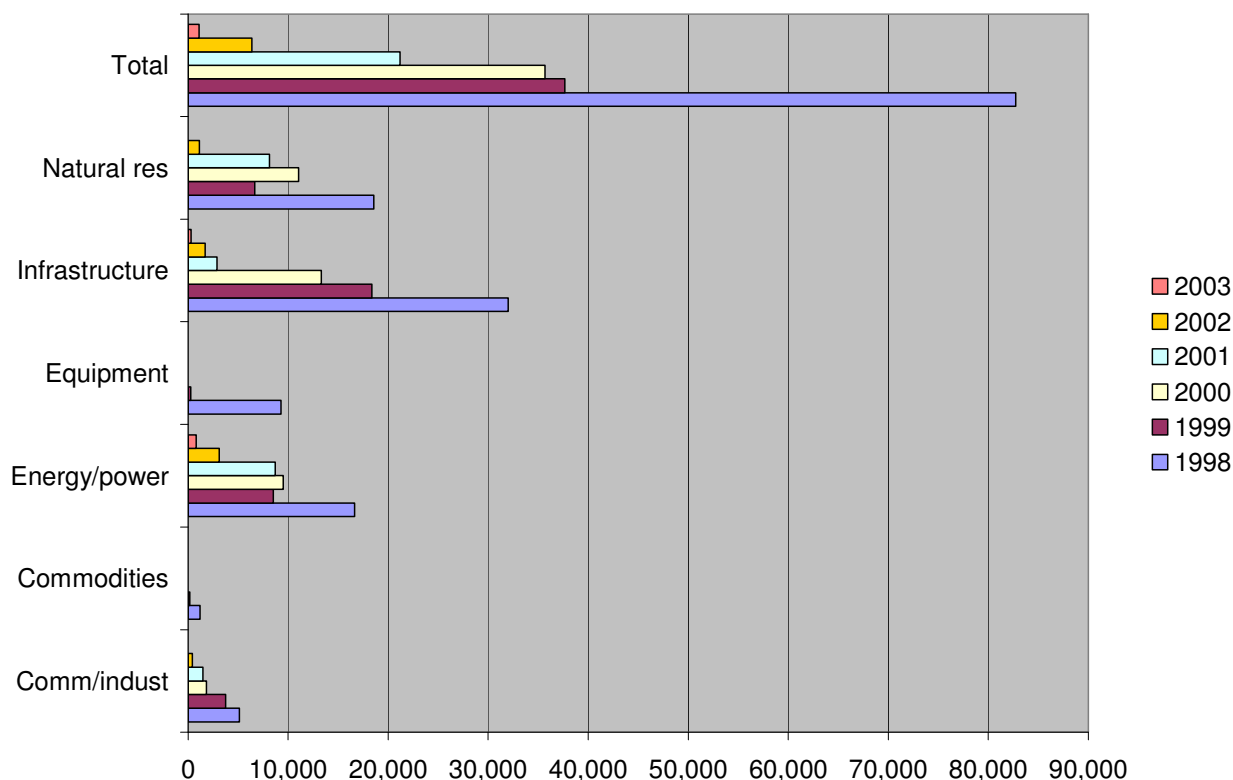
## 7. LATIN AMERICA AND CARRIBBEAN

In Latin America and the Caribbean, project finance developments were very similar to overall project finance trends for the overall Emerging Markets. (See Appendix II for a classification of Latin American & Caribbean countries.)

### 7.1 Top sectors

**Project finance steadily declined during the past five years, with infrastructure as the most popular investment sector.** Energy/power, the second most important sector, attracted US\$47.2 billion for 136 signed deals. Natural resources came in a close third measured by dollars (US\$45.5 billion), although it claimed fewer projects (83).

Latin America & Carribean Closed & Signed  
Project Finance Deals, in US\$ millions, 1998 - Apr 2003

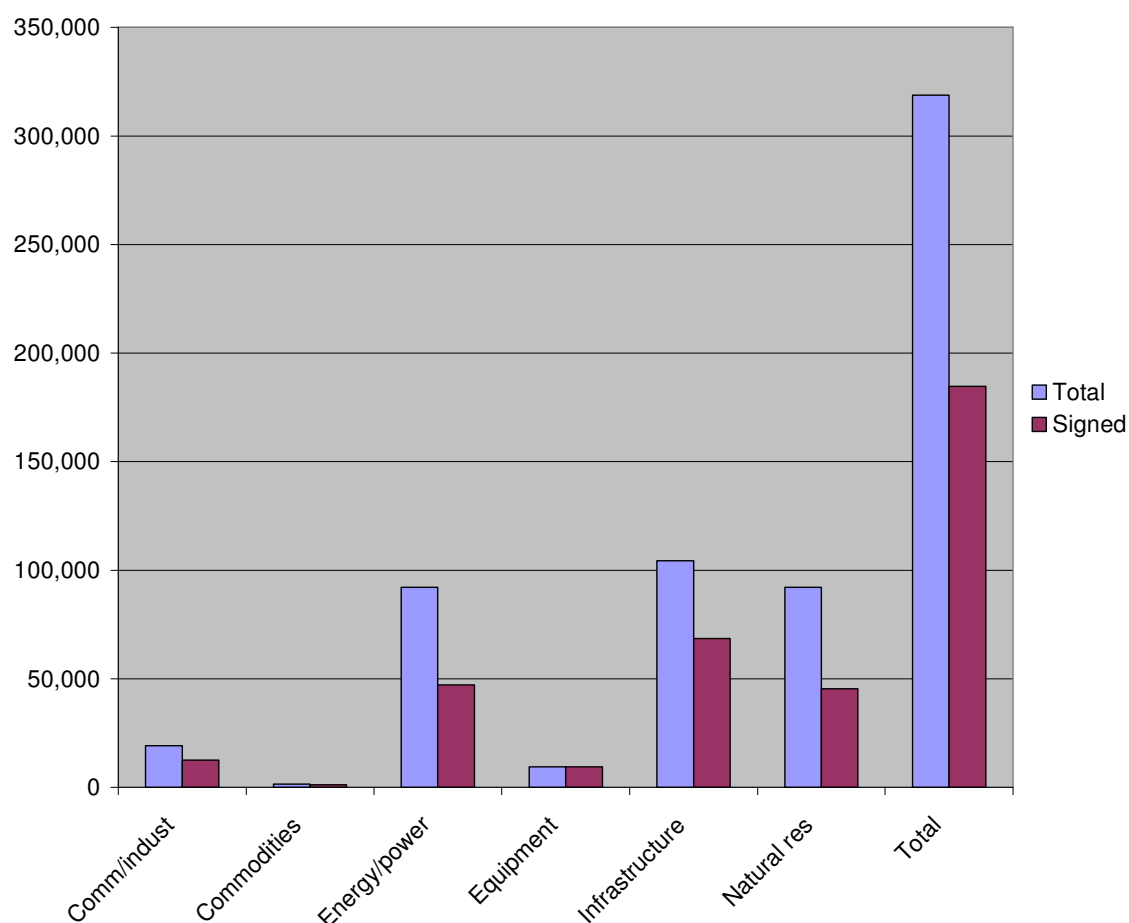


Telecom deals attracted the lion's share of project finance dollars and accounted for 90 of the 145 infrastructure deals signed in Latin America. In the natural resources sector, oilfield exploration and development projects dominated the sector, and these alone accounted for 12% of all project finance dollars invested in Latin America and the Caribbean in the past five years. One notable oil development deal was the massive US\$4.6 billion Sincor project in Venezuela, one of the country's largest four heavy crude deals.



The completion rate of project finance deals in Latin America & the Caribbean was relatively high, with about 58% of the total value of project finance deals reaching financial closed and signing. The completion rate was even higher for infrastructure deals, but slightly lower for energy/power and natural resources transactions.

**Latin America & Caribbean Project Finance Deals  
Total v. Closed & Signed, in US\$ millions, 1998 - Apr 2003**



## 7.2 Top countries

**Brazil was the clear leader among Latin American countries for project finance;** it attracted most of the deals and investment dollars. In fact globally, deals in Brazil accounted for an impressive 7% of the project finance transactions and 18% of investment among Emerging Market economies. The following Latin American & Caribbean countries were project finance destinations during the past five years:

	Amt US\$ m	Percent	No. deals
Brazil	85,827.57	46.46	156
Mexico	23,411.25	12.67	65
Chile	17,924.82	9.70	45

Venezuela	16,764.00	9.07	19
Argentina	14,849.02	8.04	54
Colombia	4,977.17	2.69	24
Peru	3,828.30	2.07	10
Puerto Rico	2,997.00	1.62	3
Bolivia	2,445.00	1.32	6
Guatemala	2,336.20	1.26	9
Trinidad and Tobago	2,159.80	1.17	6
Other	1,800.00	0.97	1
Dominican Republic	1,421.60	0.77	7
Ecuador	1,266.30	0.69	2
Panama	998.40	0.54	8
El Salvador	455.00	0.25	3
Netherlands Antilles	435.00	0.24	2
Costa Rica	314.00	0.17	5
Jamaica	210.33	0.11	2
Paraguay	110.00	0.06	1
Honduras	93.83	0.05	1
Nicaragua	48.30	0.03	2
Cayman Islands	35.00	0.02	1
Guyana	23.50	0.01	1
Belize	6.00	0.00	1
Total	184,737.40	100.00	434

### 7.3 Top banks

**The dominant banks in this region were Citigroup, BNDES, and JBIC.** Citibank was the clear front-runner in terms of total project finance investment, providing 7.5% of all dollars flowing into signed deals over the last five years. However, it should be noted that because of the popularity of infrastructure deals, there were some non-bank actors that played a big role in project finance, namely Nortel Networks and Ericsson Radio Systems (which each contributed over US\$2 billion for eight signed deals). Were these companies ranked, they would have ranked 11<sup>th</sup> and 12<sup>th</sup>, beating out BNP Paribas and Banco Santander Central Hispano.

	Country	Amt. US\$ m	Percent
Citigroup Inc	USA	8,820.77	7.52
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,533.23	5.57
Japan Bank for International Cooperation (JBIC)	Japan	4,361.74	3.72
WestLB AG	Germany	4,121.12	3.51
JP Morgan Chase & Co	USA	3,802.39	3.24
Deutsche Bank AG	Germany	3,775.86	3.22
ABN Amro Holding NV	Netherlands	3,611.94	3.08
Inter-American Development Bank	Supranational	3,225.50	2.75
Dresdner Kleinwort Wasserstein (DKW)	Germany	2,739.75	2.34
Bank of America Corp	USA	2,627.07	2.24
BNP Paribas SA	France	2,202.16	1.88
Banco Santander Central Hispano (BSCH)	Spain	2,142.18	1.83

When ranking by number of deals, Citibank still tops the list, while Dresdner Bank ranks second. Notably, Dresdner did not even show up on the previous chart, suggesting that this bank contributes relatively small amounts of financing to a relatively large number of projects. When sorting by this level of activity, ABN-Amro also moves up the list, and new banks appear such as Spain-based Banco Bilbao Vizcaya Argentaria, the World Bank, and HypoVereinsbank. Banks that decline in importance include the Inter-American Development Bank, and Bank of America.

	<b>Country</b>	<b>No. deals</b>
Citigroup Inc	USA	119
Dresdner Kleinwort Wasserstein (DKW)	Germany	84
ABN Amro Holding NV	Netherlands	77
WestLB AG	Germany	69
Deutsche Bank AG	Germany	65
BNP Paribas SA	France	63
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	61
Banco Santander Central Hispano (BSCH)	Spain	54
JP Morgan Chase & Co	USA	49
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	47
World Bank	Supranational	46
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	45

The important role of financial arranging was dominated again by Citibank, and the financial arranging rankings closely match those for total amount financed. Again, it should be noted that if Ericsson and Nortel were ranked, they would have made the list: Ericsson actually arranged 8 telecom deals, and Nortel arranged 5 (which would have placed them in 11<sup>th</sup> and 12<sup>th</sup> place).

	<b>Country</b>	<b>Amt US\$ m</b>	<b>No. deals</b>
Citigroup Inc	USA	7,889.92	82
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	6,496.18	45
Japan Bank for International Cooperation (JBIC)	Japan	5,071.48	18
JP Morgan Chase & Co	USA	4,950.48	37
WestLB AG	Germany	4,451.29	48
Deutsche Bank AG	Germany	4,421.47	43
ABN Amro Holding NV	Netherlands	3,933.24	54
Inter-American Development Bank	Supranational	3,212.24	37
Bank of America Corp	USA	2,887.26	31
Dresdner Kleinwort Wasserstein (DKW)	Germany	2,588.04	49
Kreditanstalt für Wiederaufbau (KfW)	Germany	1,904.70	10
Société Generale	France	1,839.87	26

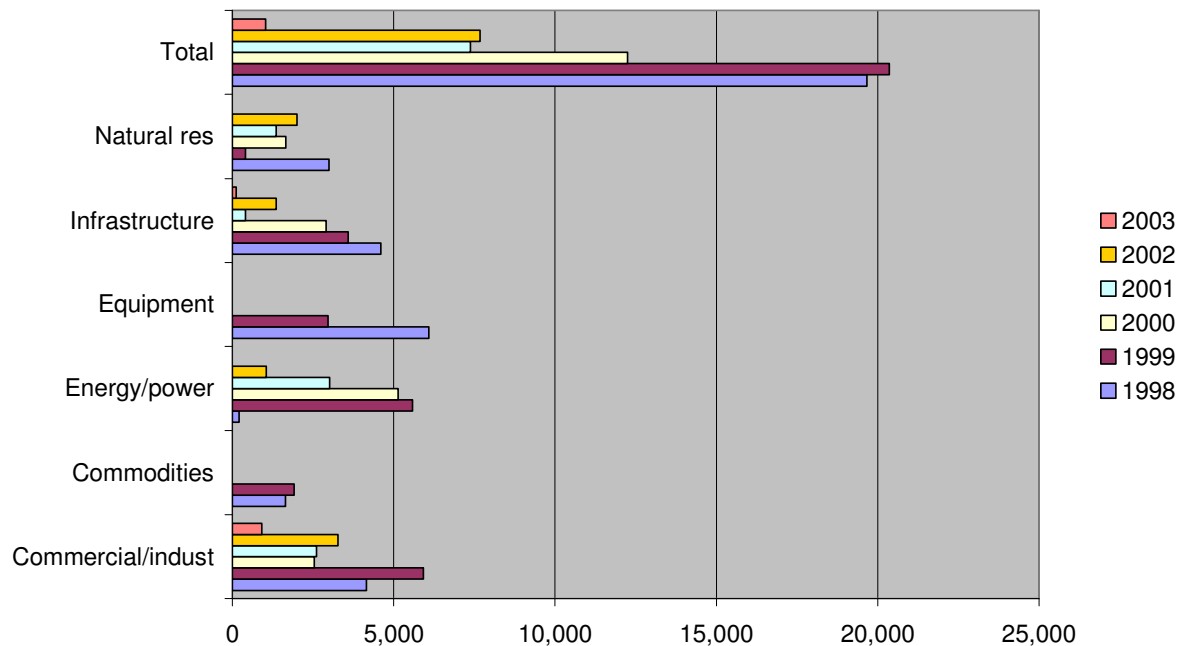
## 8. MIDDLE EAST AND NORTH AFRICA

**Overall project financings have gone down in the Middle East and North Africa, but the trend has not been as dramatic as other regions.** (See Appendix II for a classification of countries in the Middle East & North Africa.)

### 8.1 Top sectors

In this region project finance dollars are more evenly shared among sectors, with commercial/ industrial, infrastructure, and energy deals drawing the majority of deals and financing. Certainly oil investments are popular in the Middle East and Northern Africa, but this sector does not necessarily draw a lot of project financing, as the investments are relatively mature and project finance is most commonly used for new ventures.

**Middle East Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003**



In 1998 and 1999, it appeared that equipment financing (especially for aircraft transactions), were significant, with several Middle Eastern countries signing 6 and 12 transactions respectively. Among the commercial/industrial sector, chemical and petrochemical plant deals were most common, and alone they accounted for 22% of all signed project finance dollars in the region. The infrastructure sector predictably was dominated by telecom deals; and among the 31 power deals that were signed, only one was for a wind farm.

## 8.2 Top countries

The country in this region that attracted almost 30% of the project finance dollars was Saudi Arabia. However Turkey, which ranked second in terms of project finance-related investments, attracted the highest number of deals (53). United Arab Emirates ranked third.

	Amt. US\$ m	Pcnt.	No. deals
Saudi Arabia	20,243.21	29.62	24
Turkey	11,188.66	16.37	53
United Arab Emirates	6,942.80	10.16	12
Qatar	5,936.70	8.69	12
Egypt	4,405.88	6.45	13
Israel	4,370.00	6.39	6
Oman	4,182.16	6.12	10
Iran	3,961.94	5.80	7
Kuwait	2,085.00	3.05	5
Morocco	1,550.89	2.27	5
Jordan	860.00	1.26	5
Algeria	817.00	1.20	4
Bahrain	792.00	1.16	4
Tunisia	645.00	0.94	4
Lebanon	216.00	0.32	3
Palestine	150.00	0.22	1
Total	68,347.24	100.00	168

## 8.3 Top banks

In terms of total financing for signed projects, the top banks in this region were American and British (**JPMorgan Chase, Citigroup, Barclays ranked as the top providers of project finance**); but Bahrain-based Gulf International Bank and Saudi Arabia-based Al Rajhi Bank took 5<sup>th</sup> and 6<sup>th</sup> place respectively; while Bahrain's Arab Banking Corp and Israel's Bank Hapoalim ranked 8th and 9th. Middle East regional banks, buoyed by recent high oil prices and lower interest rates, are starting to become more interested in project finance. However, it is unlikely that these smaller regional institutions will be able to effectively crowd out large global banks, which have the appetite and ability to finance large, long-term oil projects.<sup>7</sup>

	Country	Amt. US\$ m	Percent
JP Morgan Chase & Co	USA	2,153.90	3.65
Citigroup Inc	USA	1,958.11	3.32
Barclays plc	UK	1,780.52	3.02
Mizuho Holdings Inc	Japan	1,621.66	2.75
Gulf International Bank BSC	Bahrain	1,579.58	2.68
Al Rajhi Banking & Investment Corp	Saudi Arabia	1,579.00	2.68
Mitsubishi Tokyo Financial Group Inc	Japan	1,325.36	2.25
Arab Banking Corp (ABC)	Bahrain	1,266.08	2.15
Bank Hapoalim BM	Israel	1,262.59	2.14
HSBC Holdings plc	UK	1,187.12	2.01

<sup>7</sup> "Energy Banking; Still Pretty Tough," *Petroleum Economist*, 10 June 2003

Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	1,184.99	2.01
Société Generale	France	1,183.70	2.01

**However, Bahrain-based banks are most active in the region, followed by HypoVereinsbank.** The US and UK banks drop down or off the Top 12 list completely, while the French banks move up. US and UK banks provide large sums of financing, but they are limited to a relatively small number of transactions.

	<b>Country</b>	<b>No. deals</b>
Arab Banking Corp (ABC)	Bahrain	50
Gulf International Bank BSC	Bahrain	46
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	45
Mizuho Holdings Inc	Japan	42
Citigroup Inc	USA	41
Barclays plc	UK	39
Mitsubishi Tokyo Financial Group Inc	Japan	37
Société Generale	France	35
BNP Paribas SA	France	35
Natexis Banque-BFCE	France	34
Crédit Agricole Indosuez	France	32
Arab Bank plc	Jordan	32

**The list of top arrangers is similar to that of the top financiers** generally, but some banks such as ABN Amro and Riyadh Bank become more dominant, while Mitsubishi drops off the list. In this region, arrangers tend to be international banks rather than regional banks, because most of the regional banks have relatively limited capacity for underwriting. However, in many transactions most of the securities are sold to investors in region.<sup>8</sup>

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
JP Morgan Chase & Co	USA	7,382.53	15
Citigroup Inc	USA	3,011.27	24
Barclays plc	UK	2,321.62	27
Gulf International Bank BSC	Bahrain	1,854.55	30
Al Rajhi Banking & Investment Corp	Saudi Arabia	1,579.00	3
Mizuho Holdings Inc	Japan	1,446.73	29
BNP Paribas SA	France	1,421.35	24
Deutsche Bank AG	Germany	1,291.56	13
Société Generale	France	1,255.16	27
ABN Amro Holding NV	Netherlands	1,238.14	22
Bank Hapoalim BM	Israel	1,133.33	3
Riyadh Bank	Saudi Arabia	1,090.27	13

<sup>8</sup> Marray, Michael. "Indian Givers," *Project Finance*, September 2002.

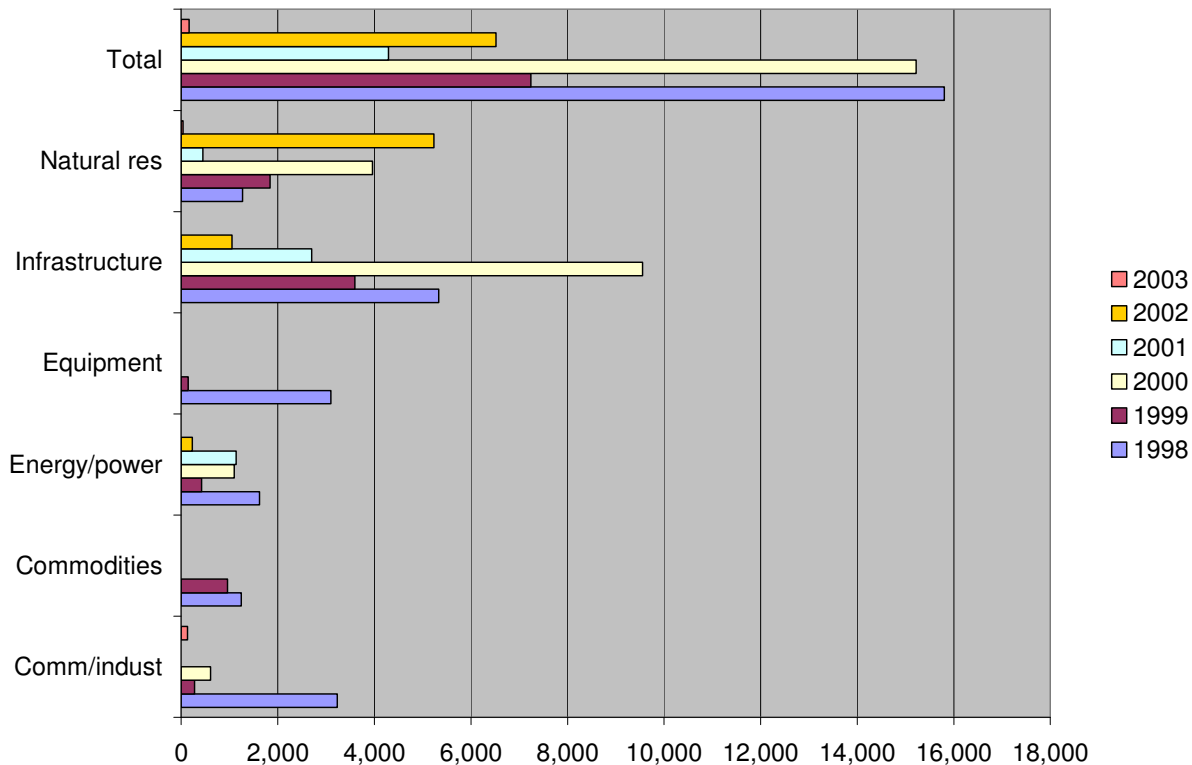
## 9. EASTERN EUROPE

In Eastern Europe, project finance trends did not decline as steadily as they did in other Emerging Markets. (See Appendix II for a classification of Eastern European countries.)

### 9.1 Top sectors

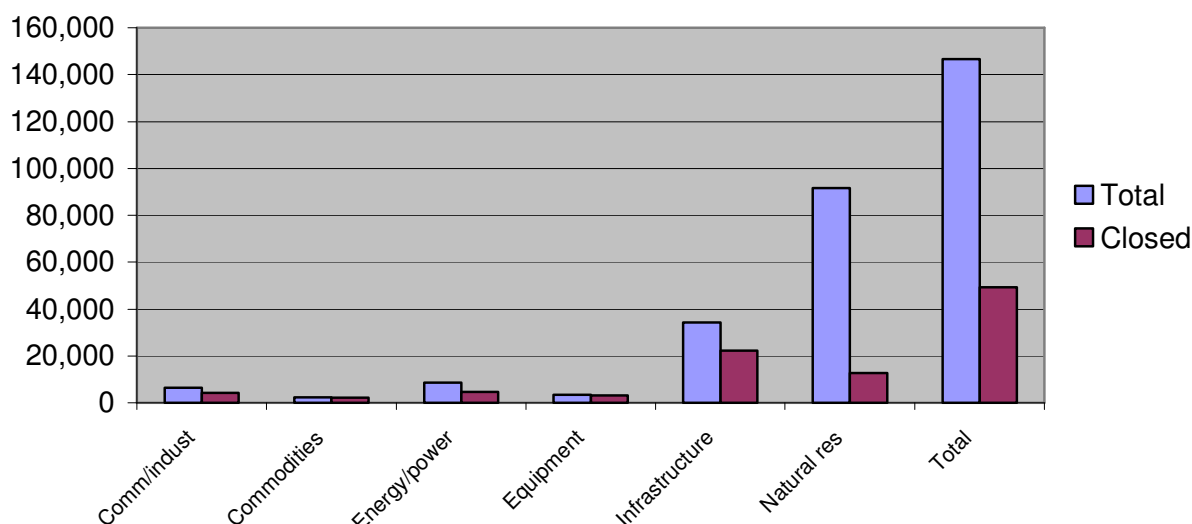
A few expensive telecom deals broke an otherwise downward trend in 2000. Notably Poland's US\$3.9 billion Telekomunicacja Polska privatization deal and its Universal Mobile Telecommunications Systems license auction gave a boost to the infrastructure and overall project finance numbers. Project finance generally dropped in 2001, although investment in the power sector remained stable. The leap in natural resource projects in 2002 boosted the project finance numbers that year; natural resource deals, particularly gas distribution and oil refinery/LNG (liquid natural gas) plants, accounted for 80% of all project finance investments in 2002.

Eastern Europe Closed & Signed Project Finance Deals  
in US\$ millions, 1998 - Apr 2003



As the chart on the next page indicates, many natural resource investments have not reached their financial close and signing, including US\$38.6 billion in oilfield development projects, US\$34.5 billion in gas pipelines, almost US\$19.5 billion in oil pipelines, and almost US\$16.6 billion in gasfield development deals.

## Eastern Europe Project Finance Deals Total v. Closed & Signed, 1998 - Apr 2003



### 9.2 Top countries

26 Eastern European countries were project finance destinations since 1998. **Poland, Russia, the Slovak Republic, and Hungary were the countries that attracted the most project finance investment.**

	Amt. US\$ m	Pcnt.	No. deals
Poland	13,678.16	27.78	40
Russia Federation	9,154.83	18.59	45
Slovak Republic	5,177.26	10.51	16
Hungary	4,440.12	9.02	29
Czech Republic	3,423.13	6.95	19
Romania	2,523.26	5.12	13
Croatia	2,252.75	4.58	17
Uzbekistan	1,990.00	4.04	10
Kazakhstan	1,133.00	2.30	6
Turkmenistan	1,040.89	2.11	5
Slovenia	832.16	1.69	8
Bulgaria	811.66	1.65	7
Azerbaijan	692.62	1.41	5
Macedonia	518.39	1.05	3
Ukraine	388.82	0.79	6
Estonia	375.67	0.76	5
Lithuania	174.75	0.35	3
Latvia	106.97	0.22	2
Malta	100.43	0.20	1
Kyrgyz Republic	95.00	0.19	1



Gibraltar	77.00	0.16	3
Moldova	77.00	0.16	2
Yugoslavia	54.73	0.11	1
Albania	46.82	0.10	2
Bosnia-Herzegovina	42.27	0.09	1
Cyprus	32.65	0.07	1
Total	49,240.34	100.00	251

### 9.3 Top banks

On the basis of total financing provided, **the most influential Eastern European project finance banks are supranationals**. The European Investment Bank tops the list with almost US\$ 2 billion in investments, but they were limited to a relatively small number of projects. **EBRD and HypoVereinsbank were more consistently influential in terms of dollars financed, activity level, and financial arranging.**

	Country	Amt. US\$ m	Percent
European Investment Bank	Supranational	1,953.26	5.56
European Bank for Reconstruction & Development (EBRD)	Supranational	1,844.88	5.26
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	1,563.78	4.45
Citigroup Inc	USA	1,311.42	3.74
JP Morgan Chase & Co	USA	1,296.72	3.69
Société Generale	France	915.60	2.61
KBC Bank NV	Belgium	843.61	2.40
Dresdner Kleinwort Wasserstein (DKW)	Germany	828.32	2.36
Japan Bank for International Cooperation (JBIC)	Japan	818.50	2.33
ABN Amro Holding NV	Netherlands	709.87	2.02

However, it should be noted that non-bank actors are also important sources of project finance investment in Eastern Europe. For example, if Gasprom's equity contributions were to be ranked, it would come in 3<sup>rd</sup> because of the company's US\$1.6 billion in investments in signed deals since 1998.

**In terms of activity level, the public financial institutions become less dominant. HypoVereinsbank tops the list as by far the most active bank**, and a few public financial institutions such as the European Investment Bank and JBIC drop off the list altogether.

	Country	No. deals
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	88
European Bank for Reconstruction & Development (EBRD)	Supranational	45
KBC Bank NV	Belgium	42
ING Groep NV	Netherlands	35
Bayerische Landesbank Girozentrale	Germany	35
Citigroup Inc	USA	34

WestLB AG	Germany	33
Société Generale	France	32
Raiffeisen Zentralbank Osterreich AG (RZB)	Austria	29
Dresdner Kleinwort Wasserstein (DKW)	Germany	28

When ranking banks in terms of financial arranging, there new banks which make it onto the Top 10 list – including the National Bank of Greece, which was involved with Romania’s \$1 billion OTE Romtelecom privatization. Meanwhile, some banks like Belgium’s KBC become less dominant.

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
European Bank for Reconstruction & Development (EBRD)	Supranational	2,375.65	45
European Investment Bank	Supranational	1,878.39	19
JP Morgan Chase & Co	USA	1,581.72	14
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	1,483.05	43
Dresdner Kleinwort Wasserstein (DKW)	Germany	1,425.44	13
Citigroup Inc	USA	1,189.34	20
Japan Bank for International Cooperation (JBIC)	Japan	1,139.05	7
National Bank of Greece SA	Greece	1,048.78	2
Société Generale	France	865.70	21
Commerzbank AG	Germany	865.11	13

## 10. GASFIELD DEVELOPMENT AND PIPELINES

**Project finance is a common method of financing gas projects, particularly pipelines.** There are 102 active gas-related deals in Emerging Market countries, valued at about US\$187.7 billion. However, only 27 projects have been closed and signed since 1998.

### 10.1 Top regions

**Countries in the Middle East and North African region are popular destinations for proposed and completed gas projects, followed by Eastern Europe and the former Soviet Union.** Southeast Asia and Latin America follow.

**Emerging Markets Total Gasfield & Pipeline Deals  
in US\$ millions, 1998 - Apr 2003**



\*International was a US\$440 million pipeline through Argentina, Chile and Brazil; and a US\$7 billion pipeline through several Asian countries.

### 10.2 Top countries

Ranked by total value of proposed and completed deals, the top countries for project-financed gasfield development and pipeline projects are:

	<b>Amt US\$ m</b>	<b>Percent</b>	<b>No. deals</b>
Saudi Arabia	25,000.00	15.98	1
China	14,500.00	9.27	1
Russia Federation	14,205.22	9.08	6
Iran	13,500.00	8.63	9
Algeria	11,600.00	7.41	4
Bolivia	8,283.00	5.29	6
International Asia	7,000.00	4.47	1

Libya	5,629.16	3.60	2
Qatar	5,100.00	3.26	3
Venezuela	4,888.00	3.12	5

**Note that Saudi Arabia and China top the list, although they each have only one project.** Saudi Arabia's massive US\$25 billion Gas-Based Core Ventures (CV) Development project entails the development of three multibillion-dollar gas based core ventures in the southeastern, western and northwestern parts of the country. China's ambitious US\$14.5 billion West-East natural gas pipeline is in tender and would entail the construction of a 4 pipeline from north-west China, to Shanghai. Iran is the country with the most number of gas deals: 9 projects valued at US\$13.5 billion.

### 10.3 Top banks

Based on the 27 signed deals, **the top three Emerging Markets gasfield development and pipeline banks are the Inter-American Development Bank, the World Bank, and Crédit Agricole.**

	Country	Amt. US\$ m	Percent
Inter-American Development Bank	Supranational	650.60	5.32
World Bank	Supranational	452.00	3.70
Crédit Agricole Indosuez	France	375.70	3.07
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	333.00	2.73
Standard Bank Investment Corp Ltd	South Africa	257.24	2.11
European Investment Bank	Supranational	245.79	2.01
JP Morgan Chase & Co	USA	225.00	1.84
Credit Suisse First Boston (CSFB)	Switzerland	225.00	1.84
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	219.41	1.80
ING Groep NV	Netherlands	216.66	1.77

It should be noted that in the gas sector, companies occasionally provide more financing than banks do. For example, if Gasprom's project finance deals were to be counted, the company would come in first, providing twice the amount of money that the Inter-American Development Bank and the World Bank does for just two of the company's projects.

**When ranking Emerging Markets gas banks by number of project finance deals, the public banks become relatively less important:** the World Bank (which was only involved in three projects) and BNDES (which was just involved in the in Bolivia-Brazil gas pipeline) become less important, and the Inter-American Development Bank ties with HypoVereinsbank, ABN-Amro and Crédit Lyonnais for first place. Each of these top-ranked banks were involved with six gasfield development and pipeline deals.

	Bank	No. deals
Inter-American Development Bank	Supranational	6
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	6

ABN Amro Holding NV	Netherlands	6
Crédit Lyonnais SA	France	6
KBC Bank NV	Belgium	5
WestLB AG	Germany	5
Société Generale	France	5
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	5
Crédit Agricole Indosuez	France	4
ING Groep NV	Netherlands	4
BNP Paribas SA	France	4
Japan Bank for International Cooperation (JBIC)	Japan	4
Bayerische Landesbank Girozentrale	Germany	4
Dresdner Kleinwort Wasserstein (DKW)	Germany	4
Natexis Banque-BFCE	France	4

When ranking financial arrangers based on the number of completed gas projects in the Emerging Markets, the Inter-American Development Bank is still the front-runner, but Crédit Agricole dramatically increases in importance.

	Country	Amt. US\$ m	No. deals
Inter-American Development Bank	Supranational	625.00	6
Crédit Agricole Indosuez	France	454.58	3
World Bank	Supranational	452.00	3
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	333.00	1
ABN Amro Holding NV	Netherlands	324.71	5
Crédit Lyonnais SA	France	270.54	3
Standard Bank Investment Corp Ltd	South Africa	257.24	1
European Investment Bank	Supranational	245.79	3
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	236.70	4
ING Groep NV	Netherlands	225.86	2

## 10.4 Regional leaders

**Dominant regions for project financed gas deals in the Emerging Markets include the Middle East, Eastern Europe, Latin America and Southeast Asia.** However, all 11 of the Southeast Asian gas projects are in finance or in tender, so this survey will not attempt to name the most banks in this region. Similarly, in Africa there were 10 gas development and pipeline projects between 1998 – Apr 2003, but only two were signed. On the Indian subcontinent, there were four active gas projects, with only one that has been signed in the last five years.

### 10.4.1 Middle East

Between 1998 – Apr 2003, there were 25 gasfield or pipeline projects in the Middle East, but four had been signed. Of these, three were exploration deals, and one was a gas pipeline. The list below lists the number and value of project-financed oil deals in the Middle East, based on all projects at various stages of development. Saudi Arabia's \$25 billion Gas-based Core Ventures Development project single-handedly accounted for 41% of the value of the Middle

East's non-recourse financed gasfield development and pipeline projects. However Iran has the largest number of deals, with 9 projects (2 of which were signed).

	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
Saudi Arabia	25,000.00	41.98	1
Iran	13,500.00	22.67	9
Algeria	11,600.00	19.48	4
Qatar	5,100.00	8.56	3
United Arab Emirates	2,500.00	4.20	2
Egypt	700.00	1.18	2
Oman	455.00	0.76	1
Israel	400.00	0.67	1
Jordan	300.00	0.50	2
Total	59,555.00	100.00	25

**In the Middle East/ North Africa gas market, Crédit Agricole provided 26% financing for closed project-financed deals.** As the only financial institution to be involved in more than one deal, it dominated, while export credit agencies (ECAs) played a very small role. Many deals are now going forward without ECA involvement, reflecting investors' increasing level of comfort with regional risks.<sup>9</sup> The top five banks were:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>	<b>No. deals</b>
Crédit Agricole Indosuez	France	242.65	26.55	2
DG Bank Deutsche Genossenschaftsbank	Germany	116.67	12.76	1
ABB Ltd	Sweden	55.00	6.02	1
Mizuho Holdings Inc	Japan	46.59	5.10	1
BNP Paribas SA	France	27.95	3.06	1
Arab Banking Corp (ABC)	Bahrain	27.95	3.06	1

Ranking by arranger, Crédit Agricole is even more dominant, while Arab Banking Corp and Arab Petroleum Investments also make it onto the list:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No deals</b>
Crédit Agricole Indosuez	France	350.00	1
Mizuho Holdings Inc	Japan	58.57	1
BNP Paribas SA	France	58.57	1
Arab Banking Corp (ABC)	Bahrain	58.57	1
Arab Petroleum Investments Corp (APICORP)	Saudi Arabia	58.57	1

#### 10.4.2 Eastern Europe

In Eastern Europe, Russia attracted the most number of deals, which represent almost half of the value of the region's gasfield development and pipelines projects. In particular, the second phase of Russia's Sakhalin II project is valued at a staggering US\$10 billion; without this project, the value of Russia's project finance deals would be more in line with the other Eastern European countries.

<sup>9</sup> Marray, Michael. "Indian Givers," *Project Finance*, September 2002.

	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
Russia Federation	14,205.22	49.97	6
Turkmenistan	4,400.00	15.48	2
Kazakhstan	3,500.00	12.31	1
Azerbaijan	2,300.00	8.09	2
Yugoslavia	2,000.00	7.03	1
Poland	1,400.00	4.92	1
Croatia	550.00	1.93	1
Bulgaria	75.00	0.26	1
Total	28,430.22	100.00	15

In Eastern Europe, there were fifteen gas development or pipeline deals, but only three were signed (Poland's Yamal gas pipeline, the Blue Stream – Black Sea pipeline from Russia to Turkey, and the Russian section of the same project). All others are still in financing or in tender, so bank participation is not settled. **No single bank was involved in more than two deals, so it is difficult to genuinely rank banks in terms of importance in this region and sector.** Nonetheless, the top five in terms of financing provided to signed deals are:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	142.57	3.06
Crédit Agricole Indosuez	France	133.04	2.85
ING Groep NV	Netherlands	113.99	2.44
Banca Intesa SpA (IntesaBci)	Italy	113.99	2.44
BNP Paribas SA	France	113.99	2.44
DG Bank Deutsche Genossenschaftsbank	Germany	73.38	1.57

In Eastern Europe, companies have played a significant financing role in project financed gas deals. For example, the money Gasprom invested in two of its Eastern European deals represents seven times more financing than HypoVereinsbank, which is ranked first.

By arranger, the top Eastern European project finance banks in the gasfield development & pipelines sectors are:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	179.79	2
ING Groep NV	Netherlands	137.86	1
Banca Intesa SpA	Italy	137.86	1
BNP Paribas SA	France	137.86	1
DG Bank Deutsche Genossenschaftsbank	Germany	117.14	2
WestLB AG	Germany	117.14	2

#### 10.4.3 Latin America

In Latin America and the Caribbean, there were 37 gasfield development and pipeline project finance deals. Of these 17 were signed, and all were pipelines. Argentina, with six pipelines, attracted the most signed deals; while the Brazil-Bolivia pipeline project was the most

expensive at US\$2.2 billion. There was one international project, a pipeline through Argentina, Chile and Brazil.

	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
Bolivia	8,283.00	35.15	6
Venezuela	4,888.00	20.74	5
Peru	3,920.00	16.63	3
Argentina	2,099.70	8.91	7
Brazil	1,655.00	7.02	4
Chile	1,332.00	5.65	5
Mexico	508.16	2.16	3
International	440.00	1.87	1
Panama	360.00	1.53	1
Ecuador	80.00	0.34	1
Colombia	0.00	0.00	1
Total	23,565.86	100.00	37

**The top bank in Latin American gasfield development and pipelines was clearly the Inter-American Development Bank;** the IADB was the only bank to provide a large amount of financing as well as participate in multiple deals. It again should be noted that project sponsors provide a significant amount of equity for gas deals. For example, if Petrobras were included in this list, the company would rank second.

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Inter-American Development Bank	Supranational	650.60	11.69
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	333.00	5.98
World Bank	Supranational	310.00	5.57
JP Morgan Chase & Co	USA	225.00	4.04
Credit Suisse First Boston (CSFB)	Switzerland	225.00	4.04

When ranking financial institutions by level of activity (i.e. number of deals), a new set of banks become important. Banks such as BNDES, the World Bank, JPMorgan Chase and CSFB provided large sums of money, but only to one project.

	<b>Country</b>	<b>No. deals</b>
Inter-American Development Bank	Supranational	6
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	4
Société Generale	France	4
Crédit Lyonnais SA	France	4
ABN Amro Holding NV	Netherlands	4
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	3
WestLB AG	Germany	3
Dresdner Kleinwort Wasserstein (DKW)	Germany	3
ING Groep NV	Netherlands	3
Citigroup Inc	USA	3



When sorting by arrangers, the top six Latin American project finance banks for the gas sector are:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
Inter-American Development Bank	Supranational	625.00	6
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	333.00	1
World Bank	Supranational	310.00	1
JP Morgan Chase & Co	USA	225.00	1
Credit Suisse First Boston (CSFB)	Switzerland	225.00	1
Crédit Lyonnais SA	France	195.33	2

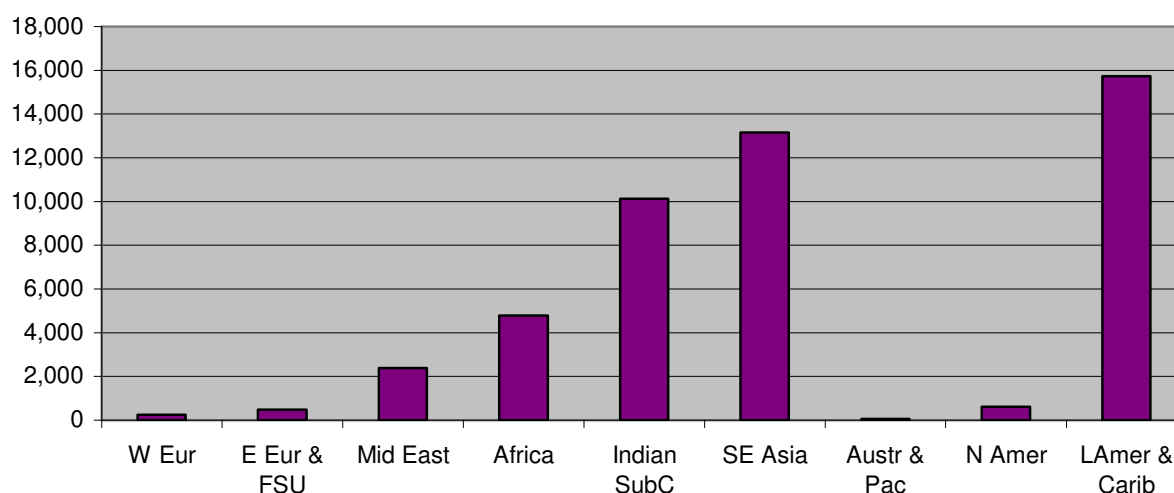
## 11. HYDROPOWER

**Project finance is the most popular way of financing hydropower projects.** In the last five years there have been 91 dams in tender, in finance, and signed around the world.

### 11.1 Top regions

**The leading regions for dam building have been Latin America** (43 dams in various stages of development), **Southeast Asia** (12 dams), **the Indian Subcontinent** (16 dams), and **Africa** (4 dams). 5 dams are also in tender in the Middle East. As evidenced, there is very little new dam building in Europe, Australia & the Pacific, and North America.

Global Closed and Signed Hydropower Deals  
in US\$ millions, 1998 - Apr 2003



### 11.2 Top countries

Since 1998, **Brazil has topped the list in terms of the dollar value of proposed and financed dams:**

	Amt. US\$ m	Percent	No. deals
Brazil	9,492.00	19.96	22
China	6,926.28	14.56	4
India	5,618.59	11.81	11
Nigeria	4,000.00	8.41	1
Pakistan	3,760.00	7.91	2
Malaysia	2,367.30	4.98	1
Turkey	2,260.00	4.75	3
Laos	2,179.00	4.58	4
Argentina	1,891.00	3.98	5
Philippines	1,679.50	3.53	3

### 11.3 Top Banks

**The combined Japanese bilateral agencies (JBIC, JEXIM and Japan’s Overseas Economic Cooperation Fund) led the way in terms of global dam financing.** Chinese banks also ranked among the Top 10 dam financiers because of their participation in the very expensive US\$3 billion Xiaowan dam in China. Notably, if ranked the Pakistan Water & Power Authority would have ranked among the Top 10 dam financiers because of its role as both an arranger and participant in the Ghazi Barotha power project which they helped finance to the tune of US\$ 1 billion. The top global dam financiers, ranked by the value of signed deals, are:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Japan Bank for International Cooperation (JBIC)	Japan	1,326.14	9.92
China Construction Bank	China	1,005.53	7.52
Industrial & Commercial Bank of China	China	1,005.53	7.52
China Development Industrial Bank	China	1,005.53	7.52
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	760.19	5.68
World Bank	Supranational	685.04	5.12
Inter-American Development Bank	Supranational	554.83	4.15
Citigroup Inc	USA	498.81	3.73
Asian Development Bank	Supranational	495.33	3.70
China International Trust & Investment Corp Ltd (CITIC)	China	362.35	2.71

**However, measured by number of hydro deals, other financial institutions are much more active in the hydropower sector, including BNDES, the World Bank and Citigroup.** The hydropower industry is the one sector examined in this survey where public financial institutions play a very important role compared with private banks.

	<b>Country</b>	<b>No. deals</b>
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	8
World Bank	Supranational	7
Citigroup Inc	USA	7
Dresdner Kleinwort Wasserstein (DKW)	Germany	6
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	5
Japan Bank for International Cooperation (JBIC)	Japan	4
Inter-American Development Bank	Supranational	4
WestLB AG	Germany	4
Australia & New Zealand Banking Group Ltd	Australia	4
Asian Development Bank	Supranational	3

When sorted by financial arrangers, the list of top hydro banks does not change much in composition, although rankings are different. “Numbers of projects arranged” is included because of the prominent arranging role the three Chinese banks have due to one transaction.

	Country	Amt. US\$ m	No. deals
Japan Bank for International Cooperation (JBIC)	Japan	1,393.41	4
China Construction Bank	China	1,005.53	1
Industrial & Commercial Bank of China	China	1,005.53	1
China Development Industrial Bank	China	1,005.53	1
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	723.72	8
Asian Development Bank	Supranational	485.00	3
Bank of America Corp	USA	335.50	1
WestLB AG	Germany	238.94	3
Inter-American Development Bank	Supranational	226.83	3
World Bank	Supranational	212.50	4
Citigroup Inc	USA	195.00	4
Eksporthfinans	Norway	105.00	1
Swedish Export Credit Corp - SEK	Sweden	105.00	1

## 11.4 Regional leaders

As mentioned, the leading regions for dam building are Latin America, Southeast Asia, the Indian Subcontinent, and Africa. Relatively little new dam building is occurring in Europe, Australia & the Pacific, and North America.

### 11.4.1 Latin America

Latin America with its 43 dams in various stages of development, represented the most popular region for dam building. Brazil clearly dominated the region, accounting for over 60% of the value of dam investments in this region. Among Latin America's 43 hydro projects, 12 reached financial close (7 of which were in Brazil), and bank rankings were based upon these 12 deals.

	Amt. US\$ m	Pcnt.	No. deals
Brazil	9,492.00	60.33	22
Argentina	1,891.00	12.02	5
Colombia	1,440.90	9.16	3
Peru	1,012.00	6.43	3
Mexico	748.00	4.75	1
Panama	666.00	4.23	2
Ecuador	200.00	1.27	1
Costa Rica	112.00	0.71	2
Guatemala	96.60	0.61	2
Honduras	75.00	0.48	1
Bolivia	0.00	0.00	1
Total	15,733.50	100.00	43

Because Latin America is by far the top region for dam building, it is little wonder that **BNDES, the world's is the top global dam financier, also tops the list of key Latin American hydro banks.** However, it should be noted that occasionally multinational corporations take a large equity stake in project-financed dams. For example, were Suez, with its

US\$261 million investment in two dam projects, included on this list, it would be ranked fifth, ahead of WestLB.

	<b>Country</b>	<b>No. deals</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	8	760.19	50.00
Dresdner Kleinwort Wasserstein (DKW)	Germany	5	50.77	31.25
Inter-American Development Bank	Supranational	4	554.83	25.00
Citigroup Inc	USA	4	196.75	25.00
WestLB AG	Germany	2	106.50	12.50

The ranking of the Latin America's top hydro banks remains the same, whether based on total financing or number of deals. However, nine banks tie with WestLB for fifth place (Unibanco, Banco Safria, the World Bank, Banco Itau-BBA, ABN Amro, Australia & New Zealand Banking Group, Banco Bilbao Vizcaya Argentaria, and Société Generale), as they each financed two dams.

When sorted by financial arranging, the top Latin American hydro banks are:

	<b>Country</b>	<b>Amt US\$ m</b>	<b>No. deals</b>
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	723.72	8
Bank of America Corp	USA	335.50	1
Inter-American Development Bank	Supranational	226.83	3
Citigroup Inc	USA	130.00	2
WestLB AG	Germany	100.00	1

#### 11.4.2 Southeast Asia

From 1998- April 2003, there were 12 dams in Southeast Asia in various stages of development. Of these projects, 7 were signed.

	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
China	6,926.28	52.66	4
Laos	2,179.00	16.57	4
Malaysia	2,367.30	18.00	1
Philippines	1,679.50	12.77	3
Total	13,152.08	100.00	12

**Mitsubishi and Mizuho Holdings top the list of leading hydropower project finance banks in Southeast Asia** (in terms of signed dam projects):

	<b>Country</b>	<b>No. deals</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Mitsubishi Tokyo Financial Group Inc	Japan	2	112.24	25.00
Mizuho Holdings Inc	Japan	2	82.69	25.00
Bangkok Bank plc	Thailand	2	50.04	25.00
Crédit Agricole Indosuez	France	2	43.23	25.00
Norinchukin Bank	Japan	2	31.55	25.00

**Because no banks were involved in more than two deals, it is misleading to rank banks' importance by number of transactions.**

Among the financial arrangers for dams in Asia, the top five banks were Mizuho, Bangkok Bank, Mitsubishi, and China's Construction, Industrial & Commercial and Development Industrial banks. Three Chinese banks tied for 4<sup>th</sup> place, and they were all involved in Xiaowan hydropower station.

	Country	Amt. US\$ m	No. deals
China Construction Bank	China	1,005.53	1
Industrial & Commercial Bank of China	China	1,005.53	1
China Development Industrial Bank	China	1,005.53	1
Japan Bank for International Cooperation (JBIC)	Japan	702.00	1
Mizuho Holdings Inc	Japan	95.71	2
Bangkok Bank plc	Thailand	88.34	2

#### 11.4.3 Indian Subcontinent

Since 1998, there have been 16 new dams in various stages of financing on the Indian subcontinent. Only one, the Upper Bhote Koshi project in India, has been signed. Two others, the Kelanitissa dam in Sri Lanka and stage 2 of the Baspa dam, have reached financial closure.

	Amt. US\$ m	Pcnt.	No. deals
India	5,618.59	55.50	11
Nepal	641.20	6.33	2
Pakistan	3,760.00	37.14	2
Sri Lanka	104.00	1.03	1
Total	10,123.79	100.00	16

**Only one bank, JBIC, was involved in all three projects.** Other banks that were involved these three deals were:

	Country	No. deals	Amt. US\$ m	Percent
Japan Bank for International Cooperation (JBIC)	Japan	3	744.94	33.33
Asian Development Bank	Supranational	3	495.33	33.33
World Bank	Supranational	2	379.04	22.22
Power Finance Corp	India	1	82.25	11.11
Australia & New Zealand Banking Group Ltd	Australia	1	34.67	11.11

It should be noted that dam building companies often provide some financing themselves through equity contributions; for example if Argentina-based Synergics were to be ranked, it would rank 5<sup>th</sup> for its US\$117 million equity participation in the Srinagar dam, which is in finance and has not yet secured any bank involvement. Also, governments sometimes take equity stakes in hydroprojects, and can be another significant source of financing.

**With respect to financial arrangers, only JBIC and the ADB played any consistent role:** they helped arrange financing for all three dams, while the other arrangers only participated in one deal. It should also be noted that non-bank actors, including the Water & Power

Development Authority of Pakistan and the Government of India, helped arrange financing for the Indian dams.

	<b>Country</b>	<b>No. deals</b>	<b>Amt. US\$ m</b>
Japan Bank for International Cooperation (JBIC)	Japan	3	691.41
Asian Development Bank	Supranational	3	485.00
Power Finance Corp	India	1	82.25
World Bank	Supranational	1	57.00
Australia & New Zealand Banking Group Ltd	Australia	1	52.00

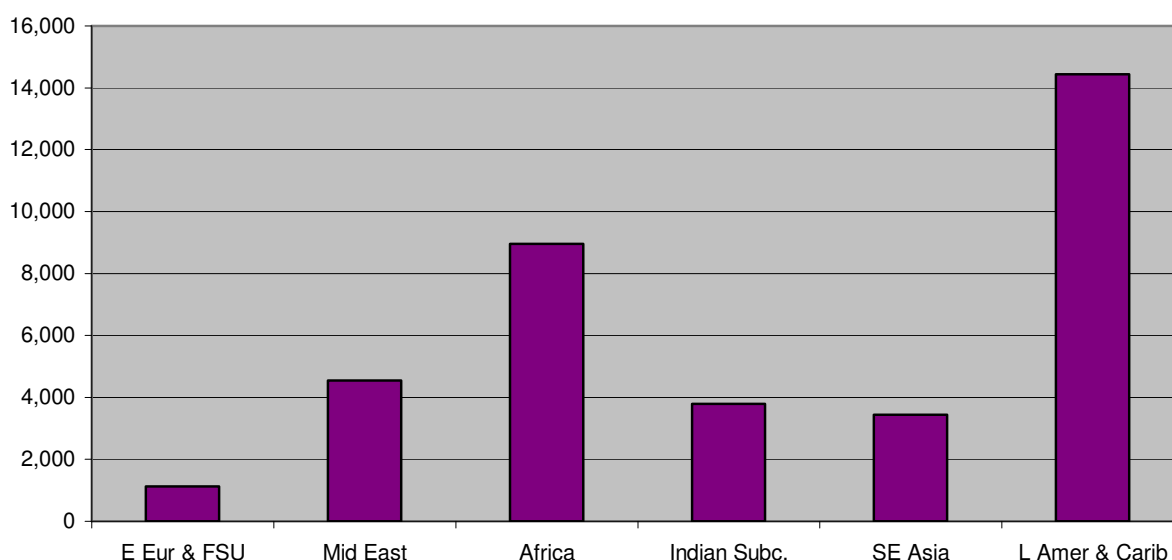
## 12. MINING

**Project finance is not the leading method of financing mines**, but nevertheless, this survey includes the mining sector because of its interest to NGOs. Mining is more typically financed by corporations themselves, and stock exchanges provide major sources of new financing. Canada, in particular, is the leading center for mining financing: in 1997, Canadian financial institutions underwrote almost 50% of the US\$10.1 billion (US\$4.8 million) of equity that was raised for exploration and mining on major international stock exchanges, and also raised US\$1.9 billion in debt. The next most influential exchanges are London (24%) and Australia (22%). The United States and South Africa accounted for 4% and 2.7%, respectively.<sup>10</sup>

### 12.1 Top regions

In the Emerging Markets, there have been 107 project finance deals since 1998 in the mining sector, most of which were signed. **Latin America was the leading region in terms of the value of its project-financed mines, followed by Africa.** However it should be noted that Africa actually had more deals – 46 as opposed to Latin America’s 33. The third most attractive project finance destination for the mining sector was the Middle East

**Emerging Market Closed & Signed Mining Deals  
in US\$ m, 1998 - Apr 2003**



<sup>10</sup> Keith Brewer, “Mining: Canada’s Competitive Advantage,” Economic and Financial Analysis Branch, Minerals and Metals Sector, Natural Resources Canada. [www.nrcan.gc.ca/mms/efab/invest/advantage/index.htm](http://www.nrcan.gc.ca/mms/efab/invest/advantage/index.htm)



## 12.2 Top Countries

Chile, Peru and Saudi Arabia were the countries attracting the most project finance dollars for mining projects. Note that South Africa attracted a high number of deals, although they were for less expensive projects.

	Amt. US\$ m	Pcnt.	No.
Chile	6,013.00	16.58	13
Peru	5,374.00	14.81	9
Saudi Arabia	4,400.00	12.13	1
India	3,800.00	10.48	2
Mozambique	2,300.00	6.34	3
Zambia	2,116.00	5.83	5
South Africa	2,069.70	5.71	12
Papua New Guinea	1,013.00	2.79	3
Vietnam	930.00	2.56	1
Brazil	882.00	2.43	3

## 12.3 Top banks

**Public banks such as JBIC and the World Bank provided large sums of project financing for mines, but they were involved in a relatively small number of deals.** The top mining project finance banks in terms of total amount of financing for signed deals are:

	Country	Amt. US\$ m	Percent
Japan Bank for International Cooperation (JBIC)	Japan	1,670.62	12.61
World Bank	Supranational	1,475.16	11.14
Barclays plc	UK	693.96	5.24
Deutsche Bank AG	Germany	417.82	3.15
Mizuho Holdings Inc	Japan	389.89	2.94
Standard Bank Investment Corp Ltd	South Africa	376.02	2.84
Luksic Group	Chile	365.00	2.76
Dresdner Kleinwort Wasserstein (DKW)	Germany	356.33	2.69
Kreditanstalt fur Wiederaufbau (KfW)	Germany	347.43	2.62
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	302.57	2.28

As noted, public banks tended to contribute significant amounts of capital to a relatively small number of projects. For example, JBIC/JEXIM was involved in five projects and the World Bank was involved in 9 mines – relatively few compared to financial institutions such as HypoVereinsbank and Standard Bank Investment Corporation. **When ranking mining banks in terms of number of deals, private banks like HypoVereinsbank, Standard Bank Investment Corporations and Dresdner Bank top list,** which dramatically changes:

	Country	No. deals
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	19

Standard Bank Investment Corp Ltd	South Africa	14
Dresdner Kleinwort Wasserstein (DKW)	Germany	13
Barclays plc	UK	13
Royal Bank of Scotland Group plc	UK	11
Rothschild	USA	11
Mizuho Holdings Inc	Japan	11
WestLB AG	Germany	10
Société Generale	France	10
Crédit Lyonnais SA	France	10

**The top financial arrangers in the mining sector are JBIC, the World Bank and Barclays.** When sorting for top financial arrangers, note that Mizuho Holdings and Rothschild become much less important. One of JBIC/JEXIM's largest arrangements was a US\$429 million co-financing facility for Coal India Ltd, for which 8 Japanese banks provided the capital.

	Country	Amt. US\$ m	No. deals
Japan Bank for International Cooperation (JBIC)	Japan	2,147.20	5
World Bank	Supranational	1,262.50	6
Barclays plc	UK	884.95	13
Deutsche Bank AG	Germany	625.21	9
Standard Bank Investment Corp Ltd	South Africa	441.72	11
Dresdner Kleinwort Wasserstein (DKW)	Germany	378.17	7
UBS AG	Switzerland	356.58	4
Mizuho Holdings Inc	Japan	346.60	5
Kreditanstalt für Wiederaufbau (KfW)	Germany	336.90	3

## 12.4 Regional leaders

### 12.4.1 Latin America

In Latin America, there were 33 mining deals, 18 of which were signed. Chile and Peru were the top destinations: Chile's 13 mines and Peru's 9 mining projects represent 80% of the total value of project-financed mine deals in the region.

	Amt. US\$ m	Pcnt.	No. deals
Chile	6,013.00	41.67	13
Peru	5,374.00	37.24	9
Brazil	882.00	6.11	3
Colombia	827.00	5.73	2
Bolivia	815.00	5.65	3
Venezuela	520.00	3.60	2
Argentina	0.00	0.00	1
Total	14,431.00	100.00	33

Based on 18 signed deals, **the top three Latin American project finance banks for the mining sector are JBIC, Barclays and KfW:**

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
Japan Bank for International Cooperation (JBIC)	Japan	971.14	15.90
Barclays plc	UK	492.52	8.06
Kreditanstalt fur Wiederaufbau (KFW)	Germany	336.90	5.51
Deutsche Bank AG	Germany	241.90	3.96
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	232.00	3.80

Each of these top banks were involved in about three or four projects, except for BNDES, which provided US\$232 billion of financing for an aluminum refinery expansion. Ranking banks based on numbers of mining deals in Latin America changes the list quite a bit. **The most active banks in non-recourse mining deals are Barclays, HypoVereinsbank, and Royal Bank of Scotland:**

	<b>Country</b>	<b>No. deals</b>
Barclays plc	UK	8
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	8
Royal Bank of Scotland Group plc	UK	7
Mizuho Holdings Inc	Japan	6
Crédit Lyonnais SA	France	6

In terms of financial arranging, two Japanese banks ranked among the top for Latin America mining deals:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
Japan Bank for International Cooperation (JBIC)	Japan	962.50	3
Barclays plc	UK	533.62	8
Kreditanstalt fur Wiederaufbau (KFW)	Germany	336.90	3
Mizuho Holdings Inc	Japan	333.67	4
Deutsche Bank AG	Germany	313.54	4

#### 12.4.2 Africa

In Africa, there were 46 project financed mining deals during the last five years, 27 of which were signed. Mozambique, Zambia, and South Africa accounting for 70% of the dollar value of project-financed mines in the region. Although new Mozambique-based mines are valued at over US\$2.3 billion, the country has only three large mines. In contrast, South Africa has 12 active deals that are collectively valued for only US\$2 billion.

	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
Mozambique	2,300.00	25.70	3
Zambia	2,116.00	23.64	5
South Africa	2,069.70	23.12	12
Congo (Zaire)	830.00	9.27	3
Tanzania	775.10	8.66	7
Mauritania	200.00	2.23	1
Ghana	180.00	2.01	3
Zimbabwe	140.00	1.56	2

Guinea	115.00	1.28	2
Mali	100.00	1.12	3
Botswana	65.80	0.74	1
Namibia	53.00	0.59	2
Congo	5.70	0.06	1
Angola	0.00	0.00	1
Total	8,950.30	100.00	46

**Based on value of signed deals, the most powerful banks in African non-recourse mining projects were Standard Bank, CDC Group and the World Bank:**

	Country	Amt. US\$ m	Percent
Standard Bank Investment Corp Ltd	South Africa	246.39	6.38
CDC Group plc	UK	227.50	5.89
World Bank	Supranational	217.76	5.64
Barclays plc	UK	201.45	5.22
Dresdner Kleinwort Wasserstein (DKW)	Germany	189.64	4.91

CDC Group and the World Bank were only involved in two project financed mines, but they were expensive. Also as noted, mining projects often rely on corporate money for development; if mining companies were ranked in terms of their equity contribution to project financed mines, Zambia Consolidated Copper Mines would rank in the top five. This company provided a US\$212 million equity contribution to the Konkola copper mine.

**Ranked banks by number of mining deals, First Rand Bank, Standard Bank, and Dresdner top the list:**

	Country	No. deals
First Rand Bank	South Africa	8
Standard Bank Investment Corp Ltd	South Africa	7
Dresdner Kleinwort Wasserstein (DKW)	Germany	7
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	6
Barclays plc	UK	5

In terms of financial arrangers for mining projects, familiar names stay on the list. However, the World Bank drops out because it did not do any financial arranging for the past five years. Rather, the International Finance Corporation actually provided a US\$850m equity contribution to the Konkola Copper mine in Zambia, and the Multilateral Investment Guarantee Agency guaranteed a US\$200 million loan led by Barclays and others for the Bulyanhulu project in Tanzania.

	Country	Amt. US\$ m	No. deals
Barclays plc	UK	351.33	5
Standard Bank Investment Corp Ltd	South Africa	327.22	6
Dresdner Kleinwort Wasserstein (DKW)	Germany	238.33	4
Deutsche Bank AG	Germany	203.33	3
First Rand Bank	South Africa	193.20	5

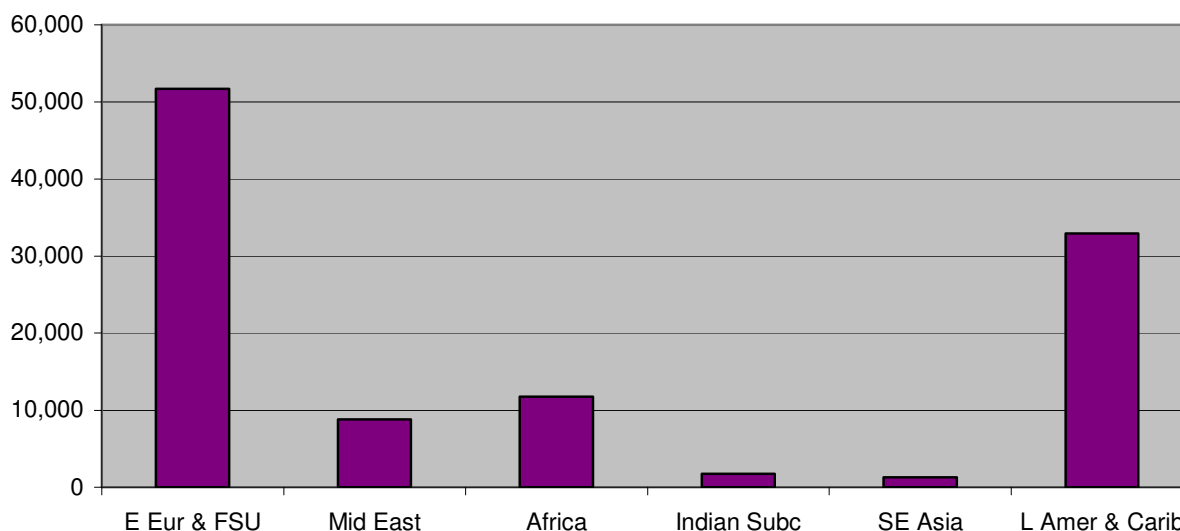
## 13. OILFIELD DEVELOPMENT AND PIPELINE PROJECTS

**Project finance is a common way of financing oil projects, particularly pipelines.** In the last five years, there have been 138 oil development and pipeline projects in tender, in finance or signed in the Emerging Markets. Of these, 51 have been signed (6 of which were oil pipelines).

### 13.1 Top regions

**Eastern Europe and the Former Soviet Union, with 46 deals worth US\$51.6 billion, accounted for over 47% of the value of all Emerging Markets oil development and pipeline projects** in finance, in tender, or signed in the past five years. Latin America's 47 projects accounted for about 30% of the value of all oil development and pipeline projects in the Emerging Markets.

**Oilfield Development & Pipelines Project Finance Deals,  
in US\$ millions, 1998 - Apr 2003**



### 13.2 Top countries

In the last five years, 38 countries have attracted new oil-related project finance deals that are planned or have been successfully financed. Russia, Azerbaijan, Brazil and Venezuela top the list of Top 16 countries for oil-related project investment (deals in various stages of development):

	<b>Amt. US\$ m</b>	<b>No. deals</b>	<b>Percent</b>
Russia Federation	28,865.39	20	26.67
Azerbaijan	16,000.00	12	14.78
Brazil	13,911.34	24	12.85
Venezuela	11,290.00	5	10.43

Ecuador	5,260.00	6	4.86
Kazakhstan	4,150.00	6	3.83
Chad	4,000.00	1	3.70
Iran	3,860.00	6	3.57
Angola	3,373.00	5	3.12
Algeria	2,285.00	5	2.11
Nigeria	2,260.00	3	2.09
Bulgaria	1,830.00	2	1.69
Sudan	1,638.70	2	1.51
Argentina	1,550.00	4	1.43
United Arab Emirates	1,450.00	2	1.34
Myanmar	1,160.00	1	1.07

### 13.3 Top Banks

Although banks provided billions in project financing, oil companies contribute so much equity to oil projects that if they were to be ranked, Petroleos de Venezuela, TotalFinaElf, and Statoil would have ranked in a 3-way tie for 4<sup>th</sup> place with their US\$1.1 billion equity contribution (each) in the US\$4.6 billion Sincor project in Venezuela. Similarly, ExxonMobil, Petronas, and Chevron Texaco each provided US\$1 billion to the Chad-Cameroon oil project, which would have put them in a 3-way tie for 5<sup>th</sup> place. **BNDES, JBIC and Citigroup provided the most money for Emerging Market oil projects** (based on signed deals):

	Country	Amt US\$ m	Percent
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	2,454.57	8.97
Japan Bank for International Cooperation (JBIC)	Japan	2,297.50	8.40
Citigroup Inc	USA	1,913.50	7.00
ABN Amro Holding NV	Netherlands	1,290.94	4.72
Export Import Bank of the United States (US EXIM)	USA	832.04	3.04
WestLB AG	Germany	747.93	2.73
World Bank	Supranational	558.54	2.04
BNP Paribas SA	France	548.64	2.01
European Bank for Reconstruction & Development (EBRD)	Supranational	415.14	1.52
Mizuho Holdings Inc	Japan	389.43	1.42

Among the top oil banks in the Emerging Market countries, ECAs and public financial institutions participated in fewer deals but tended to provide larger sums of financing. **In terms of numbers of deals, ABN Amro, Citigroup and ING topped the list of leading oil sector banks.**

	Country	No. deals
ABN Amro Holding NV	Netherlands	16
Citigroup Inc	USA	14
ING Groep NV	Netherlands	12

WestLB AG	Germany	10
Dresdner Kleinwort Wasserstein (DKW)	Germany	10
BNP Paribas SA	France	9
Mizuho Holdings Inc	Japan	9
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	9
World Bank	Supranational	8
Société Generale	France	7

**Financial arrangers for oil development and pipeline projects in the Emerging Markets are dominated by BNDES and JBIC**, although ABN-Amro arranges the most number of deals.

	Country	Amt. US\$ m	No. deals
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	2,423.00	4
Japan Bank for International Cooperation (JBIC)	Japan	2,297.50	5
ABN Amro Holding NV	Netherlands	1,144.03	11
Citigroup Inc	USA	945.32	8
WestLB AG	Germany	874.71	7
BNP Paribas SA	France	775.48	9
World Bank	Supranational	703.86	6
Export Import Bank of the United States (US EXIM)	USA	628.00	1
European Bank for Reconstruction & Development (EBRD)	Supranational	481.00	5
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	450.00	1

## 13.4 Regional leaders

### 13.4.1 Eastern Europe and the Former Soviet Union

Among Eastern Europe's 46 oil development and pipeline projects, 11 have been signed in the past five years. Russia's 20 oil-related projects are valued at US\$28 billion, or almost 56%, of the region's total.

	Amt. US\$ m	Pcnt.	No. deals
Russia Federation	28,865.39	55.87	20
Azerbaijan	16,000.00	30.97	12
Kazakhstan	4,150.00	8.03	6
Bulgaria	1,830.00	3.54	2
Poland	500.00	0.97	1
Latvia	150.00	0.29	2
Turkmenistan	100.00	0.19	2
Slovak Republic	74.00	0.14	1
Total	51,669.39	100.00	46

**The only bank to really dominate the Eastern European oil project market was the EBRD.** However, if Transneft's US\$300 million equity contribution for the Baltic pipeline system had been counted, the company would have ranked second.

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
European Bank for Reconstruction & Development (EBRD)	Supranational	415.14	18.76
Commerzbank AG	Germany	297.11	13.42
World Bank	Supranational	231.22	10.45
Citigroup Inc	USA	142.07	6.42
Japan Bank for International Cooperation (JBIC)	Japan	116.00	5.24

It should be noted that although JBIC ranked among the Top Five oil project banks in Eastern Europe, it was only involved in one project, Sakhalin. Sorting banks on the basis of activity level, ABN-Amro and Dresdner are added onto the list. Solidifying EBRD's dominance, the bank was involved in almost half of the signed oil projects in this region.

	<b>Country</b>	<b>No. deals</b>
European Bank for Reconstruction & Development (EBRD)	Supranational	5
Citigroup Inc	USA	4
World Bank	Supranational	3
ABN Amro Holding NV	Netherlands	3
Dresdner Kleinwort Wasserstein (DKW)	Germany	3

The only banks to arrange more than one oil project in Eastern Europe were the EBRD and the World Bank:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
European Bank for Reconstruction & Development (EBRD)	Supranational	481.00	5
World Bank	Supranational	350.00	3
Commerzbank AG	Germany	333.89	1
Japan Bank for International Cooperation (JBIC)	Japan	116.00	1
Citigroup Inc	USA	116.00	1

#### 13.4.2 Latin America

There are 47 oil development and pipeline projects in Latin America & Caribbean, and 27 have been signed. Brazil's 24 active new oil development & pipeline projects are valued at about 42% of the total in the Latin America. Venezuela, the second country in this regional ranking, only has five projects but they are very expensive (including the US\$3.5 billion Hamaca oilfield project, the US\$4.6 billion Sincor project, and the US\$2.7 billion Cerro Negro project).



	<b>Amt. US\$ m</b>	<b>Pcnt.</b>	<b>No. deals</b>
Brazil	13,911.34	42.20	24
Venezuela	11,290.00	34.25	5
Ecuador	5,260.00	15.96	6
Argentina	1,550.00	4.70	4
Colombia	441.10	1.34	3
Mexico	424.00	1.29	3
Chile	90.00	0.27	1
Trinidad and Tobago	0.00	0.00	1
<b>Total</b>	<b>32,966.44</b>	<b>100.00</b>	<b>47</b>

**The key oil banks in Latin America, in terms of total financing for signed project finance deals, tend to be public financial institutions such as BNDES and JBIC.** Citigroup and ABN-Amro followed.

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>Percent</b>
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	2,454.57	12.98
Japan Bank for International Cooperation (JBIC)	Japan	2,181.50	11.53
Citigroup Inc	USA	1,654.97	8.75
ABN Amro Holding NV	Netherlands	694.74	3.67
Export Import Bank of the United States (US EXIM)	USA	628.00	3.32

However, private banks are more active in the Latin American oil project sector, participating in a higher number of signed deals. **ABN-Amro was involved in the highest number of signed oil deals in Latin America:**

	<b>Country</b>	<b>No. deals</b>
ABN Amro Holding NV	Netherlands	10
Citigroup Inc	USA	8
Mizuho Holdings Inc	Japan	7
ING Groep NV	Netherlands	7
Dresdner Kleinwort Wasserstein (DKW)	Germany	7

**Financial arranging was dominated by quazi-public BNDES, followed by JBIC.** WestLB, Citigroup came in second, although they arranged more deals:

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>
BNDES- Banco Nacional de Desenvolvimento Economico e Social	Brazil	2,423.00	4
Japan Bank for International Cooperation (JBIC)	Japan	2,181.50	4
WestLB AG	Germany	836.25	6
Citigroup Inc	USA	694.32	6
Export Import Bank of the United States (US EXIM)	USA	628.00	1

## 14. PULP AND PAPER

**Timber operations are typically not project financed.** Logging operations are mostly corporate financed, which means that corporations finance new ventures by relying on traditional bank loans and lines of credit, as well as issuing stocks and bonds. However, timber companies sometimes use project-based bond offerings, where repayment is linked to the harvesting and sale of logs. For example, in 1993, Scotia Limited issued (and in 1998 refinanced) 15.5-year timber-collateralized notes. The notes were to be repaid based on logging the company's controversial redwood timberland assets in California. Pacific Lumber, Scotia's parent company, had sold its subsidiary the acreage and also agreed to purchase the redwood logs at a set price.<sup>11</sup> This arrangement allowed Pacific Lumber to separate its valuable timber assets from the financial troubles facing the rest of the company.

**However, in the Global South, pulp and paper mills are commonly project financed.** From 1994-1997 no less than five giant pulp mills were built in Indonesia alone on a project finance basis. Although project finance is a popular for Southern pulp and paper mills, there have not been many new project-finance pulp mills because since 1998 the paper market has been struggling with overcapacity. Therefore, **in the Dealogic database, there were only six pulp and paper deals since 1998.** Five have been signed, and one is in tender. As the chart indicates, project-financed pulp and paper projects are not predominantly located in any one region or country, although Malaysia and Brazil each have two projects.

Project	Borrower	Value, US \$ millions	Country	Status
Newsprint Mill	Malaysian Newsprint Industries Sdn Bhd	500.000	Malaysia	Signed
SCP Paper Machine Upgrade	SCP Ruzemberic Asia Pacific Products	262.259	Slovak Republic	Signed
Suzhou Asia Pacific Paper Mill	(Suzhou) Pte Ltd	250.000	China	Signed
Newsprint Mill Refinancing	Malaysian Newsprint Industries Sdn Bhd	152.783	Malaysia	Signed
Klabin Riocell Expansion Project	Klabin Riocell	221.000	Brazil	Signed
Veracruz Florestal Pulp Mill Project	Veracruz Florestal	1,000.000	Brazil	In Tender

### 14.1 The Banks

Eight banks participated in these transactions, **although it cannot be said that there a clear dominant project finance bank for the global pulp and paper sector.**

- Citigroup provided US\$140 million for the SCP and Suzou projects in the Slovak Republic and China.
- Bank of America provided US\$115 million for the Newsprint Mill and Newsprint Mill Refinancing in Malaysia
- JPM Chase provided US\$93 million for the Suzhou and Newsprint Mill projects in China and Malaysia

<sup>11</sup> Global Timber Property Securitizations, Standard & Poor's 01 May 2003.

- Standard Charter put in US\$78.5 million for the Newsprint Mill and Newsprint Mill Refinancing in Malaysia
- ING provided US\$73 million for the SCP and Newsprint projects.
- Hong Leong Bank provided US\$66.23 million for the Newsprint Mill and Newsprint Mill Refinancing in Malaysia
- Credit Agricole provided US\$47.55 million for the Suzhou and Newsprint Mill projects in China and Malaysia
- Royal Bank of Canada put in US\$37.65 million for the Suzhou and Newsprint Mill projects in China and Malaysia.

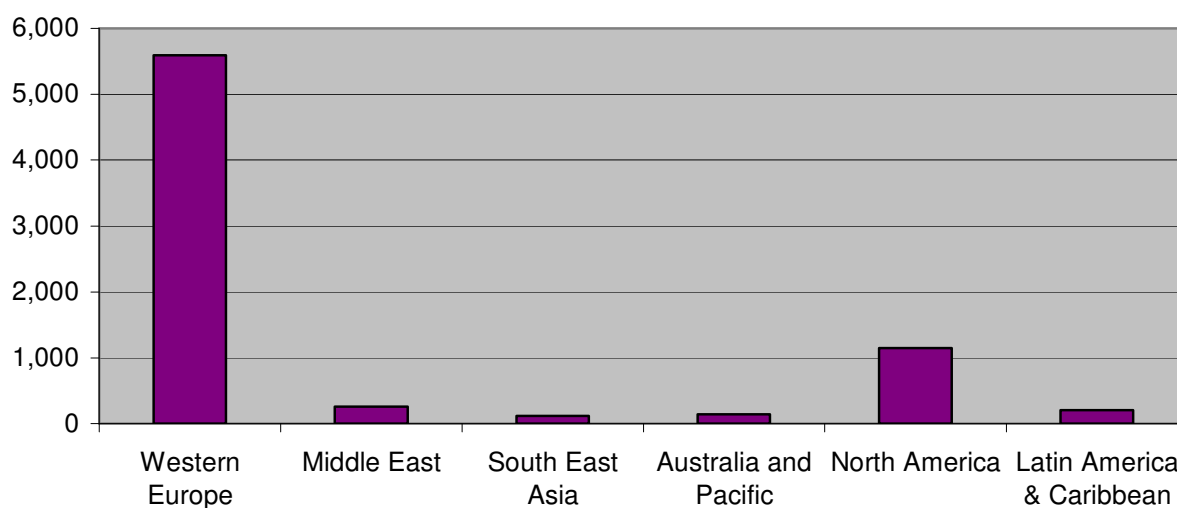
## 15. WINDFARMS

**Project finance is a relatively popular way of financing windfarms.** Globally, there were 78 project finance wind deals during the last five years, with 46 signed projects.

### 15.1 Top regions

Since 1998, **almost 75% of project financed wind transactions occurred in Western Europe** (56 deals in tender, in finance and signed), and 15% in North America. Two project financed wind transactions are located the Middle East, 1 in Australia and the Pacific, and 3 in Latin America. Spain and the United States accounted for the most project financed wind deals, measured both in terms of numbers of projects and dollars.

Global Project Finance Wind Deals,  
in US\$ millions, 1998 - Apr 2003



### 15.2 The banks

**On a global basis, the top banks involved in signed wind projects are MeesPierson (Fortis Bank), Banco Santander Central Hispano and HypoVereinsbank.** Two Spanish banks, Caja Madrid and BBVA complete the top five list:

	Country	Amt. US\$ m	Percent
MeesPierson NV (Fortis Bank)	Netherlands	377.05	8.45
Banco Santander Central Hispano (BSCH)	Spain	272.10	6.10
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	238.16	5.34
Caja Madrid	Spain	177.28	3.97
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	156.02	3.50
Dexia	Belgium	109.44	2.45
Mizuho Holdings Inc	Japan	102.10	2.29

Royal Bank of Scotland Group plc	UK	99.83	2.24
Fortis Bank SA/NV	Belgium	93.71	2.10
Instituto de Credito Oficial (ICO)	Spain	81.91	1.84

**Banco Santander Central Hispano and HypoVereinsbank participated in the highest number of signed wind deals**, while Caja Madrid and Dexia were also quite active in the sector:

	Country	No. deals
Banco Santander Central Hispano (BSCH)	Spain	14
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	12
Caja Madrid	Spain	10
Dexia	Belgium	9
MeesPierson NV (Fortis)	Netherlands	6
Mizuho Holdings Inc	Japan	6
La Caixa	Spain	6
Barclays plc	UK	6
Instituto de Credito Oficial (ICO)	Spain	5
Banca Nazionale del Lavoro SpA	Italy	5

European banks dominated the financial arranging of windfarms. In particular, **Banco Santander was the top financial arranger of signed global wind projects**.

	Country	Amt. US\$ m	No. deals
Banco Santander Central Hispano (BSCH)	Spain	431.55	13
MeesPierson NV (Fortis)	Netherlands	380.13	6
Royal Bank of Scotland Group plc	UK	326.24	3
Caja Madrid	Spain	274.71	6
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	256.06	3
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	199.24	8
Fortis Bank SA/NV	Belgium	191.53	4
Crédit Agricole Indosuez	France	189.79	4
Ahorro Corporacion Financiera SA	Spain	158.18	1
WestLB AG	Germany	158.18	1

### 15.3 Regional data

#### 15.3.1 Western Europe

Of Europe's 56 project financed wind deals, 35 were signed since 1998. Spain's 33 projects (in various stages of development) represent more than half the value of wind investments in Western Europe

	Amt. US\$ m	Pcnt.	No. deals
Spain	2,809.54	50.27	33
Ireland	649.35	11.62	1

Italy	647.88	11.59	4
Germany	640.61	11.46	5
Greece	235.79	4.22	4
Denmark	198.00	3.54	1
Netherlands	175.55	3.14	1
UK	164.66	2.95	4
Portugal	44.41	0.79	2
France	23.44	0.42	1
Total	5,589.24	100.00	56

**Banco Santander, HypoVereinsbank, and Caja Madrid dominated the Western European wind market.** Based on completed project financed wind transactions, the top banks were:

	Country	Amt. US\$ m	Percent
Banco Santander Central Hispano (BSCH)	Spain	272.10	7.57
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	238.16	6.62
Caja Madrid	Spain	177.28	4.93
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	156.02	4.34
Royal Bank of Scotland Group plc	UK	99.83	2.78

BSCH, HypoVereinsbank and Caja Madrid continued to top the most active project finance banks for this region and sector:

	Country	No. deals
Banco Santander Central Hispano (BSCH)	Spain	14
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	12
Caja Madrid	Spain	10
Dexia	Belgium	7
La Caixa	Spain	6
Barclays plc	UK	6

The rankings for financial arrangers involve the same key players:

	Country	Amt. US\$ m	No. deals
Banco Santander Central Hispano (BSCH)	Spain	431.55	13
Royal Bank of Scotland Group plc	UK	326.24	3
Caja Madrid	Spain	274.71	6
Banco Bilbao Vizcaya Argentaria SA (BBVA)	Spain	256.06	3
Bayerische Hypo- und Vereinsbank AG (HypoVereinsbank)	Germany	199.24	8

### 15.3.2 North America

In North America, there were 13 windfarms financed through non-recourse means, 8 of which were signed. **All the windfarms in North America were based in the United States, but the leading banks were all non-US.** The only US-based financier to actually finance a US

windfarm is the Clean Energy Trust, which arranged a US\$6.8m loan for the Peetz Table wind project in Colorado.

**MeesPierson (Fortis Bank) was clearly the dominant bank for US wind projects.** It was the only bank to be involved in financial arranging and was the only financier to be involved in more than one deal in this country and sector. However, it should be noted that JPMChase provided one US\$28 million loan for the Xistral wind project in Spain.

	<b>Country</b>	<b>Amt. US\$ m</b>	<b>No. deals</b>	<b>Percent</b>
MeesPierson NV (Fortis Bank)	Netherlands	353.75	4	57.14
Bayerische Landesbank Girozentrale	Germany	54.50	1	14.29
Rabobank Ireland plc	Ireland	22.00	1	14.29
Fortis Bank SA/NV	Belgium	22.00	1	14.29
Royal Bank of Canada	Canada	22.00	1	14.29
Dexia	Belgium	22.00	1	14.29
ABB Energy Capital	USA	21.00	1	14.29

### 15.3.3 Emerging Markets

**Since 1998, there were only five project financed wind farms in the Emerging Markets;** the only one that was signed was the Tetouan wind power plant in Morocco. The others, -- the Coelce wind farms project in Brazil (in finance), the first phase of the La Ventoss wind park in Mexico, the Tangiers & Tarfaya wind farms in Morocco and the Parque Eolico de Salinas wind farm in Brazil (in tender) have yet to be signed.

**Of these wind projects (in various stages of development) there were no real bank leaders,** as no bank is involved in more than one project. The Tetouan project was supported by KBC, Dexia, Natexis Banque, Crédit Agricole Indosuez, the European Investment Bank and Proparco; and JBIC is expected to help arrange financing for the Colece windfarm in Brazil.

## 16. CONCLUSION

Whether it is BNDES in Latin America hydropower, Standard Bank Investment Corporation in African mining, or HypoVereinsbank in Eastern European gas deals, different banks dominate various regions and sectors in the project finance market. **NGOs should take these rankings into account as they develop campaign strategies, particularly as they promote sector policies at particular campaign targets.**

For example, as NGOs seek to leverage the Equator Principles into sector-specific policies such as World Commission on Dams-based standards, activists should particularly target ABN-Amro, Citigroup, and WestLB, financial institutions that rank among the largest and most active dam financiers. (A list of Equator Banks and their project finance rankings can be found in Appendix III.) Similarly, financial activists working in solidarity with indigenous communities in the Amazon region should focus their efforts on the most influential financial players in Latin America, both public and private.



## APPENDIX I: DAC LIST OF AID RECIPIENTS

### DAC List of Aid Recipients - As of 1 January 2003 Part I: Developing Countries and Territories (Official Development Assistance)

Least Developed Countries (LDCs)	Other Low-Income Countries (LICs) (per capita GNI < \$745 in 2001)	Lower Middle-Income Countries (LMICs) (per capita GNI \$746-\$2975 in 2001)	Upper Middle-Income Countries (UMICs) (per capita GNI \$2976-\$9205 in 2001)	High-Income Countries (per capita GNI . \$9206 In 2001)
Afghanistan Angola Bangladesh Benin Bhutan Burkina Faso Burundi Cambodia Cape Verde Central African Republic Chad Comoros Congo, Dem.Rep. Djibouti Equatorial Guinea Eritrea Ethiopia Gambia Guinea Guinea-Bissau Haiti Kiribati Laos Lesotho Liberia Madagascar Malawi Maldives Mali Mauritania Mozambique Myanmar Nepal Niger Rwanda Samoa Sao Tome and Principe Senegal Sierra Leone Solomon Islands Somalia Sudan Tanzania Togo Tuvalu Uganda Vanuatu Yemen Zambia	*Armenia *Azerbaijan Cameroon Congo, Rep. Côte d'Ivoire East Timor *Georgia Ghana India Indonesia Kenya Korea, Democratic Republic *Kyrgyz Rep. *Moldova Mongolia Nicaragua Nigeria Pakistan Papua New Guinea *Tajikistan *Uzbekistan Viet Nam Zimbabwe	*Albania Algeria Belize Bolivia Bosnia and Herzegovina China Colombia Cuba Dominican Republic Ecuador Egypt El Salvador Fiji Guatemala Guyana Honduras Iran Iraq Jamaica Jordan *Kazakhstan Macedonia (former Yugoslav Republic) Marshall Islands Micronesia, Federated States Morocco Namibia Niue Palestinian Administered Areas Paraguay Peru Philippines Serbia & Montenegro South Africa Sri Lanka St Vincent & Grenadines Suriname Swaziland Syria Thailand Tokelau Tonga Tunisia Turkey *Turkmenistan Wallis and Futuna	Botswana Brazil Chile Cook Islands Costa Rica Croatia Dominica Gabon Grenada Lebanon Malaysia Mauritius Mayotte Nauru Panama St Helena St Lucia Venezuela  ----- <b>Threshold for World Bank Loan Eligibility (\$5185 in 2001)</b> ----- Anguilla Antigua and Barbuda Argentina Barbados Mexico Montserrat Oman Palau Islands Saudi Arabia Seychelles St Kitts and Nevis Trinidad and Tobago Turks and Caicos Islands Uruguay	Bahrain

\* Central and Eastern European countries and New Independent States of the former Soviet Union (CEECs/NIS).

Territory.

**DAC List of Aid Recipients – As of 1 January 2003**  
**Part II: Countries and Territories in Transition (Official Aid)**

Central and Eastern European Countries and New Independent States of the former Soviet Union (CEECs/NIS)	More Advanced Developing Countries and Territories
*Belarus *Bulgaria *Czech Republic *Estonia *Hungary *Latvia *Lithuania *Poland *Romania *Russia *Slovak Republic *Ukraine	/ Aruba Bahamas / Bermuda Brunei / Cayman Islands Chinese Taipei Cyprus / Falkland Islands / French Polynesia / Gibraltar / Hong Kong, China Israel Korea Kuwait Libya / Macao Malta / Netherlands Antilles / New Caledonia Qatar Singapore Slovenia United Arab Emirates / Virgin Islands (UK)

\* Central and Eastern European countries and New Independent States of the former Soviet Union (CEECs/NIS).

/ Territory.

For purposes of this report, all countries on the DAC List are considered “Emerging Markets.” “Developing Countries” are considered those on Part I of the DAC List

## APPENDIX II: REGIONAL CLASSIFICATIONS

Note that only those countries that have been mentioned in this report are listed in these regional classifications.

Sub-Saharan Africa	Emerging Markets Asia	Latin America & Caribbean
Angola Benin Botswana Burkina Faso Cameroon Chad Cote d'Ivoire Congo Equatorial Guinea Ethiopia Gabon Ghana Guinea Kenya Libya Malawi Mali Mauritania Mauritius Mozambique Namibia Nigeria Niger Senegal Sierra Leone South Africa Sudan Tanzania Uganda Congo (Zaire) Zambia Zimbabwe	Brunei China Fiji Hong Kong Indonesia Laos Malaysia Mongolia North Korea Papua New Guinea Philippines Singapore South Korea Taiwan Thailand Vietnam	Argentina Bahamas Belize Bolivia Brazil Cayman Islands Chile Colombia Costa Rica Dominican Republic Ecuador El Salvador Guatemala Guyana Haiti Honduras Jamaica Mexico Netherlands Antilles Nicaragua Panama Paraguay Peru Puerto Rico Trinidad and Tobago Uruguay Venezuela

<b>Middle East/ Northern Africa</b>	<b>Eastern Europe*</b>
Algeria Bahrain Egypt Iran Israel Jordan Kuwait Lebanon Morocco Oman Palestine Qatar Saudi Arabia Tunisia Turkey United Arab Emirates Yemen	Cyprus Gibraltar Malta Albania Azerbaijan Bosnia-Herzegovina Bulgaria Croatia Czech Republic Estonia Georgia Hungary Kazakhstan Kyrgyz Republic Latvia Lithuania Macedonia Moldova Poland Romania Russia Federation Yugoslavia Slovak Republic Slovenia Turkmenistan Ukraine Uzbekistan

\* The Western European countries of Cyprus, Malta and Gibraltar are included in the list of Eastern European countries because they are classified by the OECD as “More Advanced Developing Countries and Territories.”

## APPENDIX III: EQUATOR PRINCIPLES BANKS

When the Equator Principles on project finance were voluntarily adopted by ten investment banks in June 2003, the endorsing banks collectively represented 30% of the project loan syndication market globally in 2002. Since the launch of the Principles, several banks, including ING, the Royal Bank of Canada, HSBC and Dresdner Bank have also endorsed the Principles, bringing the total to 15 banks as of early September. According to Dealogic, the 15 Equator banks arranged \$41 billion of project loans in 2002, which represents 70% of project loan market volume in 2002. From January to August 2003, these 15 Equator banks have accounted for 73% of the project loan market.<sup>12</sup> In mid-September 2003, Dexia Group signed the Principles as well, bringing the total (as of 19 September 2003) to 16 banks.

The following list identifies Equator banks and includes their ranking in this study.

### **Equator Bank    Ranking in this study**

<b>ABN-Amro</b>	#5 Global PF bank, by total #6 Global PF bank, by number of deals #5 Global PF bank, by arranging
	#4 Emerging market PF bank, by total #4 Emerging market PF bank, by number of deals #4 Emerging market PF bank, by arranging
	#4 Developing country PF bank, by total #2 Developing country PF bank, by number of deals #4 Developing country PF bank, by arranging
	#3 Africa PF bank, by total #9 Africa PF bank, by number of deals #1 Africa PF bank, by arranging
	#7 Latin America PF bank, by total #3 Latin America PF bank, by number of deals #7 Latin America PF bank, by arranging
	#10 Middle East PF bank, by arranging
	#10 Eastern Europe PF bank, by total
	#1 (tie) Emerging market gas bank, by number of deals #5 Emerging market gas bank, by arranging
	#2 (tie) Latin America gas bank, by number of deals

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<sup>12</sup> [www.equator-principles.com](http://www.equator-principles.com), as of 22 September 2003.

**ABN-Amro,  
cont.**

#5 (tie) Latin America hydro bank, by number of deals

#4 Emerging market oil bank, by total

#1 Emerging market oil bank, by number of deals

#3 Emerging market oil bank, by arranging

#4 Eastern Europe oil bank, by number of deals

#4 Latin America oil bank, by total

#1 Latin America oil bank, by number of deals

**Barclays**

#12 Global PF bank, by total

#9 Global PF bank, by arranging

#11 (tie) Africa PF bank, by number of deals

#11 Africa PF bank, by arranging

#3 Middle East PF bank, by total

#6 Middle East PF bank, by number of deals

#3 Middle East PF bank, by arranging

#3 Emerging market mining bank, by total

#3 (tie) Emerging market mining bank, by number of deals

#3 Emerging market mining bank, by arranging

#2 Latin America mining bank, by total

#1 (tie) Latin America mining bank, by number of deals

#2 Latin America mining bank, by arranging

#4 Africa mining bank, by total

#5 Africa mining bank, by number of deals

#1 Africa mining bank, by arranging

#5 (tie) Global wind bank, by number of deals

#5 (tie) Western Europe wind bank, by number of deals

**Citigroup**

#1 Global PF bank, by total

#2 Global PF bank, by number of deals

#2 Global PF bank, by arranging

#1 Emerging market PF bank, by total

#1 Emerging market PF bank, by number of deals

#1 Emerging market PF bank, by arranging

#1 Developing country PF bank, by total

**Citigroup,  
cont.**

#1 Developing country PF bank, by number of deals  
#2 Developing country PF bank, by arranging

#5 Africa PF bank, by total  
#7 Africa PF bank, by number of deals  
#6 Africa PF bank, by arranging

#1 EM Asia PF bank, by total  
#1 EM Asia PF bank, by number of deals  
#2 EM Asia PF bank, by arranging

#1 Latin America PF bank, by total  
#1 Latin America PF bank, by number of deals  
#1 Latin America PF bank, by arranging

#2 Middle East PF bank, by total  
#5 Middle East PF bank, by number of deals  
#2 Middle East PF bank, by arranging

#4 Eastern Europe PF bank, by total  
#5 Eastern Europe PF bank, by number of deals  
#6 Eastern Europe PF bank, by arranging

#6 (tie) Latin America gas bank, by number of deals

#9 Global hydro bank, by total  
#2 (tie) Global hydro bank, by number of deals  
#12 Global hydro bank, by arranging

#4 Latin America hydro bank, by total  
#3 (tie) Latin America hydro bank, by number of deals  
#4 Latin America hydro bank, by arranging

#3 Emerging market oil bank, by total  
#2 Emerging market oil bank, by number of deals  
#4 Emerging market oil bank, by arranging

#4 Eastern Europe oil bank, by total  
#2 Eastern Europe oil bank, by number of deals  
#5 Eastern Europe oil bank, by arranging

#3 Latin America oil bank, by total  
#2 Latin America oil bank, by number of deals  
#4 Latin America oil bank, by arranging

Involved in 2 pulp & paper projects

**Crédit  
Lyonnais** #3 global PF bank, by number of deals  
#12 global PF bank, by arranging  
  
#10 (tie) Emerging market PF bank, by number of deals  
  
#9 Africa PF bank, by total  
#3 (tie) Africa PF bank, by number of deals  
  
#9 Emerging Market Asia PF bank, by number of deals  
  
#1 (tie) Emerging market gas bank, by number of deals  
#6 Emerging market gas bank, by arranging  
  
#2 (tie) Latin America gas bank, by number of deals  
#6 Latin America gas bank, by arranging  
  
#8 (tie) Emerging market mining bank, by number of deals  
  
#4 (tie) Latin America mining bank, by number of deals

**Credit Suisse  
Group** #10 Global PF bank, by total  
#11 Global PF bank, by arranging  
  
#8 Emerging market gas bank, by total  
  
#5 Latin America gas bank, by total  
#5 Latin America gas bank, by arranging

**Dexia** #6 Global wind bank, by total  
#4 Global wind bank, by number  
#3 (tie) North American wind bank, by total

**Dresdner  
Bank** #11 Global PF bank, by total  
#9 Global PF bank, by number of deals  
#10 Global PF bank, by arranging  
  
#12 Emerging market PF bank, by total  
#5 Emerging market PF bank, by number of deals  
#11 Emerging market PF bank, by arranging  
  
#11 Developing country PF bank, by total  
#4 Developing country PF bank, by number of deals  
#12 Developing country PF bank, by arranging



**Dresdner  
Bank, cont.**

- #9 Latin America PF bank, by total
- #2 Latin America PF bank, by number of deals
- #10 Latin America PF bank, by arranging
  
- #8 Eastern Europe PF bank, by total
- #10 Eastern Europe PF bank, by number of deals
- #5 Eastern Europe PF bank, by arranging
  
- #9 (tie) Emerging Markets gas bank, by number of deals
  
- #6 (tie) Latin America gas bank, by number of deals
  
- #4 Global hydro bank, by number of deals
  
- #2 Latin America hydro bank, by number of deals
  
- #8 Emerging market mining bank, by total
- #3 Emerging market mining bank, by number of deals
- #6 Emerging market mining bank, by arranging
  
- #5 Africa mining bank, by total
- #2 (tie) Africa mining bank, by number of deals
- #3 Africa mining bank, by arranging
  
- #4 (tie) Emerging market oil bank, by total
  
- #3 (tie) Eastern Europe oil bank, by number of deals
  
- #3 (tie) Latin America oil bank, by number of deals

**HSBC**

- #11 Emerging market PF bank, by total
  
- #2 Emerging market Asia PF bank, by total
- #7 Emerging market Asia PF bank, by number of deals
- #4 Emerging market Asia PF bank, by arranging
  
- #10 Middle East PF bank, by total

**Hypo- Vereins  
Bank**

- #1 global PF bank, by number of deals
  
- #2 Emerging market PF bank, by number of deals
  
- #5 Developing country PF bank, by number of deals

**Hypo- Vereins  
Bank, cont.**

#3 (tie) Africa PF bank, by number of deals  
#11 (tie) Asia PF bank, by number of deals  
#12 Latin America PF bank, by number of deals  
#11 Middle East PF bank, by total  
#3 Middle East PF bank, by number of deals  
#3 Eastern Europe PF bank, by total  
#1 Eastern Europe PF bank, by number of deals  
#4 Eastern Europe PF bank, by arranging  
#9 Emerging market gas bank, by total  
#1 (tie) Emerging market gas bank, by number of deals  
#9 Emerging market gas bank, by arranging  
#1 Eastern Europe gas bank, by total  
#1 Eastern Europe gas bank, by arranging  
#6 (tie) Latin America gas bank, by number of deals  
#5 global hydropower bank, by total  
#10 Emerging market mining bank, by total  
#1 Emerging market mining bank, by number of deals  
#2 Latin America mining bank, by number of deals  
#4 Africa mining bank, by number of deals  
#6 Emerging market oil bank, by number of deals  
#3 Global wind PF bank, by total  
#2 Global wind PF bank, by number of deals  
#6 Global wind PF bank, by arranging  
#2 Western Europe wind PF bank, by total  
#2 Western Europe wind PF bank, by number of deals  
#5 Western Europe wind PF bank, by arranging

**ING Group**

#12 Africa PF bank, by total  
#11 (tie) Africa PF bank, by number of deals  
#12 Africa PF bank, by arranging

**ING Group, cont.** #4 Eastern Europe PF bank, by number of deals  
#10 Emerging market gas bank, by total  
#9 (tie) Emerging market gas bank, by number of deals  
#10 Emerging market gas bank, by arranging  
  
#3 Eastern Europe gas bank, by total  
#3 Eastern Europe gas bank, by arranging  
  
#6 (tie) Latin America gas bank, by number of deals  
  
#3 Emerging market oil bank, by number of deals  
  
#3 (tie) Latin America oil bank, by number of deals

**Rabobank** None

**Royal Bank of Canada** None

**Royal Bank of Scotland** #12 global PF bank, by number of deals  
#5 Emerging market mining bank, by number of deals  
  
#3 Latin America mining bank, by number of deals  
  
#8 global wind bank, by total  
#3 global wind bank, by arranging  
  
#5 Western Europe wind bank, by total  
#2 Western Europe wind bank, by arranging

**WestLB** #6 global PF bank, by total  
#7 global PF bank, by number of deals  
#7 global PF bank, by arranging  
  
#5 Emerging market PF bank, by total  
#7 (tie) Emerging market PF bank, by number of deals  
#5 Emerging market PF bank, by arranging  
  
#8 Developing Country PF bank, by number of deals  
#7 Developing Country PF bank, by arranging  
  
#11 Emerging Asia PF bank, by arranging

**West LB,  
cont.**

- #4 Latin America PF bank, by total
- #4 Latin America PF bank, by number of deals
- #5 Latin America PF bank, by arranging
  
- #7 Eastern Europe PF bank, by number of deals
  
- #5 (tie) Emerging market gas bank, by number of deals
- #6 Eastern Europe gas bank, by total
  
- #6 Latin America gas bank, by number of deals
  
- #6 (tie) global hydro bank, by number of deals
- #8 global hydro bank, by arranging
- #5 Latin America hydro bank, by total
- #5 (tie) Latin America hydro bank, by number of deals
- #5 Latin America hydro bank, by arranging
  
- #5 (tie) Emerging market mining bank, by number of deals
  
- #6 Emerging market oil bank, by total
- #4 (tie) Emerging market oil bank, by number of deals
- #5 Emerging markets oil bank, by arranging
  
- #3 Latin America oil bank, by arranging
  
- #10 global wind PF bank, by arranging

**Westpac  
Banking  
Corporation**

None

**Westpac –  
New Zealand**

None