



# Western world aluminium industry: Ownership and control 1992

By Magnus Ericsson and Andreas Tegen

The tables on the following pages are excerpts from the newly launched *Raw Materials Data*, the database on ownership and production in the world's mineral industries. *Raw Materials Data* is compiled by the Raw Materials Group and is the only database of its kind covering more than 7 000 mining, refining and exploration companies active in more than 30 minerals. Readers of *Raw Materials Report* will regularly get exclusive excerpts from *Raw Materials Data*. For a sample diskette of *Raw Materials Data* please contact Mr Andreas Tegen.

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The aluminium industry has all through its history been a highly concentrated oligopoly and sometimes even a cartellized monopoly. The leading transnationals have been Alcoa, Alcan, Kaiser, Reynolds, Alusuisse and Pechiney and together they have traditionally been called the **Big Six**.

In the period after the second world war the power of the Big Six has been challenged by two groups of producers: First by the Soviet aluminium industry and later by the developing countries mainly through the International Bauxite Association (IBA).

During the 1970s it became obvious that the Soviet aluminium industry's penetration into the Western world was very limited and posed no real threat to the Big Six. This was mainly due to the lack of high quality bauxite sources in the USSR and the poor state of the art of Soviet aluminium technology. The IBA has never managed to exercise the same powers as its model the oil exporting countries' organisation OPEC. In the early 1990s both groups are weaker than 15 years ago even if the Russian exports of aluminium causes considerable problems to the Western aluminium producers.

The concentration of the aluminium industry was decreasing during the late 1970s and early 1980s. However the changes in corporate concentration have not been as dramatic as the developing countries hoped for. The Big Six continue to play important and leading roles in the international aluminium industry. Some of the old members of the Big Six group have lost some of their strength such as Alusuisse and Kaiser, which is no longer an independent producer but part of the Maxxam group. But at the same time there are also some newcomers into the industry such as the British

mining giant RTZ, Australian Western Mining Corporation and Norwegian state owned Norsk Hydro, which have replaced the old members of the Big Six.

In 1991 the single largest bauxite company controlled 17 per cent of total Western world production and the largest alumina company controlled slightly more, 19 per cent. At the smelter stage however, corporate concentration is lower and the most important aluminium company only controls 12 per cent of total world production. The corresponding cumulative figures for the three largest controlling companies were 37, 38 and 30 per cent. Compared with other branches of the mining and metallurgical industries these are average figures, lower at the mining stage than the gold and nickel mining industry but equal to industries like copper and iron ore mining and higher than lead and zinc.

## Method

In the following tables, two concepts are of basic importance, **ownership** and **control**. Ownership refers to holding of shares in a company and is easy to define and to measure. In principle the ownership figures are to be found in the share register. The concept of control is much more difficult to define and even more difficult to measure accurately. The following definition will be used:

To be in control is to have a possibility to act decisively on strategically important issues rather than to have day-to-day influence over a company. Such issues include the broad policies of a company, decisions on large investments, buying or selling of subsidiaries and authority to appoint or dismiss top management.

Control can be exercised by many means of which ownership is the most



common and important one. Other ways of exercising control are for example through administrative and technical management, interlocking directorates, long term contracts, market knowledge, proprietary technology, financing and vertical integration. The importance of these different ways of exercising control varies considerably from one branch of industry to another and from time to time within the same branch. Ownership plays a basic role in the whole market economic system and is of absolutely crucial importance in determining who is in control over a specific company and its mineral production. Consequently in the empirical studies of the Raw Materials Group ownership and management have been used as the two criteria of control. A large amount of empirical data has

been derived mainly from corporate sources such as annual reports and used for calculations of control by Raw Materials Data.

The – sometimes complex – ownership patterns, forming hierarchies from producers to controlling companies, have been quantified. On the basis of a model developed by the Raw Materials Group, all producers of bauxite, alumina or aluminium have been classified as independent or controlled by one or more parent companies. If a producer is considered fully controlled, **all** of its production is attributed to the controlling company. If a producer is partially controlled, only **a part** of its production is attributed to the controlling company. Most often, the controlled part is equal to the equity share of capital. But the control-

led share is in some cases considered to be larger than the ownership share, as production theoretically controlled by small shareholders through dispersed ownership is always distributed to the large owners. Thus, all production of a specific producer is allocated to controlling companies at the top of the ownership hierarchies. The operating mining companies' production have been systematically attributed to the controlling company or companies. Production which it has not been possible to identify by company, in the case of aluminium and bauxite less than one per cent of total world production, is mainly due to discrepancies between national statistics and company figures. ■

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**Table 1**  
**Corporate control in aluminium in 1991:**  
**Bauxite mining**

Controlling company/state ranked by size of production and controlled producers (% control)		Country of incorp. or production	Producer's total prod. Mt	Controlled share Mt	% of Western world production
<b>1. Aluminium Co. of America</b>		<b>USA</b>	–	<b>16.47e</b>	<b>16.5</b>
51%	Alcoa of Australia Ltd	Australia	21.00e	10.81e	10.8
14%	Cie des Bauxites de Guinée	Guinea	10.60	1.46	1.5
100%	Suriname Aluminium Co.	Surinam	1.20e	1.20e	1.2
50%	Jamalco JV	Jamaica	2.29e	1.15e	1.1
11%	Mineracao Rio do Norte SA	Brazil	8.52	0.95	0.9
24%	Billiton Maatschappij Surinam NV	Surinam	1.92	0.46	0.5
75%	Alcoa Aluminio SA	Brazil	0.57	0.43	0.4
<b>2. RTZ Corporation PLC</b>		<b>UK</b>	–	<b>10.66</b>	<b>10.7</b>
100%	Comalco Ltd	Australia	10.23	10.23	10.3
4%	Cie des Bauxites de Guinée	Guinea	10.60	0.43	0.4
<b>3. Western Mining Corp. Holdings Ltd</b>		<b>Australia</b>	–	<b>10.19e</b>	<b>10.2</b>
49%	Alcoa of Australia Ltd	Australia	21.00e	10.19e	10.2
<b>4. State of Guinea</b>		<b>Guinea</b>	–	<b>9.42e</b>	<b>9.5</b>
49%	Cie des Bauxites de Guinée	Guinea	10.60	5.19	5.2
100%	Offices des Bauxites de Kindia	Guinea	3.00e	3.00e	3.0
49%	Friguia Sté d'Economie Mixte	Guinea	2.50e	1.23e	1.2
<b>5. Alcan Aluminium Ltd</b>		<b>Canada</b>	–	<b>7.35e</b>	<b>7.4</b>
100%	Jamalcan JV	Jamaica	2.50e	2.50e	2.5
21%	Mineracao Rio do Norte SA	Brazil	8.52	1.82	1.8
14%	Cie des Bauxites de Guinée	Guinea	10.60	1.46	1.5
100%	Alcan Aluminio Pocos de Caldas SA	Brazil	0.44	0.44	0.4
47%	Indian Aluminium Co. Ltd	India	0.75e	0.35e	0.4
100%	Johore Mining and Stevedoring Co. Sd	Malaysia	0.34	0.34	0.3
10%	Friguia Sté d'Economie Mixte	Guinea	2.50e	0.25e	0.3
45%	Ghana Bauxite Co. Ltd	Ghana	0.41	0.18	0.2
<b>6. Royal Dutch/Shell Group</b>		<b>UK</b>	–	<b>5.53</b>	<b>5.5</b>
56%	Worsley Alumina Pty Ltd	Australia	5.38	2.99	3.0
76%	Billiton Maatschappij Surinam NV	Surinam	1.92	1.46	1.5
9%	Mineracao Rio do Norte SA	Brazil	8.52	0.76	0.8
3%	Cie des Bauxites de Guinée	Guinea	10.60	0.32	0.3
<b>7. Alusuisse-Lonza Holding Ltd</b>		<b>Switzerland</b>	–	<b>5.34</b>	<b>5.4</b>
70%	Gove Bauxite-Alumina Project	Australia	5.80	4.06	4.1
100%	Sierra Leone Ore Metal Co. Ltd	Sierra Leone	1.28	1.28	1.3

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Controlling company/state ranked by size of production and controlled producers (% control)	Country of incorp. or production	Producer's total prod. Mt	Controlled share Mt	% of Western world production
...continued				
<b>8.Maxxam Group Inc.</b>	<b>USA</b>	–	<b>3.69e</b>	<b>3.7</b>
49% Kaiser Bauxite Co.	Jamaica	4.20e	2.06e	2.1
65% Alumina Partners of Jamaica	Jamaica	2.50e	1.63e	1.6
<b>9.State of Brazil</b>	<b>Brazil</b>	–	<b>3.49</b>	<b>3.5</b>
41% Mineracao Rio do Norte SA	Brazil	8.52	3.48	3.5
<b>10.State of Jamaica</b>	<b>Jamaica</b>	–	<b>3.29e</b>	<b>3.3</b>
51% Kaiser Bauxite Co.	Jamaica	4.20e	2.14e	2.1
50% Jamalco JV	Jamaica	2.29e	1.15e	1.1
<b>10 largest: controlled share of bauxite mining</b>			<b>75.43</b>	<b>75.7</b>
<b>20 largest: controlled share of bauxite mining</b>			<b>94.60</b>	<b>94.9</b>
<b>Total bauxite mining, Western world</b>			<b>99.66</b>	<b>100.0</b>

**Table 2**  
**Corporate control in aluminium in 1991:**  
**Alumina refining**

Controlling company/state ranked by size of production and controlled producers (% control)	Country of incorp. or production	Producer's total prod. kt	Controlled share kt	% of Western world production
<b>1.Aluminium Co. of America</b>	<b>USA</b>	–	<b>6483e</b>	<b>18.5</b>
51% Alcoa of Australia Ltd	Australia	5510e	2836e	8.1
82% Aluminium Co. of America	USA	1850e	1850e	5.3
55% Suralco Paranam	Surinam	1510	831	2.4
44% Alumar	Brazil	962	426	1.2
50% Jamalco JV	Jamaica	750	375	1.1
75% Alcoa Aluminio SA	Brazil	220e	165e	0.5
<b>2.Alcan Aluminium Ltd</b>	<b>Canada</b>	–	<b>4188e</b>	<b>12.0</b>
82% Alcan Aluminium Ltd	Canada	1150e	1150e	3.3
100% Jamalcan JV	Jamaica	1000e	1000e	2.9
21% Queensland Alumina Ltd	Australia	3180	681	1.9
65% Aughinish Alumina Ltd	Ireland	954	620	1.8
100% Nippon Light Metals Co. Ltd	Japan	230e	230e	0.7
100% Alcan Aluminio do Brazil SA	Brazil	140e	140e	0.4
100% British Alcan Ltd	UK	120e	120e	0.3
47% Indian Aluminium Co. Ltd	India	200e	94e	0.3
9% Alumar	Brazil	962	87	0.2
10% Friguia Sté d'Economie Mite	Guinea	650	66	0.2

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Controlling company/state ranked by size of production and controlled producers (% control)	Country of incorp. or production	Producer's total prod. Mt	Controlled share Mt	% of Western world production
...continued				
<b>3. Western Mining Corp. Holdings Ltd</b>	<b>Australia</b>	–	<b>2674e</b>	<b>7.6</b>
49% Alcoa of Australia Ltd	Australia	5510e	2674e	7.6
<b>4. Maxxam Group Inc.</b>	<b>USA</b>	–	<b>2525e</b>	<b>7.2</b>
28% Queens land Alumina Ltd	Australia	3180	900	2.6
65% Alumina Partners of Jamaica	Jamaica	1300e	845e	2.4
100% Kaiser Aluminium Chemicals Corp.	USA	780e	780e	2.2
<b>5. Reynolds Metals Co.</b>	<b>USA</b>	–	<b>2514e</b>	<b>7.2</b>
82% Reynolds Metals Co.	USA	1600e	1600e	4.6
37% Worsley Alumina Pty Ltd	Australia	1510	559	1.6
50% Aluminium Oxid Stade GmbH	Germany	710	355	1.0
<b>6. Royal Dutch/Shell Group</b>	<b>UK</b>	–	<b>2158</b>	<b>6.2</b>
56% Worsley; Alumina Pty Ltd	Australia	1510	839	2.4
45% Suralco Paranam	Surinam	1510	60	1.9
35% Aughinish Alumina Ltd	Ireland	954	334	1.0
32% Alumar	Brazil	962	306	0.9
<b>7. Pechiney (State of France)</b>	<b>France</b>	–	<b>1735e</b>	<b>5.0</b>
20% Queens land Alumina Ltd	Australia	3180	636	1.8
100% Aluminium de Grèce SA	Greece	550e	550e	1.6
100% Pechiney	France	450e	450e	1.3
15% Friguia Sté d'Economie Mixte	Guinea	650	99	0.3
<b>8. State of Venezuela (CVG and FIV)</b>	<b>Venezuela</b>	–	<b>1500e</b>	<b>4.3</b>
100% Interamericana de Alumina CA	Venezuela	1500e	1500e	4.3
<b>9. Alusuisse–Lonza Holding Ltd</b>	<b>Switzerland</b>	–	<b>1410e</b>	<b>4.0</b>
70% Gove Bauxite–Alumina Project	Australia	1500e	1050e	3.0
100% Martinswerk GmbH	Germany	360e	360e	1.0
<b>10. RTZ Corporation PLC</b>	<b>UK</b>	–	<b>1190</b>	<b>3.4</b>
30% Queens land Alumina Ltd	Australia	3180	964	2.8
28% Eurallumina SpA	Italy	818	227	0.6
<b>10 largest: controlled share of alumina refining</b>			<b>26377</b>	<b>75.4</b>
<b>20 largest: controlled share of alumina refining</b>			<b>33041</b>	<b>94.4</b>
<b>Total alumina refining, Western world</b>			<b>34997</b>	<b>100.0</b>

continued...

**Table 3**  
**Corporate control in aluminium in 1991:**  
**Aluminium smelting**

Controlling company/state ranked by size of production and controlled producers (% control)		Country of incorp. or production	Producer's total prod. kt	Controlled share kt	% of Western world production
<b>1. Aluminium Co. of America</b>		<b>USA</b>	–	<b>1831e</b>	<b>12.1</b>
82%	Aluminium Co. of America	USA	1250e	1250e	8.3
44%	Alumar	Brazil	352	156	1.0
51%	Alcoa of Australia Ltd	Australia	180e	93e	0.6
27%	Aluvic (Portland)	Australia	320	86	0.6
75%	Alcoa Alumínio SA	Brazil	90e	68e	0.4
50%	Elkem Aluminium Mosjoen	Norway	115e	58e	0.4
100%	Aluminio SA de CV	Mexico	51	51	0.3
50%	Elkem Aluminium Lista	Norway	79e	40e	0.3
100%	Suriname Aluminium Co.	Surinam	31	31	0.2
<b>2. Alcan Aluminium Ltd</b>		<b>Canada</b>	–	<b>1813e</b>	<b>12.0</b>
82%	Alcan Aluminium Ltd	Canada	1086	1086	7.2
100%	Sebree Aluminium Smelter	USA	180e	180e	1.2
100%	British Alcan Ltd	UK	166	166	1.1
100%	Alcan Australia Ltd	Australia	147e	147e	1.0
100%	Alcan Alumínio do Brazil SA	Brazil	114	114	0.8
100%	Nippon Light Metals Co. Ltd	Japan	32	32	0.2
9%	Alumar	Brazil	352	32	0.2
47%	Indian Aluminium Co. Ltd	India	64e	30e	0.2
6%	Aluminio Brasileiro SA	Brazil	288	18	0.1
5%	PT Indonesia Asahan Aluminium Co.	Indonesia	173	9	0.1
<b>3. Pechiney (State of France)</b>		<b>France</b>	–	<b>927e</b>	<b>6.1</b>
100%	Pechiney	France	286	286	1.9
50%	Aluminière de Bécancourt Inc.	Canada	360e	180e	1.2
100%	Pechiney Nederland NL	Netherlands	158e	158e	1.0
100%	Aluminium de Grèce SA	Greece	152	152	1.0
43%	Tomago Aluminium Co. Ltd	Australia	235e	100e	0.7
58%	Sté Cameronnaise d'Aluminium	Cameroon	86	50	0.3
<b>4. Reynolds Metals Co.</b>		<b>USA</b>	–	<b>911e</b>	<b>6.0</b>
82%	Reynolds Metals Co.	USA	410	410	2.7
100%	Reynolds Canada	Canada	375e	375e	2.5
25%	Aluminière de Bécancourt Inc.	Canada	360e	90e	0.6
33%	Hamburger Aluminium-Werk GmbH	Germany	110e	37e	0.2

continued...

Controlling company/state ranked by size of production and controlled producers (% control)		Country of incorp. or production	Producer's total prod. Mt	Controlled share Mt	% of Western world production
...continued					
<b>5. Amax Inc.</b>		<b>USA</b>	–	<b>674e</b>	<b>4.5</b>
100%	Intalco Aluminium Corp.	USA	270e	270e	1.8
100%	Eastalco Aluminium Co.	USA	175e	175e	1.2
73%	Mount Holly Smelter	USA	190e	139e	0.9
25%	Aluminière de Bécancourt Inc.	Canada	360e	90e	0.6
<b>6.Norsk Hydro (State of Norway)</b>		<b>Norway</b>	–	<b>655</b>	<b>4.3</b>
100%	Karmøy Aluminium Smelter	Norway	219	219	4.3
100%	Aardal Aluminium Smelter	Norway	181	181	1.2
100%	Sunndal Aluminium Smelter	Norway	139	139	0.9
100%	Høyanger Aluminium Smelter	Norway	79	79	0.5
50%	Sör-Norge Aluminium A/S	Norway	74	37	0.2
<b>7.State of Venezuela (CVG and FIV)</b>		<b>Venezuela</b>	–	<b>609</b>	<b>4.0</b>
100%	Industria Venezolana del Aluminio	Venezuela	396	396	2.6
100%	Aluminio del Caroni SA	Venezuela	213	213	1.4
<b>8.Maxxam Group inc.</b>		<b>USA</b>	–	<b>520</b>	<b>3.4</b>
100%	Kaiser Aluminium Chemicals Corp.	USA	282	282	1.9
100%	Volta Aluminium Co. Ltd	Ghana	175	175	1.2
49%	Anglesey Aluminium Ltd	UK	128	63	0.4
<b>9.Marc Rich &amp; Co.</b>		<b>Switzerland</b>	–	<b>518e</b>	<b>3.4</b>
100%	Ormet Corp.	USA	250e	250e	1.7
100%	Ravenswood Aluminium Corp.	USA	115e	115e	0.8
100%	Northwest Aluminium Co.	USA	82e	82e	0.5
27%	Mount Holly Smelter	USA	190e	51e	0.3
6%	Aluvic (Portland)	Australia	320	20	0.1
<b>10.RTZ Corporation PLC</b>		<b>UK</b>	–	<b>457</b>	<b>3.0</b>
79%	New Zealand Aluminium Smelters Ltd	New Zealand	259	206	1.4
100%	Comalco Aluminium (Bell Bay) Ltd	Australia	118	118	0.8
30%	Boyne Smelters Ltd	Australia	228	68	0.5
51%	Anglesey Aluminium Ltd	UK	128	65	0.4
<b>10 largest: controlled share of aluminium smelting</b>				<b>8915</b>	<b>59.0</b>
<b>20 largest: controlled share of aluminium smelting</b>				<b>11775</b>	<b>77.9</b>
<b>Total aluminium smelting, Western world</b>				<b>15107</b>	<b>100.0</b>

Note: e estimate.