



REGIONAL ANALYSIS

The Wire & Cable Industry
of Central and
Eastern Europe

ICF CONGRESS

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Chapter 1: The Wire & Cable Industry of Central & Eastern Europe

1. Regional Summary

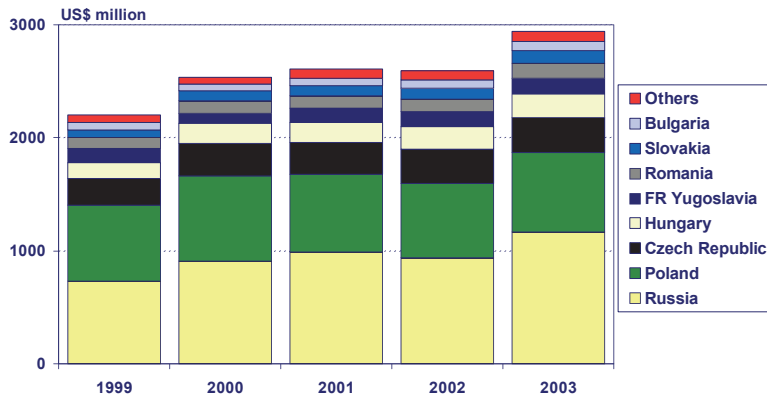
- Total regional production volume of metallic cable in Eastern and Central Europe grew by 10.9% in 2003 to reach 692,000 tonnes conductor. This is 32% of the volume produced in Western Europe.
- Fibre optic cable production volume increased by 26% to 1,720,000 fkm, which is 21% of the volume produced in Western Europe.
- In value total cable production increased by 13.3% to just over US\$2.9bn in 2003. The greater growth in value was mainly down to rising raw material prices. Regional consumption increased by 13.8% to just under US\$2.9bn.
- Metallic cable consumption in the region increased by 11.6% to 649,000 tonnes conductor, with fibre optic cable consumption rising by 18.1% to 2,046,000 fkm.
- Having regained its position as the largest regional cable producer, Russia has increased its share of total regional output of metallic cable to 39% by conductor weight in 2003. Poland is the clear second largest and these two combined account for 65% of regional output.
- The clear largest market by value is Russia (US\$1213m) followed by Poland (US\$442m), the Czech Republic (US\$259m), Hungary (US\$224m), Slovakia (US\$151m), Romania (US\$141m), FR Yugoslavia (US\$136m), Slovenia (US\$118m), Bulgaria (US\$99m), Croatia (US\$53m), Bosnia (US\$19m) and Macedonia (US\$10m).
- Of the major markets Russia saw the greatest growth over the period 1999-2003, with Poland seeing the smallest growth in metallic cable volume demand and a fall in total market value.

Table 1.1: Central and East European Wire and Cable Production & Consumption by Volume and Value 1999-2003 ('000 tonnes conductor & US\$m)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change 1999-2003</u>
Production Volume ('000t conductor)						
Russia	188	212	233	222	272	44.4
Poland	145	156	163	170	175	21.1
Czech Republic	56	63	64	67	68	21.7
Hungary	31	40	41	48	51	63.7
FR Yugoslavia	26	19	27	29	30	12.7
Romania	23	24	26	27	31	33.9
Slovakia	17	21	22	25	28	66.2
Bulgaria	18	18	21	23	24	33.7
Croatia	6	5	6	7	7	34.5
Macedonia	4	4	4	4	4	7.9
Slovenia	2	2	2	2	2	13.3
Bosnia	0	0	0	0	0	na
Total	515	563	610	624	692	34.4
Production Value (US\$m)						
Russia	731	910	989	938	1166	59.6
Poland	673	750	689	660	700	4.0
Czech Republic	239	292	283	302	309	29.5
Hungary	138	176	178	201	211	52.7
FR Yugoslavia	125	87	123	131	142	13.6
Romania	95	111	109	108	129	35.8
Slovakia	71	92	89	95	109	52.2
Bulgaria	63	56	70	76	85	34.3
Croatia	38	37	46	48	54	41.8
Macedonia	20	18	22	22	22	11.3
Slovenia	8	9	11	9	9	16.9
Bosnia	0	0	0	0	0	na
Total	2200	2537	2610	2590	2935	33.4
Consumption Volume ('000t conductor)						
Russia	189	213	236	226	279	47.8
Poland	106	103	105	106	105	-0.7
Czech Republic	43	52	55	55	58	34.8
Hungary	28	35	38	48	53	87.3
FR Yugoslavia	25	18	27	27	28	9.9
Romania	31	29	29	27	26	-16.2
Slovakia	20	19	28	34	39	95.0
Bulgaria	19	19	23	25	26	35.5
Croatia	7	6	8	7	7	2.5
Macedonia	2	3	2	2	2	-15.2
Slovenia	15	19	20	22	22	44.1
Bosnia	5	3	2	3	4	-28.4
Total	492	519	574	582	649	32.0
Consumption Value (US\$m)						
Russia	753	929	1007	965	1213	61.2
Poland	540	556	519	431	442	-18.1
Czech Republic	209	255	257	241	259	23.7
Hungary	144	176	180	212	224	55.2
FR Yugoslavia	139	88	123	123	136	-1.5
Romania	145	156	164	143	141	-2.4
Slovakia	91	89	108	132	151	66.8
Bulgaria	70	60	82	87	99	42.2
Croatia	49	41	59	50	53	8.0
Macedonia	11	16	10	9	10	-12.4
Slovenia	79	95	100	111	118	48.6
Bosnia	28	17	13	16	19	-31.0
Total	2257	2476	2621	2520	2866	27.0

Data: CRU

Regional Cable Production Surges in 2003 After a Flat Three Years

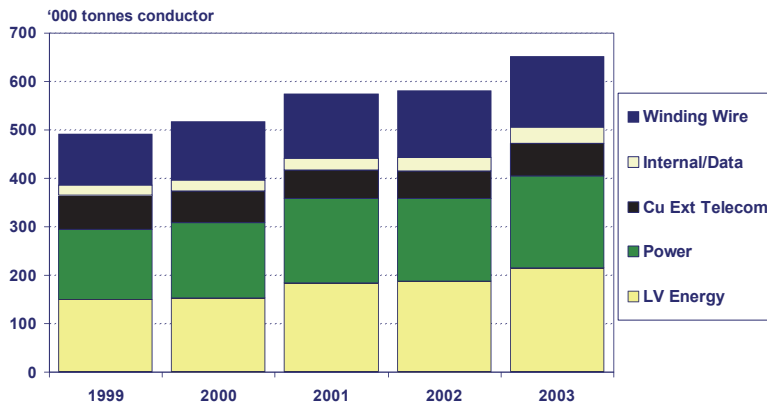


Data: CRU

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Regional Metallic Cable Consumption Rises After Flat 2002

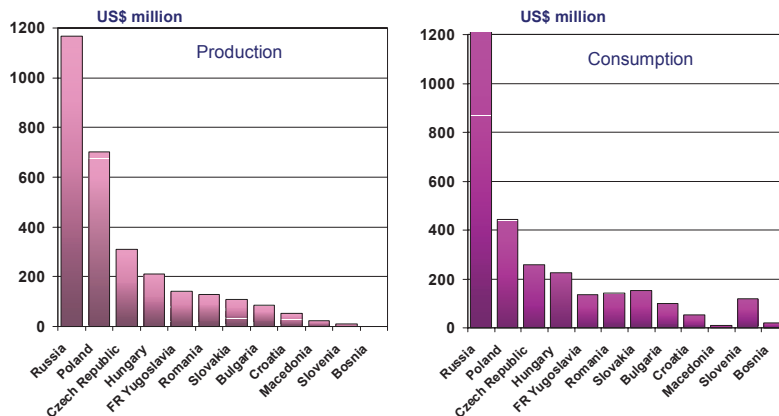


Data: CRU

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Russia by Far the Largest Producer and Consumer of Wire and Cable



Data: CRU

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Table 1.2: Central and East European Wire and Cable Production & Consumption by Product 1999-2003 ('000 tonnes conductor)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change 1999-2003</u>
Production Volume ('000t conductor)						
Low Voltage Energy	202	220	251	269	307	51.5
Copper Power Cable	98	108	114	110	125	28.3
Aluminium Power Cable	64	75	84	81	85	33.1
External Copper Telecom	58	52	49	55	60	3.6
Internal Telecom/Data	15	16	18	19	23	51.4
Winding Wire	78	92	95	89	91	17.9
Total	515	563	610	624	692	34.4
<i>Ext. Cu Telecom (m. pair km)</i>	13.3	11.8	11.2	11.1	12.3	-8.0
<i>Fibre Optic ('000 fibre km)</i>	839	1461	1517	1365	1720	105.0
Consumption Volume ('000t conductor)						
Low Voltage Energy	150	153	184	188	217	44.8
Copper Power Cable	81	83	93	91	107	32.0
Aluminium Power Cable	63	73	81	79	83	31.4
External Copper Telecom	71	66	60	58	68	-4.4
Internal Telecom/Data	22	21	23	27	32	46.8
Winding Wire	105	122	133	138	143	35.7
Total	492	519	574	582	649	32.0
<i>Ext. Cu Telecom (m. pair km)</i>	16.7	15.5	14.1	13.6	15.9	-4.4
<i>Fibre Optic ('000 fibre km)</i>	1451	1882	2107	1732	2046	41.0

Data: CRU

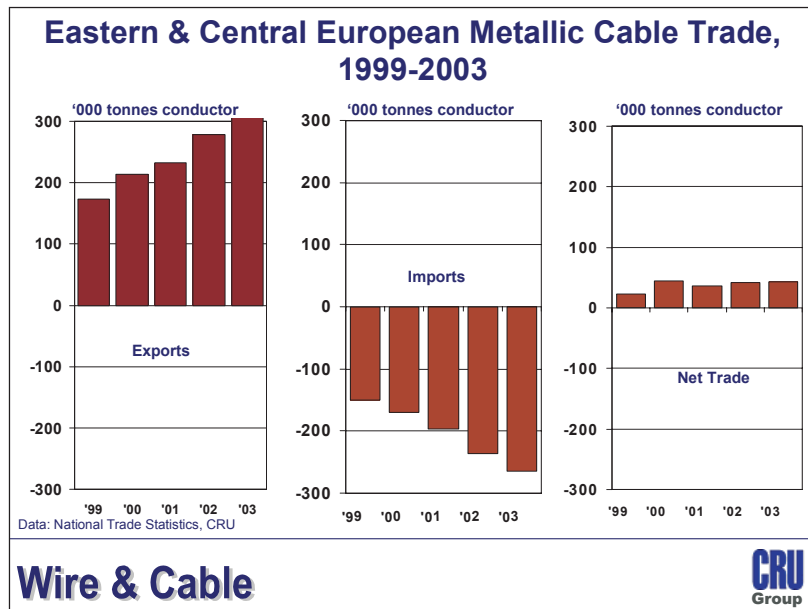
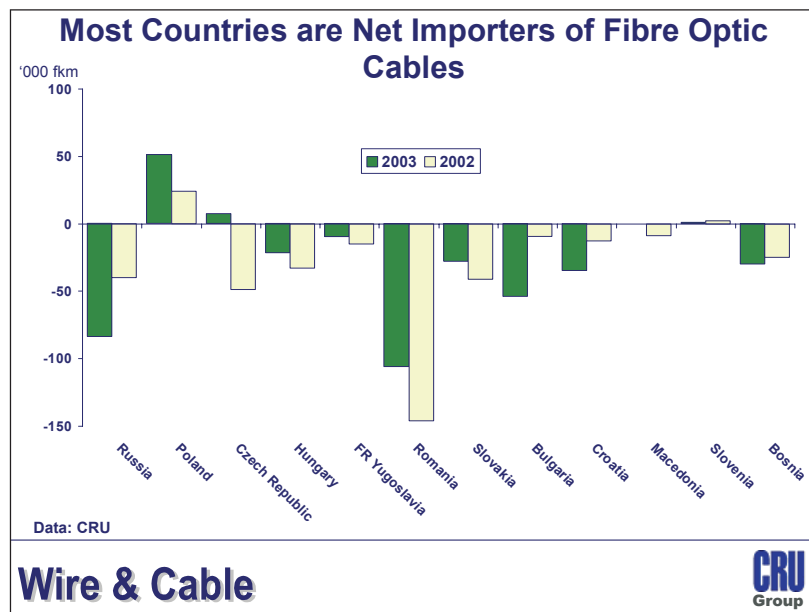


Table 1.3: Central and East European Insulated Wire & Cable Trade by Country 1999-2003 ('000t conductor, '000fkm)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change 1999-2003</u>
Metallic Exports						
Russia	8.4	13.1	16.0	17.4	20.3	142.7
Poland	62.9	79.1	87.8	97.4	107.1	70.3
Czech Republic	41.4	43.8	45.5	57.4	60.8	46.8
Hungary	27.4	32.6	32.5	45.1	47.6	73.6
FR Yugoslavia	1.3	1.1	1.9	2.6	2.5	89.3
Romania	6.4	10.1	16.0	21.4	25.7	298.6
Slovakia	16.2	23.0	21.0	23.9	28.5	75.8
Bulgaria	1.6	3.6	3.7	3.4	3.4	107.2
Croatia	2.3	2.9	3.0	4.4	4.9	115.7
Macedonia	3.8	3.9	4.0	3.7	3.6	-6.0
Slovenia	0.8	0.9	1.0	2.0	2.0	145.8
Bosnia	0.0	0.0	0.0	0.0	0.0	na
Total	172.6	214.3	232.4	278.8	306.4	77.5
Metallic Imports						
Russia	9.1	13.9	18.8	21.0	27.6	204.5
Poland	24.3	26.3	30.3	33.1	37.3	53.7
Czech Republic	28.6	32.9	36.9	45.4	50.9	77.7
Hungary	24.2	27.1	29.6	44.7	49.0	102.3
FR Yugoslavia	0.6	0.7	1.7	1.0	1.0	64.0
Romania	15.0	15.7	19.3	21.2	21.4	42.3
Slovakia	19.3	21.3	26.7	33.3	39.5	104.2
Bulgaria	2.7	3.9	5.5	5.9	5.2	89.5
Croatia	3.8	3.5	4.7	4.6	4.7	23.8
Macedonia	2.2	3.5	1.5	1.2	1.3	-39.4
Slovenia	14.7	17.8	18.8	22.0	22.5	52.9
Bosnia	5.0	3.3	2.5	3.2	3.6	-28.4
Total	149.6	169.8	196.1	236.6	264.0	76.5
Metallic Net Trade						
Russia	-0.7	-0.7	-2.7	-3.6	-7.3	934.5
Poland	38.6	52.9	57.5	64.3	69.9	80.8
Czech Republic	12.7	10.8	8.6	12.1	9.8	-22.7
Hungary	3.2	5.5	2.9	0.5	-1.4	-143.9
FR Yugoslavia	0.7	0.5	0.2	1.6	1.6	109.0
Romania	-8.6	-5.6	-3.3	0.2	4.3	-149.8
Slovakia	-3.1	1.7	-5.7	-9.4	-11.0	252.4
Bulgaria	-1.1	-0.3	-1.8	-2.5	-1.8	63.6
Croatia	-1.6	-0.6	-1.7	-0.2	0.2	-111.0
Macedonia	1.7	0.4	2.5	2.5	2.3	37.4
Slovenia	-13.9	-16.8	-17.7	-19.9	-20.5	47.4
Bosnia	-5.0	-3.3	-2.5	-3.2	-3.6	-28.4
Total	23.0	44.4	36.3	42.2	42.4	84.4
Fibre Optic Net Trade ('000fkm)						
Russia	-174	-80	-2	-40	-84	-52.0
Poland	-131	-81	-187	24	51	-138.6
Czech Republic	-92	-57	-90	-49	7	-107.6
Hungary	-73	-75	-64	-33	-22	-69.7
FR Yugoslavia	-3	0	-8	-15	-10	242.9
Romania	-33	-69	-146	-146	-106	220.3
Slovakia	-17	-11	-25	-41	-28	63.6
Bulgaria	-13	-15	-26	-9	-54	332.0
Croatia	-48	-1	-11	-13	-35	-26.3
Macedonia	0	-5	0	-9	0	-100.0
Slovenia	0	0	0	2	1	na
Bosnia	-19	-13	-13	-25	-30	58.6
Total	-602	-407	-572	-354	-310	-48.5

Data: CRU



- Russia, Hungary, Slovakia, Bulgaria, Slovenia and Bosnia are the only countries that were net importers of metallic cable in 2003. Most countries are net importers of fibre optic cables. The main exception is Poland, which has been a net exporter for the last two years, and the Czech Republic, which had a small surplus in 2003.
- The main exporter is Poland, which with exports of 107,100 tonnes conductor in 2003 accounted for 35.0% of regional exports. The other main exporters are the Czech Republic, Hungary, Slovakia and Romania. The majority of this trade is automotive wire harnesses.
- Regional net exports have been relatively stable and were 42,400 tonnes conductor in 2003. The surplus is mainly due to large net exports from Poland. Most other countries have an almost balanced trade position other than Slovenia, which has large imports of winding wire.
- By far the largest cable manufacturer in this region is Polish company **Tele-Fonika**. Total production in 2003 was US\$520m which was 18% of total regional output. The second largest is **Pirelli** (US\$205m), then **Kamkabel** (US\$145m) and **NKT** (US\$108m).
- The only mainstream companies with operations in more than one country are Pirelli (Hungary, Slovakia and Romania) and NKT (Poland and the Czech Republic). The merger of **Belden** and **CDT** will add another (The Czech Republic and Hungary). **Leoni** has a number of specialist automotive wire producing plants in Slovakia, Hungary and Poland.
- There is clear scope for industry consolidation. If this region is to develop as a major base for cabling then this will need to happen.

Table 1.4: Company Shares of Wire & Cable Production in Central & Eastern Europe in 2003 by Conductor Weight ('000t conductor, '000 fibre km)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Total</u>	<u>Fibre '000 fkm</u>
Tele-Fonika	58	52	8	1	9	129	175
Pirelli	31	21	0	0	0	51	0
Kamkabel	12	17	0	1	9	38	0
NKT	14	5	0	0	11	30	0
Moskabelmet	7	11	0	1	9	28	115
Electrokabel	19	4	5	0	0	28	0
Samarakabel	10	2	6	1	0	18	172
Sevkabel	8	5	3	0	0	15	86
FKS	7	4	2	0	1	14	60
Prakab	8	4	1	1	0	14	0
Podolskkabel	7	8	0	0	0	15	0
Others	126	79	36	19	52	311	1113
Total	307	211	60	23	91	692	1720

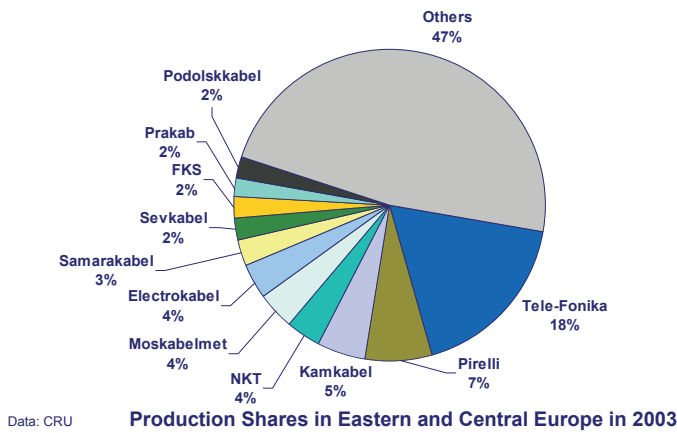
Data: CRU

Table 1.5: Company Shares of Wire & Cable Production in Central & Eastern Europe in 2003 by Value (US\$m)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Fibre</u>	<u>Total</u>
Tele-Fonika	204	219	50	10	27	10	520
Pirelli	110	95	0	0	0	0	205
Kamkabel	35	82	0	3	25	0	145
NKT	50	24	0	0	34	0	108
Moskabelmet	20	55	0	4	26	8	113
Electrokabel	57	18	30	0	0	0	105
Samarakabel	29	9	35	4	0	12	89
Sevkabel	23	24	15	0	0	6	68
FKS	26	18	10	1	5	5	65
Prakab	29	19	8	4	0	0	60
Podolskkabel	20	39	0	0	0	0	59
Others	424	378	222	132	161	81	1398
Total	1027	980	370	158	278	122	2935

Data: CRU

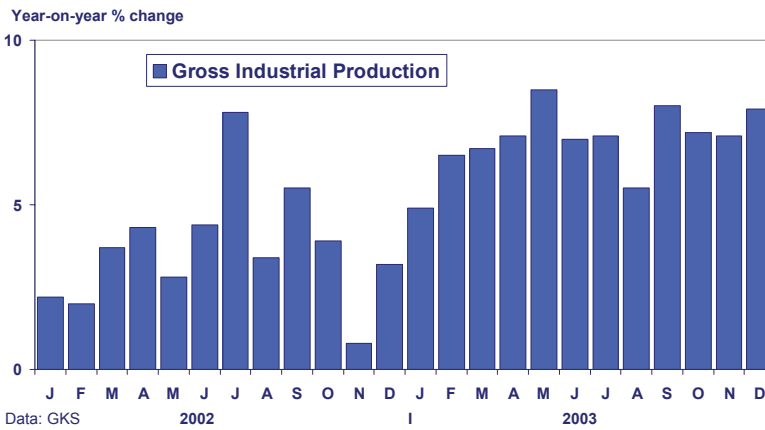
Other than Tele-Fonika, Industry is Very Fragmented



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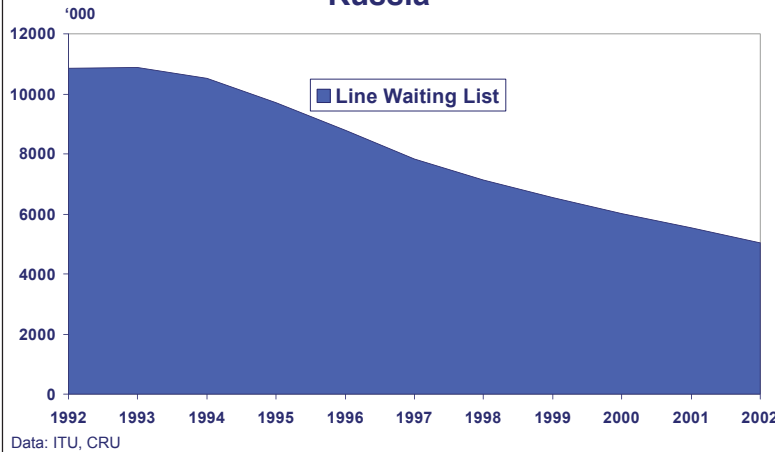
Russian Industrial Production on an Upward Path



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Demand for Fixed Lines Still Outstrips Supply in Russia



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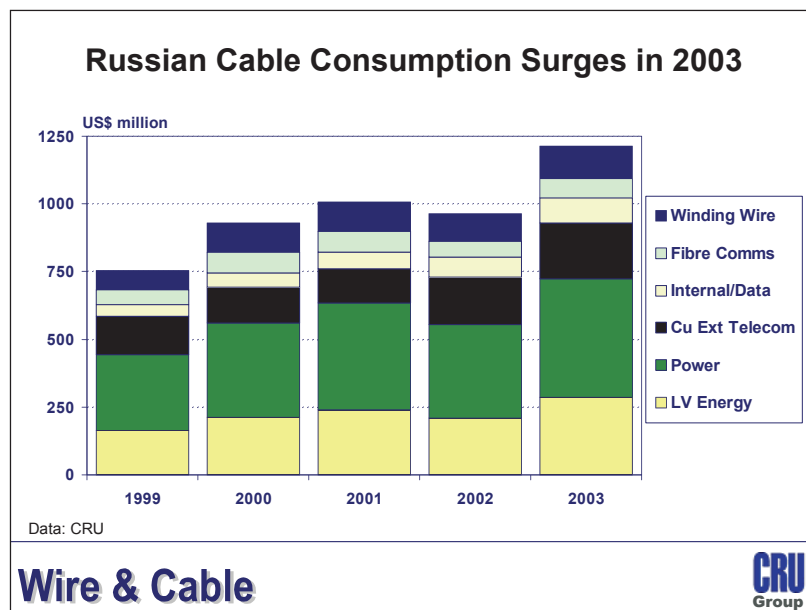
Chapter 2

Russia

1. Introduction

1.1 Market Overview

The Russian cable industry has been through some very hard times since the collapse of the Soviet Union, but there are now real reasons to be optimistic about the future. Not only has demand for wire and cable surged in 2003, but the difficulties that still remain for importers to do business in the country means that the local manufacturers have been the ones to benefit from this growth. Of course there are still problems ahead. The growth in 2003 was artificially inflated by destocking at the end of 2002, and future growth is dependant on continuing political stability. Meanwhile the cable industry should take the opportunity to rationalise and improve efficiency, if it wishes to compete on the international stage in the longer term.



2. Production and Consumption

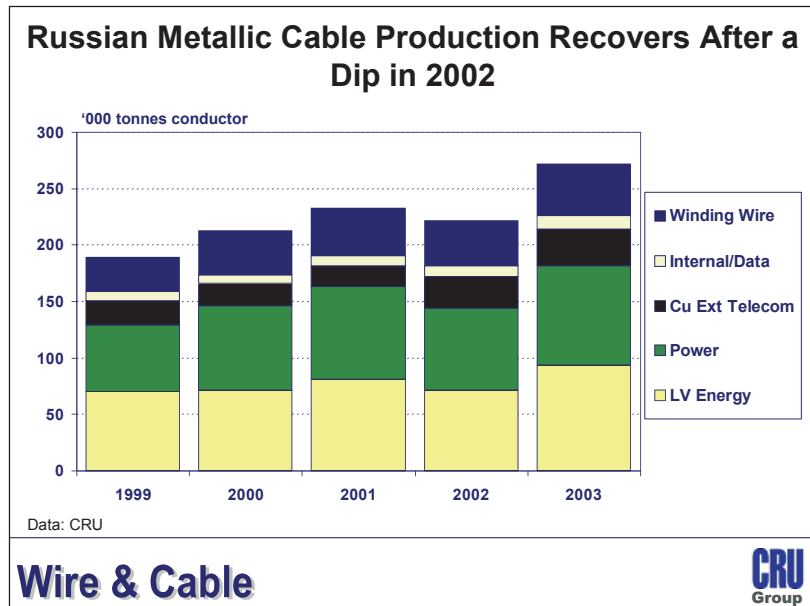
In 2002 the Russian cable industry experienced a blip in its recovery from the dramatic slump in output that followed the collapse of the Soviet Union. At its peak the industry produced around 300,000 tonnes conductor but this fell by two thirds to 100,000 tonnes conductor. In 2000 production of metallic cable passed the 200,000 tonnes conductor mark, but 2002 was a disappointing year as pressure from imports and a run down of stocks by many important customers at the end of the year, resulted in a fall in output of 4.7%. However, data for 2003 shows a very strong rebound in output, helped by restocking at the beginning of the year, and production grew by 22.3% to 272,000 tonnes conductor. In value terms total wire and cable production passed the billion dollar mark at US\$1166m.

The largest product sector is LV energy cable, with the majority of this being building wires. In the power cable sector there is significant use of aluminium conductors, although demand for copper conductor cables is growing more quickly. Winding wire production continues to recover, and investment in modern production equipment has enabled manufacturers to improve quality. Despite this most of production is destined for the home market.

With Russia being a small net importer of wire and cable consumption reached US\$1213m in 2003 with growth similar to that of production. One of the main drivers of this growth has been the substantial increase in the investment component of the economy. Official data shows that GDP growth in 2003 was 6.8% and industrial production increased by 7.0%. The industrial machinery part of this grew by 9.4% and building materials by 6.4%. It should be noted that increasingly it is believed that the official statistics do not fully reflect what is actually happening in the Russian economy and that true growth is higher than officially reported. This is because the official data concentrates on the old industries, many of which are in decline, and does not reflect growth from small companies, many of which keep outside the official economy to avoid taxes.

All the product sectors of the Russian cable industry saw strong growth in demand, and with plenty of spare capacity, the Russian cable industry was able to meet this increase in consumption. It was very good news for the industry that the boom did not result in more imports, and it is clear that the Russian market remains very difficult for outsiders to penetrate.

Infrastructure development helped boost demand for power cables and external copper telecom cables, whilst the healthy construction sector drove consumption of LV energy cables. Industrial production output helped drive increased use of winding wire. The Russian fibre optic cable market has managed to avoid the big slump seen in Western Europe. Although demand fell a little in 2002, it rebounded in 2003 and reached just over 1 million fkm.



The outlook for the Russian cable industry looks good provided that political stability can be maintained. There is still plenty of scope for demand to increase at a healthy rate and there is little sign of any strong pressure from imports. However, in the longer term, the Russian cable

industry needs to consolidate and streamline operations if it is to ever be able to compete on the open world market.

Table 2.1: Production and Consumption of Wire & Cable in Russia by Volume & Value 1999-2003 ('000t conductor, US\$m)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change</u>			
						<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Production Volume ('000t conductor)									
LV Energy	70	72	81	72	94	2.9	12.5	-11.1	30.6
Copper Power Cable	35	38	40	34	47	8.6	5.3	-15.0	38.2
AI Power Cable	24	36	42	38	41	50.0	16.7	-9.5	7.9
External Copper Telecom	22	20	19	28	32	-9.3	-2.6	47.4	14.3
Internal Telecom/Data	8	8	9	10	12	6.7	12.5	11.1	20.0
Winding Wire	30	39	42	40	46	29.3	8.2	-4.8	13.8
Total	188	212	233	222	272	12.9	9.8	-4.7	22.3
<i>Ex Copper Telecom (m pr km)</i>	<i>5.0</i>	<i>4.6</i>	<i>4.5</i>	<i>6.6</i>	<i>7.5</i>	<i>-9.3</i>	<i>-2.6</i>	<i>47.4</i>	<i>14.3</i>
<i>Fibre Optic ('000 fkm)</i>	<i>375</i>	<i>700</i>	<i>800</i>	<i>725</i>	<i>945</i>	<i>86.7</i>	<i>14.3</i>	<i>-9.4</i>	<i>30.3</i>
Production Value (US\$m)									
LV Energy	164	214	232	206	275	30.9	8.3	-11.1	33.2
Copper Power Cable	170	182	200	165	226	7.1	9.9	-17.5	36.7
AI Power Cable	113	170	198	179	209	50.0	16.7	-9.5	16.7
External Copper Telecom	135	119	115	167	192	-11.9	-3.4	45.2	15.0
Internal Telecom/Data	41	46	52	58	72	12.2	13.0	11.5	24.1
Fibre Optic Cable	36	70	78	54	66	94.4	11.4	-30.8	22.5
Winding Wire	72	109	114	109	127	51.4	4.6	-4.8	16.6
Total	731	910	989	938	1166	24.5	8.7	-5.2	24.3
Consumption Volume ('000t conductor)									
LV Energy	70	72	83	73	97	2.2	16.3	-12.4	33.4
Copper Power Cable	35	37	40	34	48	7.7	6.6	-13.1	38.9
AI Power Cable	24	36	42	38	41	49.8	17.2	-9.0	7.1
External Copper Telecom	22	22	21	29	34	-1.6	-5.4	40.5	17.4
Internal Telecom/Data	8	9	10	13	16	10.5	18.6	21.7	22.2
Winding Wire	30	38	40	38	43	26.4	5.2	-4.0	12.5
Total	189	213	236	226	279	12.9	10.7	-4.3	23.6
<i>Ex Copper Telecom (m pr km)</i>	<i>5.3</i>	<i>5.2</i>	<i>4.9</i>	<i>6.9</i>	<i>8.1</i>	<i>-1.6</i>	<i>-5.4</i>	<i>40.5</i>	<i>17.4</i>
<i>Fibre Optic ('000 fkm)</i>	<i>549</i>	<i>780</i>	<i>802</i>	<i>765</i>	<i>1029</i>	<i>42.1</i>	<i>2.8</i>	<i>-4.6</i>	<i>34.4</i>
Consumption Value (US\$m)									
LV Energy	164	213	239	209	285	30.0	12.0	-12.4	36.1
Copper Power Cable	168	178	198	167	230	6.2	11.3	-15.6	37.4
AI Power Cable	112	168	196	179	207	49.8	17.2	-9.0	15.9
External Copper Telecom	141	135	127	175	207	-4.4	-6.1	38.4	18.1
Internal Telecom/Data	44	51	60	74	93	16.2	19.2	22.1	26.4
Fibre Optic Cable	53	78	78	57	72	48.0	0.2	-27.1	26.4
Winding Wire	72	106	108	104	119	47.9	1.6	-4.0	15.3
Total	753	929	1007	965	1213	23.4	8.4	-4.1	25.8

Data: CRU

3. Trade

Trade in wire and cable is a much less important part of the Russian cable industry and market than in most other countries. In 2003 we estimate that metallic cable exports accounted for 7.5% of production by conductor weight whilst imports accounted for 9.9% of consumption. In value terms total wire and cable exports are estimated at US\$115m in 2003 and imports at US\$162m including fibre optic cables and cable assemblies.

Wire and cable exports have been growing steadily over the last five years and in 2003 reached 20,300 tonnes conductor. This is more than double the level of exports in 1999. More than half of all exports are LV energy cable with the only other significant volumes being power cable and winding wire. Almost all of Russia's exports are to either former CIS states such as

Table 2.2: Russian Trade in All Insulated Wire & Cable by Product ('000t conductor weight)

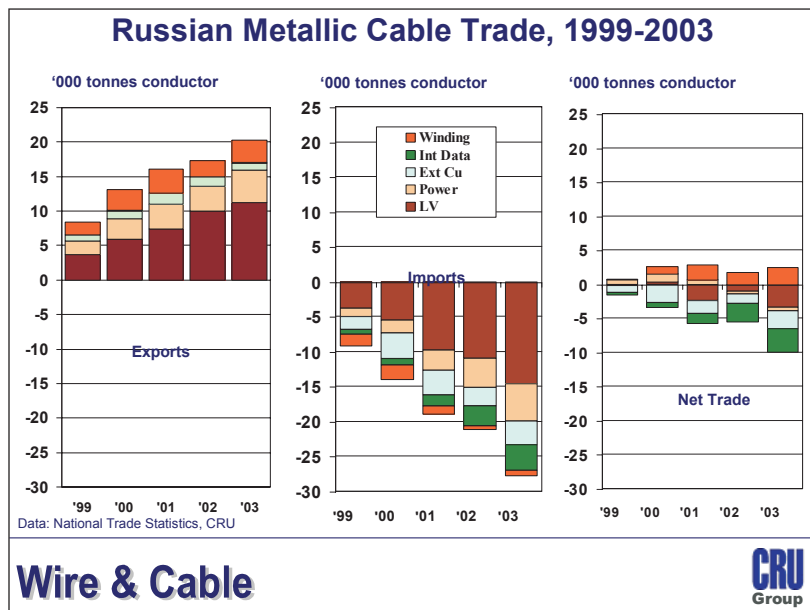
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Exports					
Low Voltage Energy	3.7	5.9	7.4	10.0	11.2
Copper Power	1.4	2.3	2.6	2.7	3.3
Aluminium Power	0.6	0.8	1.0	1.0	1.5
External Telecom	0.8	1.0	1.6	1.3	0.9
Internal Telecom/Data	0.1	0.1	0.0	0.1	0.0
Winding Wire	1.8	3.1	3.4	2.4	3.3
Total	8.4	13.1	16.0	17.4	20.3
<i>External Copper Telecom (m. pair km)</i>	<i>0.2</i>	<i>0.2</i>	<i>0.4</i>	<i>0.3</i>	<i>0.2</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>6</i>	<i>27</i>	<i>67</i>	<i>22</i>	<i>12</i>
Imports					
Low Voltage Energy	3.8	5.5	9.7	11.0	14.6
Copper Power	0.9	1.4	2.3	3.2	4.2
Aluminium Power	0.3	0.4	0.6	0.9	1.1
External Telecom	1.8	3.6	3.5	2.6	3.4
Internal Telecom/Data	0.6	0.9	1.5	2.8	3.6
Winding Wire	1.7	2.0	1.2	0.6	0.8
Total	9.1	13.9	18.8	21.0	27.6
<i>External Copper Telecom (m. pair km)</i>	<i>0.4</i>	<i>0.9</i>	<i>0.8</i>	<i>0.6</i>	<i>0.8</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>180</i>	<i>107</i>	<i>69</i>	<i>62</i>	<i>96</i>
Net Trade					
Low Voltage Energy	-0.1	0.4	-2.3	-1.0	-3.4
Copper Power	0.5	0.8	0.4	-0.5	-0.9
Aluminium Power	0.3	0.5	0.3	0.1	0.4
External Telecom	-1.0	-2.6	-1.9	-1.4	-2.5
Internal Telecom/Data	-0.5	-0.8	-1.5	-2.7	-3.5
Winding Wire	0.1	1.0	2.3	1.8	2.6
Total	-0.7	-0.7	-2.7	-3.6	-7.3
<i>External Copper Telecom (m. pair km)</i>	<i>-0.2</i>	<i>-0.6</i>	<i>-0.4</i>	<i>-0.3</i>	<i>-0.6</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>-174</i>	<i>-80</i>	<i>-2</i>	<i>-40</i>	<i>-84</i>

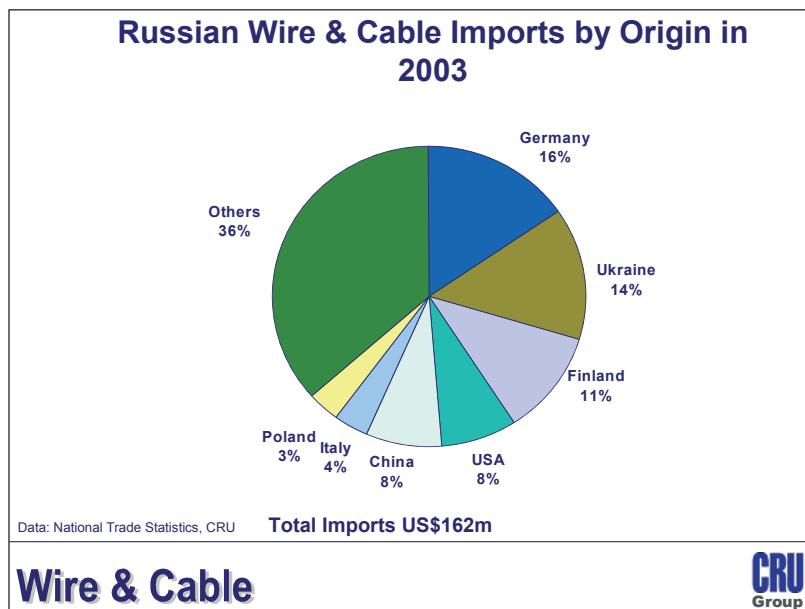
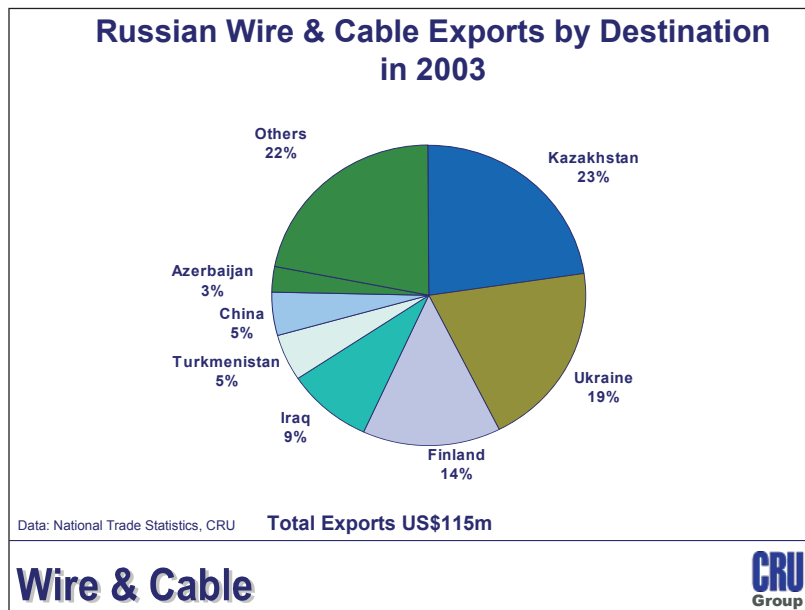
Data: Trade Statistics, CRU

Kazakhstan and the Ukraine, along with Iraq and China. The only significant exports to Western Europe are to Finland and almost all this trade is automotive harnesses.

Wire and cable imports have been growing even faster than exports and reached 27,600 tonnes conductor in 2003, compared to just 9,100 tonnes conductor in 1999. In contrast fibre optic cable imports have fallen from a high of 180,000 fkm in 1999 to 60-100,000 fkm in each of the last three years. Like exports the main product category for import is LV energy cable, followed by power cable. The greatest volume of imports is from Germany and is made up mainly of LV energy cable and co-axial cables. The second largest source of imports is the Ukraine (LV energy and power cable), followed by Finland (LV energy), the USA (power) and China (LV energy).

In view of the greater growth in imports Russia has moved from an almost neutral position in trade in 1999 and 2000, to being a small net importer of around 7,300 tonnes conductor of metallic cable and 84,000 fkm of fibre optic cable in 2003. With the Russian cable industry seemingly unable to compete in western markets, but with increasing import penetration from these western markets, we would expect that the level of net imports will continue to grow over the next few years.





4. Industry Performance and Market Shares

The Russian cable industry remains fragmented with no dominant player and a large number of what in global industry terms could be described as mid-size generalists. There has been little consolidation in the form of mergers and acquisitions in the last few years. A further feature of the Russian cable industry is that the majority of it is locally owned, with foreign investment being mainly limited to small joint ventures with local companies that concentrate on a particular specialist product range such as fibre optic or HV power cables.

Most of the Russian cabling makers are Joint Stock Companies. There are two forms this can take. The first is the Open Joint Stock Company (OJSC or OAO), which is roughly equivalent to a public company. The second, and more common, is the Closed Joint Stock Company (CJSC or ZAO) which allows up to 50 shareholders but shares can only change hands with the approval of the majority of shareholders.

We estimate that **Kamkabel** is the largest cable manufacturer in Russia. It employs around 4,000 people and is based in Perm in the Urals. The company has quite a complicated structure and the group is made up of a number of companies. 40 years ago Kamkabel formed a jv with Siemens to make rubber flexible cables called **Geros Kabel** and this company was formed into an independent JSC in 1993. As a result of its acquisition of **Rybinskabel** Kamkabel acquired a share in winding wire producer **Volmag** in partnership with **Eldra** of Austria.

Table 2.3: Company Shares of Wire & Cable Production in Russia in 2003 by Conductor Weight ('000t conductor, '000 fibre km)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Total</u>	<u>Fibre '000 fkm</u>
Kamkabel	12	17	0	1	9	38	0
Moskabelmet	7	11	0	1	9	28	115
Electrokabel	19	4	5	0	0	28	0
Samarakabel	10	2	6	1	0	18	172
Sevkabel	8	5	3	0	0	15	86
Podolskkabel	7	8	0	0	0	15	0
Sibkabel	4	1	4	0	3	13	0
Irkutskkabel	0	9	0	0	0	9	0
Saranskabel	5	2	2	0	0	9	57
Microprovod	0	0	0	0	7	7	0
Others	22	30	13	10	17	91	515
Total	94	88	32	12	46	272	945

Data: CRU

Table 2.4: Company Shares of Wire & Cable Production in Russia in 2003 by Value (US\$ million)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Fibre</u>	<u>Total</u>
Kamkabel	35	82	0	3	25	0	145
Moskabelmet	20	55	0	4	26	8	113
Electrokabel	57	18	30	0	0	0	105
Samarakabel	29	9	35	4	0	12	89
Sevkabel	23	24	15	0	0	6	68
Podolskkabel	20	39	0	0	0	0	59
Sibkabel	13	5	25	0	9	0	52
Irkutskkabel	0	44	0	0	0	0	44
Saranskabel	15	10	12	2	0	4	43
Microprovod	0	0	0	0	20	0	20
Others	63	149	75	59	47	36	428
Total	275	435	192	72	127	66	1166

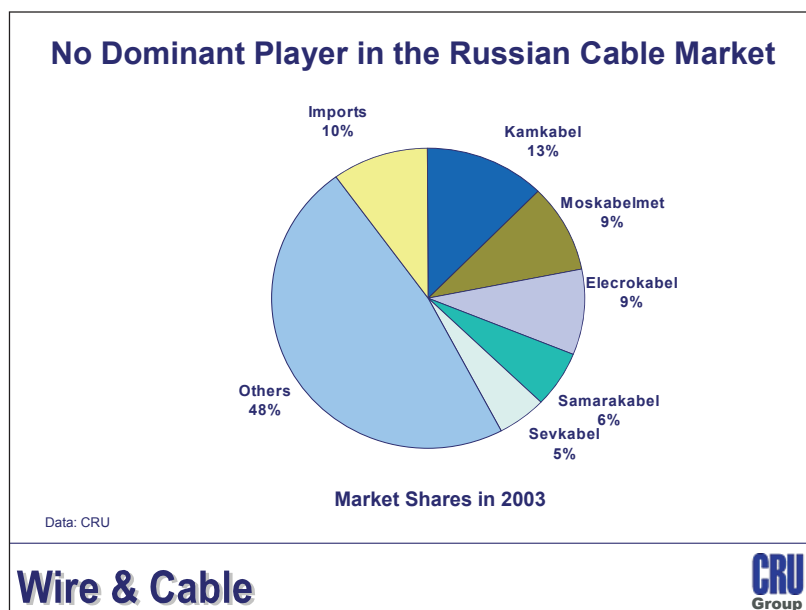
Data: CRU

Electrokabel is the second largest manufacturer and is based 160km from Moscow. The company began making cables in 1939 and mainly concentrates on LV power cable and other LV energy cables along with copper communication cables. In the first two months of 2004 sales increased by 25% to US\$20m

Moskabelmet can trace its origin even further back to 1895 and makes a wide range of products. The company claims to export 25% of its production, which makes it one of the most export orientated manufacturers. It has a jv with **ABB** called **ABB Moskabel** that manufactures HV power cables and in 1999 established a jv with **Fujikura** to make fibre optic cables. The company also has a share in copper rod manufacturer **Elkat**.

CJSC **Samarakabel** is one of the leading manufacturers of communication cables in Russia, and via its jv with **Corning** is the leading producer of fibre optic cables. The company also makes a wide range of energy cables, but does not produce winding wire. Samarakabel also has a JV with general motors called PES/SCC to make automotive wires. **Sevkabel** is another company that manufactures a broad range of energy and communication cables. It has a range of subsidiaries including **Belelektrokabel**, **Sevmorkabel** and **Geofizkabel**, and is one of the few Russian companies that have interests outside the home nation. It owns **Moldavkabel** in Moldavia, which makes winding wires and other LV energy cables. Sevkabel plans to invest US\$10m in 2004-05 to upgrade its facilities. It has recently begun production of NYY and NYM power cables and is forming a joint venture with Finnish cablemaker Reka, to produce MV and HV power cables. The company has also announced plans to issue three year bonds worth 500m rubles and is targeting two unnamed cable companies for acquisition.

Amongst the other manufacturers **Sibkabel**, owned by large mining and metallurgical company UGMK, has also been investing in new equipment and spent US\$750,000 on this in 2003. The company reported sales rose by 13.4% in value in 2003 and is targeting a rise of 8% in 2004. **Draka** has a subsidiary in Russia that it acquired through its purchase of NKF. **Neva Cables** manufactures external copper telecom cables and has sales of around US\$8m and employs 60 people. **Irkutskkabel** is a leading producer of bare overhead lines and also makes insulated power cables. In 2002 the company reported profits of US\$800,000 on sales of US\$64.5m, and



in 2003 claimed sales of US\$95m. In total there are around 36 significant cable manufacturers operating in Russia but there are also believed to be a number of smaller companies operating on a more unofficial basis. **Zavod Microprovod** is a specialist manufacturer of winding wire. The company was founded in 1956 and at that time was the only producer of round enamelled wire. It is primarily focused on the Russian market.

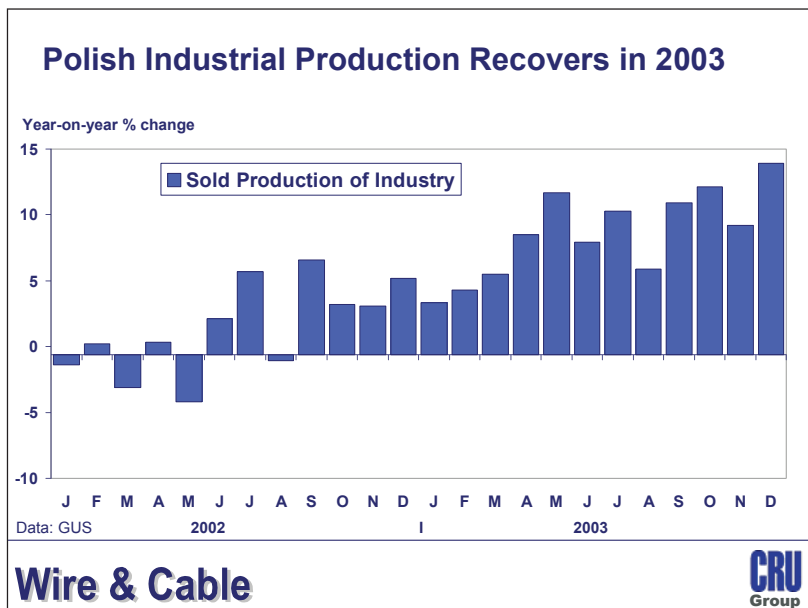
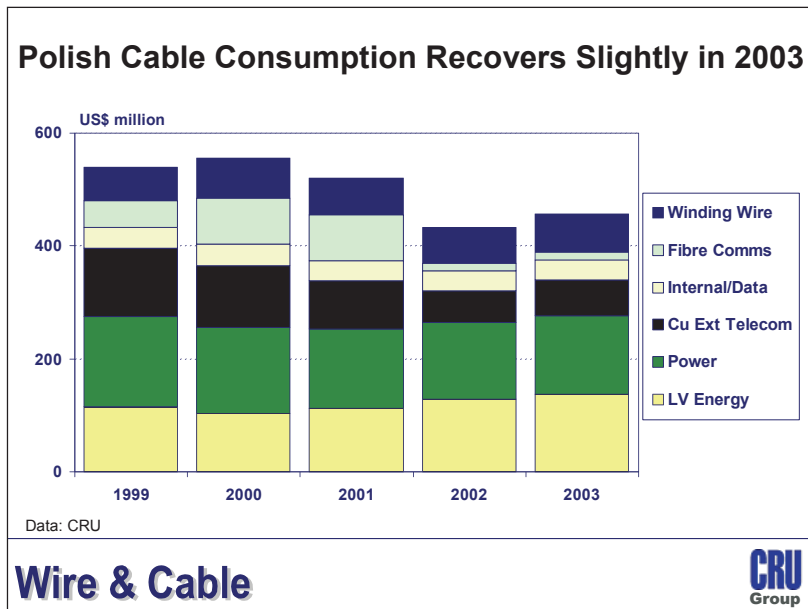
Despite the fall of the Soviet Union the Russian cable industry still displays that typical characteristics of a centrally planned economy; a large number of medium sized companies all with a broad product range. If the Russian cable manufacturers want to be able to compete in the global cable market there will need to be further rationalisation and specialisation.

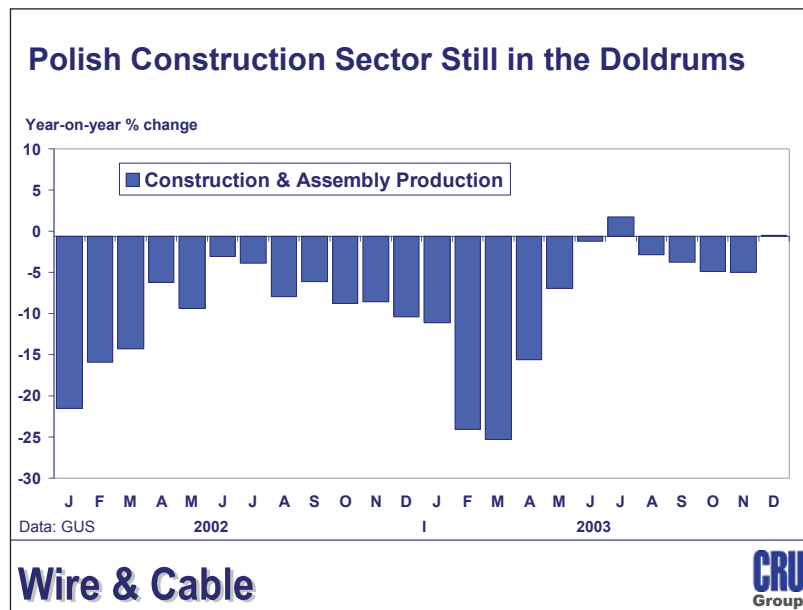
Chapter 3 Poland

1. Introduction

1.1 Market Overview

The Polish cable industry has been through big changes in the last few years and one dominant manufacturer, Tele-Fonika, has emerged. This company controls around three quarters of production and has almost 50% of the total market. The Polish market has been rather flat in the last few years as the poor economic climate in Western Europe and the collapse in the telecom sector hit demand. In 2003 though there were signs of a recovery and the outlook for 2004 is for this to continue. The Polish cable industry is very dependant on exports, mostly to





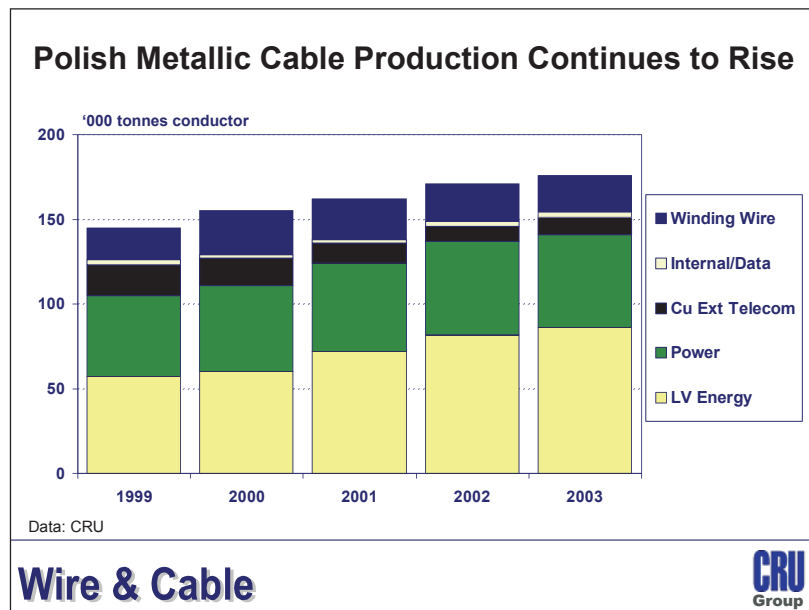
Western Europe, and a return to growth here should also help by increasing export opportunities. Thus the outlook for the Polish cable manufacturers is quite good and profitability, which has been poor, should improve.

2. Production and Consumption

The Polish economy was hit by the general slowdown across Europe. However, the outlook has improved significantly throughout 2003 and GDP forecasts have been revised upwards. There is now a general belief that the recession is over and that the outlook for 2004 is positive. Official statistics show that industrial production rose by 8.7% in 2003, with the manufacturing sector recording 10.4% year-on-year growth. The construction sector is not so buoyant though with the number of construction units falling by 5.9% in 2003 compared to the previous year. There are some signs of a recovery, with construction in December 2003 showing strong growth on the previous month and reaching the same level as in December 2002.

In 2002 our numbers show that total cable production fell by 4.2% in value to US\$660m. In 2003 our estimates are that cable production value grew for the first time since 2000 to reach US\$700m. This makes Poland clearly the second largest cable producer in Eastern and Central Europe after Russia. In volume terms metallic cable output in 2003 was 175,000 tonnes conductor and fibre optic cable production was 280,000 fkm. The main production volume is LV energy cables, this sector accounting for almost half of total output by conductor weight. There is also quite large production of power cables with Tele-Fonika having the capability of making HV cables. Winding wire production is also quite significant. Communication cable production, like in most of the rest of the world, has fallen in the last couple of years.

With Poland being a large net exporter of wire and cable the local demand is much smaller than production. In 2003 we estimate that the market for all insulated wire and cable was worth US\$442m, a 2.5% increase on the previous year. In volume terms the market was 105,000 tonnes conductor and 229,000 fkm, and demand for metallic cables fell by 0.2%. This was a slight increase on 2002.



The two main parts of the LV energy cable sector are building wire and automotive wire. With the construction sector depressed demand for building wire was weak, but this was offset by continued growth in the consumption of automotive wire. Most of Europe's large automotive harness manufacturers have production units in Poland, with the majority of their output being exported to the large vehicle manufacturers in Western Europe, primarily Germany. There is some local consumption of harnesses with Polish vehicle production at over 300,000 units.

The Polish power transmission and distribution system is now linked into the Western European UCTE network. There are also plans to install an interconnection with Lithuania and enhance the interconnections with Slovakia and Belarus. In total Polish power utility PSA plans to spend PLN2.3bn on capital investment in the period 2003 to 2007. Whilst much of this will be on overhead lines and equipment such as transformers, this should generate good demand for insulated power cables.

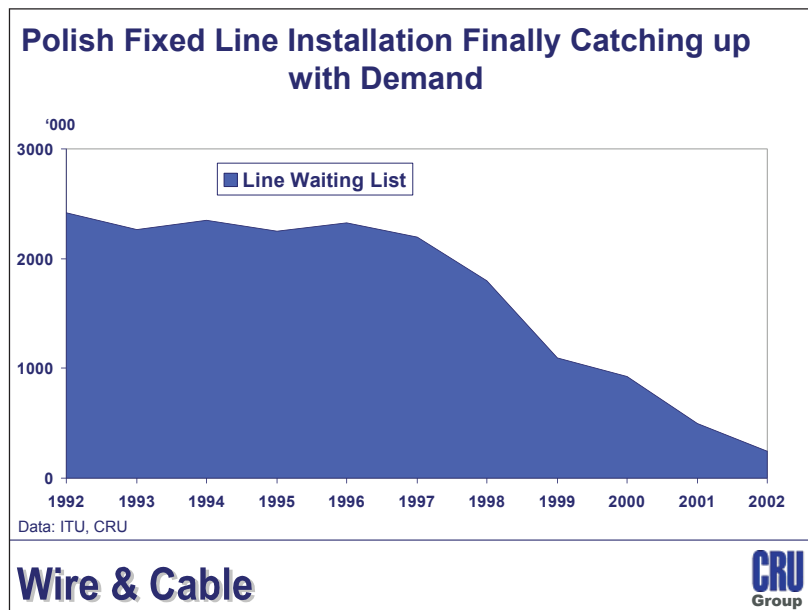
The market for both copper and fibre optic telecom cable is still dominated by the incumbent operator Telekomunikacja Polska S.A. (TPSA). A number of alternative long distance operators had emerged during the telecom boom the most notable of which was Netia, but the slump in the sector has reduced spending on infrastructure. The other main fibre optic network is owned by PKP, the Polish State Railway. After a sharp drop in the market for both copper and fibre optic cables in 2002, there has been a modest rebound in 2003, but consumption is still way below the peak years of 2000-01. With Poland having avoided the excessive fibre optic cable installation seen in Western Europe, there is some scope for a further recovery in the market in the coming years.

The market for LAN data cables is not large in Poland. The local manufacturers Tele-Fonika and Technokabel, face strong competition from Western European companies such as Avaya, Nexans and Belden, able to offer complete system solutions. Russian company Madex is also present in the market.

**Table 3.1: Production and Consumption of Wire and Cable in Poland
by Volume and Value 1999-2003 ('000t conductor, US\$m)**

	1999	2000	2001	2002	2003	% Change			
						2000	2001	2002	2003
Production Volume ('000t conductor)									
LV Energy	57	60	72	82	88	5.7	20.4	13.2	8.0
Copper Power Cable	30	33	34	35	36	9.0	2.4	4.5	3.3
AI Power Cable	18	19	19	20	19	2.7	1.1	3.2	-1.5
External Copper Telecom	18	16	12	9	10	-10.9	-26.4	-25.0	6.7
Internal Telecom/Data	3	2	2	3	3	-18.5	9.1	25.0	11.5
Winding Wire	19	26	24	22	19	36.8	-7.7	-8.3	-13.6
Total	145	156	163	170	175	7.5	4.6	4.4	3.1
<i>Ex Copper Telecom (m pr km)</i>	4.3	3.8	2.8	2.1	2.3	-10.9	-26.4	-25.0	6.7
<i>Fibre Optic ('000 fkm)</i>	160	460	400	170	280	187.5	-13.0	-57.5	64.7
Production Value (US\$m)									
LV Energy	240	255	248	274	308	6.3	-2.7	10.5	12.4
Copper Power Cable	125	134	131	145	154	7.2	-2.2	10.7	6.2
AI Power Cable	78	84	80	84	80	7.7	-4.8	5.0	-4.8
External Copper Telecom	119	101	81	51	57	-15.1	-19.8	-37.0	11.8
Internal Telecom/Data	22	22	23	26	27	1.8	3.6	12.1	3.8
Fibre Optic Cable	26	68	55	15	16	161.5	-19.1	-72.7	6.7
Winding Wire	63	86	71	65	58	36.5	-17.4	-8.5	-10.8
Total	673	750	689	660	700	11.5	-8.2	-4.2	6.1
Consumption Volume ('000t conductor)									
LV Energy	27	24	33	38	40	-10.2	34.6	16.3	4.5
Copper Power Cable	20	17	16	14	15	-13.9	-3.7	-14.4	4.3
AI Power Cable	18	18	18	18	17	1.3	-3.3	1.6	-3.3
External Copper Telecom	19	18	13	10	10	-5.3	-27.0	-24.7	5.8
Internal Telecom/Data	5	4	4	4	5	-16.2	-5.9	15.0	9.7
Winding Wire	18	22	22	22	19	20.2	1.2	-1.5	-13.4
Total	106	103	105	106	105	-3.2	2.4	0.3	-0.2
<i>Ex Copper Telecom (m pr km)</i>	4.4	4.1	3.0	2.3	2.4	-5.3	-27.0	-24.7	5.8
<i>Fibre Optic ('000 fkm)</i>	291	541	587	146	229	85.9	8.5	-75.1	57.2
Consumption Value (US\$m)									
LV Energy	116	104	113	129	140	-9.7	8.7	13.5	8.8
Copper Power Cable	82	69	64	58	62	-15.3	-8.1	-9.4	7.2
AI Power Cable	77	82	75	78	73	6.2	-8.9	3.4	-6.4
External Copper Telecom	121	109	87	55	61	-9.7	-20.5	-36.7	10.9
Internal Telecom/Data	37	39	35	36	37	4.8	-10.7	3.1	2.2
Fibre Optic Cable	47	80	81	13	13	69.1	0.9	-84.0	1.8
Winding Wire	60	72	65	64	57	19.9	-9.5	-1.6	-10.6
Total	540	556	519	431	442	2.9	-6.6	-16.9	2.5

Data: CRU



Consumption of winding wire was hit by the recession in Western Europe since the majority of this is used in motors and other appliances that are destined for this market. As a result volume consumption was flat in both 2001 and 2002, and it fell by 13.4% in 2003 to 19,000 tonnes.

3. Trade

Trade is a very important part of the wire and cable industry in Poland with 60% of all production of metallic cable being exported by volume. Imports play a slightly less important role, but even so imported cables account for a third of the market. In value Polish wire and cable exports were worth US\$880m in 2002, and reached almost US\$1.2bn in 2003. However, it should be noted that almost 60% of exports in 2002 were auto wiring harnesses and that in 2003 auto harness exports reached US\$730m. The total value of wire and cable imports was US\$330m in 2002 and this grew to US\$430m in 2003.

Official data shows that the growth in Polish wire and cable continued in 2003, with an incremental increase of almost 10,000 tonnes conductor. There has now been a decade of consistent year-on-year growth stretching back to 1994. The main export category is LV energy cable, with this sector being primarily made up of exports of building wire and automotive wire in harnesses. There are also significant exports of power cable. The only other category where exports are important is winding wire, but unlike energy cables exports here have fallen back slightly from a peak in 2000/01.

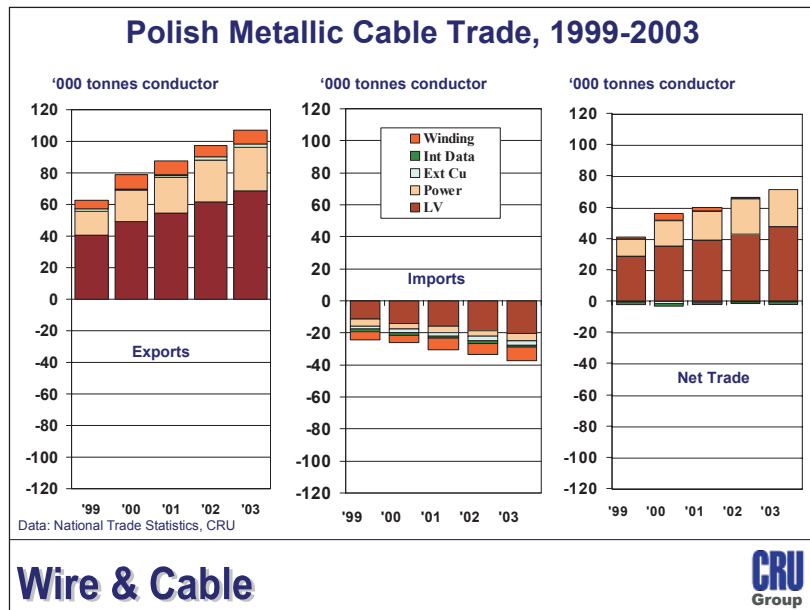
The main destination for exports is Germany. The second most popular destination has traditionally been the UK but in 2003 preliminary data shows that Sweden has moved into second place as a result of strong growth in exports of automotive harnesses. Other Western European nations make up the other main export destinations with other Eastern European countries such as the Czech Republic, Slovakia and Hungary only being at 8th, 9th and 10th. Exports to the US have declined from a peak of US\$21m in 2000 to just US\$7m in 2002.

Wire and cable imports have also been growing, although not as quickly as exports. As a consequence net exports have continued to rise and reached 69,900 tonnes conductor in 2003.

Imports are primarily LV energy cable, with auto wire again featuring. There has also been growth in winding wire imports with the result that in 2003 they exceeded exports for the first time. The main source of wire and cable imports is Germany, followed by the Czech Republic, Italy and France. Again the main trading partners are in Western Europe, with the exception of Tunisia, which is a supplier of auto wire and harnesses. The majority of imports of winding wire are from France and Germany.

Fibre optic cable exports have risen in the last couple of years and have overtaken imports with the result that Poland is now a net exporter of these cables. Romania has been one of the main destinations. In the period 1999-2001 a shortage of optical fibre and fibre optic cable limited the options for the local Polish producers, but since the collapse in the market fibre is easily available and this has enabled the local producers to win back some business from imports and also to try and win more export business.

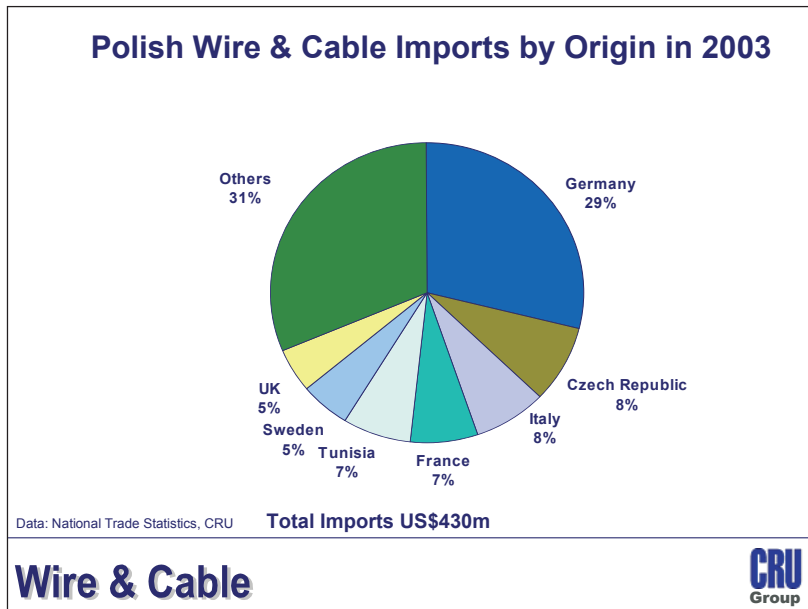
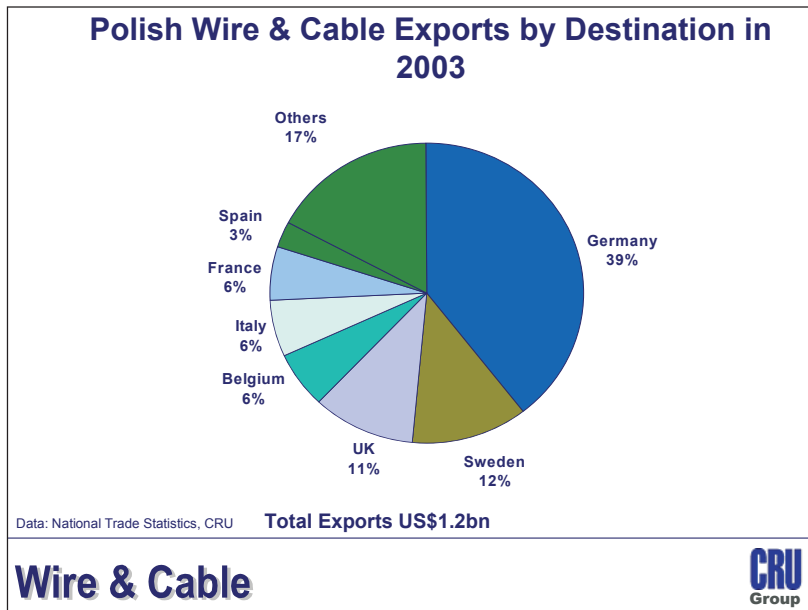
With the dominant local manufacturer Tele-Fonika keen to increase its export business and ongoing growth in production of automotive wire harnesses we would expect that Poland's net exports will continue to grow. However in the longer term the Polish automotive harness sector may start to lose out to lower cost locations such as the Ukraine and this may lead to a reduction in net exports.



**Table 3.2: Polish Trade in All Insulated Wire & Cable by Product
('000t conductor weight)**

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
Exports					
Low Voltage Energy	40.5	49.3	54.6	61.6	68.6
Copper Power	14.7	19.1	21.3	24.3	25.5
Aluminium Power	0.3	0.6	1.3	1.9	2.2
External Telecom	1.6	0.8	1.3	2.1	1.9
Internal Telecom/Data	0.2	0.1	0.2	0.1	0.1
Winding Wire	5.7	9.3	9.0	7.4	8.9
Total	62.9	79.1	87.8	97.4	107.1
<i>External Copper Telecom (m. pair km)</i>	<i>0.4</i>	<i>0.2</i>	<i>0.3</i>	<i>0.5</i>	<i>0.4</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>8</i>	<i>54</i>	<i>91</i>	<i>102</i>	<i>169</i>
Imports					
Low Voltage Energy	11.1	14.0	15.6	18.5	20.6
Copper Power	4.3	3.3	4.1	3.2	3.9
Aluminium Power	0.2	0.2	0.1	0.4	0.4
External Telecom	1.9	2.1	2.2	2.8	2.5
Internal Telecom/Data	2.0	1.7	1.4	1.2	1.3
Winding Wire	4.7	4.9	6.9	7.0	8.6
Total	24.3	26.3	30.3	33.1	37.3
<i>External Copper Telecom (m. pair km)</i>	<i>0.4</i>	<i>0.5</i>	<i>0.5</i>	<i>0.7</i>	<i>0.6</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>139</i>	<i>135</i>	<i>278</i>	<i>78</i>	<i>119</i>
Net Trade					
Low Voltage Energy	29.3	35.3	39.1	43.2	48.0
Copper Power	10.4	15.8	17.2	21.1	21.6
Aluminium Power	0.1	0.4	1.2	1.5	1.8
External Telecom	-0.3	-1.3	-0.9	-0.7	-0.7
Internal Telecom/Data	-1.9	-1.6	-1.2	-1.1	-1.2
Winding Wire	1.0	4.4	2.1	0.4	0.3
Total	38.6	52.9	57.5	64.3	69.9
<i>External Copper Telecom (m. pair km)</i>	<i>-0.1</i>	<i>-0.3</i>	<i>-0.2</i>	<i>-0.2</i>	<i>-0.2</i>
<i>Fibre Optic Cable ('000fkm)</i>	<i>-131</i>	<i>-81</i>	<i>-187</i>	<i>24</i>	<i>51</i>

Data: Trade Statistics, CRU



4. Industry Performance and Market Shares

Tele-Fonika, following its takeover of the previous market leader **Elektrim Kable**, now dominates the Polish cable industry. With 74% of total industry production in 2003 by value Tele-Fonika has the most dominant home market position of any volume cable producing country in the world. In taking over Elektrim Kable, Tele-Fonika argued that although it would control most of the Polish cable industry the cable market operated at a European level and so it would not be able to abuse its position. The local competition authorities initially blocked the move but then relented and accepted this and allowed the deal. A further argument by Tele-Fonika that this was the only way for Poland to retain a strong presence in the cable sector also seemed to have had some impact on the decision. It claimed with some justification that the only other possible buyer would be an international cabling group and that there would then be the possibility that some factories could be closed in any subsequent rationalisation.

Ironically once the deal had gone through Tele-Fonika then closed Elektrim Kable's telecom plant at Ozarow, rationalising production at Tele-Fonika's existing plant at Myslenice. This has caused a great deal of anger amongst the local workforce who occupied the plant stopping Tele-Fonika from removing some machinery. After a protracted dispute and some concessions from the company the plant was eventually closed. The company now has five manufacturing plants in Poland and employs around 3,900 people.

As a private company Tele-Fonika does not report any financials and so profitability is hard to assess. Prior to its acquisition, Elektrim Kable had seen its results deteriorate and in 2000 and 2001 made a loss. With costs savings associated with the acquisition and a reported 10% increase in sales in 2003 the company still made a loss of US\$6m, blaming the weakness in the Polish currency. With such a dominant local market position it is clear that the potential to increase its sales in Poland are very limited, and in fact it will do well to hold onto its existing market share. Thus the company is very focused on exports, and we would expect it to continue to grow this part of its business. The company is still believed to have ambitions to become a major European cabling group and to do this it would need to make acquisitions outside Poland. Having been pre-occupied with sorting out its Polish operations in the last couple of years it may now be in a position to look more closely at this strategy.

Table 3.3: NKT Cables SA Financial Results 2000-2002 (PLN m)

	<u>2000</u>	<u>2001</u>	<u>2002</u>
Net Sales	230.7	242.4	256.8
Gross Profit	33.5	36.0	41.3
Selling General and Administrative Expenses	32.9	39.2	39.1
Profit on Operating Activities	0.3	-3.7	-13.8
Profit Before Tax	-2.7	-5.4	-20.5
Net Profit	-3.6	-6.0	-21.3
Operating Margin	0.1	-1.5	-5.4
Net Profit as % of Sales	-1.6	-2.5	-8.3

Data: NKT, CRU

The only other volume cable manufacturer in Poland is **NKT Cables S.A.**. Formerly known as **Slaska Fabryka Kabli**, the name was changed to NKT Cables in 2002 to reflect the fact that NKT Cables owns 75.52% of the company. The company has three 100% owned subsidiaries which are NKT Cables Warszawice Sp. z.o.o., which makes installation and control cables, NKT Cables Sp. z.o.o., which makes winding wire and also sells bare strand, and Polinex Sp. z.o.o which makes PVC and other compounds. In 2002 62% of sales were in Poland and 38% exported. As part of the NKT group the company sells cables imported from other group companies, primarily LV and MV power cables from Denmark and also rubber cables. In 2002 20% of turnover was cables and accessories imported from other group companies.

The company lost money in 2001 and its results deteriorated further in 2002 in the face of reducing prices. As a result 60 jobs were cut to reduce costs and, helped by improving demand, it is believed to have seen an improvement in results in 2003. The company's aim is to offer a broad range of energy cables and to be a real alternative supplier to Tele-Fonika.

All the other cabling makers in Poland are specialists, concentrating on a narrow product range. **Patelec Elpena** is a subsidiary of Italian cabling maker **Patelec**. It used to make winding wire and LV energy cable, but has recently closed its winding wire production facility, and Italian winding wire manufacturer Ceros, is now importing this from Italy to supply Elpena's customers. **OTO Lublin** is a subsidiary of telecom utility TPSA and it manufactures fibre optic cables. **Leoni Kabel Polska** manufactures automotive wire serving the large base of automotive harness production in Poland. There are also a number of small locally owned companies such as **Technokabel** (LAN and other communication cables), **Drut-Plast** and **Eltrim** (energy cables) and **CET** (co-axial cables).

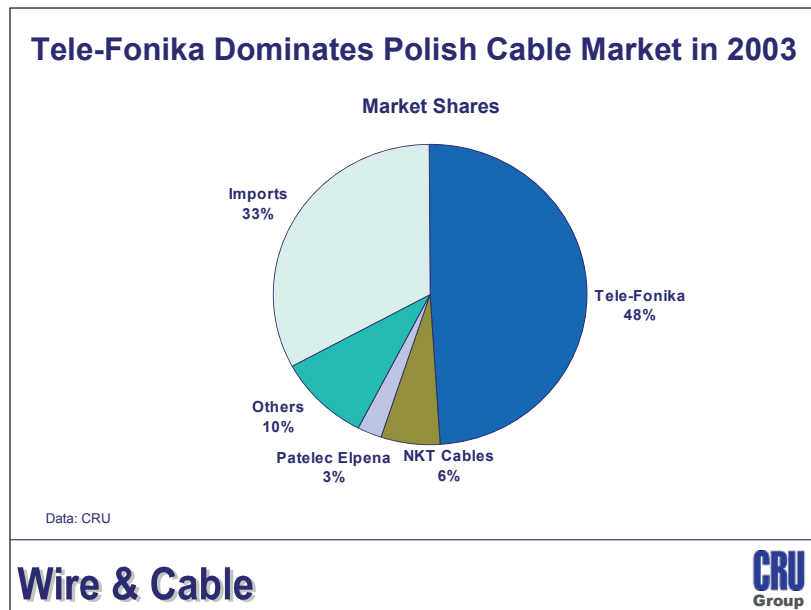


Table 3.4: Company Shares of Wire & Cable Production in Poland in 2003 by Conductor Weight ('000 t conductor, '000 fibre km)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Total</u>	<u>Fibre '000 fkm</u>
Tele-Fonika	58	52	8	1	9	129	175
NKT Cables	7	1	0	0	8	16	0
Patelec Elpena	2	0	0	0	2	4	0
Others	21	2	1	2	0	26	105
Total	88	55	10	3	19	175	280

Data: CRU

**Table 3.5: Company Shares of Wire & Cable Production in Poland
in 2003 by Value (US\$ million)**

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Int/Data</u>	<u>Winding Wire</u>	<u>Fibre</u>	<u>Total</u>
Tele-Fonika	204	219	50	10	27	10	520
NKT Cables	27	5	0	0	24	0	56
Patelec Elpena	8	0	0	0	7	0	15
Others	69	10	7	17	0	6	109
Total	308	234	57	27	58	16	700

Data: CRU

Chapter 4

Other Central & Eastern European Countries

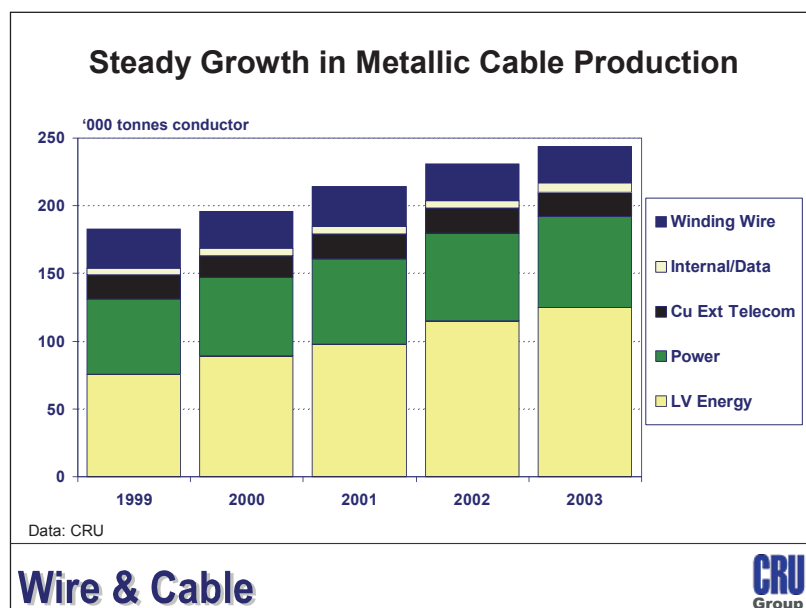
1. Introduction

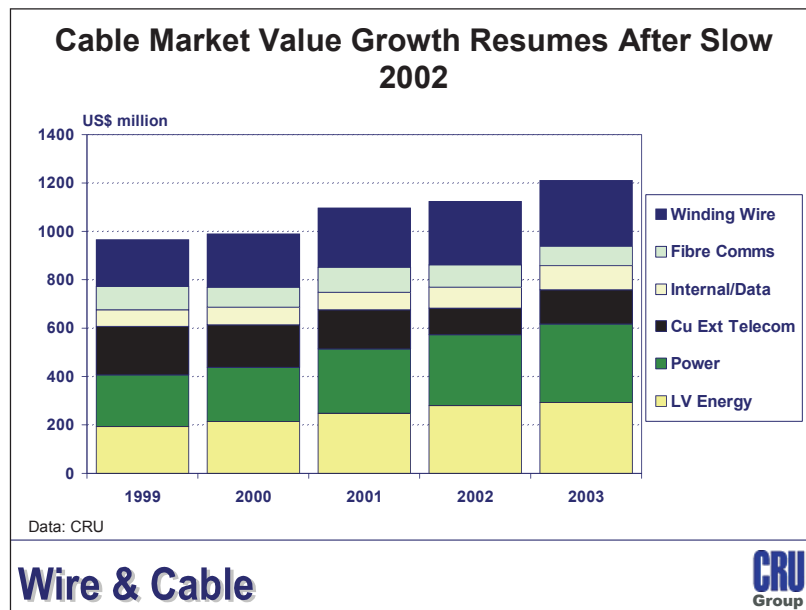
1.1 Market Overview

In this chapter we cover all the other countries in Central and Eastern Europe other than the former CIS states such as Ukraine. Following the split of Yugoslavia we have included data for all the main individual countries that were formerly part of this Republic. Thus this chapter covers the Czech Republic, Hungary, FR Yugoslavia (Serbia), Romania, Slovakia, Bulgaria, Croatia, Macedonia, Slovenia, Bosnia.

Regional metallic cable production grew by an average of 7.7% per year over the period 1999-2003 to reach 245,000 tonnes conductor. To put this in context it means that cable production in all of these countries is roughly equivalent to output from the Spanish cable industry and is less than half the output of the German cable industry. Production growth has been greatest in Hungary and Slovakia and lowest in the former Yugoslavian countries. Average consumption growth over the same period has the same as production at 6.1%, indicating that net imports into the region have been stable. With continued infrastructure and economic development and the imminent entry by a number of these countries into the European Union we expect that both production and consumption will continue to grow at a greater rate than in Western Europe.

Trade is a very important part of the cable industry in this region, and the main driving factor is the automotive industry. The majority of wiring harnesses used in vehicle assembly in Western Europe are now made either in Eastern Europe or North Africa, although much of the actual





automotive wire is still made in Western Europe. As a result there are large volumes of automotive wire flowing into this region and then large volumes of harnesses being re-exported. In the future we expect to see greater local production of automotive wire, which will reduce imports of this product.

2. Production and Consumption

For the nations included in this chapter total insulated wire and cable production reached 245,000 tonnes conductor in 2003, with a value of US\$1069m. Output has been rising steadily and over the period 1999-2003 growth averaged 7.7% per year. Almost exactly half of all production is LV energy cable and growth in output of this product sector has been amongst the fastest, driven by strong growth in automotive and building wire. External copper telecom cable production has changed little and there has only been a modest increase in production of winding wire. Fibre optic cable production has grown quite quickly in volume terms but the collapse in prices has eroded any volume growth leaving the value of industry output flat. The Czech Republic is the main manufacturer of fibre optic cables.

The largest cable producing nation is the Czech Republic which with a total output of US\$309m in 2003 accounted for 29% of total regional production. Hungary(US\$211m) is the second largest with FR Yugoslavia(Serbia) in third place. The fastest growth in production over the last five years has been in Slovakia and Hungary. In Slovakia this has been driven by the automotive sector. In Hungary this has also been a factor but country output growth has also been helped by the fact that Pirelli has its main Eastern European production base here. The slowest growth has been seen in FR Yugoslavia and the two former Yugoslav states of Macedonia and Slovenia.

Consumption of wire and cable in the region has grown at a similar rate to production and in 2003 the total market was worth US\$1211m. In volume terms it was 265,000 tonnes conductor and 788,000 fkm. In terms of product mix the regional market is quite different from industry output. Winding wire is the largest sector by conductor weight, followed by LV energy and then power cable. These three sectors have seen the fastest growth in consumption.

The largest regional country market is the Czech Republic which at US\$259m accounted for 21% of total regional demand in 2003. Hungary (US\$224m) is the second largest followed by Slovakia (US\$151m) and Romania (US\$141m). The fastest growth over the last five years has been in Slovakia followed by Hungary and Slovenia.

Czech Republic

With a number of companies owned by international cabling groups we expect that production growth in the Czech Republic will partially be driven by increased exports as these companies use the country as a low cost production base. The automotive sector will remain a very important one, but with the country now being overtaken in terms of cost by lower cost base countries such as Romania and the Ukraine, there will begin to be a decline in harness production.

Hungary

The Hungarian cable industry is dominated by MKM (Pirelli owned) for energy cables and Duna Kabel (Belden owned) for communication cables. Other than these two and winding wire producer Eldra, the only other significant cable production is co-axial cable manufacturer Leoni and Sumitomo Electric Wiring Systems, which is setting up production of low smoke zero halogen automotive wires in 2004. With all the significant cable production owned by international cabling groups, the outlook for the Hungarian cable industry is promising. Belden has said that it intends to grow production in Hungary to serve the whole of Europe, and Pirelli are thought to be looking to grow output at MKM. Further growth in the Hungarian harness business should boost production of automotive wire, and although in the longer term harness production will begin to move to lower cost base countries, Hungary may remain a base for auto wire production.

FR Yugoslavia & Other Former Yugoslavian Countries

Unlike much of the rest of Eastern Europe the automotive sector is not important in these countries, with the exception of Slovenia. With little of the cable industry owned by international groups and in need of investment and modernisation, the prospects for growth in cable production look limited. As the countries in this region continue to develop and recover from recent conflicts then wire and cable demand should see healthy growth, provided political stability continues. If this is the case we would expect there to be growing export opportunities for cable manufacturers in neighbouring countries.

Romania

The automotive sector is very important in Romania and is the main consumer of wire and cable. Harness production looks set to grow quickly in the coming years and so may automotive wire production. Demand for wire and cable in Romania has not grown as the country has struggled to stimulate local growth, and the ongoing privatisation of the power utility Electrica has hit utility power cable orders. Cable consumption should grow in the coming years, with the telecom sector benefiting from the full privatisation of RomTelecom, and the prospects for both local production and imports should improve.

Slovakia

The wire and cable market in Slovakia is dominated by the automotive industry with the country being a base for a number of international harness makers, and this will remain the case in the next few years. Wire and cable production is mostly from Kablo Bratislava, which is owned by Pirelli, and so there is the possibility that output will continue to rise. Consumption should also see steady growth as the economy develops.

Bulgaria

The automotive industry seems to have passed Bulgaria by and we do not believe this will change in the future. With the local cable industry still largely state owned it struggles to compete on the international market and mainly has to concentrate on the limited home market or exports to former CIS states. The government is in the process of trying to sell off the cablemakers and the future of the industry depends on how this goes. If new owners can be found that are willing to invest then there could be a rise in production, otherwise Bulgarian cable production could all but disappear in the future.

We expect that cable production and consumption in the countries covered in this chapter will continue to grow at a greater rate than in Western Europe. Infrastructure and general economic development should continue and the imminent entry into the European Union by the Czech Republic, Hungary, Slovakia and Slovenia should provide a further boost.

Table 4.1: Other Central and East European Wire and Cable Production by Volume and Value 1999-2003 ('000 tonnes conductor & US\$m)

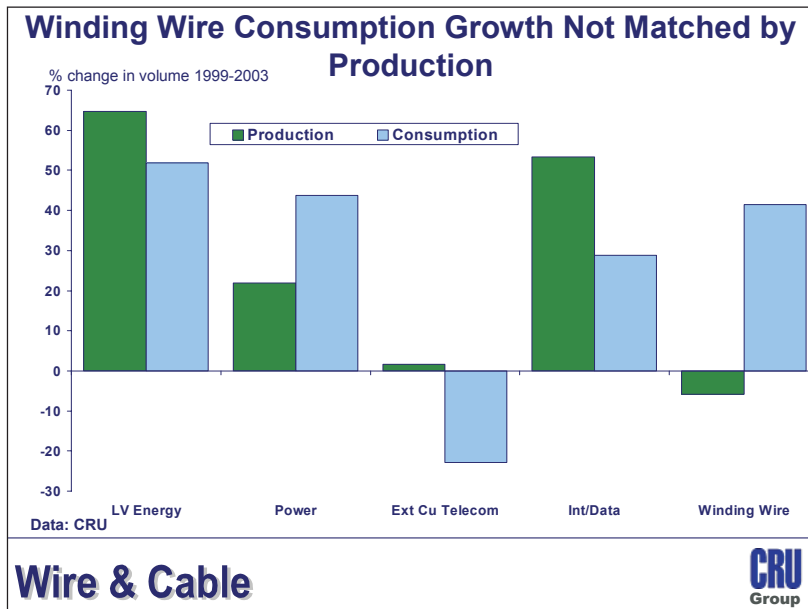
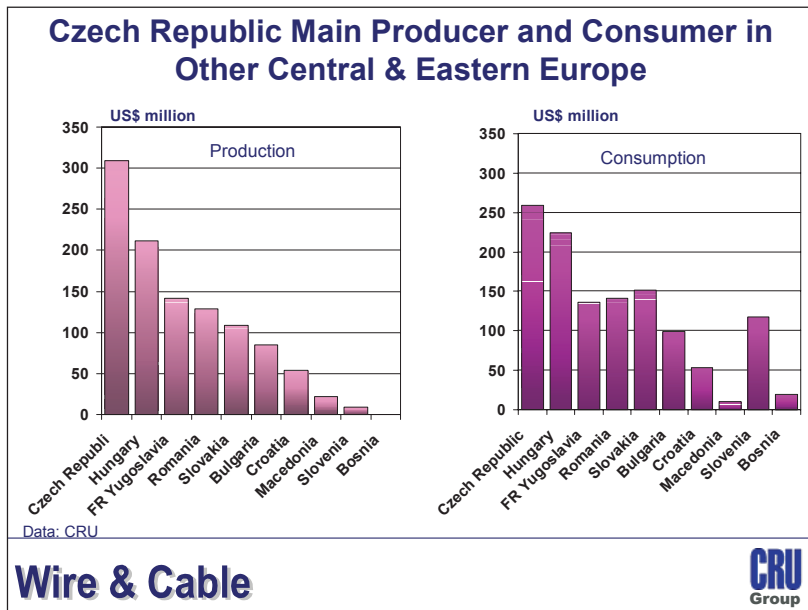
	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change 1999-2003</u>
Production Volume ('000t conductor)						
Czech Republic	56	63	64	67	68	21.7
Hungary	31	40	41	48	51	63.7
FR Yugoslavia	26	19	27	29	30	12.7
Romania	23	24	26	27	31	33.9
Slovakia	17	21	22	25	28	66.2
Bulgaria	18	18	21	23	24	33.7
Croatia	6	5	6	7	7	34.5
Macedonia	4	4	4	4	4	7.9
Slovenia	2	2	2	2	2	13.3
Bosnia	0	0	0	0	0	na
Total	182	195	214	232	245	34.5
Production Value (US\$m)						
Czech Republic	239	292	283	302	309	29.5
Hungary	138	176	178	201	211	52.7
FR Yugoslavia	125	87	123	131	142	13.6
Romania	95	111	109	108	129	35.8
Slovakia	71	92	89	95	109	52.2
Bulgaria	63	56	70	76	85	34.3
Croatia	38	37	46	48	54	41.8
Macedonia	20	18	22	22	22	11.3
Slovenia	8	9	11	9	9	16.9
Bosnia	0	0	0	0	0	na
Total	796	877	931	992	1069	34.2
Production Volume ('000t conductor)						
Low Voltage Energy	76	89	98	115	125	64.6
Copper Power Cable	33	38	40	41	42	29.0
Aluminium Power Cable	22	20	23	24	25	14.7
External Copper Telecom	18	16	18	18	18	1.6
Internal Telecom/Data	5	6	6	6	7	53.3
Winding Wire	29	27	29	27	27	-5.8
Total	182	195	214	232	245	34.5
<i>Ext. Cu Telecom (m. pair km)</i>	4.3	3.8	4.3	4.2	4.3	1.6
<i>Fibre Optic ('000 fibre km)</i>	304	301	317	470	495	62.8
Production Value (US\$ million)						
Low Voltage Energy	268	328	348	408	444	66.1
Copper Power Cable	137	165	176	177	192	39.6
Aluminium Power Cable	98	94	107	111	119	21.4
External Copper Telecom	120	108	118	111	121	0.7
Internal Telecom/Data	35	45	48	50	59	66.8
Fibre Optic Telecom/Data	41	42	36	42	40	-2.0
Winding Wire	97	95	99	93	93	-3.7
Total	796	877	931	992	1069	34.2

Data: CRU

Table 4.2: Other Central and East European Wire and Cable Consumption by Volume and Value 1999-2003 ('000 tonnes conductor & US\$m)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>% Change 1999-2003</u>
Consumption Volume ('000t conductor)						
Czech Republic	43	52	55	55	58	34.8
Hungary	28	35	38	48	53	87.3
FR Yugoslavia	25	18	27	27	28	9.9
Romania	31	29	29	27	26	-16.2
Slovakia	20	19	28	34	39	95.0
Bulgaria	19	19	23	25	26	35.5
Croatia	7	6	8	7	7	2.5
Macedonia	2	3	2	2	2	-15.2
Slovenia	15	19	20	22	22	44.1
Bosnia	5	3	2	3	4	-28.4
Total	197	203	233	250	265	34.5
Consumption Value (US\$m)						
Czech Republic	209	255	257	241	259	23.7
Hungary	144	176	180	212	224	55.2
FR Yugoslavia	139	88	123	123	136	-1.5
Romania	145	156	164	143	141	-2.4
Slovakia	91	89	108	132	151	66.8
Bulgaria	70	60	82	87	99	42.2
Croatia	49	41	59	50	53	8.0
Macedonia	11	16	10	9	10	-12.4
Slovenia	79	95	100	111	118	48.6
Bosnia	28	17	13	16	19	-31.0
Total	964	992	1095	1123	1211	25.5
Consumption Volume ('000t conductor)						
Low Voltage Energy	53	57	68	77	80	51.8
Copper Power Cable	27	29	37	43	44	65.9
Aluminium Power Cable	21	19	22	23	25	16.8
External Copper Telecom	30	26	26	19	23	-22.8
Internal Telecom/Data	9	8	9	10	12	28.9
Winding Wire	57	63	72	78	81	41.5
Total	197	203	233	250	265	34.5
<i>Ext. Cu Telecom (m. pair km)</i>	7.0	6.2	6.2	4.5	5.4	-22.8
<i>Fibre Optic ('000 fibre km)</i>	611	561	718	821	788	28.9
Consumption Value (US\$ million)						
Low Voltage Energy	194	215	247	279	292	50.3
Copper Power Cable	119	134	166	187	206	73.5
Aluminium Power Cable	95	90	101	106	118	23.8
External Copper Telecom	199	176	163	110	141	-29.3
Internal Telecom/Data	69	71	71	85	101	46.1
Fibre Optic Telecom/Data	96	82	104	92	81	-15.3
Winding Wire	193	223	243	264	273	41.6
Total	964	992	1095	1123	1211	25.5

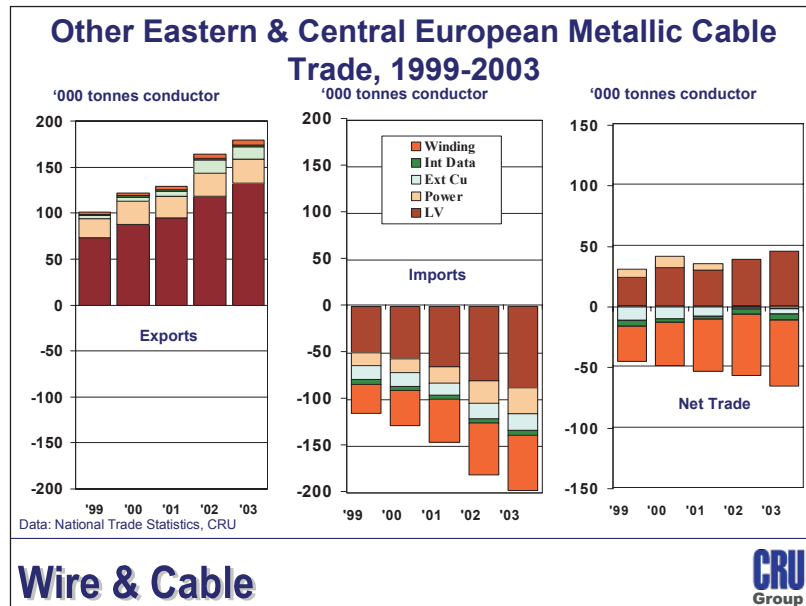
Data: CRU



3. Trade

Trade is an important part of the wire and cable industry in four of the other countries in Eastern and Central Europe. For the Czech Republic, Hungary, Romania and Slovakia, both imports and exports are a significant part of production and consumption. This is primarily due to the fact that these four countries are the main locations for automotive wire harness production. Although some of the automotive wire is manufactured locally, much of it is imported thus contributing to high levels of LV energy cable imports. Almost all of the harnesses assembled locally are then exported thus leading to large exports of LV energy cable. If the trade picture is looked at in value terms then the exports of harnesses is the dominant factor. Since many of these harnesses are destined for Germany the result is that Germany is the main destination for exports from all of these four countries. Other than LV energy cable the only other product group where exports are significant is power cable. The main countries exporting these are the Czech Republic and Hungary.

Analysis of imports shows that as well as LV energy cable there are quite significant imports of winding wire into the other countries of Eastern and Central Europe. Some of this is destined for motors and other equipment associated with the automotive sector, and the main importers are the Czech Republic, Hungary, Slovakia and Slovenia. For Slovenia winding wire imports are larger than any other product sector and mainly come from Italy and are believed to be associated with the appliance sector.



In total metallic cable exports and imports are almost balanced in volume terms, although in value exports are far larger than imports because of the high added value of automotive harnesses. Exports have been growing steadily, mainly driven by the harness business. Meanwhile imports have stabilised in the last three years, partially due to increased local production of automotive wire. As a result the region has gone from being a small net importer to a small net exporter.

Almost all the countries in this region are net importers of fibre optic cable. None of them has any significant exports and most of the imports come from Western Europe or Poland. In the last few years the largest level of imports has been in Romania.

For the future the likelihood is that automotive wire harness production in this region will continue to grow, whilst local production of automotive wire will also increase. As a result we would expect net exports of LV energy cable to rise. This effect will be further enhanced by growing exports of low technology products like building wire. We would expect to see consumption of winding wire grow in the region, but as yet there are no signs of any companies looking to establish local large scale production. With significant overcapacity amongst the main Western European manufacturers, and the fact that the market in eastern Europe is quite fragmented and split between a number of countries, it seems unlikely that any largescale investment will be made in establishing production capacity. As a result we would expect to see net imports of winding wire increase.

Table 4.3: Other Central and East European Insulated Wire & Cable Trade by Product 1999-2003 ('000t conductor, '000fkm)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>% Change</u>	
					<u>2003</u>	<u>1999-2003</u>
Exports ('000t conductor)						
Low Voltage Energy	73.3	88.1	95.1	118.6	132.7	81.1
Copper Power Cable	19.8	23.9	21.4	22.6	24.4	23.3
Aluminium Power Cable	0.9	1.0	1.5	1.9	1.8	89.5
External Copper Telecom	3.3	4.6	5.5	15.0	13.3	306.9
Internal Telecom/Data	1.4	1.7	2.0	1.1	1.3	-4.4
Winding Wire	2.7	2.7	3.2	4.9	5.4	100.7
Total	101.3	122.0	128.6	164.0	178.9	76.6
Imports ('000t conductor)						
Low Voltage Energy	50.0	56.3	65.2	80.2	87.8	75.5
Copper Power Cable	13.7	15.4	17.6	24.0	26.4	92.6
Aluminium Power Cable	0.3	0.2	0.2	0.9	1.4	444.3
External Copper Telecom	15.0	14.9	13.5	16.3	18.0	19.5
Internal Telecom/Data	5.9	4.2	4.3	5.2	6.0	1.2
Winding Wire	31.3	38.6	46.2	55.8	59.5	89.9
Total	116.3	129.7	147.0	182.5	199.1	71.2
Net Trade ('000t conductor)						
Low Voltage Energy	23.2	31.7	29.9	38.3	45.0	93.4
Copper Power Cable	6.1	8.5	3.8	-1.4	-2.0	-133.6
Aluminium Power Cable	0.7	0.8	1.3	1.0	0.3	-52.7
External Copper Telecom	-11.8	-10.3	-8.0	-1.3	-4.6	-60.5
Internal Telecom/Data	-4.5	-2.5	-2.3	-4.1	-4.7	2.9
Winding Wire	-28.6	-35.9	-43.1	-51.0	-54.1	88.8
Total	-15.0	-7.7	-18.4	-18.5	-20.2	34.7
<i>Ext. Cu Telecom (m. pair km)</i>	-2.8	-2.4	-1.9	-0.3	-1.1	-60.5
<i>Fibre Optic ('000 fibre km)</i>	-297	-246	-383	-338	-277	-6.8

Data: CRU

Table 4.4: Other Central and East European Insulated Wire & Cable Trade by Country 1999-2003 ('000t conductor, '000fkm)

	<u>1999</u>	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>% Change</u>	
					<u>2003</u>	<u>1999-2003</u>
Metallic Exports						
Czech Republic	41.4	43.8	45.5	57.4	60.8	46.8
Hungary	27.4	32.6	32.5	45.1	47.6	73.6
FR Yugoslavia	1.3	1.1	1.9	2.6	2.5	89.3
Romania	6.4	10.1	16.0	21.4	25.7	298.6
Slovakia	16.2	23.0	21.0	23.9	28.5	75.8
Bulgaria	1.6	3.6	3.7	3.4	3.4	107.2
Croatia	2.3	2.9	3.0	4.4	4.9	115.7
Macedonia	3.8	3.9	4.0	3.7	3.6	-6.0
Slovenia	0.8	0.9	1.0	2.0	2.0	145.8
Bosnia	0.0	0.0	0.0	0.0	0.0	na
Total	101.3	122.0	128.6	164.0	178.9	76.6
Metallic Imports						
Czech Republic	28.6	32.9	36.9	45.4	50.9	77.7
Hungary	24.2	27.1	29.6	44.7	49.0	102.3
FR Yugoslavia	0.6	0.7	1.7	1.0	1.0	64.0
Romania	15.0	15.7	19.3	21.2	21.4	42.3
Slovakia	19.3	21.3	26.7	33.3	39.5	104.2
Bulgaria	2.7	3.9	5.5	5.9	5.2	89.5
Croatia	3.8	3.5	4.7	4.6	4.7	23.8
Macedonia	2.2	3.5	1.5	1.2	1.3	-39.4
Slovenia	14.7	17.8	18.8	22.0	22.5	52.9
Bosnia	5.0	3.3	2.5	3.2	3.6	-28.4
Total	116.3	129.7	147.0	182.5	199.1	71.2
Metallic Net Trade						
Czech Republic	12.7	10.8	8.6	12.1	9.8	-22.7
Hungary	3.2	5.5	2.9	0.5	-1.4	-143.9
FR Yugoslavia	0.7	0.5	0.2	1.6	1.6	109.0
Romania	-8.6	-5.6	-3.3	0.2	4.3	-149.8
Slovakia	-3.1	1.7	-5.7	-9.4	-11.0	252.4
Bulgaria	-1.1	-0.3	-1.8	-2.5	-1.8	63.6
Croatia	-1.6	-0.6	-1.7	-0.2	0.2	-111.0
Macedonia	1.7	0.4	2.5	2.5	2.3	37.4
Slovenia	-13.9	-16.8	-17.7	-19.9	-20.5	47.4
Bosnia	-5.0	-3.3	-2.5	-3.2	-3.6	-28.4
Total	-15.0	-7.7	-18.4	-18.5	-20.2	34.7
Fibre Optic Net Trade ('000fkm)						
Czech Republic	-92	-57	-90	-49	7	-107.6
Hungary	-73	-75	-64	-33	-22	-69.7
FR Yugoslavia	-3	0	-8	-15	-10	242.9
Romania	-33	-69	-146	-146	-106	220.3
Slovakia	-17	-11	-25	-41	-28	63.6
Bulgaria	-13	-15	-26	-9	-54	332.0
Croatia	-48	-1	-11	-13	-35	-26.3
Macedonia	0	-5	0	-9	0	-100.0
Slovenia	0	0	0	2	1	na
Bosnia	-19	-13	-13	-25	-30	58.6
Total	-297	-246	-383	-338	-277	-6.8

Data: CRU

4. Industry Performance and Market Shares

In the Other Eastern European nations there is a mix of locally owned companies and companies that are part of the international cabling groups. In Bulgaria and the former Yugoslavia the main cable manufacturers are primarily locally owned, with little involvement by the international cabling groups. In the Czech Republic, Hungary, Slovakia and Romania much of the cable industry is owned by foreign cable manufacturers. The dominant company in the region is Pirelli with operations in Hungary, Slovakia and Romania. Pirelli along with auto wire manufacturer Leoni are the only significant companies that have cabling operations in more than one country of this region, although the recently announced merger of Belden and CDT will add another.

In the **Czech Republic** there are five main cable manufacturers of which four are foreign controlled. These are **Prakab**, owned by Austrian cabling maker **Schwechater Kabelwerke**, **Kablo Kladno**, part of the **NKT** group, **Draka Kabely**, and **CDT Decin**. CDT Decin is reported to have recently started production of fibre optic data cables at the rate of US\$4m per year. The main locally owned company is **Kablo Elektro**. In addition there are a number of smaller operations, some of which are also foreign owned. Notable amongst these are Austrian cabling maker **Gebauer & Griller's** subsidiary, local company **Lamela** which makes cables at its **Kabelovna Chyse** subsidiary and **Kopos Kolin**. **Nexans** has an automotive harness production plant. There are a number of smaller companies such as **KES Kabel**, **PEKM Kabeltechnik** and **STMEM**. Official data shows that there were a total of 59 active cable companies in 2000 employing a total of almost 8,000 people.

Table 4.5: Financial Results for Selected Czech Cabling Makers (US\$m)

	Draka Kabely		Kablo Elektro		Kabelovna Decin		Prakab	
	2001	2002	2001	2002	2001	2002	2001	2002
Sales	42.0	45.7	39.4	41.3	50.0	43.7	52.3	57.6
Added Value	9.2	8.5	10.2	11.9	16.1	8.7	7.7	9.1
Operating Profit	5.6	2.9	5.7	6.3	6.3	-1.3	2.2	2.4
Net Profit	3.9	0.9	3.2	4.5	4.3	-1.2	1.2	1.5
Operating Margin	13.3%	6.3%	14.4%	15.3%	12.5%	-2.9%	4.2%	4.1%
Net Profit as % of Sales	9.3%	1.9%	8.1%	11.0%	8.6%	-2.7%	2.4%	2.6%

Data: Financni Noviny, CRU

In **Slovakia Pirelli's Kablo Bratislava** unit dominates the cable industry. This company is the main local manufacturer of LV energy and power cables. Other than **Leoni Slovakia**, which makes co-axial cables and cord sets and has recently opened a new auto harness plant, the rest of the cable industry is locally owned. The other main cable manufacturer is **Elkond**, which initially only made communication cables but in the mid 1990's expanded to also produce energy cables. **ZTS Kabel**, founded in 1997 and part of the ZTS Dubnica nad Vahom engineering group, makes a range of energy cables and has grown quickly to now employ 100 people.

Table 4.6: Product Range of Key Czech Cablemakers (2003)

	LV Energy Cable	Auto Wire	LV Power Cable	MV Power Cable	External Telecom	Internal Data Cable	Fibre Optic Cable	Winding Wire
CDT Decin					●	●	●	
Draka Kabely	●	●	●					
Kablo Kladno	●		●	●				●
Prakab	●		●		●	●		
Kablo Elektro	●	●	●	●	●	●		

Data: CRU

Hungary is similar to Slovakia in that **Pirelli's MKM** dominates the local industry. The company is the main manufacturer of energy cables and it exports a significant part of its output, mainly via the Pirelli group. The main local manufacturer of communication cables is **Duna Kabel**, which is part of **Belden**. This company has been growing as Belden has relocated certain ranges of data cable production here to take advantage of lower cost rates. It will be interesting to see if the merger of Belden and CDT has any impact on the fortunes of the company relative to CDT Decin in the Czech Republic. The automotive harness sector is very important in Hungary and **Leoni** has a local plant making auto wire. **Sumitomo Wiring Systems** is in the process of constructing a new plant to make low smoke zero halogen automotive wires with an initial target output of 200 tonnes per month. French company **Axon Cable** has a Hungarian subsidiary that makes flat and round automotive wires.

There are three main cable manufacturers in **Romania**. These are Pirelli owned **Elcaro**, **ICME** (owned by Greek company **Hellenic Cables**) and locally owned **I PROEB**. Pirelli concentrates on energy cables but the other two make a broad range of products. ICME has recently installed equipment to manufacture fibre optic cables. The main local manufacturer of winding wire is **Elcond**. This used to be owned by UK company Allied Deals, but it got into financial difficulties and Elcond is believed to have been sold off in 2003. As in Hungary, the automotive harness sector is important and **Nexans** makes automotive wire and harnesses locally. There is also a local manufacturer of auto wire called **Romcab**.

In Bulgaria the cable industry remains locally owned and although it has been partially privatised the government still retains a significant interest, although it is looking to sell this off in the near future and is actively seeking private investors. The main cable manufacturer is **Elkabel**, which is thought to account for around half of all insulated wire and cable output. This company was privatised in 1998 and has recently been acquired by Turkish businessman Fuat Gyuyen. The company makes a broad range of products and is the only local manufacturer of HV power cables. The second largest cablemaker is **Emka**, which mainly concentrates on winding wire. The only other significant cable producer is **Gamakabel**, which mainly makes LV energy cables. **Energocabel** is not thought to make any insulated wires and concentrates on drawn wire and bare conductors.

Table 4.7: Foreign Interests in the Other Eastern European Cable Industry

<u>Country</u>	<u>Local Company</u>	<u>Overseas Interest</u>	<u>Country</u>
Czech Republic	Draka Kabely	Draka	Netherlands
	Kabelovna Decin	Belden CDT	USA
	Kablo Kladno	NKT	Denmark
	Prakab	Schwechater Kabelwerke	Austria
	Gebauer & Griller spol.s.r.o.	Gebauer & Griller	Austria
Slovakia	Kablo Bratislava	Pirelli	Italy
	Leoni Slovakia	Leoni	Germany
Hungary	MKM	Pirelli	Italy
	Duna Kabel	Belden CDT	USA
	Leoni Kabelwerk Hungaria	Leoni	Germany
	SEWS-Automotive Wire Hungary	Sumitomo	Japan
	AXON Kábelgyártó Kft	Axon Cable	France
Romania	Elcaro	Pirelli	Italy
	ICME	Hellenic Cables	Greece
	Nexans Romania	Nexans	France

Data: CRU

There are four main cable manufacturers in the former Yugoslavian republic of **Serbia**. These are **Industrija Kablova Jagodina (FKS)**, **Novosadska Fabrika Kabela (Novkabel)**, **Fabrika Kablova Zajecar (FKZ)** and **Fabrika Lak Zice Bor (FLZ)**. Other than FKZ all are locally owned. FKS is the largest and produces a full range of products at five plants. The company is currently struggling to become more efficient and as part of this drive it is trying to reduce its large workforce. As a result 1550 people left the company during 2003 and the workforce is now thought to be less than half its peak of over 8000. In 2000 the company had a nominal production capacity of 90,000 tonnes of cable. Novkabel makes a full range of products other than winding wires and has also been reducing its workforce. In 2001 the company had over 5,000 employees, but this is now down to around 2,700.

FKZ used to be part of the large mining group RTB Bor, but in mid 2002 it was sold off. In December 2003 Cypriot company East Point Holdings Group acquired a 84.7% stake and it plans to invest US\$2.7m. The company makes a wide range of energy and communication cables and has a nominal capacity of 20,000 tonnes of cable per year. Estimated sales in 2002 were 5,400 tonnes of cable giving a very low capacity utilisation. It exports around half its production and in mid 2002 had just over 1,000 employees. FLZ is still part of the RTB Bor group and is a specialist manufacturer of winding wire. It claims to manufacture almost 60% of the total country production of this product. RTB Bor has announced that it would like to sell off FLZ and has asked for expressions of interest. In preparation it is reducing its workforce by 30%.

In addition to the main manufacturers there are also a number of smaller cable producers. These are **Elkok**, **Entes** and **Buducnost**, all of which mainly make LV energy or power cables. **Juzna Morava** is a specialist manufacturer of overhead conductors.

Table 4.8: Financial Results for ELKA (US\$m)

	<u>2001</u>	<u>2002</u>
Sales	49.2	53.6
Cost of Sales	41.4	44.4
Operating Profit	0.5	0.6
Financial Income	2.7	2.9
Financial Expenses	1.7	1.4
Net Profit	1.5	2.2
Operating Margin	1.0%	1.1%
Net Profit as % of Sales	3.0%	4.1%

Data: Elka, CRU

In the other former Yugoslavian Republics there are a few notable cable manufacturers. The largest of these is **Elka in Croatia**. The company makes a full range of products including fibre optic cables and assemblies, LAN cables and power cables up to 35kV. The company claims an annual production capacity of 25,000 tonnes of cable. In mid 2003 the cable production activities of Elka were put into a separate subsidiary called **Elka Kabeli**. In early 2004 Elka announced that it was increasing the capital of this subsidiary to US\$62m in preparation for its sale, and in June it was agreed to sell its cable business to the management for US\$24.5m. The only other significant cabledmaker in Croatia is **Eurocable**. It has 60 employees and makes building wires and LV power cable. It had reportedly expressed some interest in buying Elka Kabeli.

Table 4.9: Company Shares of Wire & Cable Production in Other Eastern Europe in 2003 by Conductor Weight ('000t conductor, '000 fibre km)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper Telecom</u>	<u>Winding Int/Data</u>	<u>Wire</u>	<u>Total</u>	<u>Fibre '000 fkm</u>
Pirelli	31	21	0	0	0	51	0
FKS	7	4	2	0	1	14	60
Prakab	8	4	1	1	0	14	0
NKT/Kablo Kladno	6	4	0	0	3	13	0
ELKA	5	4	1	0	0	10	65
CDT/Decin	0	0	5	2	0	6	150
Kablo Elektro	7	2	0	1	0	10	0
Elkabel	4	3	2	0	0	9	0
Draka Kabely	4	1	1	1	0	7	60
Hellenic/ICME	5	2	0	0	0	8	0
Others	47	23	8	3	23	103	160
Total	125	67	18	7	27	245	495

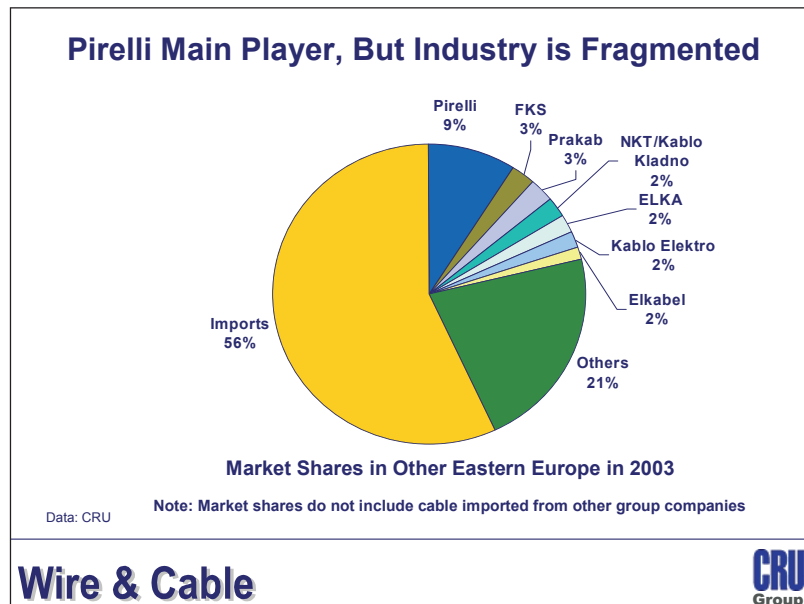
Data: CRU

The other main cable manufacturer in the region is **Cable Factory Negotino in Macedonia**. The company makes a range of energy and communication cables, including power cables up to 35kV. In 2000 a German import-export company, Alskop GmbH acquired a 50.08% share of the company. In **Slovenia** there is believed to be some small scale production of LV energy cables, but there are no notable manufacturers. We have not been able to identify any cable production in Bosnia but there may be some very small scale operations producing simple building wire.

Table 4.10: Company Shares of Wire & Cable Production in Other Eastern Europe in 2003 by Value (US\$m)

	<u>LV Energy</u>	<u>Power</u>	<u>Copper</u>		<u>Winding</u>		<u>Total</u>
			<u>Telecom</u>	<u>Int/Data</u>	<u>Wire</u>	<u>Fibre</u>	
Pirelli	110	95	0	0	0	0	205
FKS	26	18	10	1	5	5	65
Prakab	29	19	8	4	0	0	60
NKT/Kablo Kladno	23	19	0	0	10	0	52
ELKA	18	16	8	1	0	5	48
CDT/Decin	0	0	30	12	0	4	46
Kablo Elektro	24	10	0	7	0	0	41
Elkabel	13	16	10	1	0	0	40
Draka Kabely	16	3	4	10	0	5	38
Hellenic/ICME	19	11	0	0	0	0	30
Others	166	104	51	23	78	21	444
Total	444	311	121	59	93	40	1069

Data: CRU



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