

# SLOVAKIA

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Slovakia continued to be a modest regional producer of a variety of minerals. The major industries in the metals sector involved the production of aluminum and steel. Steel production was based largely on imported raw materials, and aluminum production was based entirely on imported bauxite and alumina. Small quantities of copper, gold, lead, and zinc also were produced. Among industrial minerals, the country registered production of barite, clays, magnesite, and salt. Brown coal and lignite and minor quantities of gas and petroleum composed Slovakia's production of mineral fuels (table 1).

The economy of Slovakia remained in transition towards a full market economy system. The need to denationalize the state's commercial assets expeditiously and to reduce subsidies to the public sector was tempered by policies that were promulgated to maintain social stability. These policies had contributed to the country's uneven economic performance. In 1999, Slovakia's gross domestic product increased by 1.9% (constant prices) compared with that of 1998. Industrial production, however, showed a weak performance with the value of industrial output declining by 3.4% compared with that of 1998.

## *Commodity Review*

**Aluminum.**—Slovalco was Slovakia's sole producer of primary aluminum. The enterprise, which was originally known as Zavod Slovenskeho Narodneho Postavnia (ZSNP), began production in 1953. Following the restructuring of the enterprise's assets in 1993, Slovalco became a subsidiary of ZSNP and was entirely involved in primary aluminum production. During the post-1993 period, Slovalco began a program of modernization and facility expansion that garnered investment capital from the European Bank for Reconstruction and Development (EBRD) and Hydro Aluminum A.S. of Norway. Hydro and the EBRD acquired 14.5% and 10% of Slovalco's shares, respectively; the remaining 75.5% was held by ZSNP (Slovalco, 1999, p. 5-8). Completion of the modernization of the aluminum production process allowed the plant's environmental protection standards to be more compatible with those of the European Union (European Bank for Reconstruction and Development, 1998, p. 1-5).

According to the latest available data, most of Slovalco's production was exported. Sales of finished aluminum during 1999 amounted to 134,760 metric tons, of which 83.9% was exported. The major recipients of Slovalco's aluminum were Italy and Austria and accounted for 36.3% and 17.4%, respectively, of total sales. The marketed product mix consisted of billets (71.9%), primary foundry alloys (22.2%), wire rod (5.2%), and liquid metal (0.7%). Also in 1999, about 25% of funds invested (US\$5 million) went for environmental

protection technologies and projects that pertain to health and safety; the balance was allocated toward capital improvements (Slovalco, 2000, p. 17). One of the major plans adopted in 1999 was for facility expansion to increase primary aluminum output by 35,000 metric tons per year (t/yr) to 144,000 t/yr. Construction was to begin in 2000 with startup of new capacities during the 2001 to 2002 period.

**Coal.**—In the mineral fuels sector, one of the major issues during the year concerned the coal mining sector, where a production decline was partly attributable to brief strikes in 1999 (Balaz, 2000).

**Gold.**—In 1999, gold was mined from the Svetozár gold ore deposit at Banská Hodruša by Slovenská banská spol. s.r.o., which was the country's sole gold producer. Mined gold amounted to 363 kilograms, which was about 7% more than that of 1998. Termination of mining at Banská Hodruša was expected in the near term because of low gold prices and depletion of resources (Ministry of the Environment of the Slovak Republic, 1999, p. 55).

The Canadian-based Argosy Minerals Inc., which was an investor in several gold exploration projects, sought to meet the requirements of Slovakia's approval and permitting process for gold exploration and mine development and compliance with the taxation system. Argosy also reviewed issues that related to ownership rights of the proposed plant and tailings facilities at prospective gold mining areas. Exploration work in the Kremnica region yielded estimates of more than 29 t/yr (958,000 ounces) of inferred reserves of gold and more than 217 t/yr (7 million ounces) of silver at a 1.0-gram-per-metric-ton cut-off grade for gold (Argosy Minerals Inc., 1999).

**Iron and Steel.**—Slovakia's steel industry depended mostly on imported iron ore and concentrate. Domestic iron ore production accounted for only a small portion of the steel industry's feedstock. Between 900,000 and 1,000,000 t/yr of siderite was produced from three deposits, the iron content ranged between 32% and 36%. The Ni ná Slaná deposit was considered to be the most economically viable of the deposits being worked (Ministry of the Environment of the Slovak Republic, 1999, p. 55).

Major events in Slovakia's steel industry in 1999 included a joint-venture project between VSZ Holding a.s., which was Slovakia's largest producer of steel, and the USX Corp. of the United States. The project was restarted in November after having been postponed in January because of financial issues. Plans for the joint venture's first phase called for the completion of the double cold-reduced temper mill by the end of 2000. The final phase would see the increase in the output of tin plate to 340,000 t/yr from 140,00 t/yr (Billingham and Demkova, 1999a;

Metal Bulletin, 1999). Additionally, Keramica a.s., which was a VSZ subsidiary, reported a commercially successful first semester. The company, which produced refractories for the metallurgical sector, reportedly maintained its position in the Czech, Greek, Hungarian, and Russian markets. Additional customers during this period were acquired in Bulgaria, Latvia, Romania, Russia, Slovakia, and Ukraine. During the first half of 1999, Keramica's exports amounted to about 30% of total sales (Billingham and Demkova, 1999b).

**Magnesite.**—The cessation of Komag's magnesite mine production in the Kosice region was among the principal issues in the industrial minerals sector. The company's kiln capacity was used to process magnesite for SMZ a.s. Jeslava, which was the country's principal producer of magnesite. Slovakia's mine output of magnesite declined by about 9% in 1999 compared with that of 1998 (Ministry of the Environment of the Slovak Republic, 2000, p. 160).

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TABLE 1  
SLOVAKIA: PRODUCTION OF MINERAL COMMODITIES 1/ 2/

(Metric tons unless otherwise specified)

Commodity		1995	1996	1997	1998	1999
<b>METALS</b>						
Aluminum:						
Alumina e/		100,000	100,000	100,000	100,000	100,000
Aluminum ingot, primary		38,139	121,825	127,182	108,000	130,000 e/
Copper:						
Mine output:						
Ore, Cu content		--	89	72 r/	155 r/	30 e/
Concentrate, gross weight		--	386	314	676 r/	124
Metal, refined, primary and secondary		29,000	25,000	25,000	25,000 e/	25,000 e/
Gallium metal e/	kilograms	600	600	600	600	500
Gold metal	do.	518	492	458	340	363
Iron and steel:						
Iron ore:						
Gross weight	thousand tons	820	960	970	899	900 e/
Fe content	do.	225 e/	240	250	250 e/	250 e/
Concentrate, Fe content	do.	446	436	453	479	458
Metal:						
Pig iron	do.	3,207	2,928	3,072	3,100 e/	3,100 e/
Ferrous alloys, total electric furnace 3/	do.	140 e/	93	95	95 e/	95 e/
Ferrosilicon		65,260	19,900	11,394	11,000 e/	11,000 e/
Ferrosilicon e/		30,000	30,000	30,000	30,000	30,000
Steel, crude	thousand tons	3,958	3,458	3,484	3,700 e/	3,600
Semimanufactures e/	do.	3,686 4/	3,500	3,600	3,500	3,500
<b>INDUSTRIAL MINERALS</b>						
Barite concentrate		41,600	44,930	62,102	14,880	15,900
Cement, hydraulic	thousand tons	2,981	2,841	3,136	3,000 e/	3,000
Clays:						
Bentonite		74,960	74,820	79,760	81,010	64,390
Kaolin		13,300	23,240	22,720	14,580 r/	22,930
Diamond, synthetic e/	carats	5,000	5,000	5,000	5,000	5,000
Dolomite	thousand tons	1,800 e/	2,069	1,989	1,796	1,800 e/
Gypsum and anhydrite, crude		131,000	121,000	116,000	128,000	117,000
Lime, hydrated and quicklime	thousand tons	803	764	685	700 e/	700 e/
Magnesite, concentrate		814,500	824,800	863,600	877,840	826,900
Nitrogen, N content of ammonia e/		250,000	250,000	250,000	250,000	250,000
Perlite		21,850	25,160	25,020 r/	24,240 r/	19,460
Salt		99,750	106,800	126,800 r/	100,470	119,000
Sand and gravel	thousand cubic meters	1,500 e/	1,432	1,872	1,906	1,900 e/
Stone:						
Limestone and other calcareous stones for cement	thousand tons	7,000 e/	7,000 e/	7,800	7,200	7,500 e/
Crushed stone	thousand cubic meters	5,000	3,739	3,510	4,318	4,000 e/
Talc		5,000 e/	9,000	6,100 r/	2,820 r/	1,900
Zeolite		9,720	10,000	14,000	10,000	8,640
<b>MINERAL FUELS AND RELATED MATERIALS</b>						
Coal, brown and lignite	thousand tons	4,140	3,829	3,942	3,966	3,745
Coke						
Metallurgical	do.	1,900 e/	1,854	1,708	1,730	1,700 e/
Unspecified e/	do.	200	200	200	200	200
Gas, manufactured, coke oven	million cubic meters	345	307	309	311	219
Petroleum:						
Crude:						
As reported	thousand tons	74	68	63	61	60
Converted	thousand 42-gallon barrels	500	480	426	400 e/	400 e/
Refinery products e/	do.	40,500	40,500	40,000	40,000	40,000

e/ Estimated. r/ Revised. -- Zero.

1/ Table includes data available through November 2000. In addition to the commodities listed, arsenic, diatomite, feldspar, illite, sodium compounds, sulfur, sulfuric acid, and talc are produced, but information is inadequate to make reliable estimates of output.

2/ Estimated data are rounded to no more than three significant digits.

3/ May include some FeCrSi and FeNi, if any was produced.

4/ Reported figure.

TABLE 2  
SLOVAKIA: STRUCTURE OF THE MINERAL INDUSTRY IN 1999

(Thousand of metric tons unless otherwise specified)

Commodity	Major operating companies 1/	Location of main facilities 2/	Annual capacity
Aluminum	ZSNP Aluminum Works (Slovalco)	Ziar and Hronom, central Slovakia	60
Antimony, ore	Liptovska Dubrava	Central Slovakia	50
Do.	Pezinok	Western Slovakia	50
Smelter	Vajsikova	Central Slovakia	2
Cement	Lietavska Lucka, Stupava, and Turna	Slovakia	5,400
Coal:			
Brown	Hornonitranske Bane, a.s.	Prievidza, central Slovakia	3500
Do.	Bana Dolina, a.s.	Vlky Krtis, southern Slovakia	500
Lignite	Bana Zhorie, a.s.	Holic, Western Slovakia	400
Copper:			
Ore	Slovinky, Hodrusa-Hamre, and Rudnany	Central Slovakia	500
Refinery	Krompachy	do.	27
Gallium kilograms	ZSNP Aluminum Works	Ziar and Hronom, central Slovakia	4,000
Iron:			
Ore	Nizana Slana and Rudnany	Central Slovakia	1,600
Concentrate	do.	do.	1,300
Lead-zinc, ore	Banska Stiavnica	do.	200
Magnesite	SMZ a.s. Jelsava	Eastern Slovakia	350
Do.	Slovmag a.s., Lubenik	Central Slovakia	150
Petroleum, refinery	Bratislava, Dubova	Slovakia	NA
Salt	Solivary a.s., Presov	Eastern Slovakia	150
Steel, crude	VSZ HOLDING, a.s., formerly Vychodoslvenske Zeleziarne sp (East Slovak Iron and Steel Works)	Eastern Slovakia, Kosice	4,000
Do.	Zeleziarne Podbrezova a.s.	Slovakia, Podbrezova	600

NA Not available.

1/ All mining companies are Government-owned.

2/ Names and locations of mines and crude oil refineries are identical.