



BANK OF FINLAND

MONTHLY BULLETIN

Vol. 34 No. 7

JULY

1960

RECENT DEVELOPMENTS

FOREST WORKS AND EMPLOYMENT

As has been stated before, there has been a lively foreign demand for wood and paper products, the principal Finnish export commodities, and the industries concerned have raised their production. The consequent rise in their need for raw materials has led to an appreciable increase in forest work. During the felling season from June 1, 1959, to May 30, 1960, 44.3 million cu. m was cut for commercial purposes, or 26 per cent more than during the previous season. The increase principally related to large-sized timber for the saw mills and plywood mills. In these fields of industry the production was low during the recession of 1956—1958, but rose rapidly during the subsequent upswing. As regards softwood and hardwood logs, about 50 per cent more were cut than during the 1958/59 season. The paper and pulp industries expanded more evenly, and consequently the fellings of pulpwood increased less, or by 15 per cent. Pitprops constituted the only kind of timber whose fellings were reduced. The amounts cut of different kinds of timber are given in the table below, together with an indication of the change from the previous felling season.

The increase in forest work has been the most important factor in the recent improvement in the employment situation. A large part of the rural population is heavily dependent upon forest work in winter, when

	1959/60 Million cub. m	Change per cent
Softwood logs	14.8	+ 50
Hardwood logs	1.9	+ 46
Spruce pulpwood	12.6	+ 12
Pine pulpwood	7.3	+ 19
Pitprops	0.7	— 28
Firewood	5.1	+ 12
Other timber	2.0	+ 58
Total	44.3	+ 26

employment in agriculture is seasonally low. During the first four months of the current year, the employment in lumbering was some 17 per cent higher than the corresponding 1959 figure. On an average, about 27 000 more persons were occupied in the forests than in January—April 1959.

The increase in forest activity had a direct effect upon the official unemployment figures. Last autumn, when the seasonal growth of unemployment set in, the rise was markedly less rapid than in 1958, and when the peak was reached in mid-March, there were 69 300 persons registered as unemployed, in comparison with 99 700 in March 1959. During the spring, the seasonal fall in the registered unemployment was more rapid than in the previous year, and at the end of May there were no persons left on the unemployment registers, whereas in May 1959 there had been 42 700.

**On page 18, Some Features of the
Finnish Chemical Industry**

The official unemployment registers do not, however, record the actual unemployment in the country. According to the labour force sample survey, which covers all categories of workers, 2.1 per cent of the total labour force was unemployed in March and April. This estimate excluded those officially registered who were placed in relief work. The percentage relates to those persons who by their own statement had been unemployed for more than one week owing to a lack of work. By mid-May the figure had fallen to 1.7 per cent of the total labour force.

The reduction of unemployment in comparison with the spring of 1959 was a natural consequence of the improvement in economic activity. As a main contributory factor, it had the increase in forest work, but was also affected by higher employment in other industries, especially manufacturing, traffic and communications, and house-building. Against this, there was a considerable reduction of employment in agriculture and in road and waterways construction, the latter decrease being due to the diminished need to provide relief work. As a result of these changes, the total employment was some 2—2½ per cent higher during the first four months of the current year than one year previously.

PRICES AND WAGES

A characteristic feature of the current rapid economic expansion has been the relative stability of prices. Since the autumn of 1959, however, a slight pressure on prices has been discernible. During the second half of 1959, both the cost of living index and the wholesale price index rose by 2 per cent. In May 1960, these indexes were 1 per cent higher than in December 1959.

The price increases in the autumn of 1959 can mainly be explained by reference to certain non-economic factors (see Bulletin No. 1, 1960, p. 1). In contrast to this, the development during the first half of 1960 shows clear signs of a demand-pull. On the other hand, the cost-push has been of minor importance. This reflects the stability of both import prices and unit labour costs.

In the major branches, the collective agreements expired at the end of 1959. After prolonged negotiations, the agreements for 1960 were signed during the first quarter of this year. When the fringe benefits granted are taken into consideration, the rise in wage rates varied from 2 per cent to 4.5 per cent. As for the development of earnings, during the first quarter 1960 the average increase was 2.2 per cent for male and 2.6 per cent for female workers.

July 14, 1960.

BANK OF FINLAND

Mill. mk

	1959		1960			
	June 30	Dec. 31	June 8	June 15	June 23	June 30
BALANCE SHEET						
Assets						
<i>Ordinary note cover</i>	67 251	76 694	69 107	68 014	68 878	69 089
Gold	8 473	8 454	8 455	8 455	8 455	8 455
Foreign exchange	55 526	64 611	55 493	54 356	55 220	55 410
Foreign bills	663	366	380	424	424	445
Foreign bonds	2 589	3 263	4 779	4 779	4 779	4 779
<i>Supplementary note cover</i>	30 205	27 016	35 213	33 580	40 916	42 150
Inland bills discounted						
In foreign currency	12 035	11 535	11 041	11 033	11 033	11 032
In Finnish currency	7 600	3 888	7 079	6 913	6 970	7 000
Rediscounted bills	3 695	4 718	11 468	10 009	17 288	18 493
Treasury bond loan	6 875	6 875	5 625	5 625	5 625	5 625
<i>Other assets</i>	21 111	18 096	10 986	11 164	11 560	12 412
Finnish bonds	4 247	2 620	846	1 086	1 597	2 437
Cheque accounts	335	267	427	348	395	334
Finnish coin	732	654	815	831	808	797
Other claims	15 797	14 555	8 898	8 899	8 760	8 844
Total	118 567	121 806	115 306	112 758	121 354	123 651
Liabilities						
<i>Notes in circulation</i>	62 867	69 435	67 091	65 700	69 337	69 698
<i>Short-term liabilities</i>	18 418	17 814	11 570	10 112	15 293	17 159
Foreign exchange accounts	1 373	2 116	4 104	4 047	4 456	3 865
Mark accounts of holders abroad	4 498	4 780	3 849	3 849	3 843	3 798
Cheque account of the Treasury	11 177	6 418	2 048	1 187	6 186	8 129
Cheque accounts of banks	170	3 856	671	515	374	691
Other cheque accounts	300	233	529	218	202	416
Other short-term liabilities	900	411	369	296	232	260
<i>Long-term liabilities</i>	15 603	14 089	12 018	12 017	11 899	11 897
Foreign	11 214	11 060	10 553	10 553	10 553	10 553
Finnish	4 389	3 029	1 465	1 464	1 346	1 344
<i>Equalisation accounts</i>	7 201	5 482	8 938	9 236	9 069	9 117
<i>Bank's own funds</i>	14 478	14 986	15 689	15 693	15 756	15 780
Capital	10 000	10 000	10 000	10 000	10 000	10 000
Reserve fund	3 739	3 739	4 362	4 362	4 362	4 362
Profits undisposed	—	—	624	624	624	624
Earnings less expenses	739	1 247	703	707	770	794
Total	118 567	121 806	115 306	112 758	121 354	123 651
STATEMENT OF NOTE ISSUE						
Right of note issue						
Ordinary cover	67 251	76 694	69 107	68 014	68 878	69 089
Supplementary cover (Upper limit 50 000 mill. mk)	30 205	27 016	35 213	33 580	40 916	42 150
Total	97 456	103 710	104 320	101 594	109 794	111 239
Note issue						
Notes in circulation	62 867	69 435	67 091	65 700	69 337	69 698
Short-term liabilities	18 418	17 814	11 570	10 112	15 293	17 159
Undrawn on cheque credits	891	929	770	849	801	862
Unused right of note issue	15 280	15 532	24 889	24 933	24 363	23 520
Total	97 456	103 710	104 320	101 594	109 794	111 239

Lowest Bank rate since March 1, 1959, 6 per cent

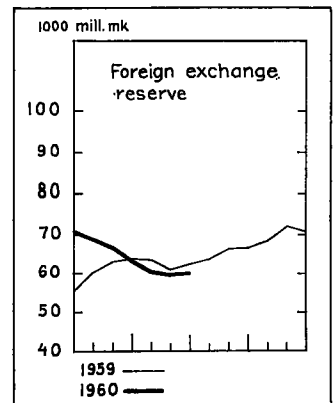
BANK OF FINLAND

Mill. mk

End of year and month	Gold and foreign accounts						Finnish credit institutions			
	Gold and foreign exchange	Liabilities on foreign exchange accounts	Foreign exchange reserve (1—2)	Other foreign assets	Other foreign liabilities	Net foreign assets (3+4—5)	Redis-counted bills	Liabilities		Net claims on the banks (7—8—9)
								Cheque accounts of banks	Account of the Mortgage Bank of Finland Oy	
	1	2	3	4	5	6	7	8	9	10
1951	34 317	3 594	30 723	1 644	3 693	28 674	16	—218	—	234
1952	22 099	13 141	8 958	7 024	5 524	10 458	17 217	2 088	—	15 129
1953	27 898	8 737	19 161	8 329	9 237	18 253	8 268	2 157	—	6 111
1954	36 573	7 017	29 556	8 206	10 102	27 660	8 465	2 187	—	6 278
1955	35 938	3 855	32 083	9 427	11 617	29 893	22 628	8 383	1)	14 245
1956	29 410	4 601	24 809	11 271	15 337	20 743	33 665	1 167	280	32 218
1957	38 429	4 569	33 860	17 642	20 185	31 317	24 912	2 405	—42	22 549
1958	57 558	2 178	55 380	12 619	16 013	51 986	18 707	1 474	2 080	15 153
1959	73 065	2 116	70 949	9 249	15 840	64 358	4 718	3 856	252	610
1959										
June	63 999	1 373	62 626	11 762	15 712	58 676	3 695	170	814	2 711
July	65 911	1 422	63 839	11 415	15 712	59 542	2 214	1 326	166	722
Aug.	67 276	1 507	66 209	11 002	15 514	61 697	120	2 010	—227	—1 663
Sept.	68 751	1 905	66 846	10 761	15 859	61 748	400	644	—101	—143
Oct.	70 542	2 141	68 401	9 985	15 727	62 659	486	1 387	419	—1 320
Nov.	74 191	2 133	72 058	9 715	15 672	66 101	315	1 556	285	—1 526
Dec.	73 065	2 116	70 949	9 249	15 840	64 358	4 718	3 856	252	610
1960										
Jan.	71 164	2 228	68 936	9 035	15 796	62 175	2 428	—164	309	2 283
Feb.	69 135	2 329	66 806	8 410	15 179	60 037	3 054	85	52	2 917
March	66 821	3 658	63 163	7 982	15 153	55 992	4 620	749	179	3 692
April	64 550	3 854	60 696	9 710	14 978	55 428	13 072	56	237	12 779
May	63 921	4 085	59 836	9 495	14 487	54 844	13 811	951	71	12 789
June	63 865	3 865	60 000	9 167	14 351	54 816	18 493	691	179	17 623

1) Including cash reserve accounts 6 677

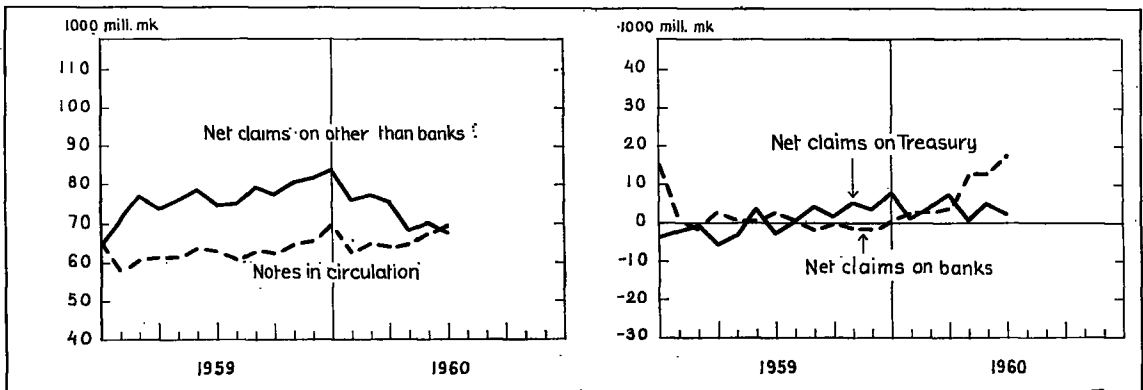
Category of currency	Foreign exchange reserve (col. 3 above) 1 000 mill. mk				
	1958	1959	1960		
	Dec. 31	Dec. 31	April 30	May 31	June 30
Gold	7.8	8.4	8.4	8.4	8.4
Convertible currencies ..	31.2	49.7	40.5	39.1	37.7
Non-transferable OEEC *	7.7	4.7	4.7	4.6	4.2
Eastern Block currencies ..	8.2	4.4	2.4	2.2	3.6
Other currencies	0.5	3.7	4.7	5.5	6.1
Total	55.4	70.9	60.7	59.8	60.0



BANK OF FINLAND

Mill. mk

End of year and month	Treasury					Trade and industry				Notes in circulation
	Bills and bonds	Advances for stand-by stocks	Liabilities		Net claims on the Treasury 1+2-3-4	Inland bills in Finnish currency	Other advances	Liabilities	Net claims on the public (6 + 7-8)	
			Cheque account	Long-term						
	1	2	3	4	5	6	7	8	9	10
1951	8 685	—	—	—	8 685	11 567	4 549	301	15 815	44 774
1952	14 738	—	—	—	14 738	14 678	5 672	2 185	18 165	46 153
1953	21 662	—	7 281	—	14 381	13 812	7 405	2 314	18 903	45 019
1954	21 662	—	15 470	—	6 192	11 940	6 895	791	18 044	47 902
1955	21 660	—	9 816	1 294	10 550	14 437	9 306	7 357	16 386	55 883
1956	19 160	—	10 550	2 310	6 300	14 922	10 547	5 205	20 264	60 735
1957	16 021	—	5 145	3 965	6 911	12 909	14 425	561	26 773	60 640
1958	9 033	4 335	7 146	9 502	3 280	8 823	14 296	525	22 594	65 075
1959	10 326	6 786	6 418	3 029	7 665	3 888	10 500	392	13 996	69 435
1959										
June	8 745	4 363	11 177	4 389	2 458	7 600	13 424	386	20 638	62 867
July	8 745	4 695	8 415	4 084	941	6 120	13 264	493	18 891	60 992
Aug.	8 745	5 274	6 236	3 685	4 098	4 632	13 066	241	17 457	62 808
Sept.	10 326	5 617	11 028	3 447	1 468	3 769	13 177	671	16 275	62 467
Oct.	10 326	6 116	7 643	3 374	5 425	3 961	11 279	500	14 740	64 583
Nov.	10 326	6 664	10 201	3 308	3 481	4 250	10 662	496	14 416	65 427
Dec.	10 326	6 786	6 418	3 029	7 665	3 888	10 500	392	13 996	69 435
1960										
Jan.	10 326	5 431	11 625	2 955	1 177	4 002	10 553	605	13 950	62 949
Feb.	10 014	4 024	7 238	2 678	4 122	5 120	10 367	560	14 927	64 854
March	8 764	4 035	3 388	2 041	7 370	5 694	10 422	323	15 793	64 013
April	7 244	4 134	9 251	1 734	393	6 078	10 376	251	16 203	65 815
May	7 244	4 265	4 808	1 565	5 136	6 832	10 245	446	16 631	67 376
June	7 244	4 597	8 129	1 344	2 368	7 000	10 051	497	16 554	69 698



DEPOSITS BY THE PUBLIC - FOREIGN EXCHANGE RATES

Mill. mk

End of year and month	Sight deposits			Term deposits						Total (2+3+9)
	Cheque accounts		Postal giro accounts	Commer- cial banks	Savings banks	Co-op. credit societies & their cen- tral bank	Post Office Savings Bank	Savings depart- ments of co-op. stores	All credit institutions	
	Commer- cial banks	All credit institutions								
	1	2	3	4	5	6	7	8	9	10
1950	24 460	28 248	10 537	36 579	39 366	20 175	13 892	5 356	115 373	154 158
1951	42 768	48 063	11 203	46 678	51 790	29 710	18 243	8 443	154 870	214 136
1952	28 020	33 410	10 765	59 742	65 344	37 223	23 562	10 798	196 706	240 881
1953	32 112	37 907	11 048	70 455	76 709	42 537	27 074	11 951	228 762	277 717
1954	34 913	42 108	13 451	83 444	92 174	52 050	30 079	13 415	271 195	326 754
1955	36 588	44 281	11 795	97 794	108 541	61 139	33 073	15 255	315 842	371 918
1956	38 614	45 963	15 265	96 807	112 402	63 531	34 162	16 013	322 953	384 181
1957	37 708	46 138	14 912	103 223	117 859	67 111	33 960	16 823	339 009	400 059
1958	39 568	49 575	18 277	122 256	131 260	74 272	38 167	19 191	385 175	453 027
1959*	55 749	67 778	15 667	150 548	152 730	85 976	43 120	21 913	454 316	537 761
1959*										
June	44 991	55 145	22 474	136 106	137 638	77 992	40 273	20 166	412 204	489 823
July	46 561	56 446	12 864	136 963	139 194	78 578	40 524	20 247	415 535	484 845
Aug.	47 447	58 030	12 425	138 372	140 510	79 301	40 919	20 407	419 538	489 993
Sept.	49 915	62 451	20 646	138 873	141 980	80 302	41 038	20 673	422 895	505 992
Oct.	50 061	62 757	12 527	140 531	144 298	81 167	41 180	20 891	428 096	503 380
Nov.	52 776	64 676	12 319	142 703	146 558	82 608	41 442	21 172	434 512	511 507
Dec.	55 749	67 778	15 667	150 548	152 730	85 976	43 120	21 913	454 316	537 761
1960*										
Jan.	50 344	60 407	10 424	152 020	154 071	87 069	43 474	22 303	458 966	529 797
Feb.	51 520	61 375	14 471	155 066	156 103	88 975	44 261	22 710	467 137	542 983
March	51 761	62 736	14 481	158 941	159 110	91 527	44 716	23 093	477 410	554 627
April	49 694	60 447	11 985	160 943	160 117	92 599	44 681	23 219	481 583	554 015
May	53 991	65 801	13 195	163 190	161 794	93 929	44 750	23 278	486 965	565 961
June	54 253	65 426	14 382	163 976	161 612	93 361	44 773	23 205	486 956	566 764

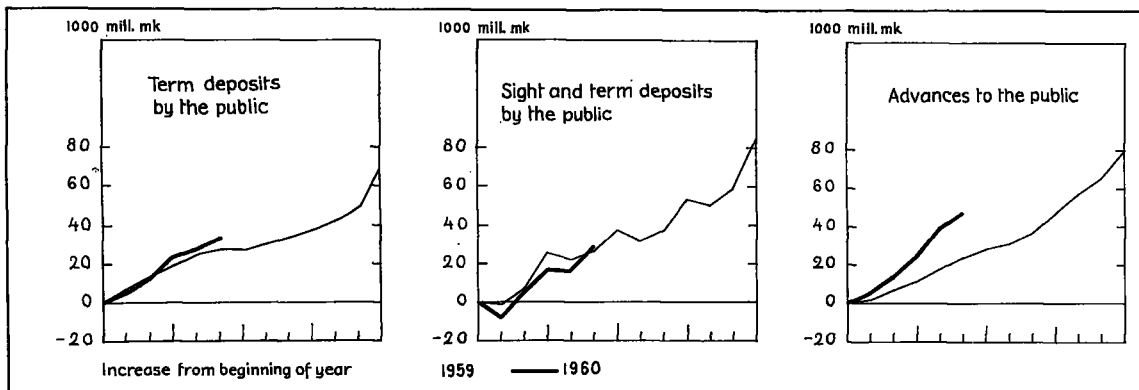
End of month	Index-tied deposits		
	1958	1959	1960
Jan.	85 733	79 991	24 350
Feb.	87 884	76 797	21 413
March	89 735	72 012	19 079
April	89 777	65 620	18 100
May	90 611	61 022	17 718
June	91 041	56 605	17 429
July	91 386	52 298	
Aug.	91 543	48 628	
Sept.	87 640	41 179	
Oct.	85 954	34 207	
Nov.	84 711	30 560	
Dec.	83 290	28 057	

Selling rates for foreign exchange			
June 30, 1960			
		mk	mk
New York ...	1 \$	321: 20	Brussels 100 Fr 644: 50
Montreal	1 \$	328: —	Zurich 100 Fr 7 444: —
London	1 £	901: 50	Paris 100 NF 6 555: —
Stockholm ...	100 Kr	6 224: —	Rome 100 Lit 51: 76
Oslo	100 Kr	4 500: —	Vienna 100 Sch 1 238: —
Copenhagen ..	100 Kr	4 659: —	Lisbon 100 Esc 1 122: —
Frankfurt a/M	100 DM	7 704: —	Reykjavik 100 Kr 844: —
Amsterdam ...	100 G	8 518: —	Prague, clear... 100 Kč 4 458: —
			Moscow, clear. 100 Rbl 8 025: —

ADVANCES TO THE PUBLIC—MONEY SUPPLY

Mill. mk

End of year and month	Granted by					Types of advances		Total (1 to 5) (6 and 7)	Money Supply
	Commercial banks	Savings banks	Post Office Savings Bank	Co-op. credit societies & their central bank	Mortgage banks	Loans & Bills	Cheque credits		
	1	2	3	4	5	6	7	8	9
1950	67 438	35 511	4 507	35 048	3 830	135 309	11 025	146 334	67 640
1951	85 578	45 554	8 508	41 849	4 425	172 003	13 911	185 914	95 038
1952	104 881	59 824	13 402	50 694	5 379	217 141	17 039	234 180	84 113
1953	105 659	70 511	18 782	56 765	9 847	245 275	16 289	261 564	87 294
1954	128 955	82 447	22 123	64 697	12 773	291 506	19 489	310 995	95 935
1955	155 436	96 454	24 866	72 868	13 599	339 797	23 426	363 223	102 032
1956	162 663	102 830	26 232	76 761	14 690	357 802	25 374	383 176	109 559
1957	160 379	106 639	26 047	78 064	15 717	363 000	23 846	386 846	112 398
1958	174 542	115 481	29 027	83 511	21 931	401 155	23 337	424 492	124 527
1959*	209 686	132 663	33 138	96 715	32 578	477 244	27 536	504 780	142 998
1959*									
June	184 863	123 152	30 387	88 660	25 681	426 924	25 819	452 743	134 774
July	183 589	124 666	31 118	89 337	26 620	430 489	24 841	455 330	125 409
Aug.	184 965	126 191	31 600	90 550	27 689	437 066	23 929	460 995	128 511
Sept.	190 749	127 980	32 369	91 957	28 771	446 076	25 750	471 826	139 508
Oct.	196 254	129 702	32 566	93 800	29 229	455 552	25 999	481 551	134 288
Nov.	200 782	131 592	32 626	94 833	30 241	463 309	26 765	490 074	137 583
Dec.	209 686	132 663	33 138	96 715	32 578	477 244	27 536	504 780	142 998
1960*									
Jan.	211 026	134 342	33 510	97 496	33 337	480 821	28 890	509 711	129 455
Feb.	217 135	135 681	33 884	98 116	34 089	488 705	30 200	518 905	131 320
March	222 749	137 133	33 984	100 212	35 225	499 743	29 560	529 303	133 702
April	230 904	139 152	34 484	102 531	37 049	513 265	30 855	544 120	131 300
May	232 510	141 062	35 356	104 208	38 826	522 430	29 532	551 962	137 962
June	239 831	142 505	36 316	104 888	39 657	531 162	32 035	563 197	..

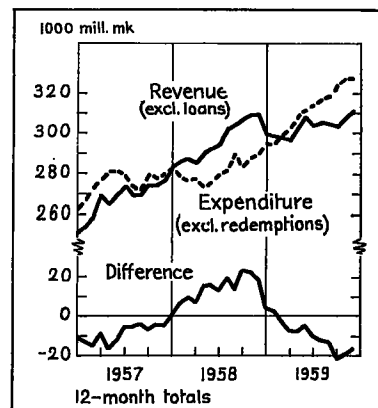


STATE FINANCES

1000 mill. mk

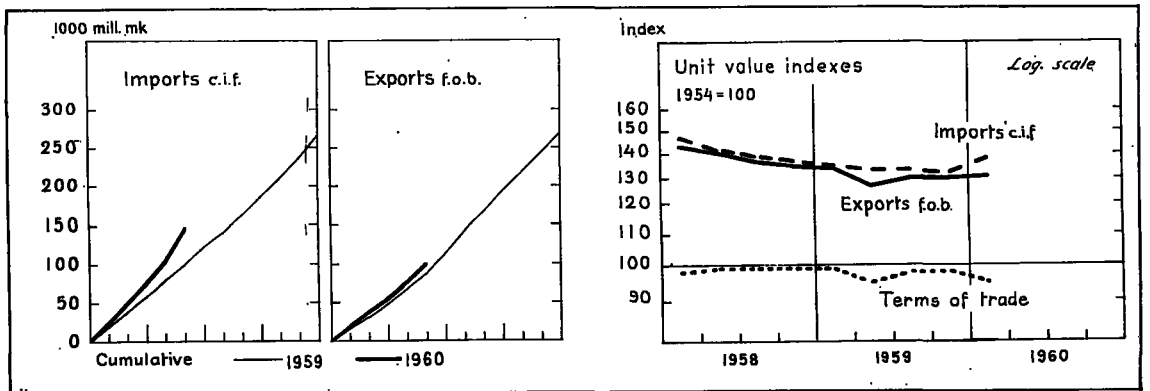
Revenue	Jan. — May		Expenditure	Jan. — May	
	1959	1960		1959	1960
Income and property tax (net)	33.6	29.4	Interest on State debt	2.7	2.3
Gross receipts	(53.5)	(70.3)	Child allowances	10.2	10.3
Refunds and communal income tax	(-19.9)	(-40.9)	The State's share in national pensions	3.5	3.4
Other direct taxes	0.5	0.5	Compensations to war-disabled	3.2	3.2
Purchase tax	26.8	32.9	Transfer of employers' payments for national pensions to the National Pensions Institution	1.8	1.3
Import duties	15.7	18.7	Subsidies	11.9	11.9
Revenue from Alcohol Monopoly	6.7	9.3	Net payments on price equalisation by extra-budgetary funds	—	1.4
Excise duty on tobacco	7.4	7.8	State aid to agriculture	2.0	1.4
Excise duty on liquid fuel	3.0	4.6	State aid to communal and private schools	9.6	10.5
Other excise duties	1.8	2.1	Net loss of State enterprises	1.3	—
Tax on automobiles and motor cycles	0.7	0.9	Maintenance of roads	2.6	2.8
Stamp duties	6.1	7.1	Other current expenditure	39.6	44.8
Employers' payments for child allowances and national pensions	10.1	11.3	Current expenditure	88.4	93.3
Net receipts of price equalisation by extra-budgetary funds	1.2	—	Real investments	29.3	30.7
Other revenue similar to taxes	2.2	2.5	Other capital expenditure	14.0	12.1
Total taxes	115.8	127.1	Capital expenditure	43.3	42.8
Interest and dividends	1.8	2.3	Total expenditure	131.7	136.1
Net profit of State enterprises	—	0.3	Redemption of external loans	4.7	1.5
Other current revenue	3.8	3.2	Redemption of internal loans	7.0	8.8
Current revenue	121.4	132.9	Redemption of indemnity bonds etc.	0.2	1.1
Capital revenue proper	7.8	3.3	Index premiums	0.5	0.6
Decrease in inventories	3.3	4.4	Redemptions	12.4	12.0
Capital revenue	11.1	7.7	Total	144.1	148.1
Total revenue	132.5	140.6			
External loans	—	—			
Internal loans	8.2	9.2			
Loans	8.2	9.2			
Short-term credit (increase +) ..	+3.0	-1.8			
Deficit (+) or surplus (-)	+0.4	+0.1			
Total	144.1	148.1			

Debt	1956	1957	1958	1959	1960		
	Dec.	Dec.	Dec.	Dec.*	April	May	June*
External debt	61.5	81.8	79.0	77.0	76.1	75.7	75.4
Ordinary loans	50.7	52.9	61.5	72.0	72.7	72.4	72.7
Indemnity bonds etc. ...	7.1	7.4	7.3	6.5	5.6	5.5	5.5
Short-term credit	—	—	1.2	2.2	0.4	0.4	0.3
Cash debt (net)	8.8	9.6	-1.7	..	-7.2	-5.4	..
Internal debt	66.6	69.9	68.3	..	71.5	72.9	..
Total debt	128.1	151.7	147.3	..	147.6	148.6	..
Total debt, mill. \$	554.5	472.7	459.8	..	460.3	463.0	..



FOREIGN TRADE

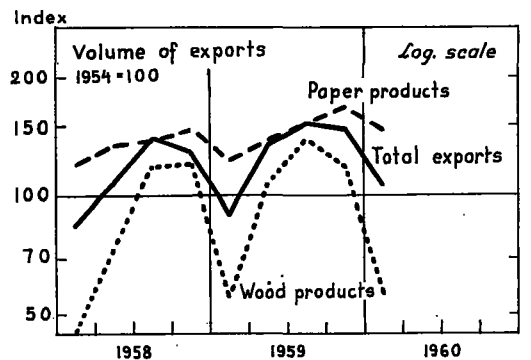
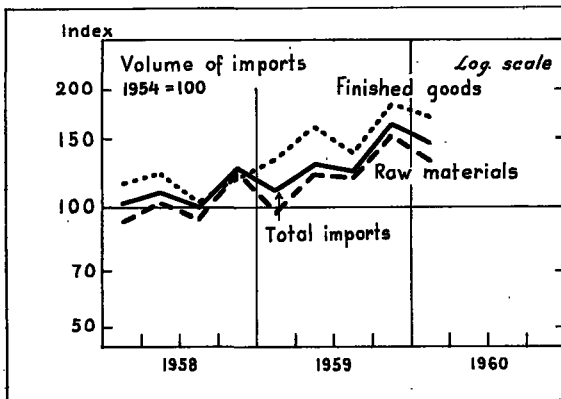
Period	Value, mill. mk			Unit value indexes 1954 = 100						
	Imports c. i. f.	Exports f. o. b.	Surplus of imports (-) or exports (+)	Articles of export f. o. b.					Articles of import c. i. f.	Terms of Trade
				Total	Round and hewn timber	Wood industry products	Paper industry products	Metal, en- gineering industry products		
1952	182 186	156 829	-25 357	130	165	99	147	118	121	107
1953	121 860	131 555	+ 9 695	98	111	95	91	109	106	92
1954	152 137	156 618	+ 4 481	100	100	100	100	100	100	100
1955	176 960	181 259	+ 4 299	106	110	105	105	115	100	106
1956	203 558	177 987	-25 571	106	110	104	109	106	105	101
1957	227 927	212 385	-15 542	116	118	113	119	120	122	95
1958	233 302	247 934	+14 632	138	139	133	139	153	140	99
1959*	266 789	267 241	+ 452	130	120	121	131	152	133	98
Jan. — May										
1958	88 680	84 007	- 4 673							
1959*	99 619	87 359	-12 260							
1960*	145 722	100 983	-44 739							
1959*										
July	19 664	28 314	+ 8 650	130	114	122	130	150	133	98
Aug.	20 144	22 228	+ 2 084							
Sept.	23 105	26 828	+ 3 723							
Oct.	23 997	25 686	+ 1 689	130	116	123	130	151	132	98
Nov.	26 993	24 882	- 2 111							
Dec.	30 403	24 591	- 5 812							
1960*										
Jan.	24 687	18 395	- 6 292	131	114	124	130	159	138	95
Feb.	24 704	18 641	- 6 063							
March	26 504	17 552	- 8 952							
April	29 031	21 937	- 7 094							
May	40 796	24 458	-16 338							



FOREIGN TRADE BY MAIN GROUPS

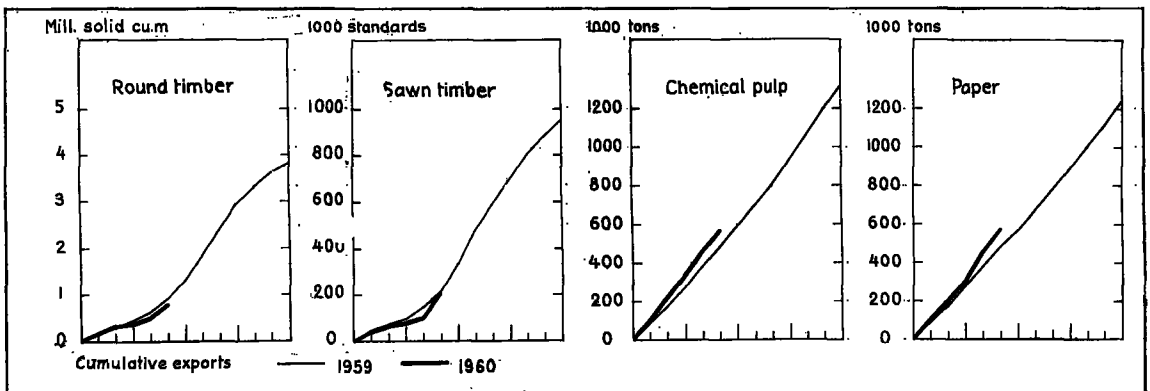
Mill. mk

Period	Imports, c. i. f.				Exports, f. o. b.					
	Raw materials and accessories	Fuels and lubricants	Finished goods		Agricultural products	Round and hewn timber	Wood industry products	Paper industry products	Metal, engineering industry products	Other goods
			Producer goods	Consumer goods						
1952	97 500	21 952	35 664	27 072	5 185	28 441	42 891	65 350	11 094	3 868
1953	65 148	15 879	24 029	16 804	4 719	10 251	43 671	47 926	20 936	4 052
1954	86 420	17 337	28 797	19 581	5 152	13 582	49 730	61 662	20 988	5 504
1955	94 919	21 540	34 225	26 276	3 880	19 905	51 321	75 793	24 803	5 557
1956	104 284	27 464	43 357	28 453	6 206	17 243	40 485	81 780	25 125	7 148
1957	117 424	40 238	41 353	28 912	10 169	17 095	48 287	97 638	30 433	8 763
1958	119 502	32 658	48 797	32 345	10 651	19 346	57 818	115 173	34 036	10 910
1959*	133 808	28 118	67 043	37 820	14 853	16 290	63 662	117 003	44 068	11 365
Jan. — May										
1958	45 018	16 869	14 994	11 799	4 600	3 633	14 824	46 223	11 293	3 434
1959*	48 044	10 071	26 487	15 017	5 812	3 988	17 006	43 886	13 268	3 399
1960*	70 433	12 060	42 923	20 306	6 745	3 570	19 372	52 381	14 346	4 569
1959*										
July	9 987	1 796	5 313	2 568	1 679	2 249	8 180	9 526	5 334	1 346
Aug.	10 043	2 399	5 258	2 444	1 010	2 336	6 138	9 677	1 988	1 079
Sept.	12 569	2 285	5 336	2 915	1 083	2 267	6 754	11 281	4 260	1 183
Oct.	12 207	2 699	5 865	3 226	1 121	1 613	7 272	11 101	3 347	1 232
Nov.	14 265	2 894	6 280	3 554	922	1 210	5 570	10 846	5 194	1 140
Dec.	14 711	3 915	6 802	4 975	2 065	995	5 408	11 650	3 334	1 139
1960*										
Jan.	13 226	2 149	5 967	3 345	1 364	662	3 203	8 797	3 556	813
Feb.	12 025	2 890	6 459	3 330	1 616	615	2 876	9 703	3 161	670
March	12 569	2 089	7 903	3 943	1 093	303	2 633	10 770	1 809	944
April	13 648	1 993	8 719	4 671	1 225	607	3 451	12 950	2 756	948
May	18 965	2 939	13 875	5 017	1 447	1 383	7 209	10 161	3 064	1 194



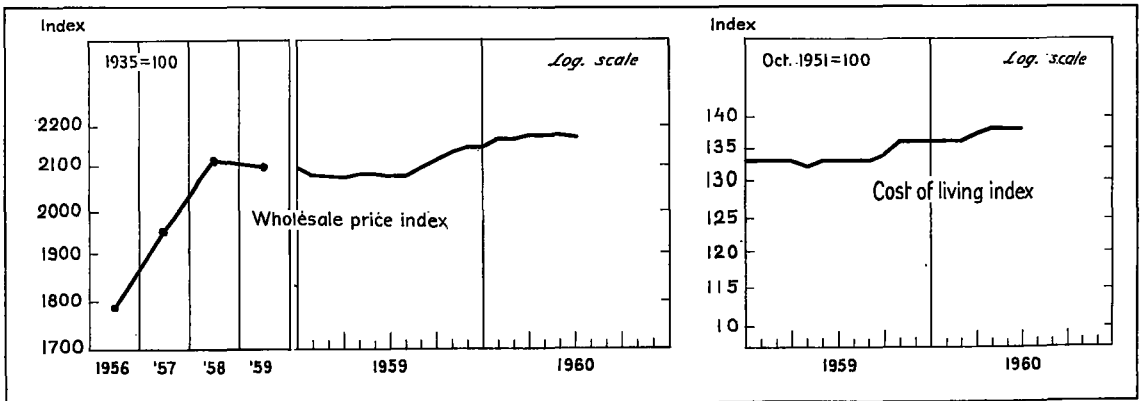
EXPORTS OF SOME IMPORTANT ARTICLES

Period	Round timber	Sawn timber	Veneers and plywood	Mechanical pulp	Sulphite pulp	Sulphate pulp	Board	Fibre building board	Newsprint	Paper, all kinds
	1 000 solid cu. m	1 000 stds	1 000 cu. m	1 000 tons	1 000 tons	1 000 tons	1 000 tons	1 000 tons	1 000 tons	1 000 tons
1952	5 112	611	222	143	477	245	65	44	392	569
1953	2 388	688	216	204	464	323	76	45	402	677
1954	3 620	733	298	193	580	375	101	59	392	751
1955	4 977	786	321	183	682	447	110	61	470	905
1956	4 424	648	230	186	679	452	106	49	537	997
1957	4 063	719	260	165	697	474	134	60	551	1 108
1958	3 861	762	239	143	725	476	145	83	585	1 147
1959*	3 812	950	296	139	770	549	142	110	576	1 244
Jan. —										
May										
1958	723	133	103	54	299	182	60	36	237	448
1959*	922	214	119	58	277	204	52	46	227	479
1960*	812	201	148	73	363	200	64	55	278	573
1959*										
July	536	144	21	9	56	50	14	5	44	102
Aug.	559	104	15	11	60	44	13	8	41	101
Sept.	535	107	28	9	81	57	12	9	52	114
Oct.	364	110	32	13	73	51	14	12	54	118
Nov.	294	80	25	12	80	50	13	11	56	111
Dec.	208	69	31	16	82	50	14	11	61	126
1960*										
Jan.	160	36	24	10	67	35	10	9	43	95
Feb.	152	25	28	14	67	40	12	10	56	105
March	65	17	31	13	81	45	14	12	49	106
April	134	24	36	16	83	43	16	12	75	155
May	301	99	29	20	65	37	12	12	55	112



FOREIGN TRADE BY COUNTRIES

Area and country	Imports c.i.f.					Exports f.o.b.				
	Whole year		Jan.—May			Whole year		Jan.—May		
	1958	1959	1959*	1960*		1958	1959*	1959*	1960*	
	%	%	%	%	Mill. mk	%	%	%	%	Mill. mk
Sterling area	17.9	16.3	16.9	16.5	24 044	25.6	26.7	28.1	27.5	27 717
United Kingdom	17.2	15.7	16.4	15.9	23 148	22.1	23.3	24.3	23.4	23 659
Other OEEC countries ..	45.2	49.4	50.1	52.3	76 141	37.5	36.5	37.1	38.8	39 134
Austria	0.5	0.6	0.6	0.6	939	0.2	0.2	0.2	0.2	242
Belgium-Luxembourg	2.8	2.5	2.2	2.8	4 029	3.6	3.7	3.2	2.9	2 898
Denmark	2.4	2.3	2.3	2.5	3 653	3.0	3.3	3.1	3.2	3 207
France	4.7	5.1	5.3	6.5	9 428	6.2	4.7	4.8	4.4	4 491
Western Germany	16.5	17.9	17.7	18.8	27 375	10.8	10.9	10.8	11.5	11 641
Italy	1.5	1.8	2.0	1.8	2 689	1.8	1.8	2.0	2.3	2 332
Netherlands	4.3	4.5	5.2	3.9	5 674	4.4	5.4	5.2	5.5	5 507
Norway	1.2	1.6	1.3	1.3	1 903	0.7	0.7	0.6	1.1	1 140
Portugal	0.1	0.2	0.1	0.2	246	0.1	0.1	0.1	0.1	73
Spain	0.6	0.5	0.5	0.6	867	1.1	0.2	0.4	0.2	182
Sweden	8.3	9.2	10.2	10.5	15 270	3.6	3.2	3.7	5.4	5 418
Switzerland	1.7	2.3	2.3	2.3	3 394	0.7	0.4	0.6	0.4	361
Eastern Bloc	25.6	24.5	22.7	20.9	30 457	24.8	23.5	19.2	18.5	18 685
China	0.5	0.5	1.1	0.3	342	1.1	2.0	1.7	0.4	426
Czechoslovakia	1.2	1.4	1.6	1.3	1 936	1.2	0.7	0.7	0.8	760
Eastern Germany	1.7	1.6	1.5	1.3	1 857	1.7	1.3	1.0	1.3	1 358
Poland	3.1	2.4	1.9	1.6	2 353	2.6	2.1	2.4	2.0	1 991
Soviet Union	18.0	17.9	16.1	15.7	22 921	17.3	16.7	12.8	13.3	13 402
U.S. and Canada	5.5	5.4	5.0	6.7	9 800	4.7	5.9	7.1	7.2	7 314
United States	5.3	5.1	4.9	6.5	9 489	4.6	5.8	7.0	7.1	7 188
Latin America	4.4	3.5	3.8	2.5	3 637	4.5	4.9	6.1	6.4	6 480
Argentina	0.3	0.5	0.6	0.5	813	1.0	0.9	1.3	1.4	1 377
Brazil	3.7	2.5	2.8	1.6	2 283	2.4	2.8	3.3	3.4	3 446
Others	1.4	0.9	1.5	1.1	1 643	2.9	2.5	2.4	1.6	1 653
Grand total	100.0	100.0	100.0	100.0	145 722	100.0	100.0	100.0	100.0	100 983
of which										
EFTA countries	31.3	31.8	33.3	33.3	48 553	30.3	31.3	32.6	33.8	34 100
EEC countries	29.8	31.8	32.4	33.8	49 195	26.9	26.5	26.0	26.6	26 869



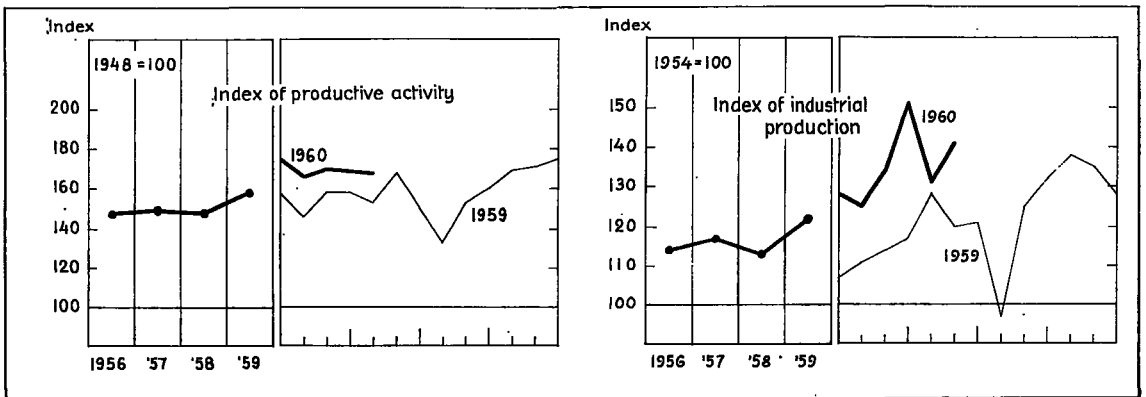
PRICE INDEXES

Period	Wholesale prices 1935 = 100						Building costs 1951 = 100		
	Total index	Finnish goods				Imported goods	Total	Building material	Workers' average hourly earnings
		Total	Products of agriculture	Products of forestry	Products of industry				
1957	1 954	1 980	2 103	2 947	1 615	1 897	113	105	127
1958	2 113	2 125	2 193	3 106	1 773	2 085	117	112	124
1959	2 096	2 134	2 198	3 060	1 801	2 016	118	110	128
1959									
June	2 076	2 103	2 126	3 007	1 791	2 019	118	110	129
July	2 076	2 110	2 166	3 006	1 790	2 002	119	111	131
Aug.	2 092	2 132	2 240	3 005	1 803	2 005	119	111	132
Sept.	2 114	2 163	2 261	3 086	1 820	2 008	119	110	130
Oct.	2 134	2 187	2 251	3 198	1 825	2 020	119	111	130
Nov.	2 141	2 201	2 278	3 203	1 838	2 014	119	111	130
Dec.	2 144	2 203	2 284	3 202	1 840	2 017	119	112	130
1960									
Jan.	2 161	2 221	2 352	3 200	1 849	2 033	119	112	128
Feb.	2 163	2 228	2 351	3 199	1 862	2 022	120	112	130
March	2 166	2 231	2 367	3 196	1 861	2 029	120	114	129
April	2 168	2 234	2 373	3 205	1 863	2 026	120	113	129
May	2 171	2 238	2 356	3 230	1 865	2 028	121	113	132
June	2 168	2 239	2 338	3 242	1 868	2 017	122	114	134

Period	Cost of living Oct. 1951 = 100						Consumer prices Oct.—Dec. 1957 = 100					
	Total	Food-stuffs	Rent	Heating and lighting	Clothing	Other	Total	Food-stuffs	Rent	Heating and lighting	Clothing	Other
1957	124	132	260	99	80	117						
1958	132	140	277	102	83	129	103	103	102	99	103	105
1959	134	141	280	98	85	134	105	103	104	95	105	109
1959												
June	133	139	273	100	84	133	104	102	101	97	104	109
July	133	140	274	97	84	134	104	103	101	94	105	109
Aug.	133	140	274	97	84	134	104	103	101	94	105	109
Sept.	134	143	274	96	85	135	105	105	101	93	106	110
Oct.	136	144	292	96	85	135	107	106	108	93	106	110
Nov.	136	144	292	96	85	135	107	106	108	93	106	110
Dec.	136	143	292	96	85	135	107	105	108	93	106	110
1960												
Jan.	136	144	295	98	85	135	107	106	109	95	106	110
Feb.	136	144	295	98	85	135	107	105	109	95	106	110
March	137	144	295	97	86	136	108	106	109	95	106	111
April	138	146	295	97	86	136	108	107	109	95	106	111
May	138	146	295	97	86	136	108	108	109	94	106	111
June	138	148	295	97	86	136	108	109	109	94	106	111

PRODUCTION - INTERNAL TRADE

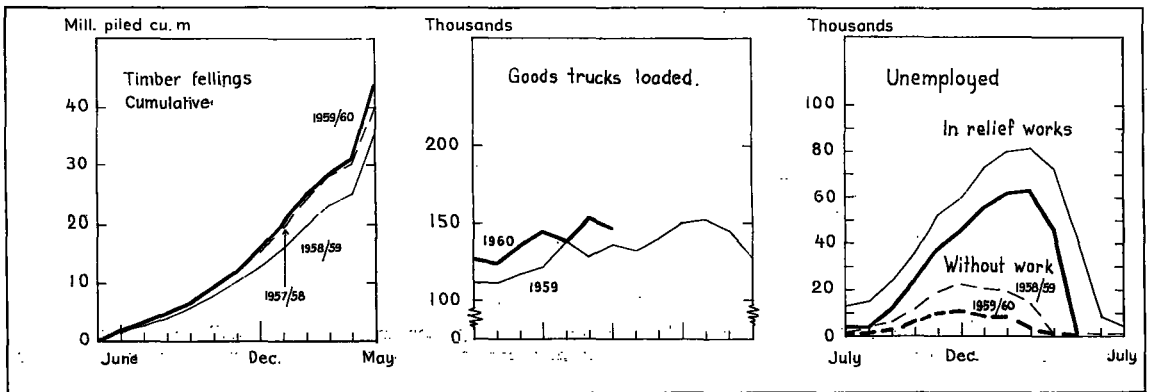
Period	Index of industrial production 1954 = 100								Commercial timber fellings 1 000 piled cu. m	Milk received by dairies 1 000 litres	Wholesale trade volume index 1954 = 100
	Total	Investment goods	Other producer goods	Consumer goods	Special indexes of manufacturing						
					Wood industry	Paper industry	Metal industry	Other			
1951									36 070	1 405	85
1952									35 079	1 515	92
1953									29 170	1 609	93
1954	100	100	100	100	100	100	100	100	35 370	1 653	100
1955	111	116	109	113	99	115	111	111	38 600	1 659	116
1956	114	117	110	120	76	122	113	118	36 623	1 977	121
1957	117	119	116	118	82	134	115	117	40 919	2 085	114
1958	113	111	114	112	87	134	106	110	37 981	2 109	109
1959*	122	116	125	121	98	143	118	120	38 100	2 317	121
1959*											
March	117	111	119	117	99	128	113	116	3 434	181	115
April	128	123	130	128	113	148	125	126	1 959	203	128
May	120	106	121	123	96	139	112	121	10 121	235	123
June	121	117	118	126	111	129	117	122	1 782	252	118
July	97	75	105	94	90	135	80	95	1 323	228	117
Aug.	125	117	125	129	94	145	119	128	1 671	201	132
Sept.	132	130	134	129	99	162	132	128	1 768	182	135
Oct.	138	129	144	133	102	164	135	136	2 640	166	150
Nov.	135	129	143	125	95	169	131	132	2 809	165	127
Dec.	128	129	132	121	106	147	131	120	3 636	176	136
1960*											
Jan.	125	120	129	120	101	157	122	114	4 094	179	101
Feb.	134	133	137	130	125	162	133	125	4 680	175	119
March	151	152	153	146	145	178	152	141	4 084	196	134
April	131	125	131	133	124	148	127	128	2 597	228	139
May	141	136	142	140	124	171	139	134	13 081	251	144



BUILDING - WAGES - TRANSPORT - EMPLOYMENT

Period	Buildings completed, mill. cu. m					Buildings under construction at end of period mill. cu. m	Index of salary and wage earners' earnings 1957 = 100			
	Total	Dwelling houses	Farm buildings	Commercial and industrial premises	Official buildings		All salary and wage earners	Wage earners in		
								Agriculture	Forestry	Manufacturing
1956	19.92	8.82	2.83	4.59	2.42	22.98	95	94	99	96
1957	20.81	9.56	3.20	4.14	2.68	20.86	100	100	100	100
1958	19.29	8.46	3.08	3.57	2.93	20.38	105	103	103	105
1959*	19.85	8.36	3.42	4.50	2.39	20.46	110	106	104	111
1959*										
Jan.-Mar.	3.22	1.38	0.32	0.89	0.50	18.16	108	106	99	109
Apr.-June	3.01	1.29	0.42	0.69	0.38	21.74	110	107	105	111
July-Sept.	6.01	2.48	1.21	0.96	0.93	22.93	111	106	105	111
Oct.-Dec.	7.62	3.22	1.47	1.96	0.59	20.46	111	104	105	112
1960*										
Jan.-Mar.	4.01	1.61	0.33	1.39	0.54	20.66

Period	Railways		Foreign shipping				Unemployed at end of month			
	Goods trucks loaded Thousands		Vessels arrived with cargo — 1 000 net reg. tons		Vessels departed		Without work Number		In relief works Number	
	1959	1960*	1959	1960*	1959	1960*	1959	1960*	1959	1960*
Jan.	112	124	307	431	359	345	20 520	8 567	72 956	55 603
Feb.	117	135	232	284	271	319	19 201	6 251	79 765	61 505
March	122	144	281	266	333	288	12 393	2 864	80 903	62 923
April	138	138	289	350	365	366	905	961	72 800	45 802
May	128	153	402	554	461	564	928	—	41 724	—
June	136	147	544	675	686	849	858	—	8 137	—
July	132		545		775		893		4 276	
Aug.	140		513		692		1 379		3 629	
Sept.	150		436		671		3 026		11 926	
Oct.	152		462		602		6 753		24 036	
Nov.	146		465		530		9 347		37 772	
Dec.	127		463		483		9 547		45 331	



EXPLANATIONS RELATING TO THE STATISTICAL SECTION

BANK OF FINLAND

Page 3. The items of the statement of the Bank of Finland are described in Monthly Bulletin No. 10, 1955, p. 25.

Page 4. *Other foreign assets* = Foreign bills + Foreign bonds + Prepayments for exports. *Other foreign liabilities* = Mark accounts of holders abroad + Long-term foreign liabilities.

Page 5. *Treasury bills and bonds*: up to August 1953, bills, and thereafter Treasury bond loan + Treasury bill covering certain IMF and IBRD accounts (included in Other claims). *Trade and industry, Other advances* = Inland bills in foreign currency + Cheque accounts (assets) + Other claims excl. Treasury's IMF and IBRD bill, Prepayments for exports and Advances for stand-by stocks. *Liabilities* = Other short-term liabilities + Other cheque accounts + Deposits against import licences (in 1955—56) — Account of the Mortgage Bank of Finland Oy. — *Diagrams*. Left: *Net claims on other than banks* = Net foreign assets + Net claims on the Treasury + Net claims on the public + Finnish bonds + Finnish coin — Equalisation accounts = Notes in circulation + Bank's own funds — Net claims on the banks.

DEPOSITS BY THE PUBLIC— ADVANCES TO THE PUBLIC

Commercial bank and mortgage bank figures obtained from the official bank statistics, savings bank figures from the Central Statistical Office, other figures from the respective credit institutions or their central banks.

Page 6. *Cheque accounts in all credit institutions* relates to commercial banks, savings banks, co-operative credit societies, and mortgage banks. *Term deposits in all credit institutions* includes a small amount of deposits in mortgage banks. *Indexed deposits* are included in term deposits.

Page 7. *Money supply* = Finnish notes and coins in circulation — Finnish notes and coins held by the banks + Cheque accounts of the public + Postal giro accounts of the public.

STATE FINANCES

Page 8. Official monthly figures adjusted by the Bank of Finland Institute for Economic Research. *Revenue and expenditure*: All extra-budgetary funds are included, and figures are reported on a payment basis. — Annual figures will be published in separate articles. *Debt*: Index-tied bond loans are given at their nominal values. Cash debt (net) = net debt to the Bank of Finland plus short-term debt to the Post Office Savings Bank minus cash holdings of State departments. The change in this item = surplus (deficit) in the table on revenue and expenditure. *Diagram*. The 12-month totals are plotted to the last month of the respective periods.

FOREIGN TRADE

Pages 9—12. Figures supplied by the Board of Customs. *The unit value indexes* (p. 9): The indexes are calculated first according to the Laspeyres formula but at the end of each year adjustments are made according to the Fisher formula,

and the level of the quarterly indexes is corrected so that their arithmetic mean equals the annual index. Seasonal variations are not eliminated. Terms of trade: the ratio of export indexes to import indexes. *Foreign trade by countries* (p. 12): imports by countries of purchase, exports by countries of sale.

PRICE INDEXES

Page 13. *Wholesale price index* and *Building cost index* calculated by the Central Statistical Office. *Cost of living index* and *Consumer price index* calculated by the Ministry for Social Affairs.

PRODUCTION — INTERNAL TRADE — WORK CESSATIONS

Page 14. *Index of industrial production* calculated by the Central Statistical Office. The grouping by branches of industry is in accordance with the international nomenclature (ISIC). The weight of each group represents the ratio of its value added to the total value added of industrial production in 1954. Monthly figures are unadjusted for seasonal variations. Commodities according to use: investment goods weight 12.7, other producer goods weight 54.6 and consumer goods weight 32.7. Special manufacturing indexes: wood industry ISIC no. 25, weight 8.6, paper industry no. 27, weight 8.6, metal industry nos. 34—38, weight 25.4, and other manufactures nos. 20—24, 26, 28—33, 39, weight 44.9. *Commercial timber fellings* calculated by the Ministry of Communications and Public Works. *Milk received by dairies* calculated by the Board of Agriculture. Figures cover about 50—60 % of the total milk production. The share of the dairies having grown over the last few years, this series does not correctly reflect the development of total milk production during a prolonged period. *Wholesale trade volume index*, calculated by the Ministry of Finance. Based on sales statistics compiled by the daily Uusi Suomi, covering about 50 % of all internal wholesale trade. Price fluctuations have been eliminated by means of the revised wholesale price index. *Diagram*. Left: *Index of productive activity* calculated by the periodical Mercator. It comprises all sectors of the economy. Annual averages are revised according to national income figures.

BUILDING — WAGES — EMPLOYMENT — TRANSPORT

Page 15. *Building* figures supplied by the Central Statistical Office. *Index of salary and wage earners' earnings* calculated by the Central Statistical Office. Beginning 1957, the weights employed are determined according to the structure of total earnings in 1957; for 1954—1956, the weights are in accordance with earnings in 1951. *Railway* figures supplied by the Board of Railways. *Shipping* figures supplied by the Shipping Board. *Unemployment* figures supplied by the Ministry of Communications and Public Works. The first column shows the number of persons actually without work, while the second one comprises unemployed persons engaged in relief works or other works financed from relief funds. The figures relate to the Friday nearest to the end of the month.

SYMBOLS USED

* Preliminary o Less than half the final digit shown . Logically impossible .. Not available — Nil

A line drawn across a column between two consecutive figures indicates that the figures above and below the line are not strictly comparable.

SOME PARTICULARS ABOUT FINLAND

FORM OF GOVERNMENT

From 1154 to 1809 Finland formed a part of the kingdom of Sweden. It then became an autonomous Grand Duchy connected with Russia until December 6, 1917, the date of Finland's declaration of independence. The republican constitution was adopted in 1919. The legislative power of the country is vested in the Diet and the President. The highest executive power is held by the President, elected for a period of 6 years. The President for the current period, March 1, 1956, to March 1, 1962, is Urho Kekkonen.

The Diet, comprising 200 members, is elected by universal suffrage for a period of 4 years. The number of seats of the different parties in the Diet elected in 1958 are as follows: People's Democrats 50, Agrarians 47, Social Democrats 37, Conservatives 29, Swedish Party 14, Social Democrat Opposition 14, Finnish People's Party (liberal) 8 and Finnish Small Farmers' Party 1.

LAND

THE AREA is 337 000 square kilometres (Great Britain's area is 245 000 sq. km and Italy's area 301 000 sq. km). Of the total, inland waters form 9.4 %. On an average 13.9 % of the land in the South of Finland is cultivated (1950), 1.9 % in the North and 8.0 % of the land as a whole. Of the land area 21.8 mill. ha (53.9 mill. acres), or 71.6 %, are covered by forests.

OWNERSHIP OF LAND (1950): The total land area was distributed among different classes of owners approximately as follows: private 56.9 %, State 35.0 %, joint stock companies etc. 6.4 %, communes 1.7 %.

POPULATION

NUMBER OF INHABITANTS (1958): 4.4 million. Sweden 7.4, Switzerland 5.2, Denmark 4.6 and Norway 3.5 million.

DENSITY OF POPULATION (1958): In South Finland 24.5, in North Finland 4.0 and in the whole country an average of 14.4 inhabitants to the square kilometre.

DISTRIBUTION BY AREA (1958): 63.0 % of the population inhabit the rural areas, 37.0 % towns and urban districts. The largest towns are: Helsinki (Helsingfors), the capital, 445 190 inhabitants, Tampere (Tammerfors) 121 422, Turku (Åbo) 120 095.

OCCUPATIONS (1950): Agriculture and forestry 42 %, industry 29 %, commerce 7 %, transport and communications 6 %, services 9 %, other economic activities 1 %, economically inactive persons 6 %.

LANGUAGE (1950): Finnish speaking 91.1 %, Swedish speaking 8.6 %, others 0.3 %.

EDUCATION (1959): Practically all persons over 15 years of age are literate. There are 5 universities (the oldest founded in 1640), 7 colleges of university standard, and 2 teachers' training colleges, besides teacher-training departments in two of the universities.

INCREASE OF POPULATION (1958): births 18.5 ‰, deaths 8.9 ‰, increase 8.5 ‰. Deaths in France 11.2 ‰ and in Great Britain 11.7 ‰.

TRADE AND COMMUNICATIONS

NATIONAL INCOME (1958, in thousand million marks): Gross domestic product at market prices 1 185 (excl. repairs and maintenance). Net domestic product at factor cost, by industrial origin: agriculture 113 (12 %), forestry and fishing 90 (9 %), manufacturing 302 (31 %), construction 94 (10 %), transport and communications 76 (8 %), commerce, banking and insurance 116 (12 %), general government 112 (12 %), other services 62 (6 %), total 965. Index of real domestic product 144 (1948 = 100).

FOREST RESOURCES (1951—1953): The growing stock comprised 1 493 million of solid cu. m incl. bark (52 660 million cu. ft), of which pine 43.7 % and spruce 35.7 %, the rest 20.6 % being leaf-trees, chiefly birch. Of the growing stock, 10 900 million cu. ft, 58.0 % of them pine, was up to the standard required for logs. The annual growth is 46 million solid cu. m green wood excl. bark (1 620 mill. cu. ft). The total removal in 1954 calculated according to the use of wood was 45 million cu. m (1 589 million cu. ft.)

AGRICULTURE (1950): Cultivated land 2.4 million hectares of which holdings of less than 5 ha amount to 17 %, 5 to 15 ha 46 %, 15 to 50 ha 32 % and more than 50 ha 5 %. Number of holdings 357 000, of which 162 000 are of more than 5 ha. Index of agricultural production 91 for 1957 (1954 = 100). Measure of self-sufficiency in the crop year 1957/58: bread cereals 42 %, animal products 121 %.

INDUSTRY (1957): Gross value of industrial production 912 000 mill. marks, number of workers 309 000, administrative employees 58 000, motive power (1957) 2.6 mill. HP. Index of industrial production 117 for 1957 (1954 = 100).

RAILWAYS (Jan. 1, 1960): Length 5 369 km, of which 5 295 km are State and 74 km private railways. The gauge of State railways 1 524 m.

MERCHANT FLEET (June 30, 1960): Steamers 219 (311 467 gross reg. tons), motor vessels 199 (400 808 gross reg. tons), sailing vessels with auxiliary engines 94 (9 507 gross reg. tons). Total 512 (721 782 gross reg. tons).

MOTOR VEHICLES (Dec. 31, 1959): Private cars 163 000, lorries and delivery vans 57 900, buses 5 900, others 2 100. Total 228 900.

AIR TRAFFIC: (Dec. 1, 1959) Number of aircraft in scheduled traffic 21, other aircraft 71. In 1958, 424 000 passengers were carried by the two Finnish companies; over 177 million passenger kilometres and 2.3 million ton kilometres of freight and mail were transported.

FINANCE AND BANKING

CURRENCY. Since 1860, Finland has had its own monetary system. From 1877 until 1914 the country was on the gold standard, and returned to it in 1926. Since 1931, the redemption of bank notes in gold has been suspended. The currency unit is the mark (Finnish markka). Its official par value is 320 marks per one U.S. dollar. Finland has been a member of the International Monetary Fund since 1948.

MUNICIPAL FINANCES. In the finance accounts for 1957 expenditure amounted to 159 411 mill. marks. Total revenue was 159 591 million, of which income from taxation 84 383 million. The municipal income tax (non-progressive) averaged 11.22 % of the ratepayers' taxable income.

THE CENTRAL BANK. The Bank of Finland functions under the guarantee and supervision of the Diet. Its Board of Management is appointed by the President of the Republic; the Bank Supervisors, nine in number, are elected by the Diet. The Bank has a head office in Helsinki and 12 branch offices in other towns.

OTHER CREDIT INSTITUTIONS (Dec. 31, 1959). There are two big and three small commercial banks with in all 564 offices, 395 savings banks, 548 cooperative credit societies and their central bank, six mortgage societies, and the Post Office Savings Bank. The savings departments of the cooperative stores accept deposits from the public.

RATES OF INTEREST (April 1, 1959). Bank of Finland discount rates 6—7 1/4 %. Other credit institutions: term deposits 4 1/4 % (12 months' deposits 5 %, index-tied deposits 3 1/4 %) and sight deposits in savings banks and cooperative credit societies 1/4 %; lending rate 7 % in general.

SOME FEATURES OF THE FINNISH CHEMICAL INDUSTRY

BY

J. LARINKARI, D. Sc. (Techn.)

THE CENTRAL CHEMICAL ASSOCIATION

The great advance that has occurred in the chemical industry is of worldwide extent. During the period 1950—1958, when the total of industrial production increased by 19 per cent in the United States, 55 per cent in Europe and 80 per cent in the Central European countries, the increase in the chemical industry was 45 per cent in the United States, 96 per cent in Europe and a full 126 per cent in Central Europe.

A similar development has taken place in Finland. In 1957, the index figure of production volume (1948 = 100) was 177 for the whole of industry, and 247 for the chemical industry. The aims which were set for the chemical industry about ten years ago have for the greater part been attained and part are on the verge of attainment. This does not mean that development is coming to an end, for new aims and plans await their turn of fulfilment. Perhaps the main obstacle to rapid progress is the small population of the country. The chemical industry is characterised by large productive plants, each of which manufactures only a few products. Profitability prescribes the minimum size of an industrial undertaking. As there are few consumers in the country, and as in several spheres keen foreign competition means that exports can scarcely be reckoned on, marketing problems restrict the versatility of the chemical industry.

The production of chemicals is not possible in any country if a certain extent of basic production does not exist there. Finland has now crossed this threshold as regards inorganic chemicals, but there is no basic industry in respect of actual organic chemicals. The sources of organic raw materials are confined to the forests, so that the by-products of the woodpulp industry constitute almost the only source. The future basic industry concerned with organic chemicals will probably follow the lines tried out elsewhere, and be based upon the distillation of mineral oils.

Very often, the „chemical industry” is understood to mean only the production of basic chemicals. Unfortunately, there does not exist a definition which is precise and internationally approved. As chemical technics are characterised by the conversion of one substance into another, all products obtained by an alteration of chemical structure might be considered to be products of the chemical industry.

In practice, the boundary of the chemical industry is not drawn in this way, but when any one of its spheres of activities is sufficiently grown, it leaves its parent and founds its own family. Thus the lines of demarcation are drawn differently in various countries. For instance, in Finland the conversion of wood into chemical pulp constitutes an independent industry, but the

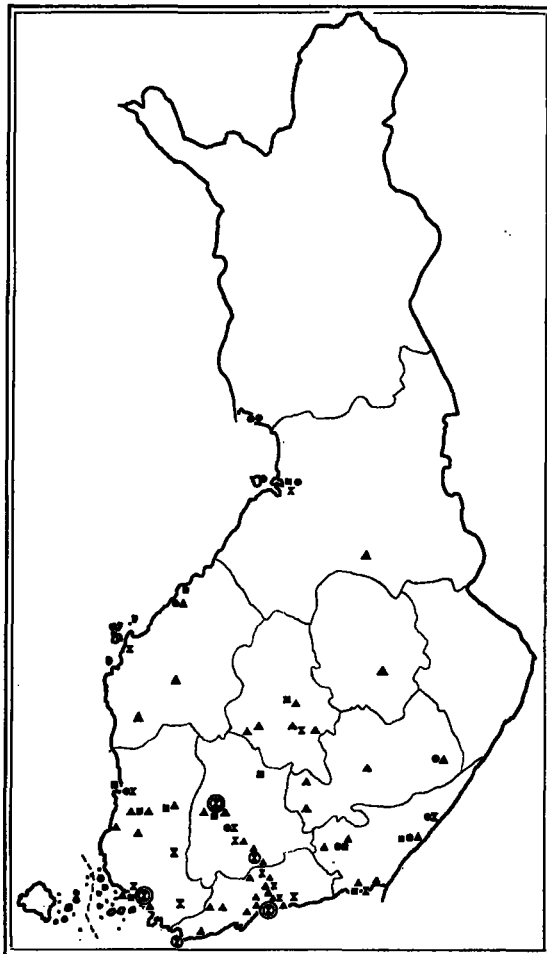
further processing of its by-products forms a part of the chemical industry.

If the chemical industry is considered in its widest sense, its share in the gross value of total Finnish industry would in 1957 have been 20 per cent, this figure including all industrial activity in which a material is converted chemically. In the „normal” chemical industry, the 1959 gross value of production was preliminarily estimated at about 70 000 million marks, and the number of workers at about 14 000; this represented about 7 per cent of the gross value of the total of industrial production. Mainly owing to the oil refinery of Neste Oy, the figure has risen during the last two years. In the near future, the share of the chemical industry may be expected to increase still further.

On examination of the geographical distribution of Finnish chemical plants, one finds them to be situated principally in Southern and Western Finland. If the estimation is based upon the number of workers, 83 per cent of the chemical industry is situated in the provinces of Uusimaa, Turku and Pori, Häme, and Vaasa.

Sulphuric acid forms the major part of the basic chemicals produced from mined raw materials. The roaster gases of the pyrite ores are converted by catalysis into sulphuric acid. As the output of processed ores is growing, the quantity of gases suitable for profitable manufacture of sulphuric acid will increase considerably, so that the 170 000 tons produced last year should be far exceeded during the next few years. The fertiliser industry is a large consumer of sulphuric acid. In 1959, a total of 780 000 tons of fertilisers were produced in Finland. One industry which makes use of sulphuric acid is that producing explosives. When the output of sulphuric acid increases, fresh uses must be found for it. The soil also contains ilmenite, from which titanium oxide

LOCATION OF FINNISH CHEMICAL WORKS



- Basic chemical works
- Refining of by-products
Other chemical plants
- ▲ 1 unit
- × 2—5 units
- ⊙ 6—10 „
- ⊗ over 10 units

is obtained by treating it with sulphuric acid, and it is therefore natural that there has begun the building of a titanium oxide factory; it is being constructed at Mäntyluoto in the neighbourhood of Pori. Production, which will amount to 16 000 tons yearly, should start in a year's time. This should consume 60 000 tons of sulphuric

acid. The factory is owned by Vuorikemia Oy, which was founded by five State-controlled companies. Among other future users of sulphuric acid, mention should be made of the aluminium sulphate works at Harjavalta, at present under construction, and owned by the State sulphuric acid company. The manufacture of phosphoric acid is being planned, and some other large projects for utilising sulphuric acid are under consideration.

Self-sufficiency in fertilisers for agriculture has been attained, thanks to the nitrogen factory of Typpi Oy in Oulu. In 1959, its output of total nitrogen amounted to 36 500 tons. Complete self-sufficiency has not yet been achieved as regards nitrogen. If the domestic demand is to be satisfied, another factory should be built with an output of about 32 000 tons of nitrogen, which could also be used for producing calcium saltpetre to replace imports. Self-sufficiency has been attained in respect of ammonia and nitric acid; the latter in particular is an indispensable raw material for the manufacture of explosives.

Practically speaking, Finland has for a long time been self-sufficient in respect of chlorine and caustic soda; at times, it has even been possible to export these. However, the high rates of freight make this branch of activity a typical home market industry. As the demand for bleached chemical pulp has continued to grow in the world market, a chlorine factory, Oulu Oy, with an annual capacity of 6 000 tons was built about three years ago at Oulu, the enlargement of which to 21 000 tons has just been completed. This will ensure that the requirements of the bleaching departments under construction in the pulp mills of Northern Finland will be met. Exports of alkali which are produced during the process of electrolysis have been made after satisfaction of the home demand; when the production of chlorine reaches full

capacity, there may even be a surplus of lye. Apart from its use in bleaching, small quantities of chlorine are used for the production of some solvents and anti-freezing solutions.

The remainder of the country's electrochemical industry is comparatively modest. Calcium carbide is produced at Voikka to an extent of 7 000 tons annually; most of this is employed in the production of acetylene and a part for lime nitrogen. As four kWh are consumed per kilogramme of calcium carbide, and the cost of electricity is comparatively high in Finland, the establishment of an extensive organic chemical industry on the basis of carbide cannot be contemplated. — For the same reason, chlorate is produced only to satisfy home requirements.

Mention should be made of some of the possibilities and plans connected with mined raw materials. Exploitation will soon begin of the Pyhäsalmi sulphur ore deposit, owned by Outokumpu Oy, which contains copper and zinc; the building of a smelting furnace has been started at Kokkola. This will provide the chemical industry with 80 000 tons of sulphur dioxide and 80 000 tons of sulphur, besides iron ore and electrical power. The sulphur so obtained will be used in the chemical pulp industry and in the production of carbon disulphide and some plant-protecting materials, etc., and will be sufficient to satisfy the home demand. The Korsnäs mine should come into use at the beginning of 1961; from this, lead concentrate will be obtained. From the waste, it will be possible annually to produce 20 000 tons of lime for agricultural purposes. As regards the apatite deposits at Siilijärvi, plans are still incomplete. — The main metallurgical products obtained in 1959 were 32 600 tons of copper, 726 kg of gold and 16 259 kg of silver. In addition, a few hundred tons of nickel and copper sulphate were produced. On the other hand, more than 100 000 tons

of zinc concentrates were exported. A nickel flash smelting furnace was completed at the end of 1959, the first of its kind in the world. These works began continuous production early in 1960. The raw material basis provided by the chrome deposit at Kemi will also be very valuable for the chemical industry.

The development of an organic chemical industry is hampered by the absence of domestic coal resources. Instead, Finland has her forests, and the by-products obtained in the manufacture of chemical pulp may make it possible to extend the organic chemical industry. Nevertheless, the variety of products is very limited, and many years of research work have not yet resulted in the discovery of a truly economic and profitable article in addition to those now produced. Sulphite alcohol, tall oil and turpentine are therefore still the principal products. The quantities produced are, of course, dependent upon the output of the main product, chemical pulp, but are also influenced by the competitive ability of the article on the world market. Sulphite alcohol encounters the greatest difficulties in this respect. Considerably more of it could be produced than the quantity last year, when the output was 19 000 tons, of which 8 000 tons were used within the country and the remainder exported. At the moment, export prospects appear to be good owing to the present state of trade, but it is open to question how long these conditions will last. Competitive ability depends entirely upon the size of the demand, as synthetic ethanol and alcohol derived from molasses are cheaper to produce. In the very near future, the export of sulphite alcohol may again become a critical question, if the production of alcohol from surplus barley is started in the United States; in this event, 250 000 tons of alcohol in excess of demand would be produced there. The uncertainty of the market

may be in part the reason why several sulphite alcohol factories have stopped production and have begun to distil sulphite liquor. It also seems to be very difficult to establish a refining industry which is based upon sulphite alcohol, as the same basic materials are obtained more cheaply from mineral oils. In its report, the Industrial Council recommends that study should be made of the conditions for extending the manufacture of synthetics based upon ethyl alcohol, and suggests the employment of acetaldehyde. This method is at present in use in Sweden, where the productive capacity of acetaldehyde is 25 000 tons yearly. As research work is in progress into the future use of sulphite alcohol, the prospects for the future should soon be made clear.

A considerable quantity of tall oil is also obtained as a by-product of the manufacture of chemical pulp. In 1959, the output amounted to 29 200 tons. By further refining, 6 400 tons of tall oil fatty acids and 5 600 tons of tall resin were obtained. A lack of refining capacity means that part of the tall oil has to be exported in a crude state. As, on the other hand, resin is imported for the paper industry, it would seem feasible to increase the productive capacity of the home country. At the same time, the further refining of the tall oil fatty acids should be studied; the major part of the present output is used for pine soap. A further important by-product of sulphate pulp is crude turpentine, of which 6 500 tons were produced in 1959. Of this quantity, 4 400 tons were distilled and used chiefly at home. Dimethyl sulphite is produced on a small scale, a considerable part of the output being exported for the manufacture of dimethyl sulphoxide. An artificial fibre similar to orlon can be produced with this material.

Hardwood contains pentosan, from which furfural can be obtained by hydrolysis. This opens up interesting prospects, and above

all for the use of birch as a raw material for the chemical industry. The question has recently been investigated in the United States and Finland and other countries. The total world output is probably about 70 000 tons, of which 25 000 tons are used for producing nylon, and the rest for the lubricating oil industry. Its commercial future will depend mainly upon the demand for furfural in the world market, as there is sufficient raw material, and the need of capital is small. A factory capable of producing a few thousand tons is considered sufficient, and such a factory would cost only about a hundred million marks.

By further refining, rayon and cellophane are obtained from chemical pulp. In 1959, Säteri Oy at Valkeakoski produced 13 200 tons of viscose staple, 900 tons of viscose rayon and 866 tons of viscose film. A considerable part of the output was exported. As a by-product, 5 500 tons of sodium sulphate were obtained.

A few hundred tons of nitrocellulose were produced by nitration from chemical pulp at the Vihtavuori works, and were used for gunpowder, varnish and plastics. In its own works the Äänekoski company also produced about 700 tons of carboxymethyl chemical pulp, as well as acetic acid, one of the components necessary for this product. By treatment of the acetic acid with chlorine, acetic acid chloride was also produced; this is employed for the production of weed hormones.

The oil refinery of Neste Oy at Naantali, which started operations in 1957, is a newcomer to the chemical industry of Finland. It has a capacity of one million tons of crude oil yearly, and is able to satisfy the home demand for liquid gas and benzene. By means of the gases produced in refining the oil, a very considerable petro-chemical industry could be established in accordance with foreign models. Technically, this is possible; nevertheless, marketing the products

is another matter, for the home market is too small for the minimum size of a petro-chemical factory.

Many branches of chemical manufacture have not been mentioned here, as for instance the medicament, soap, rubber and plastic industries, as well as the production of glass and ceramics, and some factories connected with the manufacture of foodstuffs which employ chemical processes in their production. In Finland, these are mostly home market industries and are of great importance to the community. However, the difficulties they encounter are probably common experience in all countries.

In Finland, the supplies of raw materials for the production of inorganic basic chemicals can be considered as being ample. For organic products, it is necessary to rely upon imported raw materials to a considerable extent. As regards future development, it may be said that the existence of basic production, and expansion in the near future of the basis of domestic raw materials, will increase the variety of production in the Finnish chemical industry, and will at the same time raise the quantity of chemical output. Some new mineral deposits still await a time appropriate to their becoming the object of regular working. This applies above all to uranium and lithium.

In addition to the spheres referred to, the Industrial Council recommends the establishment of factories for soda ash, sodium sulphate, calcium chloride and carbon black, and the extension of the nitrogen industry in order to produce carbamide and ammonium chloride. The suggestion regarding the carbamide factory does not seem realisable, because the minimum capacity of the factory, according to data, would have to be 100 000 tons, a quantity that would be far in excess of demand. As for the other factories, their establishment should be within the bounds of possibility.

ITEMS

Trade and payments agreements. Finland has recently concluded trade and payments agreements with the following countries, with a view to effecting a gradual changeover from a bilateral to a multilateral system of payments.

Turkey, on May 13. The trade agreement contains indicative lists which cover all the commodities traditionally exchanged between Finland and Turkey. The payments agreement includes a provision that one-half of the balance on clearing account be settled in convertible currency at quarterly intervals.

Greece, on June 9. The trade agreement contains indicative lists which cover all the commodities traditionally exchanged between Finland and Greece. The payments agreement includes a provision that one-half of the balance on clearing account be settled in convertible currency at intervals of four months.

Payments agreement with Iceland. The payments agreement between Finland and Iceland was terminated on June 15. Payments are now made in convertible currencies, and Iceland is included in the group of countries which benefits from the Finnish free list and global quota systems.

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New social Legislation. Several new acts have emerged from the spring session of the Diet. On April 30 the *Act on Annual Vacation* was passed. The minimum period to which any employee is entitled is fixed at 1 ½ days' holiday per working month; for a full 12 months (ending March 31) this makes 3 weeks. After 10 years of service, all employees are given 2 days' holiday per month, or a minimum of 1 month for a full 12 working months. Previously the law stip-

ulated 2 weeks after the first year (ending April 30), 3 weeks after the fifth year and a month (or 2 days per working month) after the 10th year of service.

Unemployment is to be dealt with by three laws which constitute far-reaching revisions of the previous statutes. The new *Employment Act*, issued on June 20, makes the State primarily responsible for providing opportunities for work when needed. Local authorities share the burden up to certain limits, but the act is aimed at improving their financial position in this respect. The terms of engagement in public works shall as far as possible be equivalent to those offered in private employment.

The Act on Unemployment Funds, issued on June 20, is indeed an innovation. It sanctions, expands and supports the existence of unemployment funds pooled by an organized labour force. The State will provide 10/15 of the finances, the employers will be responsible for 4/15, and 1/15 will be collected from the beneficiaries themselves. If a member is involuntarily unemployed for a minimum period of 6 days, he is entitled to collect 2/3 of his regular wage, up to a maximum 1 000 marks, daily (750 marks if no dependents) for a period of not longer than 150 days in 12 consecutive months.

The Unemployment Compensation Act, issued on June 20, is intended for an unorganized labour force, mainly in the provinces, with no common pooled funds. Should there be no public works available, the local authorities can pay the unemployed 540—800 marks daily for a maximum of 120 days during one calendar year. The cost of this programme is to be borne by the State. The new law is more flexible, more substantial in payments, and has a wider coverage than the Unemployment Assistance Act it replaces.

BANK OF FINLAND

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