



# BANK OF FINLAND

*Monthly Bulletin*

**Finland's trade with the Socialist  
countries**

**Findings and recommendations of the  
Finnish committee on technology**

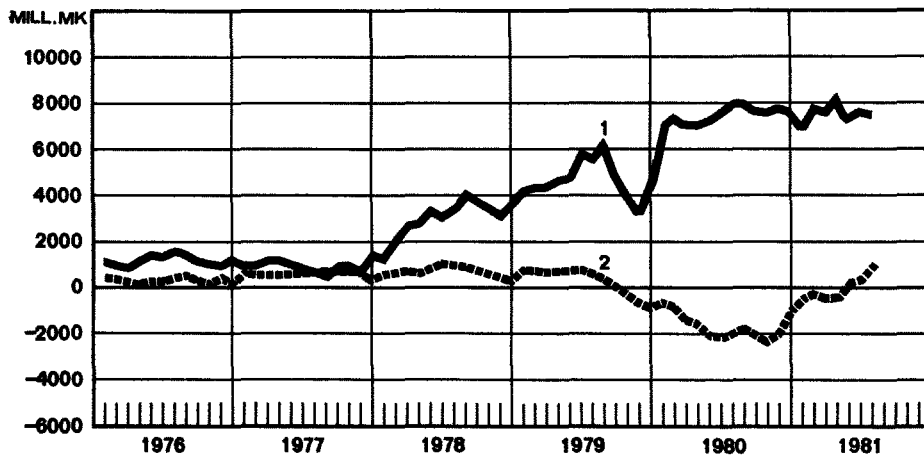
**Bank of Finland to participate in the  
financing of the Regional Development  
Fund**

**Finland's gross long-term foreign debt in  
January—June 1981**

**SEPTEMBER 1981**

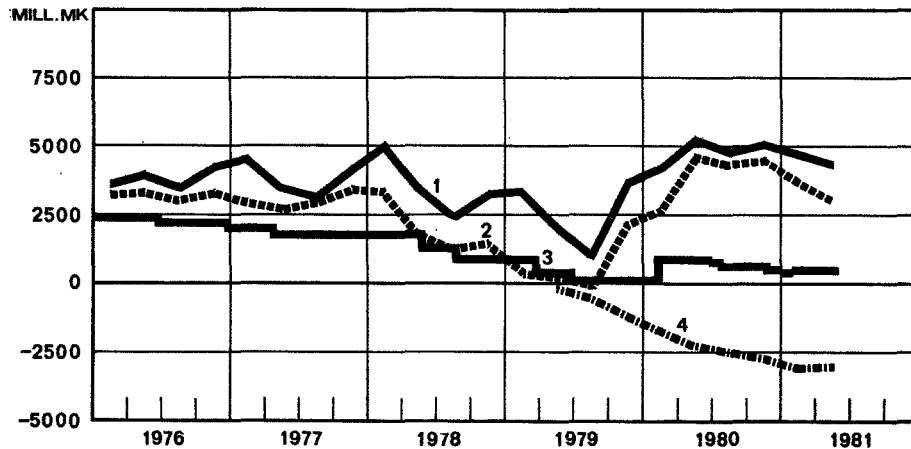
**Vol. 55 No. 9**

**BANK OF FINLAND'S CONVERTIBLE AND TIED FOREIGN EXCHANGE RESERVES, 1976-81**



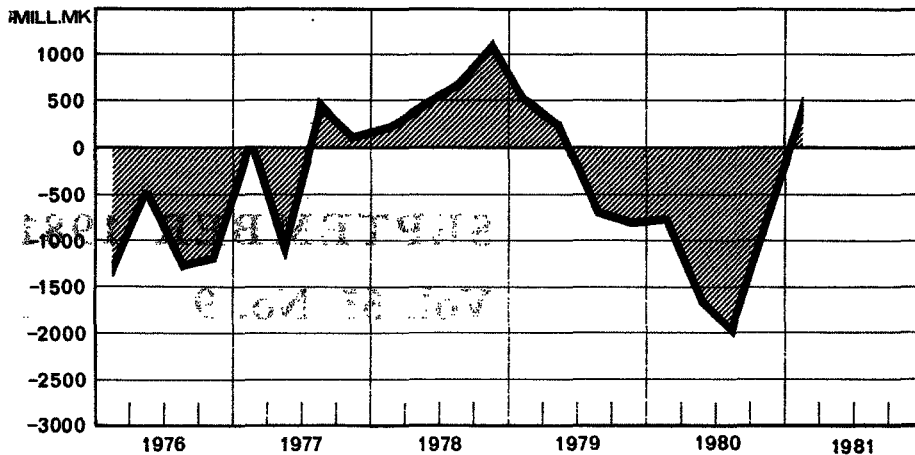
- 1. Gold and convertible currencies
- 2. Tied currencies

**COMMERCIAL BANKS' CENTRAL BANK POSITION, 1976-81**



- 1. Total central bank debt
  - 2. Actual central bank debt
  - 3. The quotas
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- Quarterly average of daily amounts (1, 2 and 4)

**BALANCE OF PAYMENTS CURRENT ACCOUNT SURPLUS/DEFICIT, 1976-81**



Seasonally adjusted quarterly figures

# FINLAND'S TRADE WITH THE SOCIALIST COUNTRIES

by Kari Holopainen, Head of Department

Bilateral Trade Department  
Bank of Finland

Traditionally, the Socialist countries have played an important role in Finland's foreign trade. During the postwar period, the share of these countries in Finland's foreign trade has averaged slightly more than one-fifth, which is considerably more than the corresponding shares in the trade of other industrialized market economies. For example, in recent years trade with the Socialist countries has accounted for only about 4 per cent of the total foreign trade of the OECD region.

Finland's trade with the Socialist countries is also distinguished by the procedural methods used, which differ in many respects from those applied in other East-West trade. Thus, Finland's trade with these countries is still conducted on a largely bilateral basis. Intergovernmental protocols on the exchange of goods and the bilateral clearing payments system continue to figure prominently in the development and regulation of trade. This applies particularly to the trade with the Soviet Union

but also in part to Finland's trade with other Socialist countries. Finland's agreements with some Socialist trading partners on the removal of Customs duties and the abolition of quantitative restrictions are unique internationally. Furthermore, Finland is the only developed market economy which has concluded an agreement on co-operation with the CMEA.

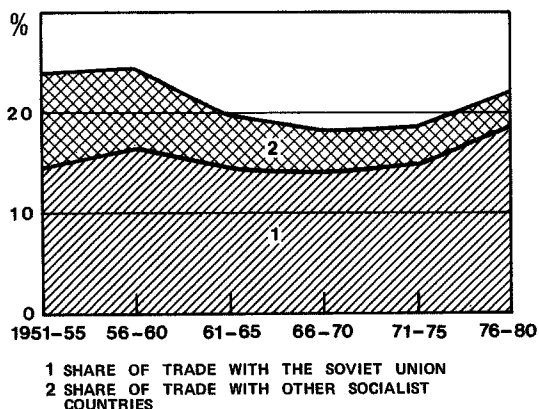
Of Finland's Socialist trading partners, the Soviet Union is by far the most important. At present, about 85 per cent of Finland's trade with the Socialist countries is carried on with the Soviet Union.

Chart 1 shows the development of the relative share of trade with the Socialist countries, broken down into trade with the Soviet Union and the other Socialist countries, in Finland's foreign trade during five-year periods in 1951—1980.

## TRADE WITH THE SOVIET UNION

Trade between Finland and the Soviet Union is based on a pure bilateral trade system. Since 1951, trade between the two countries has been regulated by five-year protocols and annual supplementary protocols on the exchange of goods. From the very beginning, payments between Finland and the Soviet Union have been effected within the framework of a bilateral clearing payments system. In addition, the development of trade is regulated by a number of other agreements and co-operation programmes. The Long-Term Programme for Economic Co-operation includes, for instance, development targets for economic co-operation between the two countries up to

**CHART 1. THE SHARE OF TRADE WITH THE SOCIALIST COUNTRIES IN FINLAND'S FOREIGN TRADE IN 1951—1980**



1995. On the basis of a customs agreement concluded in 1960, Finland has abolished tariffs on industrial products imported from the Soviet Union.

Trade with the Soviet Union occupies a central position in Finland's total foreign trade. In 1976—1980 its share rose to nearly 19 per cent, having previously remained relatively constant at 15 per cent.

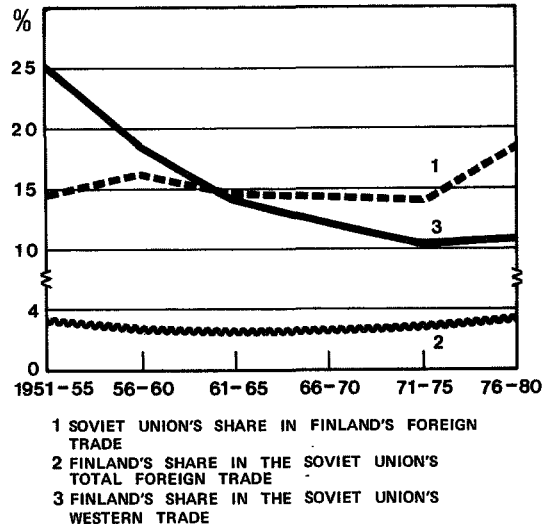
During the last two years, the value of trade between Finland and the Soviet Union has increased at an exceptionally fast rate. In 1980, the value of Finnish exports to the Soviet Union amounted to about 9 300 million marks, 55 per cent more than in 1979. The value of exports has continued to grow rapidly during the current year and is likely to exceed last year's level by at least a third. This is attributable to the vigorous growth in the value of imports from the Soviet Union during 1979—1980 caused by the sharp rises in the price of crude oil and other energy products on world markets.

As the majority of Finland's imports from the Soviet Union consists of crude oil and other energy products, energy price rises have a significant impact on the development of trade between the two countries. Owing to the bilateral nature of the trade, the growth in the value of imports can be compensated by increasing export deliveries.

Recent developments in Finnish exports to the Soviet Union have had an equilibrating effect on economic activity in Finland, for the vigorous growth of Finnish exports to the Soviet Union took place at the same time as the expansion in Finland's Western exports slowed down.

Finland's position on the Soviet market has remained fairly stable throughout the entire postwar period, her share in the total trade of the Soviet Union in the late 1970s being about the same as in the early 1950s. By contrast, Finland's share in the Soviet Union's trade with the West clearly declined up to

**CHART 2. THE SOVIET UNION'S SHARE IN FINLAND'S FOREIGN TRADE AND FINLAND'S SHARE IN THE SOVIET UNION'S FOREIGN TRADE IN 1951—1980**



the beginning of the 1970s, since when it has remained constant at about 10 per cent.

Chart 2 illustrates the development of average market shares during five-year periods in 1951—1980.

At present, about four-fifths of Finland's imports from the Soviet Union consists of energy products. Finland imports slightly less than 60 per cent of her crude oil from the Soviet Union, in addition to oil products, coal and natural gas. Of the West European countries, Finland has traditionally been the most important buyer of Soviet machinery and equipment.

Chart 3 illustrates the structure of Finland's imports from the Soviet Union during five-year periods in 1951—1980.

Metal industry products have dominated Finland's exports to the Soviet Union, in general accounting for about half the total export trade. The Soviet Union has continually been the most important export market of the Finnish metal industry. During the past decade about

(continued on page 30)

	1980		1981				
	Aug. 29	Dec. 31	Aug. 7	Aug. 14	Aug. 21	Aug. 31	
<b>Assets</b>							
Gold and foreign exchange receivables	8 122	8 024	9 280	9 234	8 951	9 131	
Gold	1 073	1 073	1 073	1 073	1 073	1 073	
Special drawing rights	564	397	697	697	697	689	
IMF reserve tranche	225	380	380	380	380	380	
Foreign bonds	2 071	2 125	1 412	1 421	1 421	1 420	
Convertible currencies	4 103	3 841	4 317	4 243	4 063	4 169	
Tied currencies	86	208	1 401	1 420	1 317	1 400	
Other foreign receivables	1 054	1 540	1 632	1 632	1 632	1 632	
Mark subscription to Finland's IMF quota	1 054	1 540	1 632	1 632	1 632	1 632	
Receivables from financial institutions	5 196	5 350	4 169	5 048	4 524	4 004	
Banks' cheque accounts	751	481	628	643	618	611	
Call money market advances	3 968	3 674	2 188	3 081	2 555	1 916	
Till-money credits	—	643	638	593	625	738	
Bonds	424	527	655	672	674	673	
Other financial institution receivables	53	25	60	59	52	66	
Receivables from the public sector	1 261	1 225	1 195	1 201	1 199	1 209	
Government promissory notes	650	512	354	354	354	354	
Bonds	220	288	373	377	377	386	
Total coinage	389	403	464	465	466	468	
Other public sector receivables	2	22	4	5	2	1	
Receivables from corporations	2 978	3 399	3 769	3 757	3 802	3 819	
Financing of exports	1 268	1 502	1 531	1 514	1 543	1 557	
Financing of domestic deliveries	1 372	1 561	1 939	1 941	1 957	1 960	
Bonds	223	220	196	196	196	196	
Other corporate receivables	115	116	103	106	106	106	
Other assets	77	80	84	84	84	84	
	Total	18 688	19 618	20 129	20 956	20 192	19 879
<b>Liabilities</b>							
Foreign exchange liabilities	1 775	983	78	74	69	53	
Convertible accounts	33	18	19	16	17	15	
Tied accounts	1 742	965	59	58	52	38	
Other foreign liabilities	1 931	2 430	2 652	2 652	2 652	2 652	
IMF mark accounts	1 365	1 864	1 956	1 956	1 956	1 956	
Allocations of special drawing rights	566	566	696	696	696	696	
Notes and coins in circulation	4 449	4 954	5 151	5 100	5 101	5 089	
Notes	4 086	4 572	4 730	4 680	4 680	4 669	
Coins	363	382	421	420	421	420	
Deposit certificates in circulation	2 100	1 900	600	1 800	1 800	450	
Claims of financial institutions	4 000	3 739	4 367	4 018	3 279	4 329	
Banks' cheque accounts	1	1	2	1	5	1	
Call money market deposits	780	290	1 835	1 500	770	1 770	
Cash reserve deposits	2 989	3 317	2 396	2 396	2 387	2 429	
Capital import deposits	205	108	122	109	107	106	
Other financial institution claims	25	23	12	12	10	23	
Claims of the public sector	43	591	771	772	750	747	
Cheque accounts	0	2	1	1	1	0	
Counter-cyclical reserves	42	545	545	545	545	545	
Counter-cyclical deposits	—	37	145	145	145	145	
Capital import deposits	—	—	63	64	44	44	
Other public sector claims	1	7	17	17	15	13	
Claims of corporations	854	978	1 533	1 533	1 536	1 565	
Deposits for investment and ship purchase	572	717	1 320	1 320	1 322	1 351	
Capital import deposits	260	83	—	—	—	—	
Export deposits	17	110	204	204	205	205	
Other corporate claims	5	68	9	9	9	9	
Other liabilities	14	13	17	13	13	13	
Equalization accounts	1 516	1 767	2 559	2 586	2 579	2 562	
Capital accounts	2 006	2 263	2 401	2 408	2 413	2 419	
Primary capital	1 400	1 400	1 400	1 400	1 400	1 400	
Reserve fund	441	441	750	750	750	750	
Net earnings	165	422	251	258	263	269	
	Total	18 688	19 618	20 129	20 956	20 192	19 879

End of year or month	Foreign sector						Public sector				Deposit certificates in circulation
	Gold SDR, IMF reserve tranche	Foreign bonds	Convertible currencies, net	Total convertible reserves (1+2+3)	Tied currencies, net	Other receivables, net	Net receivables (4+5+6)	Receivables	Liabilities	Net liabilities (9-8)	
	1	2	3	4	5	6	7	8	9	10	11
1975	399	204	1 011	1 614	368	-315	1 667	339	1 301	962	250
1976	357	397	954	1 708	389	-660	1 437	447	1 133	686	-
1977	337	543	1 212	2 092	496	-2 031	557	391	328	- 63	200
1978	728	872	3 080	4 680	471	-1 099	4 052	633	114	-519	1 090
1979	1 728	1 749	2 964	6 441	-678	-764	4 999	884	387	-497	1 700
1980	1 850	2 125	3 823	7 798	-757	-890	6 151	1 225	591	-634	1 900
1980											
Aug.	1 862	2 071	4 070	8 003	-1 656	-877	5 470	1 261	43	-1 218	2 100
Sept.	1 851	2 088	3 796	7 735	-1 847	-886	5 002	1 284	43	-1 241	2 250
Oct.	1 851	2 077	3 811	7 739	-2 146	-886	4 707	1 165	43	-1 122	1 850
Nov.	1 845	2 082	3 949	7 876	-1 847	-886	5 143	1 185	74	-1 111	2 600
Dec.	1 850	2 125	3 823	7 798	-757	-890	6 151	1 225	591	-634	1 900
1981											
Jan.	1 980	1 994	3 163	7 137	-389	-1 020	5 728	1 081	631	-450	1 000
Feb.	1 974	1 812	4 165	7 951	-165	-1 020	6 766	1 095	647	-448	1 500
March	1 974	1 764	4 107	7 845	-363	-1 020	6 462	1 112	656	-456	1 800
April	1 974	1 726	4 698	8 398	-349	-1 020	7 029	1 116	667	-449	1 300
May	1 974	1 708	3 777	7 459	315	-1 020	6 754	1 161	680	-481	300
June	1 974	1 422	4 331	7 727	437	-1 020	7 144	1 155	696	-459	700
July	2 150	1 400	4 109	7 659	1 166	-1 020	7 805	1 186	731	-455	600
Aug.	2 142	1 420	4 154	7 716	1 362	-1 020	8 058	1 209	747	-462	450

## FOREIGN EXCHANGE SITUATION

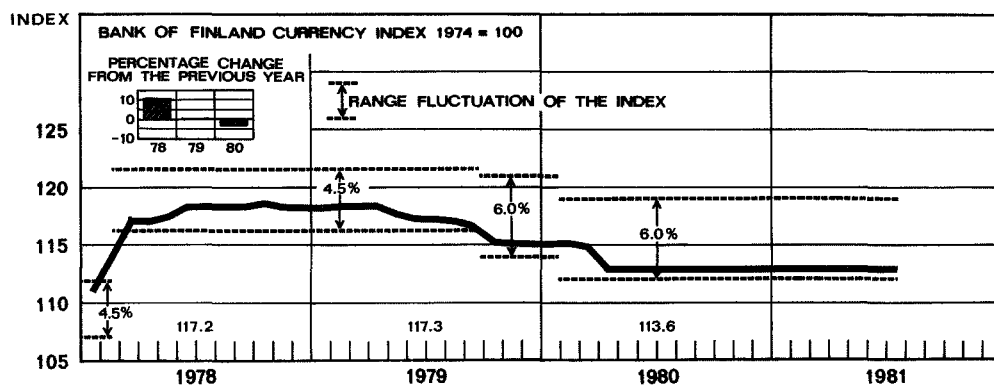
Mill. mk

	Net holdings, Dec. 31, 1980			Net holdings, July 31, 1981			Change	
	Bank of Finland	Other	Total	Bank of Finland	Other	Total	July	Jan.-July
Gold	1 073	-	1 073	1 073	-	1 073	-	-
Special drawing rights	397	-	397	697	-	697	+ 176	+ 300
IMF reserve tranche	380	-	380	380	-	380	-	-
Foreign bonds	2 125	-	2 125	1 400	-	1 400	- 21	- 725
Convertible currencies	3 823	-7 194	-3 371	4 109	-7 373	-3 264	+ 243	+ 107
Total	7 798	-7 194	604	7 659	-7 373	+ 286	+ 398	- 318
Tied currencies	-757	-67	-824	1 167	- 74	1 093	+ 725	+1 917
Grand total	7 041	-7 261	-220	8 826	-7 447	1 379	+1 123	+1 599

## Domestic financial sector

## Corporate sector

End of year or month	Dis-counted and re-dis-counted bills	Cheque account re-ceive-ables, net	Demand for call money by deposit banks	Supply of call money by deposit banks	Cash reserve deposits	Other liabilities, net	Net re-ceive-ables (1+2+3-4-5-6)	Perma-nent special financing schemes	Liabili-ties, net	Net re-ceive-ables (8-9)	Notes and coins in circulation
	1	2	3	4	5	6	7	8	9	10	11
1975	3 385	130	372	95	—	-343	4 136	933	539	394	2 855
1976	2 920	172	1 204	1 137	—	-372	3 531	1 400	308	1 092	2 885
1977	3 091	107	1 804	850	—	-74	4 228	1 416	242	1 174	3 167
1978	970	136	2 213	2 075	—	69	1 175	1 948	356	1 592	3 822
1979	—	229	3 870	1 131	1 764	-291	1 495	2 182	65	2 117	4 375
1980	—	480	3 674	290	3 317	-1 064	1 611	3 063	642	2 421	4 954
1980											
Aug.	—	750	3 968	780	2 989	-247	1 196	2 640	516	2 124	4 449
Sept.	—	722	4 307	525	2 982	-270	1 792	2 775	607	2 168	4 366
Oct.	—	762	4 410	595	3 006	-322	1 893	2 926	621	2 305	4 447
Nov.	—	705	3 861	30	3 022	-767	2 281	3 046	574	2 472	4 614
Dec.	—	480	3 674	290	3 317	-1 064	1 611	3 063	642	2 421	4 954
1981											
Jan.	—	557	3 679	470	3 461	-879	1 184	3 131	651	2 480	4 666
Feb.	—	593	3 651	975	3 469	-975	775	3 178	668	2 510	4 661
March	—	620	4 978	1 610	3 472	-1 188	1 704	3 249	724	2 525	4 960
April	—	550	3 197	925	3 055	-1 141	908	3 290	782	2 508	5 033
May	—	576	2 717	1 340	2 783	-1 131	301	3 340	797	2 543	5 082
June	—	603	2 635	1 430	2 346	-1 303	765	3 441	1 167	2 274	5 212
July	—	610	1 876	1 240	2 396	-1 186	36	3 525	1 228	2 297	5 166
Aug.	—	610	1 916	1 770	2 429	-1 348	-325	3 517	1 263	2 254	5 089



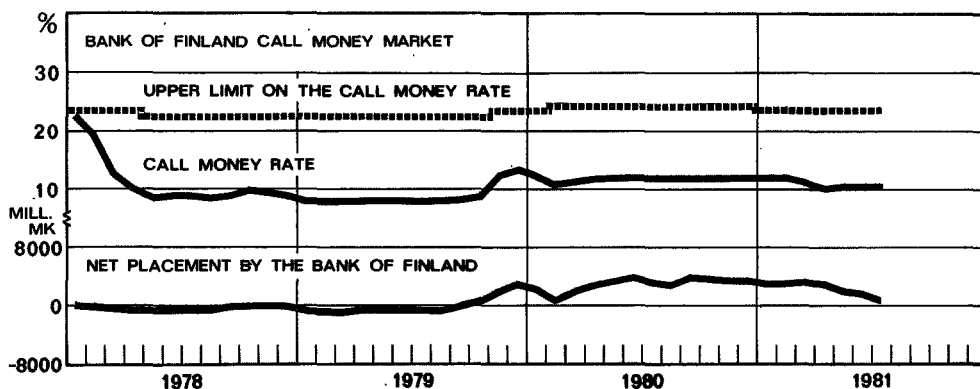
# MONETARY POLICY INDICATORS

Average for period	Total central bank debt of the commercial banks, mill. mk	Actual central bank debt of the commercial banks, mill. mk	Credit quotas of the commercial banks at the Bank of Finland, mill. mk	Cash reserve deposits of the deposit banks mill. mk	Cash reserve deposits of the commercial banks mill. mk	Bank of Finland placements in the call money market, mill. mk	Base rate %	Call money interest rate %	Average cost of total central bank debt %	Average lending rate of the commercial banks <sup>1</sup> %
	1	2	3	4	5	6	7	8	9	10
1974	3 204	2 840	2 494	—	—	—	9.25	—	10.57	9.52
1975	4 000	3 611	2 725	—	—	239 <sup>2</sup>	9.25	26.80 <sup>2</sup>	12.10	9.65
1976	4 001	3 345	2 400	—	—	79	9.25	18.40	12.38	9.69
1977	3 914	3 094	1 967	—	—	149	9.00	17.20	11.82	9.54
1978	3 573	2 070	1 475	—	—	90	7.58	11.99	8.88	8.22
1979	2 629	820	475	447	389	321	7.46	9.74	8.99	8.03
1980	4 963	4 097	783	2 542	2 220	3 313	9.20	12.38	12.37	9.77
1980										
Aug.	4 456	3 880	700	2 662	2 333	3 181	9.25	12.50	13.06	9.83
Sept.	5 530	4 805	700	2 984	2 608	4 106	9.25	12.50	13.93	9.84
Oct.	5 500	4 709	700	2 980	2 599	4 010	9.25	12.50	13.31	9.83
Nov.	5 024	4 562	700	3 005	2 627	3 864	9.25	12.50	12.60	9.82
Dec.	4 816	4 457	600	3 032	2 653	3 860	9.25	12.50	13.43	9.83
1981										
Jan.	4 677	3 693	540	3 324	2 917	3 153	9.25	12.50	13.61	9.84
Feb.	4 976	3 905	600	3 443	3 033	3 307	9.25	12.50	12.82	9.84
March	5 039	4 026	600	3 458	3 022	3 429	9.25	11.72	12.89	9.85
April	5 838	3 974	600	3 259	2 829	3 377	9.25	10.57	10.32	9.85
May	3 950	2 848	600	2 918	2 523	2 249	9.25	11.00	11.20	9.86
June	3 658	2 634	600	2 569	2 228	2 036	9.25	11.00	10.96	9.85
July	3 513	1 760	600	2 346	2 052	1 161	9.25	11.00	10.73	9.85
Aug.	3 115	1 678	600	2 393	2 099	1 080	9.25	11.45	..	..

See explanations on page 22.

<sup>1</sup> End of period.

<sup>2</sup> 1. 9.—31. 12. 1975.



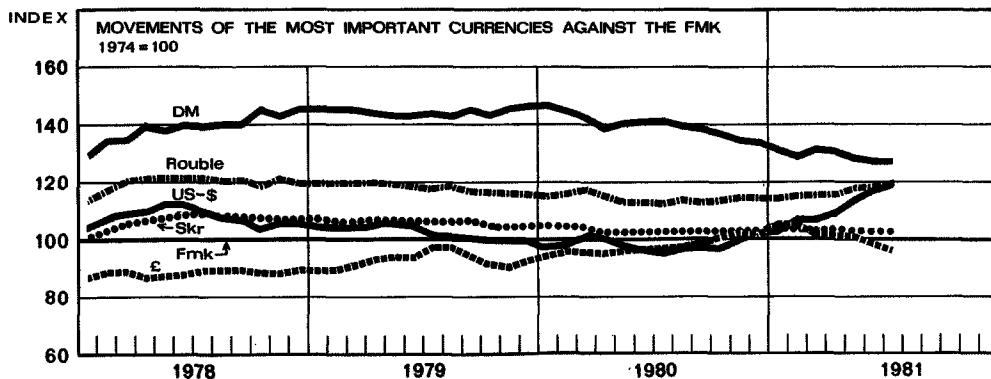


# FOREIGN EXCHANGE RATES

Mill. mk

Average selling rates for foreign exchange, mk

Period	New York 1 US \$ USD	London 1 £ GBP	Stockholm 100 Skr SEK	Oslo 100 Nkr NOK	Copenhagen 100 Dkr DKK	Frankfurt 100 DM DEM	Zurich 100 Sfr CHF	Paris 100 FF FRF	Moscow 1 Cl Rbl SUR	Currency index 1974=100
	1	2	3	4	5	6	7	8	9	10
1974	3.774	8.833	85.22	68.44	62.17	146.21	127.19	78.65	4.995	100.0
1975	3.679	8.155	88.80	70.59	64.21	149.80	142.64	86.00	5.093	101.1
1976	3.864	6.983	88.86	70.95	64.04	153.78	154.86	81.09	5.125	99.9
1977	4.029	7.042	90.21	75.83	67.23	174.15	168.70	82.16	5.475	106.1
1978	4.117	7.917	91.43	78.93	75.06	205.53	231.83	91.77	6.037	117.2
1979	3.896	8.275	91.12	77.22	74.38	212.75	234.36	91.88	5.941	117.3
1980	3.730	8.691	88.43	75.81	66.53	205.58	222.87	88.65	5.741	113.6
<b>1980</b>										
Aug.	3.665	8.697	88.03	75.58	66.52	204.85	222.00	88.63	5.713	113.1
Sept.	3.655	8.796	88.22	75.83	66.32	204.40	223.05	88.19	5.669	113.1
Oct.	3.695	8.942	88.40	75.75	65.53	200.98	222.77	87.18	5.706	113.1
Nov.	3.791	9.104	88.36	75.90	64.59	197.66	219.78	85.66	5.750	113.1
Dec.	3.872	9.095	88.12	75.24	64.32	196.47	217.00	85.10	5.744	113.1
<b>1981</b>										
Jan.	3.889	9.369	87.85	74.62	63.38	194.10	214.34	84.20	5.747	113.1
Feb.	4.073	9.358	88.59	75.50	61.88	189.90	209.14	82.18	5.779	113.1
March	4.072	9.098	88.65	75.78	61.78	193.33	211.94	82.26	5.810	113.1
April	4.151	9.061	88.76	76.20	61.37	192.38	210.91	81.66	5.825	113.1
May	4.321	9.047	88.51	76.52	60.18	188.58	209.60	79.04	5.922	113.1
June	4.448	8.805	88.34	75.62	59.90	187.41	214.73	78.97	5.951	113.1
July	4.543	8.546	87.97	74.82	59.78	186.54	217.10	78.75	6.028	113.1
Aug.	4.629	8.445	87.59	75.24	59.23	185.36	213.77	77.77	6.078	113.1



DEPOSITS BY THE PUBLIC

Mill. mk

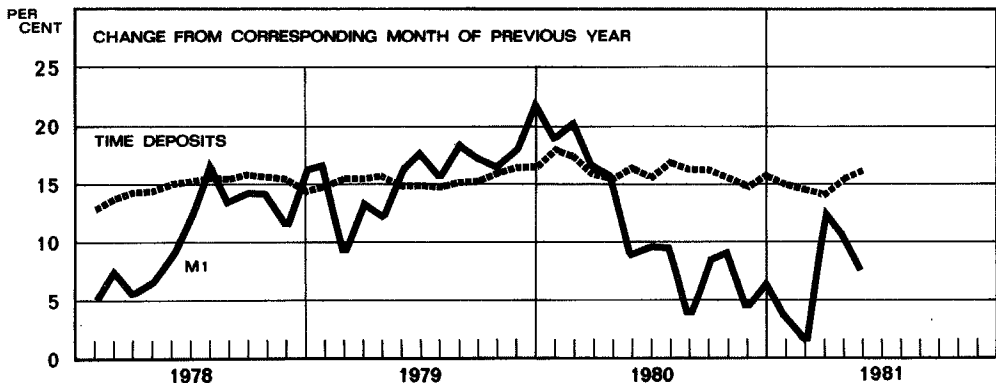
End of year and month	Demand deposits				Time deposits					Total (4+9)
	Commer- cial banks	Savings banks & Co-op. banks	Posti- pankki	All depos- it banks	Commer- cial banks	Savings banks	Co-op. banks	Posti- pankki	All depos- it banks	
	1	2	3	4	5	6	7	8	9	
1977	2 948	1 506	2 212	6 666	14 999	12 671	9 846	4 177	41 693	48 359
1978	3 887	1 676	2 052	7 615	17 035	14 641	11 286	4 900	47 862	55 477
1979	4 697	2 255	2 714	9 666	19 794	17 177	13 348	5 599	55 918	65 584
1980	5 459	2 285	2 531	10 275	22 591	20 009	15 950	6 355	64 905	75 180

1980

May	4 190	2 094	2 865	9 149	20 500	18 277	14 289	5 935	59 001	68 150
June	4 826	2 133	3 275	10 234	20 656	18 588	14 479	5 847	59 570	69 804
July	4 741	2 332	3 001	10 074	21 209	18 993	14 861	5 976	61 039	71 113
Aug.	4 205	2 275	2 996	9 476	21 273	19 195	14 948	6 082	61 498	70 974
Sept.	4 625	2 328	2 946	9 899	21 295	19 255	15 051	6 073	61 674	71 573
Oct.	4 584	2 325	2 859	9 768	21 454	19 391	15 216	6 186	62 247	72 015
Nov.	4 410	2 155	2 669	9 234	21 658	19 618	15 416	6 256	62 948	72 182
Dec.	5 459	2 285	2 531	10 275	22 591	20 009	15 950	6 355	64 905	75 180

1981

Jan.	4 519	2 183	3 011	9 713	22 516	20 394	16 164	6 440	65 514	75 227
Feb.	3 999	2 123	2 848	8 970	22 492	20 683	16 485	6 578	66 238	75 208
March	4 522	2 036	3 913	10 471	22 405	20 581	16 420	6 652	66 058	76 529
April	4 552	2 189	3 366	10 107	23 119	20 851	16 673	6 732	67 375	77 482
May	4 334	2 391	3 035	9 760	23 800	21 177	16 919	6 769	68 665	78 425



# ADVANCES TO THE PUBLIC—MONEY SUPPLY

Mill. mk

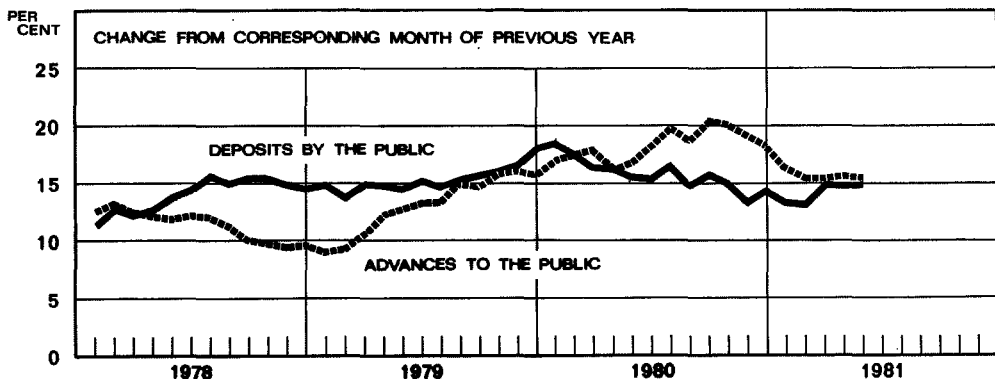
End of year and month	Advances granted by				Types of advances			Total (1 to 4) (5 to 7)	Money Supply	
	Commer- cial banks	Savings banks	Co-op. banks	Posti- pankki	Loans & bills in domestic currency	Cheque credits	Domestic credits in foreign currency		M <sub>1</sub>	M <sub>1</sub> + Quasi- Money
1977	24 679	12 312	10 547	6 609	47 355	1 690	5 102	54 147	9 872	52 581
1978	26 324	14 092	12 181	6 847	52 517	1 723	5 204	59 444	11 496	60 682
1979	29 844	16 535	14 258	8 299	60 971	1 955	6 010	68 936	14 087	71 157
1980	35 994	19 097	16 760	9 973	70 466	2 347	9 011	81 824	14 979	81 601

1980

May	32 764	17 535	15 039	8 898	64 817	2 545	6 874	74 236	13 594	74 137
June	34 065	17 733	15 243	9 317	65 980	2 765	7 613	76 358	14 588	75 749
July	34 707	17 932	15 497	9 528	66 753	2 607	8 304	77 664	14 438	77 325
Aug.	34 814	18 177	15 715	9 528	67 215	2 531	8 488	78 234	13 825	77 066
Sept.	35 314	18 483	16 061	9 954	68 545	2 700	8 567	79 812	14 141	77 670
Oct.	35 931	18 711	16 282	10 061	69 360	2 623	9 002	80 985	14 234	78 290
Nov.	35 789	18 920	16 491	10 166	69 911	2 543	8 912	81 366	13 757	78 488
Dec.	35 994	19 097	16 760	9 973	70 466	2 347	9 011	81 824	14 979	81 601

1981

Jan.	35 612	19 269	16 849	10 004	70 763	2 564	8 407	81 734	14 307	81 615
Feb.	36 102	19 462	17 015	9 978	71 487	2 865	8 205	82 557	13 649	81 707
March	36 904	19 617	17 211	9 977	72 291	2 884	8 534	83 709	15 093	82 994
April	37 444	19 751	17 421	10 120	73 015	2 884	8 837	84 736	14 852	84 105
May	38 034	20 004	17 704	10 149	73 769	2 912	9 210	85 891	14 634	85 186





# FOREIGN TRADE

Mill. mk

Value mill. mk

Period	Value mill. mk		
	Exports f. o. b.	Imports c. i. f.	Surplus of exports (+) or imports (-)
1975	20 247	28 002	-7 755
1976	24 505	28 555	-4 050
1977	30 931	30 708	+223
1978	35 206	32 338	+2 868
1979	43 430	44 222	-792
1980*	52 795	58 250	-5 455

## 1980\*

Aug.	3 921	5 478	-1 557
Sept.	4 579	5 133	- 554
Oct.	4 639	5 306	- 667
Nov.	4 487	4 172	+ 315
Dec.	5 589	5 548	+ 41

## 1981\*

Jan.	4 998	4 472	+ 526
Feb.	4 434	4 395	+39
March	5 041	4 618	+ 423
April	4 657	4 916	-259
May	5 538	5 906	-368
June	5 311	4 891	+420

## Jan.-June

1980*	25 230	27 606	-2 376
1981*	29 979	29 198	+ 781

Indices of exports and imports  
1975 = 100

Period	Volume		Unit value		Terms of trade
	Exports	Imports	Exports	Imports	
1975	100	100	100	100	100
1976	117	96	103	107	96
1977	129	88	119	124	96
1978	138	84	126	138	91
1979	151	99	142	159	89
1980*	165	112	158	186	85

## 1979

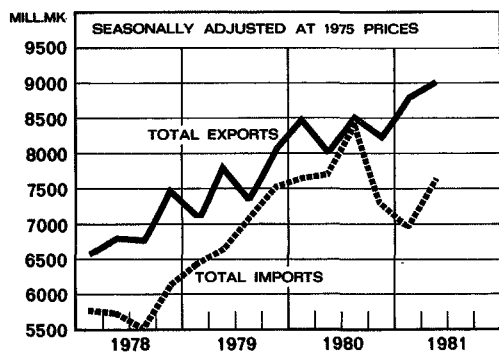
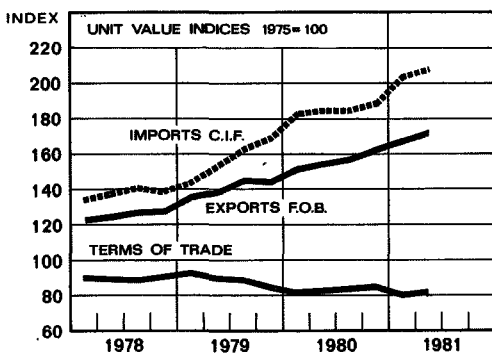
Apr.-June	154	94	140	154	91
July-Sept.	138	100	147	164	90
Oct.-Dec.	171	113	146	170	86

## 1980\*

Jan.-March	166	105	152	184	83
Apr.-June	158	106	156	186	84
July-Sept.	160	120	159	186	85
Oct.-Dec.	177	112	164	190	86

## 1981\*

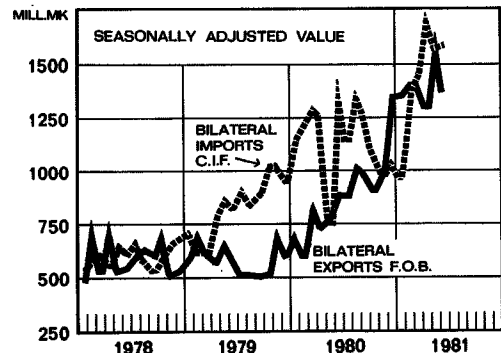
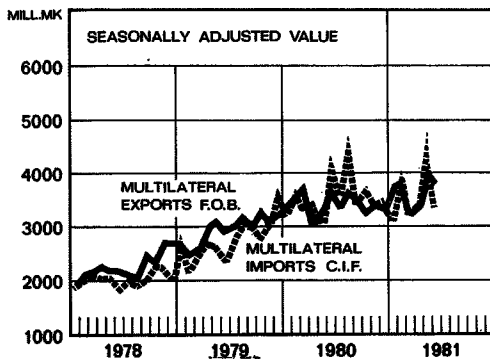
Jan.-March	169	94	169	205	82
Apr.-June	177	107	173	209	82



# FOREIGN TRADE BY MAIN GROUPS

Mill. mk

Period	Exports, f. o. b.					Imports, c. i. f.				
	Agri-cultural and other primary products	Wood industry products	Paper industry products	Metal, engineering industry products	Other goods	Raw materials and producer goods	Fuels and lubricants	Finished goods		Other goods
								Investment goods	Consumer goods	
1975	449	2 177	7 225	5 357	5 039	17 058	1 670	5 222	3 989	63
1976	804	2 892	7 860	6 891	6 058	17 828	1 581	4 966	4 103	77
1977	1 087	3 854	8 798	9 184	8 008	19 128	2 066	4 828	4 603	83
1978	966	4 641	10 402	9 593	9 604	20 431	2 224	4 801	4 830	52
1979	1 366	6 073	12 992	10 342	12 657	28 878	3 401	5 719	6 133	91
1980*	1 403	7 742	15 751	11 546	16 353	38 622	4 088	7 989	7 440	111
1980*										
Aug.	47	582	1 387	684	1 221	3 572	459	838	602	7
Sept.	76	690	1 374	931	1 508	3 399	388	706	637	3
Oct.	56	742	1 313	1 040	1 488	3 475	436	727	665	3
Nov.	59	627	1 324	1 099	1 378	2 680	284	650	556	2
Dec.	260	669	1 479	1 566	1 615	3 710	380	856	597	5
1981*										
Jan.	392	592	1 341	1 295	1 378	2 704	283	818	665	2
Feb.	104	526	1 324	1 045	1 435	2 823	238	619	701	14
March	299	557	1 387	1 069	1 729	2 933	210	799	669	7
April	72	570	1 502	1 050	1 463	3 126	271	750	767	2
May	318	644	1 376	1 678	1 522	4 211	344	679	668	4
June	89	717	1 361	1 375	1 769	3 026	621	665	565	14
Jan.-June										
1980*	832	3 729	7 333	5 330	8 006	18 613	1 602	3 490	3 812	89
1981*	1 274	3 606	8 291	7 512	9 296	18 823	1 967	4 330	4 035	43



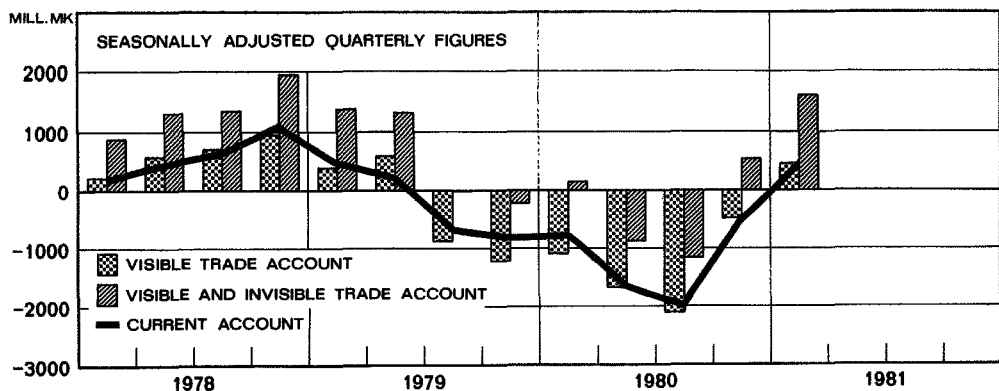
## FOREIGN TRADE BY COUNTRIES

Mill. mk

Area and country	Exports, f. o. b.				Imports, c. i. f.			
	January-June				January-June			
	1980*		1981*		1980*		1981*	
	%	Mill. mk	%	Mill. mk	%	Mill. mk	%	Mill. mk
<b>OECD countries in Europe</b>	67.3	16 987	56.6	16 963	53.5	14 762	52.3	15 261
Austria	0.8	188	0.5	152	1.2	328	1.2	354
Belgium and Luxembourg	1.5	378	1.4	407	1.9	509	1.8	538
Denmark	3.6	897	3.2	954	2.4	649	2.3	657
France	5.0	1 262	4.2	1 265	3.2	895	3.5	1 014
Federal Republic of Germany	11.5	2 905	9.3	2 797	12.7	3 508	12.4	3 624
Italy	2.5	641	2.1	623	2.5	692	2.4	691
Netherlands	4.9	1 242	3.5	1 039	2.6	719	2.6	754
Norway	4.0	1 021	4.7	1 418	2.0	563	2.7	800
Portugal	0.4	99	0.3	77	0.5	148	0.5	142
Spain	0.9	216	0.8	228	1.0	267	0.6	183
Sweden	17.3	4 355	12.9	3 861	12.2	3 375	11.5	3 351
Switzerland	1.8	461	1.5	461	1.6	432	1.7	500
United Kingdom	11.7	2 961	10.5	3 147	9.2	2 530	8.4	2 450
Other	1.4	361	1.7	534	0.5	147	0.7	203
<b>OECD countries outside Europe</b>	5.6	1 401	5.8	1 730	10.1	2 792	12.3	3 591
Canada	0.6	146	0.7	210	0.8	223	0.7	189
Japan	0.7	185	0.9	264	3.2	891	3.9	1 148
United States	3.3	815	3.4	1 008	5.9	1 634	7.5	2 196
Other	1.0	255	0.8	248	0.2	44	0.2	58
<b>CMEA countries</b>	16.7	4 227	26.4	7 923	23.9	6 588	26.5	7 752
Czechoslovakia	0.3	69	0.2	61	0.6	151	0.6	180
German Democratic Republic	0.6	159	0.6	177	0.5	148	0.6	185
Poland	0.7	181	0.1	34	1.7	472	1.3	378
Soviet Union	14.2	3 584	24.8	7 422	20.3	5 607	23.0	6 704
Other	0.9	234	0.7	229	0.8	210	1.0	305
<b>Latin America</b>	1.6	407	2.1	643	3.3	903	2.1	614
Argentina	0.4	110	0.4	131	0.2	45	0.2	49
Brazil	0.4	106	0.3	95	0.9	259	0.5	155
Colombia	0.2	38	0.1	37	1.0	260	0.5	132
Other	0.6	153	1.3	380	1.2	339	0.9	278
<b>Other</b>	8.8	2 208	9.1	2 720	9.2	2 561	6.8	1 980
<b>GRAND TOTAL</b>	100.0	25 230	100.0	29 979	100.0	27 606	100.0	29 198
of which								
<b>EFTA countries</b>	24.5	6 171	20.0	6 001	17.7	4 894	17.8	5 208
<b>EEC countries</b>	41.4	10 455	35.4	10 612	34.6	9 559	33.7	9 849
<b>OECD countries</b>	72.9	18 394	62.4	18 693	63.6	17 554	64.6	18 852

# BALANCE OF PAYMENTS

Period	Visible exports f.o.b.	Visible imports c.i.f.	Visible trade account	Transport, net	Travel, net	Other services, net	Visible and invisible trade account	Invest- ment income, net	Un- requited transfers, net	Other, net	Current account
1977	30 805	30 961	-156	+1 747	-23	+526	+2 094	-2 434	-198	-42	-580
1978	35 068	32 600	+2 468	+2 024	+141	+803	+5 436	-2 713	-211	+94	+2 606
1979*	43 302	44 430	-1 128	+3 010	+157	+359	+2 398	-2 840	-430	+111	-761
1980*	52 860	58 315	-5 455	+3 027	+324	+607	-1 497	-3 308	-451	+70	-5 186
<b>1978</b>											
Jan.-March	7 753	7 445	+308	+457	-72	+185	+878	-569	-80	+ 4	+233
Apr.-June	8 625	8 086	+539	+479	+4	+205	+1 227	-781	-40	+28	+434
July-Sept.	8 284	7 906	+378	+500	+217	+140	+1 235	-617	-42	+31	+607
Oct.-Dec.	10 406	9 163	+1 243	+588	-8	+273	+2 096	-746	-49	+31	+1 332
<b>1979</b>											
Jan.-March	9 683	9 168	+515	+652	-112	+318	+1 373	-656	-204	+24	+537
Apr.-June	10 847	10 193	+654	+745	+13	-71	+1 341	-963	-91	+25	+312
July-Sept.	10 210	11 573	-1 363	+792	+251	+76	-244	-671	-51	+33	-933
Oct.-Dec.	12 562	13 496	-934	+821	+5	+36	-72	-550	-84	+29	-677
<b>1980*</b>											
Jan.-March	12 787	13 608	-821	+870	-102	+325	+272	-786	-168	+6	-676
Apr.-June	12 470	14 027	-1 557	+558	+81	+104	-814	-724	-99	+34	-1 603
July-Sept.	12 865	15 641	-2 776	+844	+299	+120	-1 513	-765	-102	+12	-2 368
Oct.-Dec.	14 738	15 039	-301	+755	+46	+58	+558	-1 033	-82	+18	-539
<b>1981*</b>											
Jan.-March	14 472	13 609	+863	+998	-80	+69	+1 850	-995	-109	+3	+749





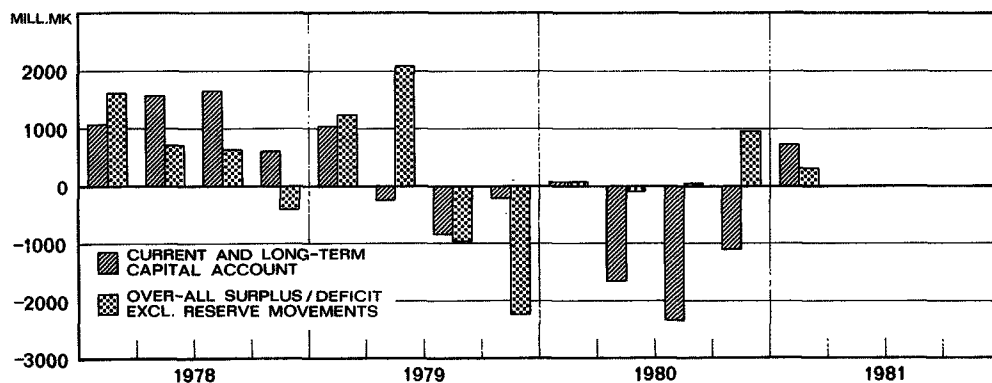
Drawings of long-term loans	Amortizations of long-term loans	Long-term export credits, net	Miscellaneous long-term capital items, net <sup>1</sup>	Long-term capital account	Current and long-term capital account	Short-term import credits and prepayments, net	Short-term export credits and prepayments, net	Short-term capital of authorized banks, net <sup>2</sup>	Miscellaneous, short-term capital items, incl. errors and omissions <sup>2</sup>	Over-all surplus deficit excl. reserve movements <sup>2</sup>	Bank of Finland foreign exchange reserves
+6 454	-2 745	-241	-401	+3 067	+2 487	-1 547	-470	-279	+25	+216	-216
+9 007	-5 743	-774	-225	+2 265	+4 871	+130	-2 188	-703	+479	+2 589	-2 589
+6 230	-4 843	-541	-337	+509	-252	+831	-834	+1 211	-834	+122	-122
+5 183	-4 140	-433	-428	+182	-5 004	+3 255	-967	+3 930	-219	+995	-995
+1 876	-854	-166	-17	+839	+1 072	-479	-402	+627	+804	+1 622	-1 622
+2 900	-1 733	-1	-51	+1 115	+1 549	+328	-402	-725	-28	+722	-722
+2 265	-1 089	-96	-38	+1 042	+1 649	+20	-692	-588	+252	+641	-641
+1 966	-2 067	-511	-119	-731	+601	+261	-692	-17	-549	-396	+396
+2 202	-1 626	-8	-46	+522	+1 059	-19	-63	+819	-564 <sup>3</sup>	+1 232	-1 232
+1 267	-1 453	-218	-174	-578	-266	+39	-62	+1 966	+423	+2 100	-2 100
+1 258	-892	-336	+70	+100	-833	+422	-354	-1 100	+880	-985	+985
+1 503	-872	+21	-187	+465	-212	+389	-355	-474	-1 573	-2 225	+2 225
+2 108	-1 113	-171	-65	+759	+83	+302	-31	+518	-789 <sup>3</sup>	+83	-83
+1 076	-997	-39	-86	-46	-1 649	+1 498	-32	+1 666	-1 578	-95	+95
+1 126	-913	-36	-146	+31	-2 337	+711	-452	+1 189	+943	+54	-54
+873	-1 117	-187	-131	-562	-1 101	+744	-452	+557	+1 205	+953	-953
+1 404	-955	-227	-231	-9	+740	-512	+96	+127	-142 <sup>3</sup>	+309	-309

Assets: increase —, decrease +. Liabilities: increase +, decrease —

<sup>1</sup> Including Direct investment, net.

<sup>2</sup> Reserve movements of other foreign exchange holders have been transferred to the short-term capital account. The short-term capital of the authorized banks is shown separately.

<sup>3</sup> Including Allocations of Special drawing rights 139 million in 1979, 133 million in 1980 and 131 million in 1981.



# FINLAND'S FOREIGN ASSETS AND LIABILITIES

Mill. mk

End of year and month	Long-term assets				Long-term liabilities					Net long-term liabilities (9-4)
	Export credits	Direct investment	Other	Total (1 to 3)	Financial loans	Import credits	Direct investment	Other	Total (5 to 8)	
	1	2	3	4	5	6	7	8	9	10
1977	2 269	1 596	750	4 615	22 695	5 775	1 717	169	30 356	25 741
1978	2 978	1 850	956	5 784	27 716	5 612	1 885	231	35 444	29 660
1979*	3 389	2 324	983	6 696	28 194	4 898	1 979	300	35 371	28 675
1980*	3 872	2 806	1 051	7 729	29 730	4 377	2 075	340	36 522	28 793

## 1978

March	2 499	1 673	840	5 012	25 107	6 068	1 774	159	33 108	28 096
June	2 517	1 759	862	5 138	26 769	6 134	1 865	159	34 927	29 789
Sept.	2 548	1 785	885	5 218	28 212	5 812	1 885	187	36 096	30 878
Dec.	2 978	1 850	956	5 784	27 716	5 612	1 885	231	35 444	29 660

## 1979\*

March	3 001	1 972	1 008	5 981	28 214	5 584	1 924	221	35 943	29 962
June	3 179	2 089	1 029	6 297	27 763	5 172	1 923	226	35 084	28 787
Sept.	3 419	2 226	1 066	6 711	27 724	4 956	1 930	232	34 842	28 131
Dec.	3 389	2 324	983	6 696	28 194	4 898	1 979	300	35 371	28 675

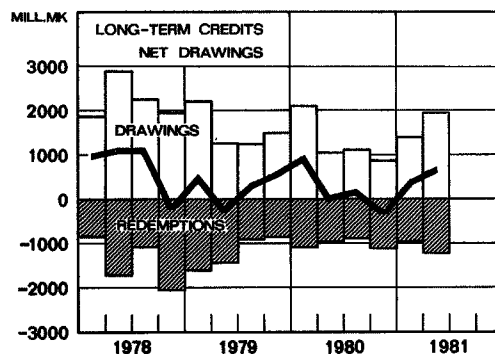
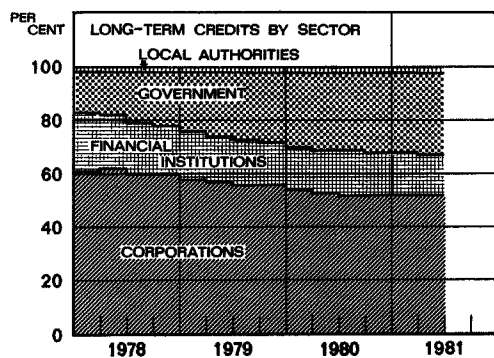
## 1980\*

March	3 625	2 456	932	7 013	29 122	4 692	1 971	288	36 073	29 060
June	3 534	2 539	967	7 040	28 887	4 517	1 990	268	35 662	28 622
Sept.	3 594	2 649	972	7 215	29 251	4 482	2 029	278	36 040	28 825
Dec.	3 872	2 806	1 051	7 729	29 730	4 377	2 075	340	36 522	28 793

## 1981\*

March	4 254	2 945	1 229	8 428	30 523	4 455	2 138	442	37 558	29 130
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See explanations on page 22.

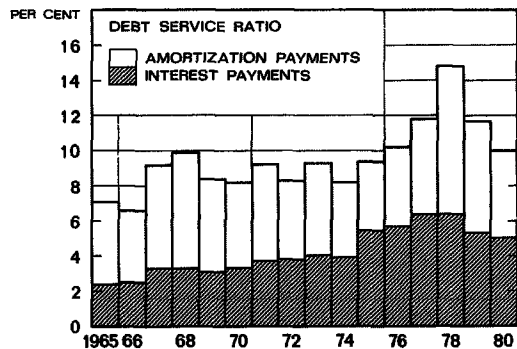
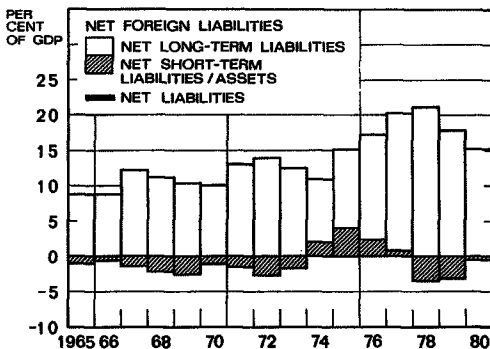


# FINLAND'S FOREIGN ASSETS AND LIABILITIES

Mill. mk

Short-term assets				Short-term liabilities				Net short-term liabilities (18-14)	Net liabilities (10+19)	Debt service, flow	Of which amortization payments, flow
Bank of Finland	Authorized banks and other foreign exchange holders	Corporate sector	Total (11 to 13)	Bank of Finland	Authorized banks and other foreign exchange holders	Corporate sector	Total (15 to 17)				
11	12	13	14	15	16	17	18	19	20	21	22
3 776	3 960	7 334	15 070	1 423	6 335	8 241	15 999	929	26 670	4 516	2 082
6 545	4 731	8 698	19 974	1 478	6 379	7 309	15 166	-4 808	24 852	6 623	3 769
7 918	6 579	9 970	24 467	2 340	9 333	7 816	19 489	-4 978	23 697	6 457	3 472
9 895	9 560	12 532	31 987	3 089	16 240	11 849	31 178	-809	27 984	6 716	3 274
5 491	3 507	7 622	16 620	1 293	6 594	7 559	15 446	-1 174	26 922	1 392	779
6 748	4 194	7 907	18 849	1 772	6 610	7 752	16 134	-2 715	27 074	1 494	673
7 003	4 509	8 247	19 759	1 483	6 264	7 419	15 166	-4 593	26 285	1 628	984
6 545	4 731	8 698	19 974	1 478	6 379	7 309	15 166	-4 808	24 852	2 109	1 333
7 804	4 187	8 845	20 836	1 611	6 692	7 332	15 635	-5 201	24 761	1 970	1 284
9 871	4 053	9 131	23 055	1 604	8 404	7 476	17 484	-5 571	23 216	2 085	1 082
8 601	4 205	9 508	22 314	1 579	7 620	7 808	17 007	-5 307	22 824	1 315	604
7 918	6 579	9 970	24 467	2 340	9 333	7 816	19 489	-4 978	23 697	1 087	502
8 708	6 936	10 224	25 868	3 113	10 179	7 865	21 157	-4 711	24 349	1 756	937
9 279	7 133	10 509	26 921	3 727	11 970	9 545	25 242	-1 679	26 943	1 518	730
9 250	7 478	11 469	28 197	3 605	13 539	10 567	27 711	-486	28 339	1 554	761
9 895	9 560	12 532	31 987	3 089	16 240	11 849	31 178	-809	27 984	1 888	846
9 701	9 629	12 458	31 788	2 680	16 526	11 804	31 010	-778	28 352	1 746	732

See explanations on page 22.



# PRICE INDICES

Period	Wholesale price index 1949 = 100	Basic price index for domestic supply 1975 = 100						Building costs 1980 = 100 <sup>1</sup>		
		Total	Origin		Purpose			Total	Wages in building trade	Building materials
			Domestic goods	Imported goods	Raw materials	Consumer goods	Investment goods			
1978	727	125.8	124.1	131.8	119.2	140.3	129.5			
1979	791	138.0	135.0	148.7	133.1	150.7	139.2			
1980	919	160.7	156.6	175.0	160.1	167.7	155.9	100.0	100.0	100.0
<b>1980</b>										
Nov.	963	168.3	164.9	180.5	168.2	174.4	163.7	104.4	104.5	104.5
Dec.	971	169.6	165.9	182.8	170.0	174.8	164.5	104.9	104.5	105.3
<b>1981</b>										
Jan.	983	171.8	168.2	184.6	172.6	176.5	166.1	106.7	105.3	106.8
Feb.	1 003	175.3	170.7	191.6	177.7	176.9	168.4	107.0	105.3	107.3
March	1 020	178.2	173.7	194.1	181.2	179.4	169.9	107.4	105.4	107.8
April	1 029	179.9	175.6	194.9	183.4	181.2	170.4	108.6	109.5	108.1
May	1 037	181.3	177.1	196.1	184.6	183.3	171.7	108.9	109.6	108.4
June	1 042	182.1	177.7	197.7	185.2	184.8	172.4	109.7	109.6	109.5
July	1 048	183.1	179.0	197.5	185.7	187.0	173.8	110.3	109.6	110.4

<sup>1</sup> New series.

Period	Consumer prices 1977 = 100										
	Total	Food	Beverages and tobacco	Clothing and footwear	Rent	Heating and lighting	Household goods and services	Health and medical services	Transport and communication	Education and recreation	Other goods and services
1978	107.8	104.4	114.6	105.8	106.3	106.4	105.2	112.4	111.1	108.2	109.2
1979	115.9	108.8	129.4	116.3	113.1	114.4	114.4	124.1	120.2	115.5	118.4
1980	129.3	122.8	140.9	131.9	122.4	141.1	127.4	137.6	136.4	123.4	132.6
<b>1980</b>											
Nov.	135.4	129.7	149.8	140.5	130.6	149.7	131.8	142.6	139.0	126.6	139.2
Dec.	136.4	128.5	149.8	141.2	132.8	152.1	132.3	144.1	141.1	128.0	141.0
<b>1981</b>											
Jan.	137.6	128.8	155.5	140.4	132.8	153.4	133.9	145.2	142.4	129.4	144.4
Feb.	138.8	129.3	155.5	143.2	132.8	159.4	134.5	145.3	144.9	130.0	145.8
March	140.6	133.6	157.3	142.8	134.1	163.2	135.2	145.3	146.0	130.4	147.7
April	142.4	136.4	157.4	145.1	134.1	168.1	137.0	145.4	147.4	134.5	149.6
May	144.4	137.1	157.4	146.2	142.1	168.0	137.2	148.3	148.5	135.7	150.1
June	145.3	138.4	157.8	146.4	142.1	168.3	137.4	150.3	149.7	137.1	151.0
July	145.7	140.1	157.9	144.4	142.1	168.6	137.9	152.5	150.2	137.0	151.7

## WAGES

Index of wage and salary earnings 1975 = 100

Period	By industries				By institutional sectors			All salary earners	All wage earners	All employees
	Wage earners in			Employees in services	State employees	Municipal employees	Employees in private sector			
	Agriculture	Industry	Construction							
1979*	161.6	151.6	132.8	149.5	145.6	142.6	150.8	148.6	149.3	148.9
1980*	179.3	170.1	146.3	166.5	160.5	156.6	169.6	165.8	167.2	166.5
1980*										
Jan.-March	168.9	160.2	139.4	158.2	152.2	149.4	159.2	156.4	157.4	156.9
Apr.-June	178.1	172.0	144.8	166.6	160.9	157.0	170.0	165.6	168.3	166.9
July-Sept.	178.4	170.7	147.1	166.8	161.2	157.1	170.9	166.9	168.1	167.5
Oct.-Dec.	189.3	177.5	153.9	174.6	167.6	163.1	178.4	174.4	175.1	174.8
1981*										
Jan.-March	192.2	179.9	154.6	179.7	173.9	169.0	181.0	178.6	177.9	178.3

## PRODUCTION

Volume indices of production 1975 = 100

Period	Gross domestic product	Industrial production	Agriculture	Forestry	Construction of buildings	Land and waterway construction	Transport and communication	Commerce	Public sector services	Others
1979										
Jan.-March	107	118	78	145	73	85	99	90	119	108
Apr.-June	111	117	87	168	73	89	111	103	119	113
July-Sept.	106	105	161	70	97	86	113	103	120	109
Oct.-Dec.	119	126	77	148	119	90	127	111	122	115
1980*										
Jan.-March	112	126	73	145	79	87	110	96	124	112
Apr.-June	114	126	83	139	79	89	112	104	124	117
July-Sept.	115	116	187	89	111	86	123	106	125	113
Oct.-Dec.	124	135	80	152	121	86	131	114	127	119
1981*										
Jan.-March	113	128	71	139	78	85	112	96	127	115

# PRODUCTION

Index of industrial production 1975 = 100

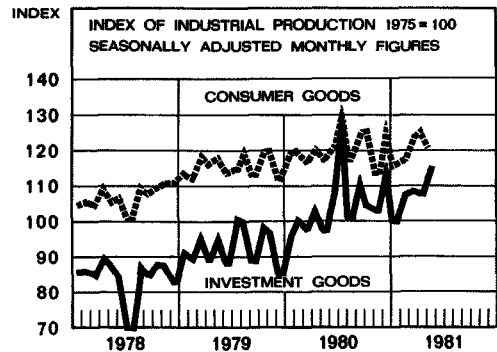
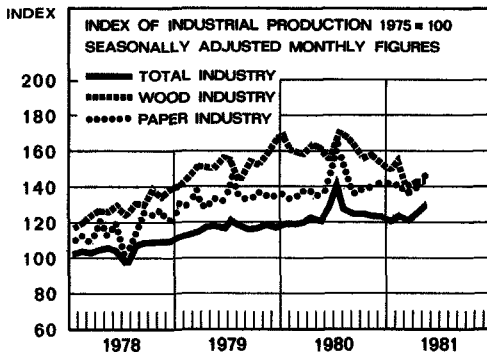
Period	Total	Investment goods	Consumer goods	Other producer goods	Special indices of manufacturing						Total adjusted for seasonal variations
					Food industry	Wood industry	Paper industry	Chemical industries	Non-metallic mineral industry	Metal industry	
1977	101.8	93.6	100.9	104.4	96.3	199.0	104.6	101.0	94.7	98.7	101.9
1978	107.0	85.6	108.1	111.9	103.9	130.3	118.2	109.6	93.5	99.6	107.0
1979*	118.2	94.4	116.9	125.0	110.4	153.2	136.0	123.7	102.3	110.8	118.4
1980*	126.1	106.8	122.2	132.8	114.5	163.0	142.9	138.0	112.7	120.8	126.5

## 1980\*

May	127.6	107.4	125.6	133.6	121.0	203.4	132.5	144.5	114.7	123.9	123.0
June	123.8	113.0	116.7	129.7	109.9	171.0	129.3	133.5	112.7	126.0	130.1
July	89.5	59.4	77.9	102.6	109.7	90.2	150.6	88.2	82.3	67.9	145.1
Aug.	124.5	100.5	121.6	132.0	110.6	147.6	154.2	140.6	119.7	113.9	127.8
Sept.	134.1	120.5	128.5	140.0	121.3	179.6	145.2	144.7	131.4	135.8	126.2
Oct.	142.7	120.3	142.1	148.6	141.1	177.1	154.5	159.8	141.9	137.7	126.6
Nov.	132.3	119.1	128.4	137.4	123.5	154.8	149.1	143.2	122.5	132.7	125.6
Dec.	127.5	117.1	127.0	130.2	112.7	140.1	137.8	134.9	95.8	128.7	125.5

## 1981\*

Jan.	128.6	108.3	125.7	135.2	103.8	141.2	152.2	151.7	103.0	121.9	122.9
Feb.	123.5	109.9	118.5	129.2	97.1	148.6	139.4	143.6	107.0	121.8	125.1
March	135.2	118.9	134.3	139.8	112.2	161.3	150.8	168.4	109.7	129.4	123.1
April	126.5	109.4	126.0	131.0	113.7	166.1	131.7	159.1	106.9	123.5	126.3
May	133.9	124.0	127.5	139.1	114.5	170.9	150.1	159.0	110.8	137.1	131.7



# LABOUR—TIMBER FELLINGS—INTERNAL TRADE

Period	Population of working age, 1 000 persons	Total labour force, 1 000 persons	Employed, 1 000 persons	Un-employed, 1 000 persons	Unemployment, % of total labour force	Commercial timber fellings, 1 000 solid cu. m	Retail sales volume index 1972 = 100	Wholesale volume index 1972 = 100
1977	3 561	2 248	2 111	137	6.1	27 814	113	120
1978	3 578	2 253	2 084	169	7.5	29 021	110	120
1979	3 593	2 223	2 134	139	6.1	37 986	117	135
1980*	3 606	2 315	2 203	112	4.8	38 283	119	141
1980*								
Sept.	3 609	2 295	2 204	91	4.0	2 568	120	157
Oct.	3 615	2 355	2 234	121	5.1	3 255	125	157
Nov.	3 612	2 296	2 189	107	4.6	3 400	114	139
Dec.	3 615	2 294	2 179	115	5.0	3 775	150	158
1981*								
Jan.	3 616	2 280	2 148	132	5.8	3 397	106	124
Feb.	3 622	2 300	2 174	126	5.5	3 839	103	130
March	3 622	2 295	2 167	128	5.6	4 305	108	144
April	3 623	2 272	2 158	114	5.0	4 563	118	140
May	3 624	2 333	2 215	118	5.1	3 587	..	..
June	3 623	2 542	2 415	127	5.0	..	..	..

## CONSTRUCTION OF BUILDINGS

Period	Building permits granted					Buildings completed					Building-works under construction
	Total	Residential buildings	Farm buildings	Industrial and business buildings	Public buildings	Total	Residential buildings	Farm buildings	Industrial and business buildings	Public buildings	
Million cubic metres											
1978	41.98	17.90	4.97	12.72	3.68	42.56	18.21	3.77	13.59	4.21	42.78
1979	48.64	18.71	6.34	16.57	3.99	38.29	16.70	4.39	11.88	3.25	47.62
1980*	50.53	19.66	5.43	18.41	3.99	42.34	17.05	4.73	14.56	3.81	50.82
1980*											
Jan.-March	8.55	3.38	1.04	3.13	0.55	8.46	3.82	0.76	2.82	0.74	43.61
Apr.-June	18.92	8.21	2.64	5.69	1.24	7.84	3.35	0.72	2.74	0.61	52.72
July-Sept.	11.97	4.69	1.01	4.49	0.91	10.77	3.47	1.37	4.05	1.11	54.62
Oct.-Dec.	11.09	3.38	0.74	5.10	1.29	13.49	5.80	1.65	4.37	1.15	50.82
1981*											
Jan.-March	7.17	2.85	0.90	2.47	0.49	7.91	3.50	0.54	2.81	0.80	45.82

# EXPLANATIONS RELATING TO THE STATISTICAL SECTION

## BANK OF FINLAND

Page 4. *Public sector:* Receivables = Government promissory notes + Bonds + Total coinage + Other public sector receivables. Liabilities = Cheque accounts + Counter-cyclical reserves + Counter-cyclical deposits + Capital import deposits + Other public sector claims. Deposit certificates are interest bearing, freely transferable, term liabilities of the Bank of Finland. Their maturities range from one week to one year.

Page 5. *Domestic financial sector:* Other liabilities, net = Capital import deposits + Other financial institution claims — Till-money credits — Bonds — Other financial institution receivables.

*Corporate sector:* Permanent special financing schemes = Foreign bills + New export bills + Financing of suppliers credits. Liabilities, net = Deposits for investment and ship purchase + Counter-cyclical withholdings + Capital import deposits + Import levy deposits + Export deposits + Other corporate claims — Bonds — Other corporate receivables.

## MONETARY POLICY INDICATORS

Page 6. All the figures except the Average lending rate of the commercial banks are mean values of daily figures for the month or year in question. The Average lending rate of the commercial banks is the mean value of end of the month lending rates weighted by credit outstanding.

Total central bank debt of the commercial banks = Discounted and rediscounted bills (until 30. 6. 1979, subsequently the banks have not been allowed to discount or rediscount bills) + net cheque account receivables from the commercial banks + call money debt + bond transactions with repurchase obligation — call money deposits by the commercial banks.

Actual central bank debt of the commercial banks = Total central bank debt — Postipankki's call money placements (or + Postipankki's call money overdrafts). Postipankki accounts for the bulk of the supply of call money from the deposit banks (supply of call money, see column 4 on page 5).

Credit quotas of the commercial banks at the Bank of Finland are the sum of individual quotas specifying the amount each bank eligible for central bank credit can borrow at the base rate. Before July 1979, a progressively rising interest rate was charged on credit in excess of the quota up to an absolute ceiling on quota-related debt. From July 1979, no bank may exceed its quota on average over the month. On any given day quota-related borrowing may not exceed 2.5 times the quota. The interest on this borrowing is the base rate.

Bank of Finland placements in the call money market = Demand for call money by the deposit banks — Supply of call money by the deposit banks. Average, cost of the total central bank debt of the commercial banks: Net costs paid to the Bank of Finland by the commercial banks, as a percentage of their total central bank debt, per annum.

## FOREIGN EXCHANGE RATES

Page 7. *Exchange rates* are annual and monthly averages of the Bank of Finland's daily quotations. *Currency index* is annual and monthly average of daily index numbers.

## DEPOSITS BY THE PUBLIC — ADVANCES TO THE PUBLIC — MONEY SUPPLY

Figures for deposits and advances are supplied by the Central Statistical Office.

Page 8. *Deposits by the public.* The central government and the financial institutions are mainly excluded from the public. From 1974 deposits include domestic deposits denominated in foreign currency.

Page 9. *Advances to the public.* The central government and the financial institutions are not included in the public. Postipankki's advances do not include loans granted by the State Investment Fund (INRA). Domestic credits in foreign currency are mainly granted by the commercial banks and the rest by Postipankki.

*Money Supply.*  $M_1$  = Finnish notes and coins in circulation — Finnish notes and coins held by the banks + Demand deposits held by the public (incl. Demand deposits at the Bank of Finland). Quasi-Money = Time deposits held by the public (incl. Time deposits at the Bank of Finland).

Note: Domestic deposits in foreign currency included in money supply since 1974. In the money supply the public includes non-monetary financial institutions.

## STATE FINANCES

Page 10. Official figures computed by the Economic Department of the Ministry of Finance. Revenue and expenditure: Extra-budgetary funds and the aggregated net current deficit of State enterprises are included. Figures are reported on a cash payment basis. Debt: Foreign debt includes promissory notes given to international organizations. Cash debt (net) = net debt to the Bank of Finland plus short-term debt to Postipankki less cash holdings (net) of State departments and funds.

## FOREIGN TRADE

Pages 11—13. Figures supplied by the Board of Customs. *Indices* (p. 11): The volume indices are calculated according to the Paasche formula and the unit value indices according to the Laspeyres formula. *Terms of trade:* the ratio of export indices to import indices. *Foreign trade by countries:* (p. 13): from January 1980 imports by countries of origin exports by countries of consignment.

## BALANCE OF PAYMENTS

Pages 14—15. Figures are calculated by the Bank of Finland. In the current account, the figures for visible and invisible trade have been revised from 1970 so that they are in accordance with the revised System of National Accounts. In addition to the Board of Customs figures, exports include fuel for carriers but exclude stevedoring expenses and imports include seamen's duty-free imports, fuel for carriers and adjusted allowance for smuggling. On Jan. 1, 1980, foreign bonds were included in the convertible foreign exchange reserves of the Bank of Finland and not in the short-term capital account as earlier. The figures for other years have also been revised accordingly.

## FOREIGN ASSETS AND LIABILITIES

Pages 16—17. Figures calculated by the Bank of Finland. Long-term assets: Other = financial loans development credits + Finland's subscriptions to international financial institutions. Long-term liabilities: Other = Leasing credits + subscriptions to international financial institutions paid in the form of bonds. Short-term assets: From 1978 the Bank of Finland's foreign bills are included in financing of exports and reclassified under the corporate sector.

Column 21 Debt service = Net investment income of short-term and long-term assets and liabilities + net amortisation payments of long-term foreign assets and liabilities, excl. amortisation payments of the Bank of Finland's reserves and oil credits.

Columns 21 and 22 during the year and the quarter.

Chart Debt service ratio: Debt service as a per cent of current account earnings. 1978 and 1979 debt service does not include amortisation of the Bank of Finland's reserve and oil credits.

## PRICE INDICES

Page 18. All indices calculated by the Central Statistical Office

## WAGES — PRODUCTION

Pages 19—20. Figures supplied by the Central Statistical Office. Page 20. *Index of industrial production* calculated by the Central Statistical Office. The grouping, by branches of industry is in accordance with the Standard Industrial Classification (SIC) which is a version of the 1968 edition of the ISIC. The SIC facilitates international comparisons between Finnish statistics and corresponding data from countries which use the ISIC. The seasonally adjusted series is calculated by the Bank of Finland on the basis of the index of industrial production per working day according to a method resembling the U.S. Bureau of Census Method II. Commodities according to use: Investments goods weight 7.0, other producer goods weight 67.0 and consumer goods weight 26.0. The weights for the special manufacturing indices are food manufacturing (SIC 311-2) 9.8, manufacture of wood, and wood and cork products (SIC 311-2) 8.0, manufacture of paper and paper products (SIC 341) 15.2, manufacture of industrial chemicals (SIC 351-2) 6.2, manufacture of non-metallic mineral products except products of petroleum and coal (SIC 381-9) 3.6, and metal industry (SIC 37—38) 25.9.

## LABOUR — TIMBER FELLINGS — INTERNAL TRADE — CONSTRUCTION OF BUILDINGS

Page 21. *Labour* figures supplied by the Central Statistical Office. *Commercial timber fellings* compiled by the Ministry of Labour. *Retailers' and Wholesalers' volume indices* supplied by the Central Statistical Office. *Construction of buildings* figures calculated by the Central Statistical Office.

SYMBOLS USED: \* Preliminary, r Revised, 0 Less than half the final digit shown, . Logically impossible, .. Not available, — Nil S affected by strike — Break in series.



# SOME PARTICULARS ABOUT FINLAND

## FORM OF GOVERNMENT

From 1155 to 1809 Finland formed a part of the kingdom of Sweden. Connected from 1809 with Russia, Finland was an autonomous country with the Emperor as Grand Duke 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 Parliament and the President. The highest executive power is held by the President, elected for a period of 6 years. Mr. Urho Kekkonen has been President since 1956 and he was re-elected for the period March 1, 1978, to March 1, 1984.

Parliament, comprising 200 members is elected by universal suffrage for a period of 4 years. The number of seats of the different parties in Parliament elected in 1979 is as follows: Social Democratic Party of Finland 52, National Coalition Party 47, Centre Party 36, Democratic League of the People of Finland 35, Swedish Party 10, Christian League of Finland 10, Finnish Rural Party 6 and Liberal Party 4.

## INTERNATIONAL ORGANIZATIONS

Finland became a member of BIS 1930, IMF 1948, IBRD 1948, GATT 1950, UN 1955, IFC 1956, IDA 1960, EFTA 1961, ADB 1966, OECD 1969, and IDB 1977.

## 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%. Of the land area (1970) 2.7 mill. ha (9.6%) area cultivated and 19.1 mill. ha (68.4%) are covered by forests.

OWNERSHIP OF LAND (1970). The total land area was distributed among different classes of owners approximately as follows: private 60.7%, State 29.4%, joint stock companies etc. 8.0%, municipalities and parishes 1.9%.

## POPULATION

NUMBER OF INHABITANTS (1979): 4.8 million. Sweden 8.3, Switzerland 6.3, Denmark 5.1, and Norway 4.1 million.

DENSITY OF POPULATION (1979): In South Finland 46.6, in East and Central Finland 14.0, in North Finland 4.0 and in the whole country an average of 15.6 inhabitants to the square kilometre.

DISTRIBUTION BY AREA (1979): 40% of the population inhabit the rural areas, 60% towns and urban districts. The largest towns are: Helsinki (Helsingfors), the capital 483 743 inhabitants, Tampere (Tammerfors) 165 883, Turku (Åbo) 163 903.

EMPLOYMENT (1979): Agriculture and forestry 12%, industry and construction 34%, commerce 14%, transport and communication 8%, financing, insurance, real estate and business services 6%, community and personal services 26%.

LANGUAGE (1979): Finnish speaking 93.6% Swedish speaking 6.3%, others 0.1%.

EDUCATION (1980): Practically all persons over 15 years of age are literate. There are 6 universities (the oldest founded in 1640) and 15 colleges of university standard.

CHANGE OF POPULATION (1979): births 13.3‰, deaths 9.2‰, change + 2.3‰, net immigration - 1.9‰. Deaths in France 10.1‰ and Great Britain 11.9‰.

## TRADE AND TRANSPORT

NATIONAL INCOME (1980), in million marks: Gross domestic product at factor cost by industrial origin: agriculture 6 863 (4%), forestry and fishing 8 330 (5%), manufacturing 54 285 (33%), construction 12 102 (7%), trade, restaurants and hotels 19 169 (11%), transport and communication 13 557 (8%), banking and insurance 6 613 (4%), ownership of dwellings 11 048 (7%) other services 34 146 (21%), total 166 113. Index of real domestic product 118 (1975 = 100).

FOREST RESOURCES (1979). The growing stock comprised of 1 606 million m<sup>3</sup> (solid volume with bark) of which 45% was pine and 37% spruce, the remaining 18% being broad-leaved trees, chiefly birch. Of the growing stock, 890 million m<sup>3</sup> was up to the standard required for logs, 56% of these being pine. The annual growth was 61 million m<sup>3</sup> and the total removal calculated on the basis of roundwood consumption was 49 million m<sup>3</sup>.

AGRICULTURE (1979). Cultivated land 2.3 million hectares. Number of holdings 229 356 of which 157 673 are of more than 5 ha. Measure of self-sufficiency in bread cereals 44%, 70% in 1980.

INDUSTRY (1979). Gross value of industrial production 138 668 mill. marks, number of workers 396 020, salaried employees 133 650, motive power (1978) 7.6 mill. kW. Index of industrial production 118 for 1979 (1975 = 100).

STATE RAILWAYS (Dec. 31, 1980): Length 6 076 km.

MERCHANT FLEET (June 30, 1981): Passenger vessels 144 (263 458 gross reg. tons), tankers 43 (1 245 887 gross reg. tons), dry cargo vessels 197 (906 378 gross reg. tons), other vessels 95 (14 798 gross reg. tons), total 479 (2 430 521 gross reg. tons).

MOTOR VEHICLES (Dec. 31, 1980): Passenger cars 1 225 931 lorries and vans 149 151, buses 8 963, others 8 782, total 1 392 827.

FINNISH AIRLINES (Sept. 1, 1981): Finnair and Kar-Air have in use 3 DC-8, 1 DC-6-ST, 5 Super Caravelles, 9 DC-9 10/14/15, 3 DC-9-41, 12 DC-9-51, 3 DC-10-30, 2 Fokker F-27 and 1 Embraer Bandeirante. Companies have scheduled traffic outside of Finland to 39 airports and to 20 domestic airports.

## FINANCE AND BANKING

CURRENCY. Since 1860, Finland has had its own monetary system. From 1877 until 1914 the country was on the the gold standard, and returned to it in 1926. In 1931, the Central Bank's duty to redeem bank notes in gold was suspended and at the end of 1962 was entirely cancelled. The monetary unit is the mark (Finnish markka). The last par value of the mark was set on Oct. 12, 1967 and was 0.21159 grams of fine gold per mark (equivalent, at the time, to 4.20 marks per U.S. dollar). Since Nov. 1, 1977 the external value of the mark has been officially expressed in terms of a currency index. This index is trade-weighted and indicates the average change in the currencies which are important in Finnish foreign trade. The present currency weights are Rbl 20.9, Skr 16.8,2 13.4, DM 13.1, \$ 10.0, other currencies 25.8. The permissible range of fluctuation is about 3 per cent on either side of the arithmetic mean. The fluctuation limits are 119.0 and 112.0.

THE CENTRAL BANK. The Bank of Finland (estab. 1811) functions under the guarantee and supervision of Parliament. Its Board of Management is appointed by the President of the Republic; the Bank Supervisors, nine in number, are elected by Parliament. The Bank has a head office in Helsinki and 12 branches in other towns.

OTHER CREDIT INSTITUTIONS (Dec. 31, 1980). There are two big and five small commercial banks with in all 880 offices, 275 savings banks, 372 co-operative banks, five mortgage banks. Posti-pankki and three development credit institutions. The co-operative stores accept deposits from their members. The Social Insurance Institution and fifty-five private insurance companies also grant credits.

RATES OF INTEREST (Feb. 1, 1980). The base rate applied by the Bank of Finland on credit extended to the banks in the context of the quota facility is 9 ½%. The range of rates for other credits granted by the Bank of Finland is between 7 ½% and 10 ½%. Other credit institutions: time deposits 5%; 6 month deposits 6 ¼%; 12 month deposits 7 ¼%; 24 month deposits 9%; 36 month deposits 9 ¾% + savings premium; 36 month deposits 9 ¾% + tax concession and sight deposits 2%. The highest lending rate 12 ½%.

# FINDINGS AND RECOMMENDATIONS OF THE FINNISH COMMITTEE ON TECHNOLOGY

by Pertti Kukkonen, Dr.Pol.Sc.

Bank of Finland

## INTRODUCTION AND SUMMARY

The slowing down of the rate of productivity increase in many industrial countries in the 1970s and the emerging competition from the newly industrialising countries have intensified pressures for devising policies to promote research, innovation and the application of new technologies. In addition to energy technology, the rapid advances in micro-electronics and automation have been the areas of greatest interest. Many governments have undertaken extensive programmes of technological research and development (R & D), especially in these promising fields of the new technology.

As a small country Finland is unable to compete in basic research to the same extent as large industrial countries. When it comes to the application of the new technology, however, the prospects for a small country are better, provided that scarce R & D resources are improved and allocated efficiently.

Faced with the growing danger that Finland's competitive strength on world markets would be gradually eroded, the Finnish government has taken determined steps to increase R & D efforts. One step in this process was the appointment in March 1979 of a committee on technology. The committee was composed of experts in technology, economics and social sciences, drawn widely from government offices, research institutions and labour market and industrial organisations.

The committee was assigned the task of forecasting probable technological developments and their consequences for the economy and society. Furthermore, it was required to

draw up recommendations for policies to enhance the beneficial and alleviate the detrimental effects of technological progress, paying particular attention in the study to automation.

The committee completed its work and published its findings at the end of 1980. Altogether, there are more than a thousand pages including seven subcommittee reports in addition to the main report.<sup>1</sup> The subcommittee reports deal with predictions of technological developments in the 1980s, the economic and social impact of the new technologies and recommendations for policies in these areas. Policy proposals for education and R & D are also reported. Finally, there is a publication devoted to the problems of technology transfer.

The implementation of the suggested policy measures is now gradually getting under way. Other government bodies, such as the Council for Industrial Policy, have recently been involved in further investigations and the preparation of additional policy proposals.

In summarising the findings, one of the main points to emerge is that the committee considers it essential that the pace of technological development in Finland be accelerated so that the competitiveness of Finnish industry can be maintained. This would sustain the growth of the economy, thus creating better prospects for employment and social developments. The new technologies would permit further savings in the use of energy and raw materials as well as improvements in pollution controls.

The committee suggested measures for alleviating the dangers arising from the faster

<sup>1</sup> An English edition of the report will be issued by the Government Printing Centre at the end of 1981.

application of new technologies, such as a rise in structural unemployment and, in some cases, impoverishment of job content.

Most of the committee's other proposals deal with educational policies designed to promote structural adjustments in the labour force and with R & D policies. The committee calls for a rapid increase in the R & D input and improvements in allocation. Technology transfer is also identified as a vital policy area, especially for a small country.

## RESEARCH AND DEVELOPMENT ACTIVITY IN FINLAND

Finnish industry has accumulated a great deal of experience in the application of technology, enabling it to develop some new and original techniques. However, the total contribution of R & D to GDP in Finland is small in relation to most industrial countries. At present, it accounts for about one per cent of GDP, whereas it is well above two per cent in leading countries.

The relatively low share of expenditure on R & D in Finland was a cause of great concern to the committee. As Table 1 shows, the share of R & D expenditure in value added in Finnish manufacturing is the lowest among the Nordic countries.

**TABLE 1. EXPENDITURE ON RESEARCH AND DEVELOPMENT AS A PERCENTAGE OF VALUE ADDED IN DIFFERENT SECTORS OF MANUFACTURING IN NORDIC COUNTRIES IN 1977**

	Den- mark	Finland	Nor- way	Sweden
	Per cent of value added			
Manufacture of:				
Food, beverages and tobacco	0.7	0.6	0.5	1.5
Wood and paper	0.2	1.3	0.8	0.9
Chemical products (Of-which pharmaceuticals)	4.7 (15.7)	3.3 (11.7)	4.5 (14.8)	4.8 (29.7)
Metals	0.5	1.7	2.3	1.8
Machinery	3.4	3.1	5.2	4.9
Electrotechnical (Of which electronics)	5.7 (10.1)	7.2 (8.7)	10.5 (17.2)	9.4 (9.4)
Transport equipment	2.1	0.6	0.7	5.8
Instruments	11.2	15.8	0.7	5.8
Total manufacturing	2.6	1.6	2.4	3.5

Research and development activity is most intensive in the chemical industry — notably pharmaceuticals — as well as in the electrical and electronics sector and instrument manufacturing. Viewed in terms of the total R & D input, the performance of Finnish industry does not compare very favourably with other Nordic countries. However, it may not give a completely fair picture of the overall competitive position of Finnish industry. There are technologies, mostly in wood processing, metallurgy and chemicals, where Finnish industry has accumulated a wealth of experience enabling it to be highly innovative. Evidence of this is to be found in the fact that Finnish exports of these technologies are growing rapidly in the form of know-how and, increasingly, equipment and construction projects.

## MAIN TRENDS IN TECHNICAL DEVELOPMENTS AND THEIR CONSEQUENCES IN THE 1980S

Automation based on microelectronic technology is expected to accelerate in the 1980s. Here automation is understood to embrace a wide field including communications technology, data processing, production control, the manufacture of new products based on microelectronics as well as automated manufacturing processes and services. The committee also considered new developments in biotechnology and materials technology. Apart from projections in these main areas of the new technology, the prospects for the application of techniques in various sectors and their effects on production processes and on productivity were evaluated by experts in these sectors.

One of the principal findings was that, although automation will be rapid over the next ten years, the time horizon will not as yet be long enough for automation to have a revolutionary impact on social developments. Rather, automation is seen as a resource that will create opportunities for selective growth in the form of rising incomes and better social conditions as well as for savings in the use of energy and raw materials.

**TABLE 2. THE EFFECT OF AUTOMATION (INCREASE IN LABOUR PRODUCTIVITY) ON THE FINNISH ECONOMY IN 1981—1990 ACCORDING TO TWO SCENARIOS**

Scenario 1: The pace of automation is the same in Finland and abroad

Scenario 2: Automation is applied faster in Finland than abroad (labour productivity in Finland rises 0.5 per cent a year faster)

	Scenario 1	Scenario 2
	Per cent	
Effect of automation on:		
1. Labour productivity	+6.0	+11.0
GDP volume	+5.0	+ 8.5
2. Direct effect on employment	-4.5	- 8.5
3. Sum of indirect effects on employment	+3.5	+10.0
4. Total effect on employment (2 + 3)	-1.0	+ 1.5
5. Total effect on open unemployment	+0.7	- 0.9

One of the central issues in this, as in the most recent investigations of automation, was the effects of automation on employment. Automation will increase the productivity of labour. However, savings in labour input are only one of the main effects of automation. Other direct influences are savings (or productivity increases) in capital input and in energy and raw material inputs. All these productivity increases have a tendency to create incomes, total demand, output and hence employment in the economy. Positive employment effects are also transmitted via exports and imports, as rising productivity improves or at least maintains the competitive positions of domestic producers.

Estimated quantitatively, the direct labour saving effects and indirect employment creating effects are of approximately the same magnitude, if automation in Finland keeps pace with that in competing countries (Scenario 1 in Table 2). This means that automation would not significantly increase total unemployment, as long as the necessary structural adjustments are carried out effectively. Should Finland, through the skilful application of automation, succeed in increasing productivity faster than her competitors (Scenario 2), the net effect on employment would be positive (a gain of 1.5 per cent in the number of jobs). This result indicates the importance of foreign trade and competitiveness for employment in a small, open economy like Finland. If the annual rate of productivity increase in Finland were 0.5 per cent less than in competing countries, the loss of employment would be of the order of 2 per cent of the labour force.

Table 2 also shows that the principal economic effects of rising labour productivity are higher total output and real incomes. No consideration was given in the analysis to a possible increase in the productivity of capital. If this were taken into account, the total economic effects would be even more beneficial.

Although the loss of employment due to automation is likely to be minimal, the new technologies will alter the structure of the labour force,

the distribution of employment between sectors, the occupational structure and job content. Retraining and re-education will play a dominant role in preventing structural unemployment and social problems during the necessary adjustment process. Consequently, a large number of the committee's recommendations are concerned with educational policies.

The full extent of the structural change in employment in the 1980s was difficult to estimate. The figures of 5 to 10 per cent of labour force, or 100 000—200 000 persons, in Table 2 represent only part of the change, i.e. the shift between the 14 sectors studied in the quantitative analysis. In the long run, the majority of jobs will be effected by automation. However, the committee was unable to estimate quantitatively the extent of the change in occupational structure and left this difficult task for future investigations.

The new technologies will open up new possibilities for upgrading jobs, but they are also a source of potential danger. Initially, machines will take over the dirty, dangerous and tedious tasks. In most cases, the need for training and higher occupational qualifications

will be increased and job content enriched. However, in some instances there could be a change in the opposite direction towards more monotonous and less-demanding or dehumanized jobs. To forestall and mitigate these undesirable tendencies, the participation of employees in the planning of technological changes was considered essential.

Some other problems arise in connection with the new technologies. For example, the committee pointed out the scarcity of technical expertise in small business firms and in the more remote development regions and some suggestions for improvements in this area were made. Another subject dealt with was the use of microelectronics and automation to promote savings of energy and raw materials as well as in applications for pollution control.

## POLICY RECOMMENDATIONS

The committee on technology considered it necessary to propose a variety of policy actions, especially those dealing with education, R & D and technology transfer. Indeed, the number of recommendations is so large that decision makers may have difficulty in focussing on the most urgent of them.

One of the principal conclusions was that industrial policies should be aimed at enhancing the general business environment and maintaining a sufficient level of investment activity so as to promote the introduction of new technologies. Particular importance was attached to improving the circumstances of small and medium-sized firms, whose vast innovative and entrepreneurial reserves could be mobilized for the introduction of new products and technologies.

Like similar committees and advisory groups in many countries, the Finnish committee recommends the teaching of the basic facts of the new technologies to all age groups, starting in secondary schools. This will require the preparation of teaching materials, the special training of teachers and the purchase

of such equipment as mini- and microcomputers for senior secondary schools, intermediate vocational schools, universities and institutions of complementary education. A very urgent need was seen for the provision of special complementary education in the field of microelectronics and automation for certain groups of managerial and technical personnel in business firms.

Most of Finland's competitors on international markets have decided to increase their R & D expenditure substantially in the 1980s. For Finland to preserve her competitive position, the committee proposes that total R & D expenditure be raised from the present 1.1 per cent of GDP to 2 per cent at the end of the 1980s. This will require increasing the quantity and quality of both government and private sector resources devoted to R & D.

Table 3 shows the current distribution of R & D financing by sectors. Slightly more than half is financed from private sector funds. The committee found it difficult to agree on ways of increasing incentives that would encourage higher expenditure on R & D in the private sector. It was proposed that firms be granted special investment tax credits on their wage bills for R & D expenditure.

Public sector financing of basic research is intended mainly for universities and the Academy of Finland. Funds for applied research are channelled through the Ministry of Trade and Industry both as loans and subsidies for development projects in business firms. The

**TABLE 3. FINANCING OF RESEARCH AND DEVELOPMENT EXPENDITURE IN FINLAND BY SECTORS**

	1971		1975		1979	
	Mill. mk	Per cent	Mill. mk	Per cent	Mill. mk	Per cent
Public sector	193	44	459	48	750	43
Private						
corporations	228	52	472	49	964	55
Private nonprofit						
sector	11	3	14	2	21	1
Foreign countries	4	1	9	1	13	1
Total R & D	436	100	954	100	1 748	100

State Technical Research Centre concentrates on applied research. The Regional Development Fund (KERA) has, in addition to its main function, the special task of promoting R & D in development regions. The committee recommended additional funding through all of these channels. It should be mentioned that the committee did not deal with the quite important sponsoring of technological R & D by the Finnish National Fund for Research and Development (SITRA), which is owned by the Bank of Finland.

Detailed recommendations on special development projects were made in the fields of semiconductor technology, data processing technology, automation of batch assembly lines, biotechnology and other process technologies. There were also proposals for improving organizations supplying consulting and technical development services to small and medium-sized firms as well as for studying the establishment of companies specialising in the transfer of technology to small firms.

The committee recognised that in the field of technology transfer Finland is for the most part dependent on imported technologies. Consequently, it suggested measures that would promote and strengthen the technology transfer process mainly by improving organisations, information channels and the interna-

tional contacts of Finnish business firms and professional personnel.

As pointed out above, Finland's exports of technological know-how are growing rapidly. In so doing, it has a positive influence on other exports, especially on exports of engineering goods. The committee suggested some measures that would accelerate these trends through education and consulting services.

Although the total cost of the proposed policies would be of the order of 200 million marks per year and could be regarded as a heavy strain on government finances, the committee considered it as a minimum programme when compared to similar programmes being introduced in other countries. The adoption of these policies would be enough to ensure that Finland just maintains her current competitive position in the technological and economic race. These measures would, however, do little to alleviate the burden of high unemployment, which, because of slow economic growth, threatens to become the major problem of the 1980s. To further increase the rate of application of the new technologies would require still greater investments in R & D, education and technology transfer. This would have a very positive effect on employment, at least in the long run, as is suggested by Scenario 2 in Table 2 above.

## ITEMS

**Bank of Finland to participate in the financing of the Regional Development Fund.** After thoroughly examining ways in which monetary policy could be used to support regional development policy so as to stimulate more balanced regional development in Finland, the Bank of Finland has decided that the most practical means of achieving this would be through the participation of the Bank in the financing of the Regional Development Fund.

Consequently, the Board of Management of the Bank of Finland has made a decision in principle to this effect. The express aim of the Bank's planned contribution to the Fund is to reduce the share of foreign financing, which is less in keeping with the activities of the Regional Development Fund. The Bank of Finland intends to cover one fifth of the financial requirements of the Fund in 1982, with detailed preparations starting immediately.

Even though the decision has no direct bearing on the extension of the Fund's activi-

ties, its financial structure and scope for activity will improve.

**Finland's gross long-term foreign debt in January—June 1981.** At the end of June 1981, Finland's gross long-term foreign debt amounted to the equivalent of 39 867 million marks. Drawings of long-term foreign capital totalled 3 595 million marks, and redemptions 2 263 million marks. The net inflow of long-term capital thus reached 1 332 million marks in the first half of 1981, as against 1 074 million marks in the corresponding period last year.

In a breakdown of drawings by type of credit, financial loans accounted for 85 per cent, import and leasing credits for 8 per cent, direct investments for 4 per cent and subscriptions for 3 per cent.

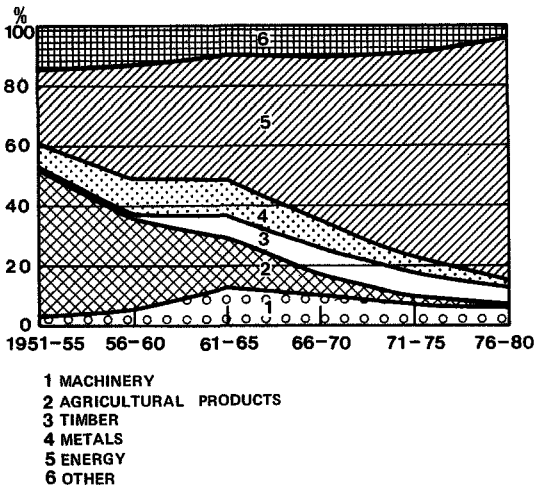
Drawings by enterprises amounted to 1 815 million marks or 54 per cent of total drawings, while those by central and local government totalled 1 138 million marks or 34 per cent, and those by financial institutions accounted for 399 million marks or 12 per cent.

### FINLAND'S GROSS LONG-TERM FOREIGN DEBT BY TYPE OF CREDIT IN JANUARY—JUNE 1981, MILLION MARKS <sup>1</sup>

	Debt Dec. 31, 1980	Drawings	Redemp- tions	Net drawings	Import of exchange rates	Debt June 30, 1981
<b>Financial loans</b>	29 298	3 073	1 800	+1 273	+2 243	32 814
Individual financial loans	13 170	1 704	1 311	+ 393	+1 567	15 130
Bonds and debentures	16 128	1 369	489	+ 880	+ 676	17 684
<b>Import credits</b>	4 377	279	355	— 76	+ 166	4 467
<b>Leasing credits</b>	102	0	13	— 13	+ 13	102
<b>LONG-TERM CREDITS</b>	33 777	3 352	2 168	+1 184	+2 422	37 383
<b>Direct investments</b>	2 075	131	49	+ 82	+ 23	2 180
<b>Subscriptions</b>	238	112	46	+ 66	—	304
<b>LONG-TERM GROSS DEBT</b>	36 090	3 595	2 263	+1 332	+2 445	39 867

<sup>1</sup> The mark values of debt outstanding have been calculated by using the selling rates of the same date, drawings and redemptions by using the average monthly selling rates.

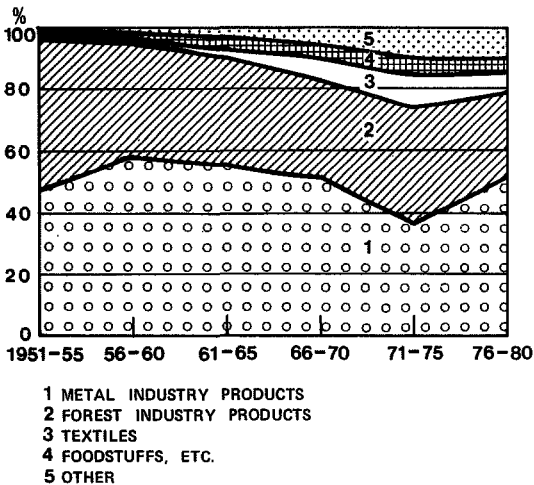
**CHART 3. THE STRUCTURE OF FINLAND'S IMPORTS FROM THE SOVIET UNION IN 1951—1980**



one-quarter of the metal industry's exports has gone to the Soviet Union, the major export items being ships and machinery and equipment for the forest industry. Forest industry products have accounted for about one-third of exports.

Chart 4 shows the structure of Finland's exports to the Soviet Union during five-year periods in 1951—1980.

**CHART 4. THE STRUCTURE OF FINLAND'S EXPORTS TO THE SOVIET UNION IN 1951—1980**



The share of other Socialist countries in Finland's foreign trade is fairly modest, being only a little more than 3 per cent in 1980. In spite of considerable activity in trade policy, trade with most of these countries has grown at a slower pace than Finland's total foreign trade, an exception being the trade with Hungary, which in recent years has grown at a faster rate.

The various trade agreements with these countries differ from each other, but there has been a general trend towards a gradual departure from bilateralism during the last decade. The protocols on the exchange of goods, which constitute an essential component of the bilateral trade system, have been practically abandoned. Today, Finland applies clearing payments systems in her trade with Bulgaria, the People's Republic of China, the German Democratic Republic, Hungary and Romania. Finland and Romania have already agreed to shift over to payments in freely-convertible currencies. Negotiations on a similar change-over were also started with the People's Republic of China after it had become a member of the IMF.

Payments between Finland and the other Socialist countries are effected in freely-convertible currencies, although subject to certain restrictions in the cases of Czechoslovakia and Poland.

DEVELOPMENT PROSPECTS

The development of trade between Finland and the Soviet Union over the next few years can be forecast with a good degree of accuracy. According to the Intergovernmental Protocol on the Exchange of Goods in 1981—1985, the volume of Finnish imports from the Soviet Union will remain at broadly the same level as in the previous five-year period. Crude oil imports, however, are expected to increase in volume terms. As from 1983, annual imports of crude oil are estimated to rise from



7 million tonnes at present to 7.5—8 million tonnes.

The actual development of Finnish exports to the Soviet Union is highly dependent on the trend in the prices of crude oil and other energy products. The potential for growth in Finnish exports caused by the rise in energy prices during 1979—1980 will in any case be exhausted before the end of the current year. Export prospects are brightest in the ship-building industry. The total value of ship exports will most likely rise to about 15 000 million marks during 1981—1985, the annual deliveries growing during the entire five-year period.

According to the Intergovernmental Protocol on the Exchange of Goods for the period 1981—1985 signed in the autumn of 1979, the value of trade should amount to about

80 000 million marks, but as a result of a rise in the price level it will grow to at least 120 000 million marks.

Unlike in trade with the Soviet Union, it is rather difficult to forecast the future of Finland's trade with the other Socialist countries. A slackening in the economic growth of these countries may also be reflected in Finnish exports. On the other hand, Finland's share in the Western trade of these countries is relatively small, being about 2 per cent in 1979, which may offer room for growth even if there should be a marked slowdown in the growth of these countries' imports from the West. The view in Finland is that scope still exists for the further expansion of this trade. Accordingly, Finland will continue to play a very active role in its development.

August 21, 1981

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# BANK OF FINLAND

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## Board of Management

Mauno Koivisto

*Chairman, absent as Prime Minister*

Ahti Karjalainen                      Rolf Kullberg  
*Vice Chairman, Acting Chairman      Acting Vice Chairman*

Pentti Uusivirta                      Ele Alenius

Harri Holkeri                      Seppo Lindblom  
*Acting Member of the Board*

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## Directors

Markku Puntila                      Seppo Lindblom

Eino Helenius                      Pentti Koivikko

Kari Nars                      Antti Lehtinen

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## Senior officials

Pertti Kukkonen                      Ralf Pauli  
*Director, ADP-planning                      Monetary Policy*

Raimo Hyvärinen                      Kari Pekonen  
*Domestic Financing                      Exchange Policy*

M. Vanhala                      Kari Holopainen  
*Foreign Exchange                      Bilateral Trade*

Pekka Tukiainen                      J. Ojala  
*Foreign Financing                      Exchange Control*

Seppo Kostainen                      Juhani Hirvonen  
*Deputy, Economics Dept.                      Deputy, Research Dept.*

Markku Pietinen                      H. T. Hämäläinen  
*Information                      Administration*

Timo Männistö                      U. Levo  
*Internal Audit                      International Legal Affairs*

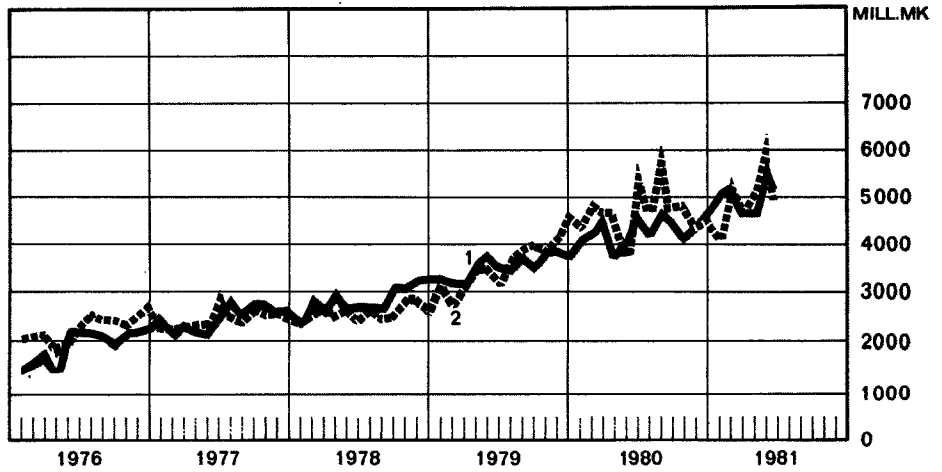
Erkki Vehkamäki                      Anton Mäkelä  
*Data Processing                      Personnel*

Stig G Björklund                      Reijo Mäkinen  
*Payments                      Cash*

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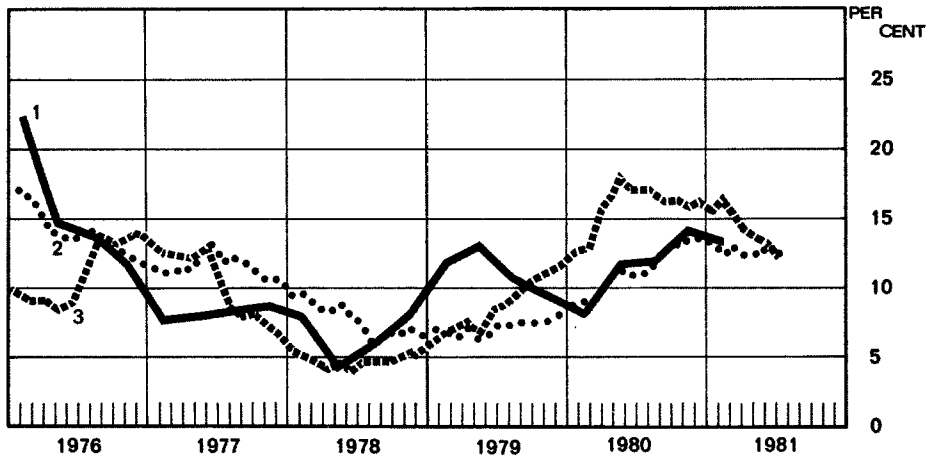
**FOREIGN TRADE, 1976-81**

- 1. Exports f.o.b.
  - 2. Imports c.i.f.
- Seasonally adjusted monthly figures



**PRICES AND WAGES, 1976-81**

- 1. Index of wage and salary earnings 1975 = 100, quarterly figures
  - 2. Consumer price index 1977 = 100, monthly figures
  - 3. Wholesale price index 1949 = 100, monthly figures
- Percentage change over previous year



**PRODUCTION, 1976-81**

- 1. Total index of industrial production 1975 = 100, seasonally adjusted monthly figures
- 2. Volume index of gross domestic product 1975 = 100, seasonally adjusted quarterly figures

