



EUROPEAN CENTRAL BANK



# **PAYMENT SYSTEMS IN THE EUROPEAN UNION**

**Addendum incorporating  
1998 figures**

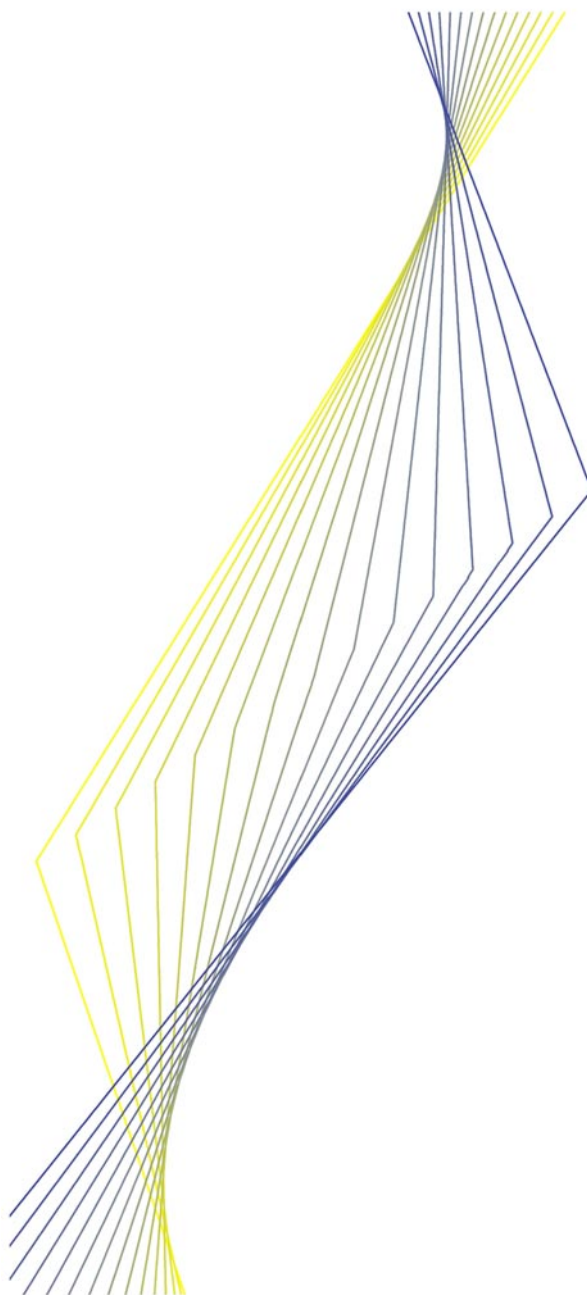
February 2000







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**Addendum incorporating  
1998 figures**

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In accordance with Community practice, countries are listed using the alphabetical order of the national languages.

Data used in this Addendum are as of end-1998 unless otherwise indicated.

Convention used in the tables:

“-” Nil;

“n.a.” Not available or not applicable;

“neg.” Negligible.



## **Introduction**

In the European countries the importance of payment and securities settlement systems has grown considerably over the last years. One of the basic tasks of the European Central Bank (ECB) and the national central banks of the European Union (EU) is to contribute to the reduction of the risks associated with the functioning of payment and securities settlement systems while promoting the smooth efficiency of these systems.

The availability of comprehensive information on these systems is essential for the successful realisation of these tasks. The report on "Payment systems in the European Union", also known as the "Blue Book", provides a comprehensive description on payment and securities settlement systems operating in the Member States of the European Union on both a domestic and a cross-border basis. The Committee of Governors published the first edition of the Blue Book in September 1992, and the European Monetary Institute (EMI) published the second edition in April 1996. Whilst the intention is to update the descriptive part of the Blue Book every four years, the statistical data are being updated every year.

This "Blue Book Addendum" provides the update of the country data and comparative tables to include 1998 figures. The tables reflect the level of integration and convergence achieved in payment and securities settlement systems in the EU Member States but pointing to the remaining differences in structure and variety. The data are presented as time series in order to facilitate the analysis of recent developments. The Annex explains the methodology used for collecting and calculating the statistical data.





Belgium



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	10,116.0	10,137.0	10,157.0	10,181.0	10,202.0
Gross domestic product (BEF billions)	7,786.3	8,132.2	8,331.2	8,726.8	9,064.2
Exchange rate vis-à-vis ECU <sup>(1)</sup>	39.6565	38.5519	39.2986	40.5332	40.6207

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	1994	1995	1996	1997	1998
					BEF billions
Notes and coins	396.3	416.2	435.8	441.3	438.8
Transferable deposits <sup>(1)</sup>	1,066.9	1,111.3	1,150.1	1,225.5	1,405.6
Narrow money supply (M1)	1,463.2	1,527.5	1,585.9	1,666.8	1,844.4
Transferable deposits in foreign currencies <sup>(2)</sup>	98.5	144.8	193.9	229.2	286.0
Outstanding value on electronic money schemes <sup>(3)</sup>	-	0.02	0.11	0.85	1.35
<i>of which:</i>					
<i>on card-based products</i>	-	0.02	0.11	0.85	1.35
<i>on network-based products</i>	-	-	-	-	-

(1) In local currency only.

(2) Revised figures.

(3) The electronic purse scheme "PROTON" started in February 1995.

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	BEF billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1) (2)</sup>	-	-	-	-	33.1
Free reserves held at central bank <sup>(1)</sup>	2.05	1.86	2.38	1.19	0.85
Transferable deposits at other institutions <sup>(3)</sup>	113.1	128.9	164.7	182.1	185.5

(1) Average of end-of-month figures.

(2) In preparation of the introduction of the euro, the NBB started with a system of didactical required reserves in September 1998.

(3) Payment means held by Belgian credit institutions with other credit institutions (sight accounts, BEF and foreign currencies, in Belgium).

Table 4

**Banknotes and coins***(total value, end of year)*

	BEF billions				
	1994	1995	1996	1997	1998
Total banknotes issued	412.2	445.8	464.7	478.6	482.9
of which:					
BEF 10,000	182.6	206.1	225.7	220.1	230.4
BEF 5,000 <sup>(1)</sup>	6.1	0.8	-	-	-
BEF 2,000 <sup>(2)</sup>	100.3	124.2	134.6	159.2	155.6
BEF 1,000	95.6	86.2	75.0	68.6	65.7
BEF 500	13.1	13.5	13.6	14.3	14.7
BEF 200 <sup>(3)</sup>	-	-	4.9	5.6	6.0
BEF 100	14.5	15.0	10.9	10.8	10.5
Total coins issued	19.2	20.1	21.5	22.5	23.0
of which:					
BEF 500	0.2	0.2	0.2	0.2	0.2
BEF 250	0.1	0.1	0.1	0.1	0.1
BEF 50	7.7	8.1	8.7	9.1	9.3
BEF 20	6.9	7.2	7.6	7.9	8.0
BEF 5	2.7	2.8	3.0	3.2	3.3
BEF 1	1.3	1.4	1.6	1.7	1.8
BEF 0.5	0.3	0.3	0.3	0.3	0.3
Notes and coins held by credit institutions	35.1	49.7	50.4	59.8	67.1
Notes and coins in circulation outside credit institutions	396.3	416.2	435.8	441.3	438.8

(1) The BEF 5,000 banknotes are no longer legal tender from 1 December 1994.

(2) The issuance of the BEF 2,000 banknote started on 22 April 1994.

(3) The issuance of the BEF 200 banknote started on 25 January 1996.

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (BEF billions)
Central bank	1	13	2	1.6
Credit institutions <sup>(1)</sup>	120	7,169	12,910	1,390.4
Postcheque	1	1,393	1,271	13.5
<b>TOTAL</b>	<b>122</b>	<b>8,575</b>	<b>14,183</b>	<b>1,405.5</b>
Branches of foreign banks	39	n.a.	n.a.	n.a.
<i>of which EC based</i>	25	n.a.	n.a.	n.a.

(1) Number of branches: Non-full size branches excluded.

**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	15	15	15	15	15
Number of machines	3,170	3,654	4,207	5,007	5,732
Volume of transactions (millions)	132.33	144.93	153.80	159.58	159.29
Value of transactions (BEF billions)	533.17	589.28	637.71	673.29	682.80
<b>EFTPOS terminals</b>					
Number of networks	2	2	2	2	2
Number of points of sale	49,983	55,883	60,664	63,974	68,543
Number of machines	63,765	72,892	81,331	85,727	93,061
Volume of transactions (millions)	181.96	211.45	243.19	276.68	333.90
Value of transactions (BEF billions)	412.67	482.91	564.84	646.24	764.20
<b>Electronic money loading machines <sup>(1)</sup></b>					
Number of machines	-	311	1,425	6,438	18,198
Volume of transactions (thousands)	-	121	267	1,776	3,335
Value of transactions (millions)	-	156	354	2,308	5,100
<b>Electronic money purchase terminals</b>					
Number of machines	-	1,109	5,504	21,263	45,649
Volume of transactions (thousands) <sup>(2)</sup>	-	737	1,534	10,190	28,167
Value of transactions (millions)	-	139	247	1,591	4,602

(1) The electronic purse scheme "PROTON" started in February 1995.

(2) Collected payments.

Table 7

**Number of payment cards in circulation <sup>(1)</sup>***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	8,912	9,461	10,591	11,361	12,014
Cards with a debit/credit function	8,912	9,461	10,591	11,361	12,014
<i>of which:</i>					
<i>cards with a debit function</i>	6,780	7,190	8,141	8,748	9,277
<i>cards with a credit function <sup>(2)</sup></i>	2,132	2,271	2,450	2,613	2,737
Cards with a cheque guarantee function	4,660	4,645	4,366	4,767	4,746
Retailer cards	1,089	1,221	1,372	1,428	1,564
Electronic money cards <sup>(3)</sup>	-	30	761	3,430	5,606

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) Most cards with a credit function are of the delayed debit type.

(3) The electronic purse scheme "PROTON" started in February 1995.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
ELLIPS <sup>(1)</sup>			0.21	0.96	1.01
Clearing house	15.88	14.45	11.57	6.78	5.75
Securities clearing balances	neg.	neg.	neg.	-	-
Postal drafts and money orders	3.76	3.72	3.28	2.85	2.40
Debits	6.25	5.11	4.14	3.57	3.30
Credit transfers	5.87	5.62	4.15	0.36	0.05
Province	-	-	-	-	-
Others	-	-	-	-	-
CEC	784.33	826.21	867.92	880.60	929.10
Direct debits	66.43	71.95	76.11	84.86	91.90
of which:					
<i>ordinary direct debits</i>	64.07	69.37	73.27	81.56	88.09
<i>refunds</i>	0.52	0.63	0.67	0.65	0.86
<i>unpaid direct debits</i>	1.84	1.95	2.17	2.65	2.95
Other debit operations	322.14	337.06	351.33	334.43	340.79
of which:					
<i>truncated cheques</i>	84.76	77.47	72.08	65.79	61.47
<i>ATMs and POS</i>	237.02	259.21	278.84	268.24	278.96
<i>unpaid cheques</i>	0.36	0.38	0.41	0.40	0.36
Credit transfers	394.64	416.03	439.61	458.38	490.65
of which:					
<i>credit transfers</i>	322.90	337.03	352.67	368.72	388.04
<i>counterparty postal</i>	2.97	2.70	2.48	2.17	1.82
<i>counterparty ATM-POS</i>	49.26	57.01	64.96	67.75	82.93
<i>inpayment transfers</i>	19.51	19.30	19.50	19.74	17.86
Large-value or urgent transfers	1.12	1.17	0.87	1.84	2.50
Others <sup>(2)</sup>	-	-	-	1.09	3.26

(1) ELLIPS, the Belgian RTGS system went live on 24 September 1996.

(2) Bills of exchange, of which non financial exchanges.



Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	BEF billions				
	1994	1995	1996	1997	1998
ELLIPS <sup>(1)</sup>			72,533	342,688	377,139
Clearing house	337,567	334,353	243,142	5,413	4,805
Securities clearing balances <sup>(2)</sup>	11,010	12,522	10,092	-	-
Postal drafts and money orders	67	40	60	62	50
Debits	16,862	14,887	15,229	5,031	4,750
Credit transfers	309,628	306,904	217,761	320	5
Province	-	-	-	-	-
Others	-	-	-	-	-
CEC	24,512	26,588	26,662	18,460	19,463
Direct debits	407	440	478	600	593
of which:					
<i>ordinary direct debits</i>	387	419	455	572	560
<i>refunds</i>	5	6	6	7	9
<i>unpaid direct debits</i>	15	15	17	21	24
Other debit operations	1,830	1,859	1,883	1,884	1,908
of which:					
<i>truncated cheques</i>	1,148	1,123	1,091	1,044	992
<i>ATMs and POS</i>	671	724	779	828	905
<i>unpaid cheques</i>	11	12	13	12	11
Credit transfers	10,255	10,373	10,583	10,667	11,464
of which:					
<i>credit transfers</i>	9,386	9,438	9,592	9,626	10,369
<i>counterparty postal</i>	39	37	35	30	25
<i>counterparty ATM-POS</i>	663	719	773	828	905
<i>in payment transfers</i>	167	179	183	183	165
Large-value or urgent transfers	12,020	13,916	13,718	5,146	4,922
Others <sup>(3)</sup>	-	-	-	163	579

(1) ELLIPS, the Belgian RTGS system went live on 24 September 1996.

(2) As from 1 October 1996 end of day balances of the participants are directly registered on their accounts with the NBB.

(3) Bills of exchange.

Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
<b>BNB Clearing</b>	197	175	197
Banks	108	100	108
Stockbrokers	51	51	51
ICSD (Cedel / Euroclear)	2	2	2
Others:	36	-	36
- Ministry of Finance	3	-	3
- Public bodies	24	22	24
<b>CIK</b>	128		
Banks	65	-	65
Stockbrokers	54	-	54
Others:		-	-
- CSD (F, CH, NL, DE)	4	-	-
- Local custodian for Luxembourg	1	-	-
CIK customers		-	-
- Others	4	-	-
<b>BELFOX</b>	21	20	
Banks	15	14	-
Stockbrokers	6	6	-

Table 11

**Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
BNB Clearing	188,258	198,608	229,789	199,807	156,876
CIK	664	485	735	770	n.a.
BELFOX <sup>(1)</sup>	1,915,483	2,164,527	2,635,945	2,527,665	2,175,033

(1) Total number of contracts (options and futures).

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	BEF billions				
	1994	1995	1996	1997	1998
BNB Clearing	66,148	85,050	92,937	103,426	108,994
CIK	554	547	809	1,229	1,212
BELFOX <sup>(1)</sup>	4.4	5.8	9.4	13.4	23.1

(1) Premium turnover (options).

**Table 13****Nominal values registered by securities settlement systems  
(end of year)**

	BEF billions				
	1994	1995	1996	1997	1998
BNB Clearing	6,450	7,485	8,987	9,491	9,633
CIK	n.a.	n.a.	n.a.	n.a.	n.a.
BELFOX	-	-	-	-	-

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1)</sup>	124.1	117.1	109.7	95.8	86.9
Payments by debit and credit cards <sup>(2)</sup>	190.9	218.1	249.3	281.6	342.5
Paper-based credit transfers <sup>(3)</sup>	5.9	5.6	4.2	0.3	0.1
<i>customer initiated</i>	1.8	1.7	1.3	0.3	0.1
<i>interbank</i>	4.1	3.9	2.9	-	-
Paperless credit transfers <sup>(3) (4)</sup>	640.9	661.2	690.4	697.0	674.6
<i>customer initiated</i>	640.9	661.2	690.2	695.9	673.3
<i>interbank</i>	-	-	0.2	1.1	1.3
Direct debits	100.1	104.5	113.5	117.9	117.4
Electronic money	-	0.7	1.5	10.2	28.2
<i>of which:</i>					
<i>payments by card-based products</i>	-	0.7	1.5	10.2	28.2
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	-	-	-	-
<b>TOTAL</b>	<b>1,061.9</b>	<b>1,107.2</b>	<b>1,168.6</b>	<b>1,202.8</b>	<b>1,249.7</b>

(1) Postal drafts included.

(2) Payments by retailer cards included.

(3) Revised figures and methodology from 1993 onwards.

(4) In-payment transfers included.

Table 15

**Indicators of use of various cashless payment instruments:  
Value of transactions**

	BEF billions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1)</sup>	13,693	12,287	11,492	11,664	14,456
Payments by debit and credit cards <sup>(2)</sup>	443	508	591	673	801
Paper-based credit transfers <sup>(3)</sup>	309,628	306,904	217,761	320	5
<i>customer initiated</i>	37,155	36,828	26,131	320	5
<i>interbank</i>	272,473	270,076	191,630	-	-
Paperless credit transfers <sup>(3) (4)</sup>	36,829	50,209	131,814	390,908	432,409
<i>customer initiated</i>	36,829	50,209	68,155	93,217	107,446
<i>interbank</i>	-	-	63,659	297,691	324,963
Direct debits	885	979	1,102	1,187	1,296
Electronic money	-	0.1	0.3	1.6	4.6
of which:					
<i>payments by card-based products</i>	-	0.1	0.3	1.6	4.6
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	-	-	-	-
<b>TOTAL</b>	<b>361,478</b>	<b>370,887</b>	<b>362,760</b>	<b>404,754</b>	<b>448,972</b>

(1) Postal drafts included.

(2) Payments by retailer cards included.

(3) Revised figures and methodology from 1993 onwards.

(4) In-payment transfers included.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	73	72	75	76	79
of which:					
<i>members</i>	34	32	32	32	29
<i>sub-members</i>	36	37	37	39	41
<i>participants</i>	3	3	6	5	9
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
of which:					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	21,233,594	23,796,106	26,928,329	31,355,971	36,454,886
<i>of which:</i>					
<i>category I</i>	6,331,292	6,660,281	6,845,391	7,170,089	7,825,972
<i>category II</i>	5,350,057	5,606,480	6,307,048	7,009,454	6,859,838
<i>sent/received to/from domestic users</i>	3,907,203	4,452,493	5,283,148	6,138,563	6,999,929
Total messages received	18,910,023	21,003,109	24,324,277	27,950,457	31,617,702
<i>of which:</i>					
<i>category I</i>	5,835,044	6,197,728	6,441,304	6,665,892	7,108,235
<i>category II</i>	4,198,073	4,457,184	5,202,993	5,771,831	5,715,306
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Denmark





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	5,205.0	5,228.0	5,262.0	5,284.0	5,303.0
Gross domestic product: (DKK billions)	965.7	1,013.6	1,066.8	1,123.0	1,174.8
Exchange rate vis-à-vis ECU <sup>(1)</sup>	7.5435	7.3280	7.3593	7.4836	7.4993

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	DKK billions				
	1994	1995	1996	1997	1998
Notes and coins	28.95	30.59	30.90	33.20	34.50
Transferable deposits <sup>(1)</sup>	244.54	253.00	278.44	295.14	316.81
of which held by:					
households <sup>(2)</sup>	115.84	124.00	135.79	149.60	162.17
corporate sector <sup>(3)</sup>	113.92	113.36	127.32	133.45	142.29
other (public sector)	14.78	15.64	15.34	12.09	12.35
Outstanding value on electronic money schemes <sup>(4)</sup>	7.00	15.00	21.00	15.12	18.50
of which:					
on card-based products <sup>(4)</sup>	7.00	15.00	21.00	15.12	18.50
on network-based products	-	-	-	-	-

(1) Sight deposits held by residents in Denmark and in foreign currencies.

(2) Non-business sector.

(3) Business sector.

(4) DKK millions.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	DKK billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	-	-	-	-	-
Deposits on current accounts	2.82	2.02	7.90	18.45	12.40
Transferable deposits at other institutions	n.a.	n.a.	n.a.	n.a.	n.a.

Table 4

**Banknotes and coins**

(total value, end of year)

	DKK billions				
	1994	1995	1996	1997	1998
Total banknotes issued	29.71	31.43	33.19	35.08	37.20
of which:					
DKK 1,000	17.29	18.24	19.28	19.59	19.79
DKK 500	4.69	5.31	5.82	6.56	8.09
DKK 200	n.a.	n.a.	n.a.	1.62	2.18
DKK 100	6.65	6.76	6.93	6.12	5.88
DKK 50	0.70	0.74	0.78	0.80	0.85
DKK 20	n.a.	n.a.	n.a.	n.a.	n.a.
DKK 10	n.a.	n.a.	n.a.	n.a.	n.a.
Other <sup>(1)</sup>	0.38	0.39	0.38	0.40	0.41
Total coins issued <sup>(2)</sup>	2.98	3.22	3.43	3.63	3.82
DKK 20	1.01	1.12	1.21	1.30	1.37
DKK 10	0.66	0.70	0.74	0.77	0.81
DKK 5	0.42	0.44	0.46	0.48	0.50
DKK 2	0.21	0.25	0.28	0.31	0.34
DKK 1	0.38	0.39	0.39	0.40	0.41
50 øre	0.11	0.11	0.12	0.13	0.13
25 øre	0.15	0.15	0.16	0.16	0.11
Notes and coins held by credit institutions	3.74	4.06	5.01	5.51	6.52
Notes and coins in circulation outside credit institutions	28.95	30.59	31.60	33.20	34.50

(1) Special banknotes in circulation in the Faroe Islands. From 1993 the figure also includes DKK 20 and DKK 10 banknotes.

(2) Includes DKK 200 commemorative coins and DKK 2 coins in circulation until end-1959.

Table 5

**Institutional framework**

(end of 1998)

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (DKK billions)
Central bank	1	0	0	0
Commercial banks and savings banks	168	2,353	n.a.	n.a.
Co-operative and rural banks	23	23	n.a.	n.a.
Post office (Giro Bank)	0	1,196	n.a.	n.a.
<b>TOTAL</b>	<b>192</b>	<b>3,572</b>	<b>9,004</b>	<b>368</b>
Branches of foreign banks	18	18	n.a.	n.a.
of which EC-based	15	15	n.a.	n.a.

Table 6

**Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	1	1	1	1	1
Number of machines	741	1,081	1,257	1,338	1,642
Volume of transactions (millions)	n.a.	n.a.	n.a.	n.a.	n.a.
Value of transactions (DKK billions)	n.a.	n.a.	n.a.	n.a.	n.a.
<b>EFTPOS terminals</b>					
Number of networks	1	1	1	1	1
Number of points of sale <sup>(1)</sup>	24,066	26,214	41,911	63,000	68,600
Volume of transactions (millions)	207.7	240.9	274.4	304.9	340.5
Value of transactions (DKK billions)	70.19	82.76	95.76	106.07	118.90
<b>Electronic money loading machines</b>					
Number of machines	-	2	2	3	5
Volume of transactions (thousands)	-	0.1	0.1	n.a.	0.1
Value of transactions (millions)	-	0.1	0.1	n.a.	1.4
<b>Electronic money purchase terminals</b>					
Number of machines	403	586	2,413	5,230	4,383
Volume of transactions (thousands)	963	2,138	3,657	5,450	7,290
Value of transactions (millions)	8	19	34	54	63

(1) Number of machines.

**Table 7**

Number of payment cards in circulation <sup>(1)</sup>  
(end of year)

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	2,825	2,941	3,073	3,082	3,323
Cards with a debit/credit function	2,825	2,941	3,073	3,082	3,323
of which:					
<i>cards with a debit function</i>	2,658	2,765	2,889	2,825	3,085
<i>cards with a credit function</i>	167	176	184	193	196
Cards with a cheque guarantee function	106	62	71	54	42
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards	150	295	390	n.a.	651

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

**Table 8**

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
DN Inquiry and Transfer system	0.347	0.349	0.426	0.369	0.384
DN Retail Clearing	518.646	595.649	605.007	656.027	713.880
Cheques	85.868	73.654	67.075	61.743	57.940
Direct debits	75.285	86.966	96.423	105.129	112.763
Paperless credit transfers	143.619	187.059	159.268	175.599	192.715
Payments by debit cards	207.722	240.865	274.364	304.862	340.453
of which:					
<i>by EFTPOS</i>	161.833	189.412	217.504	243.972	272.755
<i>by paperslip</i>	45.889	51.453	22.849	16.504	10.910
Payments by credit cards	6.152	7.105	7.877	8.694	10.009

**Table 9****Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	DKK billions				
	1994	1995	1996	1997	1998
DN Inquiry and Transfer system	24,153	18,875	16,642	18,119	21,654
DN Retail Clearing	2,831	2,854	3,038	3,250	3,682
Cheques	1,155	1,018	959	931	940
Direct debits	197	227	223	241	290
Paperless credit transfers	1,403	1,522	1,754	1,965	2,325
Payments by debit cards	71	82	96	106	119
<i>of which:</i>					
<i>by EFTPOS</i>	53	62	84	100	113
<i>by paperslip</i>	18	20	12	6	6
Payments by credit cards	5	5	6	7	8

**Table 10****Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
VP	112	166	95
Banks	99	147	85
Stockbrokers	5	5	5
Cedel / Euroclear	2	1	1
Mortgage credit institutions	6	13	4

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
VP					
Government securities	3.9	3.5	3.5	3.3	3.4
Bonds	)	)	)	)	)
Shares	)	)	)	)	)
CDs	n.a.	n.a.	n.a.	n.a.	n.a.
Futures	n.a.	n.a.	n.a.	n.a.	n.a.
Options	n.a.	n.a.	n.a.	n.a.	n.a.
Others	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	DKK billions				
	1994	1995	1996	1997	1998
VP					
Government securities	17,478	17,754	21,229	23,276	28,287
Bonds	)	)	)	)	)
Shares	76	68	98	135	172
CDs	n.a.	n.a.	n.a.	n.a.	n.a.
Futures	n.a.	n.a.	n.a.	n.a.	n.a.
Options	n.a.	n.a.	n.a.	n.a.	n.a.
Others	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 13****Nominal values registered by securities settlement systems***(end of year)*

	DKK billions				
	1994	1995	1996	1997	1998
VP					
Government securities	1,543	1,627	1,710	1,785	1,823
Bonds	)	)	)	)	)
Shares	74	78	89	110	141
CDs	n.a.	n.a.	n.a.	n.a.	n.a.
Others	n.a.	n.a.	n.a.	n.a.	n.a.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	107.5	93.5	84.5	76.6	71.1
<i>of which truncated</i>	107.5	93.5	84.5	76.6	71.1
Payments by debit and credit cards	213.9	248.0	282.2	313.6	350.5
Paperless credit transfers	n.a.	n.a.	n.a.	n.a.	n.a.
<i>customer initiated</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<i>interbank/large-value</i>	0.3	0.3	0.4	0.4	0.4
Direct debits	75.3	87.0	96.4	105.1	112.8
Electronic money	1.0	2.1	3.7	5.5	7.3
<i>of which:</i>					
<i>payments by card-based products</i>	1.0	2.1	3.7	5.5	7.3
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>397.7</b>	<b>430.6</b>	<b>466.8</b>	<b>500.8</b>	<b>541.7</b>

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	DKK billions				
	1994	1995	1996	1997	1998
Cheques issued	1,473	1,276	1,186	1,259	1,237
<i>of which truncated</i>	1,473	1,276	1,186	1,259	1,237
Payments by debit and credit cards	76	87	102	113	127
Paperless credit transfers	n.a.	n.a.	n.a.	n.a.	n.a.
<i>customer initiated</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<i>interbank/large-value</i>	24,153	18,875	16,642	18,119	21,654
Direct debits	197	227	223	241	290
Electronic money	8	19	34	54	63
<i>of which:</i>					
<i>payments by card-based products</i>	8	19	34	54	63
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>25,907</b>	<b>20,484</b>	<b>18,187</b>	<b>19,786</b>	<b>23,371</b>

**Table 16****Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	35	36	39	43	48
<i>of which:</i>					
<i>members</i>	30	31	33	34	36
<i>sub-members</i>	5	5	6	8	9
<i>participants</i>	-	-	-	1	3
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

**Table 17****S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	6,586,912	7,180,779	7,797,385	8,664,841	9,961,742
<i>of which:</i>					
<i>category I</i>	2,021,197	2,359,033	2,578,542	2,910,867	3,348,400
<i>category II</i>	2,087,615	2,118,840	2,234,460	2,436,291	2,689,158
<i>sent/received to/from domestic users</i>	1,002,745	1,053,617	1,132,180	1,226,964	1,503,964
Total messages received	5,911,734	6,397,247	6,929,831	7,892,844	9,130,548
<i>of which:</i>					
<i>category I</i>	1,928,935	2,062,300	2,242,872	2,457,573	2,729,086
<i>category II</i>	1,331,041	1,400,163	1,511,502	1,583,669	1,824,054
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Germany



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	81,422.0	81,661.0	81,896.0	82,053.0	82,024.0
Gross domestic product (DEM billions)	3,394.4	3,523.8	3,586.8	3,675.8	3,799.4
Exchange rate vis-à-vis ECU <sup>(1)</sup>	1.9245	1.8738	1.9095	1.9644	1.9691

(1) Average for the year.

**Table 2****Settlement media used by non-banks***(end of year)*

	DEM billions				
	1994	1995	1996	1997	1998
Notes and coins	225.9	237.5	246.8	247.0	242.6
Transferable deposits	541.1	580.8	676.8	691.1	800.7
<i>of which held by:</i>					
<i>households</i>	333.1	352.0	393.8	413.8	470.7
<i>corporate sector</i>	174.7	197.3	246.2	245.4	292.1
<i>other</i>	33.3	31.5	36.8	31.9	37.9
Narrow money supply (M1)	764.1	816.1	916.9	938.0	1,042.1
Outstanding value on electronic money schemes	-	-	n.a.	0.1	0.1
<i>of which:</i>					
<i>on card-based products</i>	-	-	n.a.	0.1	0.1
<i>on network-based products</i>	-	-	n.a.	n.a.	n.a.

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	DEM billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1)</sup>	43.6	36.5	38.7	41.0	45.8
Free reserves held at central bank	0.8	0.8	0.8	0.7	0.6
Transferable deposits at other institutions	342.8	363.9	401.1	427.6	472.6

(1) 1992 to 1994 without deductible cash balances.

Table 4

**Banknotes and coins**  
**(total value, end of year) <sup>(1)</sup>**

	DEM billions				
	1994	1995	1996	1997	1998
Total banknotes issued	236.1	248.4	260.4	260.7	255.3
of which:					
DEM 1,000	75.0	81.1	86.6	88.5	86.6
DEM 500	25.7	26.1	27.8	27.7	26.5
DEM 200	11.3	10.8	10.1	9.3	8.4
DEM 100	90.7	95.9	100.1	99.5	98.2
DEM 50	20.4	21.1	21.9	21.6	21.4
DEM 20	7.9	8.1	8.5	8.6	8.7
DEM 10	4.8	5.0	5.1	5.2	5.2
DEM 5	0.3	0.3	0.3	0.3	0.3
Total coins issued	14.8	15.1	15.4	15.6	15.6
of which:					
DEM 10	2.2	2.3	2.4	2.5	2.6
DEM 5	5.5	5.6	5.7	5.7	5.7
DEM 2	2.1	2.2	2.2	2.3	2.3
DEM 1	2.3	2.3	2.3	2.3	2.3
DEM 0.50	1.1	1.1	1.1	1.1	1.1
DEM 0.10	1.0	1.0	1.0	1.0	1.0
DEM 0.05	0.3	0.3	0.3	0.3	0.3
DEM 0.02	0.1	0.1	0.1	0.2	0.1
DEM 0.01	0.2	0.2	0.2	0.2	0.2
Notes and coins held by credit institutions	25.0	26.0	28.9	29.2	28.4
Notes and coins in circulation outside credit institutions	225.9	237.5	246.8	247.0	242.6

(1) Differences between sums and individual figures due to rounding.

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands) <sup>(1)</sup>	Value of accounts (DEM billions)
Central bank <sup>(2)</sup>	1	148	36	1.2
Commercial banks <sup>(3)</sup>	373	22,190	20,690	329.0
Savings banks	607	19,364	38,326	306.2
Co-operative and rural banks	2,253	18,418	23,000	164.4
<b>TOTAL</b>	<b>3,234</b>	<b>60,120</b>	<b>82,052</b>	<b>800.8</b>
Branches of foreign banks	74	116	n.a.	4.3

(1) Partly estimated.

(2) As a legal entity the Deutsche Bundesbank comprises the Central Office (in Frankfurt am Main) and nine Land Central Banks as well as 147 branches.

(3) Including mortgage banks, installment sales with special functions and Deutsche Postbank AG (fully fledged credit institution since 1 January 1995).

Table 6

Cash dispensers, ATMs and EFTPOS terminals <sup>(1)</sup>

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	4	4	4	4	4
Number of machines	29,400	35,700	37,600	41,397	45,615
Volume of transactions (millions)	935.0	1,100.0	1,251.8	n.a.	1,405.5
Value of transactions (DEM billions)	238.5	310.0	348.4	n.a.	419.0
<b>EFTPOS terminals</b>					
Number of networks <sup>(2)</sup>	18	19	19	22	26
Number of machines <sup>(2)</sup>	62,500	70,048	115,000	162,794	230,880
Volume of transactions (millions) <sup>(3)</sup>	104.0	149.4	214.2	225.8	363.4
Value of transactions (DEM billions) <sup>(3)</sup>	10.8	20.5	32.7	29.0	56.6
<b>Electronic money loading machines <sup>(4)</sup></b>					
Number of machines	-	-	75	20,000	22,000
Volume of transactions (thousands)	-	-	80	1,600	2,400
Value of transactions (DEM millions)	-	-	10.3	n.a.	252.2
<b>Electronic money purchase terminals <sup>(4)</sup></b>					
Number of machines	-	-	1,000	50,000	60,000
Volume of transactions (thousands)	-	-	220	4,200	13,600
Value of transactions (DEM millions)	-	-	5.7	85.0	175.0

(1) Partly estimated.

(2) From 1993 onwards, "electronic cash" and "POZ procedures" only.

(3) From 1993 onwards, "electronic cash" and "POZ procedures" only. In 1992 "electronic cash" and other debit card procedures. In 1997 "electronic cash" procedures only.

(4) In 1996 use of the so-called "Geldkarte" only in the pilot region Ravensburg/Weingarten.

Table 7

**Number of payment cards in circulation <sup>(1)</sup>***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	n.a.	n.a.	n.a.	n.a.	n.a.
Cards with a debit/credit function	47,353	74,337	80,454	85,200	91,345
<i>of which:</i>					
<i>cards with a debit function <sup>(2)</sup></i>	37,113	62,597	66,914	71,000	76,145
<i>delayed debit cards</i>	10,240	11,740	13,540	14,200	15,200
<i>cards with a credit function <sup>(3)</sup></i>	n.a.	n.a.	n.a.	n.a.	n.a.
Cards with a cheque guarantee function	37,113	38,479	39,937	41,720	43,845
Retailer cards	4,500	4,800	4,900	5,000	5,000
Electronic money cards <sup>(4)</sup>	-	-	22,000	35,000	60,700

- (1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures. Partly estimated.
- (2) Eurocheque cards, eligible for cash and debit functions, if they are issued with a Personal Identification Number (PIN) and from 1995 on including bank customer cards.
- (3) Most of the so-called "credit cards" do not have a credit option (the periodic invoice has to be paid immediately after receipt). Therefore "credit cards" appear under "delayed debit cards".
- (4) In 1996 only in the pilot region Ravensburg/Weingarten.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions <sup>(1)</sup>**

	millions				
	1994	1995	1996	1997	1998
Retail payments	2,355.1	2,272.2	2,276.1	2,244.9	2,250.4
Maschinell-optische Beleglesung (MAOBE) <sup>(2) (3)</sup>	248.0	115.3	77.9	27.7	11.1
<i>Collection items</i>	86.0	26.7	20.2	16.8	11.1
<i>Credit transfers</i>	162.0	88.6	57.7	10.9	-
Elektronischer Massenzahlungsverkehr (EMZ) <sup>(4)</sup>	2,107.1	2,156.9	2,198.1	2,217.2	2,239.3
<i>Collection items</i>	1,496.9	1,499.1	1,473.3	1,469.9	1,499.6
<i>Credit transfers</i>	610.2	657.8	724.8	747.3	739.7
Large-value payments	477.6	33.1	30.0	33.9	36.1
Gross-settlement procedures	34.3	13.6	10.3	11.2	13.5
Elektronischer Schalter(ELS) <sup>(5)</sup>	4.0	5.5	7.2	10.6	13.5
Platzüberweisungsverkehr <sup>(6)</sup>	30.3	8.1	3.1	0.6	-
Net settlement procedures	443.3	19.5	19.7	22.7	22.6
Konventionelle Abrechnung <sup>(3) (7) (8)</sup>	430.6	1.7	1.0	0.3	0.1
<i>Collection items (conventional)</i>	150.8	0.7	0.5	0.2	0.1
<i>Local credit transfers (conventional)</i>	279.8	1.0	0.5	0.1	-
Elektronische Abrechnung Frankfurt (EAF) <sup>(9)</sup>	12.7	17.8	18.8	22.4	22.5

- (1) This table does not include figures relating to IFTS which are not operated by the Deutsche Bundesbank.
- (2) Machine-optical voucher reading, excluding payments submitted in a paper-based form which were truncated and passed on in a paperless form by the Bank's regional computer centres/payment units (BSE/GSE cheques).
- (3) Termination of conventional clearing of credit transfers, of the optical character recognition system (OCR) for credit transfers, and the conventional local credit transfer system on 31 May 1997 owing to the introduction of the full EZÜ requirement with effect from 1 June 1997 (see Agreement on credit transfers in 1996).
- (4) Paperless exchange of data media, including payments submitted in a paper-based form which were truncated and passed on in a paperless form by the Bank's regional computer centres/payment units (BSE/GSE cheques and EZÜ/BZÜ credit transfers). Former: DTA.
- (5) Former: EIL-ZV (express electronic credit transfer system).
- (6) Express paper-based local credit transfer system. Reduction due to shift caused by truncation obligation: previous paper-based payments shifted to ELS and EMZ. System was closed down end of May 1997.
- (7) Daily local clearing system.
- (8) Statistical recording changed in 1995: settled delivery envelopes (clearing items) instead of individual payments therein.
- (9) Former: EAF2.



Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions <sup>(1)</sup>**

	DEM billions				
	1994	1995	1996	1997	1998
Retail payments	4,688.7	4,699.4	4,628.4	4,540.5	4,434.2
Maschinell-optische Beleglesung (MAOBE) <sup>(2)</sup>	2,307.3	266.9	240.7	218.8	147.8
<i>Collection items</i>	2,203.4	240.0	224.5	215.3	147.8
<i>Credit transfers</i>	103.9	26.9	16.2	3.5	-
Elektronischer Massenzahlungsverkehr (EMZ) <sup>(4)</sup>	2,381.4	4,432.5	4,387.7	4,321.7	4,286.4
<i>Collection items</i>	1,313.9	3,277.1	3,173.6	3,044.9	2,978.4
<i>Credit transfers</i>	1,067.5	1,155.4	1,214.1	1,276.8	1,308.0
Large-value payments	204,656.	187,966.8	189,952.8	218,119.3	227,710.9
	0				
Gross-settlement procedures	30,342.6	32,197.1	32,613.5	35,372.8	39,369.0
Elektronischer Schalter (ELS) <sup>(5)</sup>	22,772.4	27,007.5	28,743.1	33,395.5	39,369.0
Platzüberweisungsverkehr <sup>(6)</sup>	7,570.2	5,189.6	3,870.4	1,977.3	-
Net settlement procedures	174,313.	155,769.7	157,339.3	182,746.5	188,341.9
	4				
Konventionelle Abrechnung <sup>(3)(7)</sup>	29,409.9	7,382.3	3,929.8	1,077.9	87.0
<i>Collection items (conventional)</i>	799.9	669.8	620.8	275.1	87.0
<i>Local credit transfers (conventional)</i>	28,610.0	6,712.5	3,309.0	802.8	-
Elektronische Abrechnung Frankfurt (EAF) <sup>(8)</sup>	144,903.5	148,387.4	153,409.5	181,668.6	188,254.9

(1) This table does not include figures relating to IFTS which are not operated by the Deutsche Bundesbank.

(2) Machine-optical voucher reading procedure, excluding payments submitted in a paper-based form which were truncated and passed on in a paperless form by the Bank's regional computer centres/payment units (GSE cheques).

(3) Termination of conventional clearing of credit transfers, of the optical character recognition system (OCR) for credit transfers, and the conventional local credit transfer system on 31 May 1997 owing to the introduction of the full EZÜ requirement with effect from 1 June 1997 (see Agreement on credit transfers in 1996).

(4) Paperless exchange of data media, including payments submitted in a paper-based form which were truncated and passed on in a paperless form by the Bank's regional computer centres/payment units (BSE/GSE cheques and credit transfers), former: DTA.

(5) Former: EIL-ZV (express electronic credit transfer system).

(6) Express local credit transfer system. Reduction due to shift caused by truncation obligation: previous paper-based payments shifted to ELS and EMZ, closed End of 1997.

(7) Daily local clearing system.

(8) Former: EAF2.

**Table 10****Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
<b>Deutsche Börse Clearing AG (DBC)</b>			
Banks	n.a.	n.a.	n.a.
Stockbrokers <sup>(1)</sup>	n.a.	n.a.	n.a.
Securities houses	n.a.	n.a.	n.a.
Insurance companies	n.a.	n.a.	n.a.
Foreign central banks	n.a.	n.a.	n.a.
Cedel / Euroclear	n.a.	n.a.	n.a.
Others <sup>(2)</sup>	n.a.	n.a.	n.a.

(1) Direct account with DBC (without stockbrokers without direct account with DBC).

(2) DTC, NY (only oneway through DBC, New York); NECIGEF, Amsterdam; OEKB, Vienna; SEGA, Zürich; SICOVAM, Paris; CIK, Brüssel; JSCC, Tokio; Monte Titoli, Milano, Intersettle Zürich (via Dresdner Bank Frankfurt).

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	millions <sup>(1)</sup>				
	1994	1995	1996	1997	1998
Deutsche Börse Clearing AG (DBC)	25.2	23.4	20.6	31.2	58.0
Delivery versus payment	20.5	19.0	17.7	27.5	53.5
without countervalue + others	4.7	4.4	2.9	3.7	4.5

(1) Since 1996 interregional transactions calculated in a new procedure, only chargeable transactions.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	DEM billions				
	1994	1995	1996	1997	1998
Deutsche Börse Clearing AG (DBC)	9,510	11,878	16,040	18,850	25,139
Bonds	8,205	9,742	13,616	n.a.	n.a.
Shares (including options)	1,305	2,136	2,424	n.a.	n.a.

Table 13

**Nominal values registered by securities settlement systems***(end of year)*

	1994	1995 <sup>(1)</sup>	1996	1997	1998
<b>Deutsche Börse Clearing AG (DBC)</b>					
Bonds (DEM billions)	3,274.1	3,698.4	3,945.3	4,218.2	4,604.0
shares	4,183.6	n.a.	n.a.	n.a.	n.a.
unit quotations (millions)					
(including warrants)	19,378.3	28,238.1	35,157.1	48,039.9	n.a.
percentage quotations (DEM billions)					
(including profit-sharing certificates)	25,361.6	28,008.3	34,272.8	35,560.0	n.a.
Investment fund units (DEM millions)	4,183.6	7,514.1	8,989.1	8,876.3	10,561.5

(1) Due to a new data collecting procedure, figures are not comparable with figures of previous years.

Table 14

**Indicators of use of various cashless payment instruments  
volume of transactions <sup>(1)</sup>**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	903.0	812.0	772.0	729.0	656.1
<i>of which truncated</i>	722.0	650.0	625.0	597.8	590.5
Payments by debit <sup>(2)</sup> and credit cards <sup>(3)</sup>	350.5	416.1	504.1	529.2	690.8
Paper-based credit transfers <sup>(4)</sup>	1,672.2	1,128.8	589.6	615.8	0.2
<i>customer initiated</i>	1,664.7	1,126.8	588.5	615.2	-
<i>interbank/large-value <sup>(5)</sup></i>	7.5	2.0	1.1	0.6	0.2
Paperless credit transfers	3,899.4	4,527.3	5,317.7	5,562.2	6,905.2
<i>customer initiated</i>	3,884.3	4,507.2	5,296.5	5,536.8	6,879.7
<i>interbank/large-value <sup>(5)</sup></i>	15.1	20.1	21.2	25.4	25.3
Direct debits <sup>(6)</sup>	4,607.0	4,704.6	4,828.8	5,393.2	5,391.0
Electronic money	-	-	0.2	4.2	13.6
<i>of which:</i>					
<i>payments by card-based products <sup>(7)</sup></i>	-	-	0.2	4.2	13.6
<i>payments by network-based products</i>	-	-	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>11,432.1</b>	<b>11,588.8</b>	<b>12,012.4</b>	<b>12,833.6</b>	<b>13,656.9</b>

(1) Partly estimated; 1995 adjustment of volume of transactions via cheque, credit transfer, direct debit. Without adjustment there would have been a steady rise of the volume of cashless payment transactions (app. + 6 %).

(2) In 1997 only electronic cash (POS-procedure).

(3) Most of the so-called "credit cards" do not have a credit option (the periodic invoice has to be paid immediately after receipt=delayed debit). Therefore "credit cards" includes "delayed debit cards" as well.

(4) Termination of conventional clearing of credit transfers, of the optical character recognition system (OCR) for credit transfers, and the conventional local credit transfer system on 31 May 1997 owing to the introduction of the full EZÜ requirement with effect from 1 June 1997 (see Agreement on credit transfers in 1996).

(5) Only interbank payments via the Deutsche Bundesbank by Elektronischer Schalter (ELS) and/or Elektronische Abrechnung Frankfurt (EAF).

(6) Including cash dispenser/ATM withdrawals made with eurocheque cards at banks other than the one issuing the card.

(7) In 1996 only use of the so-called "Geld Karte" in the pilot region Ravensburg/Weingarten.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions <sup>(1)</sup>**

	DEM billions				
	1994	1995	1996	1997	1998
Cheques issued	5,550.0	4,544.0	4,135.0	4,005.0	3,804.8
<i>of which truncated</i>	662.8	908.8	1,240.5	1,602.0	1,902.4
Payments by debit <sup>(2)</sup> and credit cards <sup>(3)</sup>	57.2	65.6	81.9	81.7	112.5
Paper-based credit transfers <sup>(4)</sup>	55,224.8	26,764.2	17,671.7	10,565.9	1,862.7
<i>customer initiated</i>	22,908.5	15,743.2	11,206.8	8,032.4	-
<i>interbank/large-value <sup>(5)</sup></i>	32,316.3	11,021.0	6,464.9	2,533.5	1,862.7
Paperless credit transfers	177,993.7	185,615.2	197,824.3	234,232.1	252,148.1
<i>customer initiated</i>	15,528.5	19,634.8	26,149.2	32,129.6	41,910.9
<i>interbank/large-value <sup>(5)</sup></i>	162,465.2	165,980.4	171,675.1	202,102.5	210,237.2
Direct debits <sup>(6)</sup>	4,766.8	4,644.5	5,562.3	6,382.0	7,222.8
Electronic money	-	-	neg.	neg.	0.2
<i>of which:</i>					
<i>payments by card-based products <sup>(7)</sup></i>	-	-	neg.	neg.	0.2
<i>payments by network-based products</i>	-	-	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>243,592.5</b>	<b>221,633.5</b>	<b>225,275.2</b>	<b>255,266.7</b>	<b>265,151.0</b>

(1) Partly estimated; 1995 adjustment of value of transactions via cheque, credit transfer, direct debit.

(2) In 1997 only electronic cash (POS-procedure).

(3) "Credit cards" also include "delayed debit cards".

(4) Termination of conventional clearing of credit transfers, of the optical character recognition system (OCR) for credit transfers, and the conventional local credit transfer system on 31 May 1997 owing to the introduction of the full EZÜ requirement with effect from 1 June 1997 (see Agreement on credit transfers in 1996).

(5) Only interbank payments via the Deutsche Bundesbank by Elektronischer Schalter (ELS) and/or Elektronische Abrechnung Frankfurt (EAF).

(6) Including cash dispenser/ATM withdrawals made with eurocheque cards at banks other than the one issuing the card.

(7) In 1996 only use of the so-called "Geld Karte" in the pilot region Ravensburg/Weingarten.

**Table 16****Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	240	253	253	262	268
<i>of which:</i>					
<i>members</i>	149	152	155	153	154
<i>sub-members</i>	88	97	94	101	104
<i>participants</i>	3	4	4	8	10
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

**Table 17****S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	38,187,536	43,824,742	47,803,674	55,873,558	61,963,751
<i>of which:</i>					
<i>category I</i>	13,843,274	15,580,557	16,493,249	17,731,609	19,351,531
<i>category II</i>	7,557,127	8,373,229	8,564,736	9,177,317	9,690,958
<i>sent/received to/from domestic users</i>	6,310,196	6,734,317	6,834,054	7,396,209	7,572,070
Total messages received	51,011,768	56,505,445	59,246,442	66,287,028	72,099,434
<i>of which:</i>					
<i>category I</i>	16,438,145	17,759,489	18,627,409	20,146,525	21,958,781
<i>category II</i>	21,833,621	24,441,740	25,231,632	28,261,324	29,076,972
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Greece





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	10,426.0	10,454.0	10,465.0	10,518.0	10,570.0
Gross domestic product (GRD billions)	23,983.6	26,883.5	29,697.7	32,752.2	35,676.60
Exchange rate vis-à-vis ECU <sup>(1)</sup>	288.026	302.989	305.546	309.355	330.731

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	GRD billions				
	1994	1995	1996	1997	1998
Notes and coins	1,687.7	1,863.5	1,941.4	2,182.7	2,229.3
Transferable deposits <sup>(1)</sup>	1,611.7	1,854.6	2,354.4	2,634.7	3,076.5
<i>of which held by:</i>					
<i>households</i>	431.3	492.5	612.1	<i>n.a.</i>	790.4
<i>corporate sector</i>	376.5	478.2	588.6	<i>n.a.</i>	645.7
<i>other</i> <sup>(2)</sup>	803.9	883.9	1,153.7	<i>n.a.</i>	1,640.4
Narrow money supply (M1)	3,299.4	3,718.1	4,295.8	4,817.4	5,305.8
Outstanding value on electronic money schemes	-	-	-	-	-
<i>of which:</i>					
<i>on card-based products</i>	-	-	-	-	-
<i>on network-based products</i>	-	-	-	-	-

(1) Total sight deposits (in local currency).

(2) Including non-bank financial institutions, public entities and public enterprises.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	GRD billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1)</sup>	860.7	1,231.9	1,460.5	1,818.7	2,214.3
<i>of which can be used for settlement</i>	-	-	-	-	-
Free reserves held at central bank	-	-	-	-	-
Transferable deposits at other institutions	363.6	280.1	367.8	607.5	471.6

(1) Primary and secondary reserve requirements.

**Table 4****Banknotes and coins***(total value, end of year)*

	GRD millions				
	1994	1995	1996	1997	1998
Total banknotes issued	1,800,385	2,018,137	2,205,992	2,404,012	2,469,797
<i>of which:</i>					
GRD 10,000	-	358,018	576,867	1,063,054	1,374,178
GRD 5,000	1,654,553	1,522,079	1,480,441	1,184,457	942,710
GRD 1,000	108,743	100,503	106,771	110,104	103,977
GRD 500	24,845	26,034	28,457	29,569	30,131
GRD 200	-	-	1,985	5,529	7,409
GRD 100	10,262	9,889	9,706	9,376	9,632
GRD 50	1,982	1,614	1,765	1,923	1,730
Total coins issued	39,415	42,817	45,075	47,449	49,652
Notes and coins held by credit institutions	152,102	197,402	309,705	268,741	290,126
Notes and coins in circulation outside credit institutions	1,687,698	1,863,552	1,941,362	2,182,720	2,229,293

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches <sup>(2)</sup>	Number of accounts (thousands)	Value of accounts (GRD billions)
Central bank <sup>(1)</sup>	1	95	2.1	4.9
Commercial banks	42	2,404	1,295.4	2,675.1
Shipping banks	1	1	n.a.	n.a.
Co-operative banks	12	31	2.6	5.3
Specialised credit institutions	4	34	85.2	396.1
Postal Savings Bank	1	130	n.a.	n.a.
<b>TOTAL</b>	<b>61</b>	<b>2,695</b>	<b>1,385.3</b>	<b>3,081.4</b>
Branches of foreign banks	23	115	52.4	189.8
<i>of which EC-based</i>	14	52	27.7	105.4

(1) There are twenty-seven full branches and sixty-seven agencies of the Bank of Greece (which offer payment services only).

(2) Including head offices.

**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	12	12	12	12	18
Number of machines	1,617	1,350	1,936	2,190	2,168
Volume of transactions (thousands)	40,655	40,720	58,605	62,536	78,524
Value of transactions (GRD millions)	1,198,099	1,683,639	2,377,010	3,141,534	4,356,267
<b>EFTPOS terminals</b>					
Number of networks	3	3	5	5	6
Number of points of sale	11,296	11,316	18,812	29,719	55,318
Volume of transactions (thousands)	7,867	8,410	8,590	14,048	19,777
Value of transactions (GRD millions)	149,407	163,125	195,632	321,293	476,909
<b>Electronic money loading machines <sup>(1)</sup></b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-

(1) E-money schemes are in pilot phase.

**Table 7****Number of payment cards in circulation <sup>(1)</sup>***(end of year)*

	1994	1995	1996	1997	1998
					thousands
Cards with a cash function	667	2,398	2,400	2,459	3,417
Cards with a debit/credit function	1,077	1,419	2,578	3,079	2,522
<i>of which:</i>					
<i>cards with a debit function</i>	502	361	1,518	1,553	1,413
<i>cards with a credit function</i>	575	1,058	1,060	1,526	1,513
Cards with a cheque guarantee function	-	-	-	-	-
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards <sup>(2)</sup>	-	-	-	-	-

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) E-money schemes are in pilot phase.

**Table 8****Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
Athens Clearing Office	14,611	10,847	8,801	7,477	6,071
Cheques in GRD and exchange	14,558	10,796	8,747	7,426	6,021
Other (Money Market Loan)	53	51	54	51	50
DIAS SA <sup>(1)</sup>	1,900	6,629	9,349	11,194	11,904
Cheques	1,900	5,052	8,127	10,152	11,083
Eurocheques	-	1,577	1,222	1,042	821

(1) DIAS SA started operating in October 1993.

**Table 9****Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	GRD billions				
	1994	1995	1996	1997	1998
Athens Clearing Office	126,438.2	120,028.6	174,596.9	194,873.0	212,568.0
Cheques in GRD and exchange	42,148.7	41,002.2	49,678.9	58,577.0	66,448.0
Other (Money Market Loan)	84,289.5	79,026.4	124,918.0	136,296.0	146,120.0
DIAS SA <sup>(1)</sup>	1,084.3	3,739.9	6,969.7	9,713.0	11,379.4
Cheques	1,084.3	3,677.3	6,920.9	9,672.0	11,344.0
Eurocheques	-	62.6	48.8	41.0	35.4

(1) DIAS SA started operating in October 1993.

**Table 10****Participants in securities settlement systems <sup>(1)</sup>  
(end of 1998)**

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
Securities Settlement System	101	101	60
Banks	44	44	44
Stockbrokers	57	57	16

(1) The securities settlement system for securities in book-entry form started operating in mid-1995.

**Table 11****Transfer instructions handled by securities settlement systems: <sup>(1)</sup>****volume of transactions**

	1994	1995	1996	1997	1998
Securities Settlement System		4,318	18,404	31,061	55,760
Government Securities	n.a.	4,318	18,404	31,061	55,760

(1) Bonds are included in the figure of Government Securities.

**Table 12****Transfer instructions handled by securities settlement systems: <sup>(1)</sup>****value of transactions**

	1994	1995	1996	1997	1998
					GRD billions
Securities Settlement System		3,574	5,187	19,090	62,080
Government Securities	n.a.	3,574	5,187	19,090	62,080

(1) Bonds are included in the figure of Government Securities.

**Table 13****Nominal values registered by securities settlement systems <sup>(1)</sup>**

(end of year)

	1994	1995	1996	1997	1998
					GRD billions
Securities Settlement System		1,702	5,503	12,311	21,191
Government Securities	n.a.	1,702	5,503	12,311	21,191

(1) Bonds are included in the figure of Government Securities.

Table 14

**Indicators of use of various cashless payment instruments:  
Volume of transactions**

	thousands				
	1994	1995	1996	1997	1998 <sup>(3)</sup>
Cheques issued	n.a.	2,922	3,343	3,575	4,466
Payments by debit and credit cards	28,000	22,000	26,325	21,386	26,135
Paper-based credit transfers	822	n.a.	n.a.	677	n.a.
<i>customer initiated</i>	743	n.a.	n.a.	637	n.a.
<i>interbank/large-value</i>	79	n.a.	n.a.	40	n.a.
Paperless credit transfers	2,497	3,333	3,280	5,638	n.a.
<i>customer initiated</i>	2,117	2,921	2,984	5,299	n.a.
<i>interbank/large-value</i>	380	412	296	339	n.a.
Direct debits	n.a.	846	1,086	882	3,781
Electronic money <sup>(1)</sup>	-	-	-	-	-
of which:					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	n.a.	n.a.	-	-	-
<b>TOTAL</b>	n.a.	29,101	34,034 <sup>(2)</sup>	32,158	34,382

(1) E-money schemes are in pilot phase.

(2) Total refers only to data available.

(3) Figures of some large banks have not been provided yet.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	GRD billions				
	1994	1995	1996	1997	1998 <sup>(3)</sup>
Cheques issued	n.a.	8,440	15,457	20,624	9,787
Payments by debit and credit cards	n.a.	406	504	538	589
Paper-based credit transfers	31,748	n.a.	n.a.	49,360	
<i>customer initiated</i>	106	n.a.	n.a.	154	n.a.
<i>interbank/large-value</i>	31,642	n.a.	n.a.	49,206	n.a.
Paperless credit transfers	132,940	269,082	394,191	369,238	n.a.
<i>customer initiated</i>	30,528	34,291	39,263	40,441	n.a.
<i>interbank/large-value</i>	102,412	234,791	354,928	328,797	n.a.
Direct debits	n.a.	21	27	21	n.a.
Electronic money <sup>(1)</sup>	-	-	-	-	-
of which:					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	n.a.	n.a.	n.a.	n.a.	n.a.
<b>TOTAL</b>	n.a.	n.a.	410179 <sup>(2)</sup>	439,781	n.a.

(1) E-money schemes are in pilot phase.

(2) Total refers only to data available.

(3) Figures of some large banks have not been provided yet.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	40	44	44	43	44
of which:					
<i>members</i>	22	24	23	22	22
<i>sub-members</i>	18	20	20	21	21
<i>participants</i>	-	-	-	-	1
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
of which:					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	2,558,821	3,054,343	3,653,816	4,749,696	6,087,598
<i>of which:</i>					
<i>category I</i>	833,724	995,550	1,156,158	1,540,709	1,711,688
<i>category II</i>	955,238	1,099,905	1,279,116	1,625,045	2,032,025
<i>sent/received to/from domestic users</i>	576,431	689,608	868,701	1,157,566	1,643,201
Total messages received	2,599,331	2,982,371	3,489,556	4,247,397	5,411,163
<i>of which:</i>					
<i>category I</i>	748,822	873,179	978,375	1,110,972	1,306,175
<i>category II</i>	469,224	526,311	700,031	1,030,760	1,584,059
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Spain



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	39,150.0	39,210.0	39,270.0	39,323.0	39,371.0
Gross domestic product (ESP billions)	64,811.5	72,840.0	77,105.2	81,666.8	86,850.5
Exchange rate vis-à-vis ECU <sup>(1)</sup>	158.9190	163.000	160.748	165.887	167.184

(1) Average for the year.

**Table 2****Settlement media used by non-banks <sup>(1)</sup>**

(end of year)

	ESP billions				
	1994	1995	1996	1997	1998
Notes and coins	7,164	7,535	7,941	8,378	8,436
Transferable deposits	22,087	22,605	24,169	27,566	32,939
Narrow money supply (M1)	28,753	29,638	31,717	35,484	40,616
Outstanding value on electronic money schemes	-	-	0.07	0.15	1.71
of which:					
on card-based products	-	-	0.07	0.15	1.71
on network-based products	-	-	-	-	-

(1) Including non-bank financial institutions.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	ESP billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	936	1,001	1,033	1,053	1,071
of which can be used for settlement	936	1,001	1,033	1,053	1,071
Free reserves held at central bank	11	14	10	10	12
Transferable deposits at other institutions	285	390	295	297	215

**Table 4****Banknotes and coins***(total value, end of year)*

	ESP billions				
	1994	1995	1996	1997	1998
Total banknotes issued	7,324	7,708	8,147	8,638	8,773
<i>of which:</i>					
ESP 10,000	3,700	4,003	4,314	4,684	4,887
ESP 5,000	3,027	3,093	3,206	3,297	3,206
ESP 2,000	317	354	378	407	434
ESP 1,000	273	253	246	246	246
Other	5	5	4	4	-
Total coins issued	333	360	371	354	382
<i>of which:</i>					
ESP 2000	15	28	33	37	39
ESP 500	89	93	96	101	106
ESP 200	22	21	19	14	16
ESP 100	109	115	119	124	135
ESP 50	10	11	11	6	6
ESP 25	42	44	46	39	43
ESP 10	3	3	4	4	4
ESP 5	24	25	26	16	19
ESP 2	0.1	0.1	0.1	-	-
ESP 1	7	7	7	2	2
Other	11	11	12	12	12
Notes and coins held by credit institutions	493	532	577	613	719
Notes and coins in circulation outside credit institutions	7,164	7,535	7,941	8,378	8,436

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts <sup>(1)</sup> (thousands)	Value of accounts (ESP billions)
Central bank	1	52	-	-
Commercial banks	148	17,569	28,025	15,025
Savings banks	51	17,582	38,464	15,438
Co-operative and rural banks	95	3,607	5,255	1,802
Post office	-	-	-	-
<b>TOTAL</b>	<b>295</b>	<b>38,810</b>	<b>71,744</b>	<b>32,265</b>
Branches of foreign banks	51	127	28	245
<i>of which EC-based</i>	34	101	23	204

(1) The accounts of foreign branches of Spanish banks are included.

Table 6

**Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995 <sup>(1)</sup>	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	3	3	3	3	3
Number of machines	23,479	26,680	30,437	33,940	37,893
Volume of transactions (millions)	509	565	582	605	638
Value of transactions (ESP billions)	6,803	7,713	7,924	8,211	8,774
<b>EFTPOS terminals</b>					
Number of networks	3	3	3	3	3
Number of machines	400,184	481,280	575,325	656,325	722,498
Volume of transactions (millions)	253	310	294	348	402
Value of transactions (ESP billions)	1,700	2,079	2,342	2,745	3,207
<b>Electronic money loading machines</b>					
Number of machines	-	-	4,123	10,942	16,774
Volume of transactions (thousands)	-	-	149	1,110	1,384
Value of transactions (millions)	-	-	363	2,948	3,740
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	48,524	77,092	99,335
Volume of transactions (thousands)	-	-	41	1,920	2,231
Value of transactions (millions)	-	-	38	1,001	1,035

(1) Since 1995 a new source of data has been used and, therefore, some of the 1995 figures may differ from those contained in the Addendum to the "Blue Book", January 1997.

Table 7

**Number of payment cards in circulation <sup>(1)</sup>***(end of year)*

	thousands				
	1994	1995 <sup>(2)</sup>	1996	1997	1998
Cards with a cash function	32,041	31,753	33,189	35,770	39,385
Cards with a debit/credit function	32,041	31,753	33,076	35,275	38,606
<i>of which:</i>					
<i>cards with a debit function</i>	32,041	31,753	33,076	35,275	38,606
<i>cards with a credit function</i>	10,480	10,491	10,645	11,634	12,922
Cards with a cheque guarantee function	-	-	-	-	-
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards	-	-	1,344	3,502	5,691

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) Since 1995 a new source of data has been used and, therefore, some of the 1995 figures may differ from those contained in the Addendum to the "Blue Book", January 1997.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
Volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Clearing house <sup>(1)</sup>	112.1	63.8	15.5	2.1	2.2
Retail payments <sup>(2)</sup>	110.3	61.9	13.5	-	-
Cheques	10.9	8.5	1.6	-	-
Paper-based credit transfers	-	-	-	-	-
Direct debits	43.3	17.9	1.5	-	-
Bills of exchange	56.1	35.5	10.4	-	-
Large-value payments <sup>(3)</sup>	1.8	1.9	2.0	2.1	2.2
Foreign exchange transactions <sup>(4)</sup>	0.1	0.1	0.1	0.1	0.1
Cross-border transfers <sup>(5)</sup>	1.6	1.8	1.9	2.0	2.1
<b>SNCE</b>	<b>515.5</b>	<b>582.7</b>	<b>663.9</b>	<b>735.8</b>	<b>789.9</b>
Computer link	188.0	194.7	237.2	522.6	677.7
Cheques	126.9	124.8	129.1	128.3	131.4
Credit transfers	61.1	69.9	81.3	96.1	121.6
Direct debits	-	-	26.5	296.0	379.4
Bills of exchange	-	-	0.3	2.2	45.3
Magnetic tape	327.5	388.0	426.7	213.2	112.2
Cheques	16.6	16.9	16.1	14.5	11.3
Credit transfers	17.0	18.8	20.3	20.2	11.2
Direct debits	224.4	269.6	291.3	76.5	40.5
Petrol cheques	22.7	20.1	19.0	21.7	18.8
Bills of exchange	46.8	62.6	80.0	80.3	30.4
<b>SLBE <sup>(6)</sup></b>	<b>0.89</b>	<b>0.86</b>	<b>1.13</b>	<b>1.38</b>	<b>2.21</b>
Interbank loans market	0.27	0.25	0.26	0.24	0.19
Book-entry debt market	0.60	0.59	0.69	0.69	0.70
Interbank transfers	0.02	0.02	0.17	0.45	0.65
Others	-	-	-	-	0.67

(1) The large-value net settlement service performed at the Madrid Clearing House is called SEPI (Servicio Español de Pagos Interbancarios).

(2) From January 1997 onwards, retail payments are processed entirely through the SNCE system.

(3) Only at the Madrid Clearing House.

(4) Peseta leg of foreign exchange transactions.

(5) Large-value transfers from/to non-residents denominated in pesetas.

(6) "Servicio de Liquidación del Banco de España", formerly known as STMD. Due to the changes in the system, since 1998, a new source of data has been used, and a new concept "Others" has been added.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	ESP billions				
	1994	1995	1996	1997	1998
Clearing house <sup>(1)</sup>	1,387,959	1,261,007	1,508,694	1,642,909	1,651,581
Retail payments <sup>(2)</sup>	35,723	22,890	7,759	-	-
Cheques	14,717	5,476	1,361	-	-
Paper-based credit transfers	-	-	-	-	-
Direct debits	2,586	1,530	274	-	-
Bills of exchange	18,420	15,884	6,124	-	-
Large-value payments <sup>(3)</sup>	1,352,236	1,238,117	1,500,935	1,642,909	1,651,581
Foreign exchange transactions <sup>(4)</sup>	202,219	185,011	176,997	161,096	91,680
Cross-border transfers <sup>(5)</sup>	1,150,017	1,053,106	1,323,938	1,481,813	1,559,901
SNCE	91,826	107,619	128,973	149,590	167,378
Computer link	63,585	68,605	77,670	99,558	139,797
Cheques	49,238	52,104	56,786	62,610	72,487
Credit transfers	14,347	16,501	19,597	24,074	36,420
Direct debits	-	-	1,112	11,499	17,105
Bills of exchange	-	-	175	1,376	13,785
Magnetic tape	28,241	39,014	51,303	50,032	27,581
Cheques	8,369	11,329	10,862	11,418	8,559
Credit transfers	9,862	11,087	12,787	13,568	7,791
Direct debits	6,105	8,362	10,234	3,395	1,599
Petrol cheques	54	46	44	83	77
Bills of exchange	3,851	8,190	17,376	21,567	9,555
SLBE <sup>(6)</sup>	2,784,127	2,453,898	3,124,037	3,327,911	5,411,736
Interbank loans market	832,726	762,541	927,262	974,558	922,661
Book-entry debt market	1,909,184	1,648,929	2,017,987	2,101,506	3,581,946
Interbank transfers	42,217	42,428	178,788	251,847	339,056
Others	-	-	-	-	568,073

(1) The large-value net settlement service performed at the Madrid Clearing House is called SEPI (Servicio Español de Pagos Interbancarios).

(2) From January 1997 onwards, retail payments are processed entirely through the SNCE system.

(3) Only at the Madrid Clearing House.

(4) Peseta leg of foreign exchange transactions.

(5) Large-value transfers from/to non-residents denominated in pesetas.

(6) "Servicio de Liquidación del Banco de España", formerly known as STMD. Due to the changes in the system, since 1998, a new source of data has been used, and a new concept "Others" has been added.



Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
CADE <sup>(1)</sup>	269	109	224
Banks	123	48	118
Savings Banks	50	27	50
Credit co-operatives	35	4	35
Stockbrokers	33	30	15
Insurance companies	7	-	3
Official credit institutions	1	-	1
Mutual funds	13	-	-
International financial organisations	5	-	-
Deposit guarantee funds	2	-	2
SCLV	105	105	56
Banks	42	42	39
Savings banks	6	6	6
Credit co-operatives	1	1	1
Stockbrokers	56	56	10
ESPACLEAR	92	92	69
Banks	55	55	47
Savings banks	13	13	11
Credit co-operatives	1	1	1
Stockbrokers	23	23	10

(1) "Central de Anotaciones de Deuda Española", formerly SACDE.

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
CADE <sup>(1)</sup>	6.69	7.46	8.44	8.42	3.47
Government securities <sup>(2)</sup>	6.50	7.30	8.28	8.30	3.37
CDs issued by the Banco de España	0.10	0.10	0.08	0.06	0.05
Futures and options	0.09	0.06	0.08	0.06	0.05
SCLV	4.55	4.19	5.37	6.67	19.92
Bonds	0.1	0.1	0.18	0.21	0.74
Shares	4.4	4.0	5.06	6.32	18.52
Futures and options	0.05	0.09	0.13	0.14	0.66
ESPACLEAR thousands	11.6	8.9	14.6	23.1	27.2
Bonds	11.6	6.9	12.6	19.3	21.2
Commercial paper	3.5	2.0	2.0	3.7	6.0

(1) "Central de Anotaciones de Deuda Española", formerly SACDE.

(2) Since 1998, a new source of data has been used to calculate the concept "Government securities". Due to this methodological change, figures may differ sharply from those of previous years.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	ESP billions				
	1994	1995	1996	1997	1998
CADE <sup>(1)</sup>	2,879,575	2,631,575	3,481,866	4,409,299	7,148,065
Government securities <sup>(2)</sup>	2,638,171	2,396,371	3,252,236	4,171,490	6,998,975
CDs issued by the Banco de España	240,479	234,653	228,846	237,169	148,566
Futures and options	925	591	784	640	524
SCLV	20,169	17,514	26,769	27,629	43,783
Bonds	1,805	1,722	1,953	2,128	268
Shares	18,357	15,769	24,782	25,449	43,373
Futures and options	7.3	23.1	34.0	52.0	142.4
ESPACLEAR	2,878	1,910	4,308	3,527	8,232
Bonds	2,283	1,600	3,520	2,955	6,415
Commercial paper	595	310	788	572	1,817

(1) "Central de Anotaciones de Deuda Española", formerly SACDE.

(2) Since 1998, a new source of data has been used to calculate the concept "Government securities". Due to this methodological change, figures may differ sharply from those of previous years.

**Table 13****Nominal values registered by securities settlement systems***(end of year)*

	ESP billions				
	1994	1995	1996	1997	1998
CADE <sup>(1)</sup>	30,581	34,123	38,791	41,088	41,888
Government securities	27,892	31,792	36,848	39,569	40,832
CDs issued by the Banco de España	2,689	2,331	1,943	1,519	1,056
SCLV	7,835	7,340	7,453	7,774	8,339
Bonds	3,372	2,957	2,910	2,961	2,573
Shares	4,463	4,383	4,543	4,813	5,766
ESPACLEAR	2,929	3,554	3,506	4,473	4,970
Bonds	2,218	2,805	3,115	3,974	3,873
Commercial paper	711	749	391	499	1,097

(1) "Central de Anotaciones de Deuda Española", formerly SACDE.

**Table 14****Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995 <sup>(1)</sup>	1996	1997	1998
Cheques issued	212.8	222.8	204.9	216.8	220.5
Payments by debit and credit cards	253.0	310.5	293.7	347.8	401.7
Paper-based credit transfers	-	-	-	-	-
<i>customer initiated</i>	-	-	-	-	-
<i>interbank/large-value</i>	-	-	-	-	-
Paperless credit transfers	149.6	207.8	231.8	240.0	255.8
<i>customer initiated</i>	146.6	204.7	228.4	236.4	251.4
<i>interbank/large-value</i>	3.0	3.1	3.4	3.6	4.4
Direct debits	667.0	632.1	671.0	753.2	837.1
Electronic money	-	-	0.04	1.9	2.2
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	0.04	1.9	2.2
<i>payments by network-based products</i>	-	-	-	-	-
Others					
<i>bills of exchange</i>	136.2	131.6	121.3	106.3	103.6
<b>TOTAL</b>	<b>1,418.7</b>	<b>1,504.8</b>	<b>1,522.7</b>	<b>1,666.0</b>	<b>1,820.8</b>

(1) Since 1995 a new source of data has been used and, therefore, some of the 1995 figures may differ from those contained in the Addendum to the "Blue Book", January 1997.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	ESP billions				
	1994	1995 <sup>(1)</sup>	1996	1997	1998
Cheques issued	114,937	105,038	98,253	114,476	120,808
Payments by debit and credit cards	1,700	2,079	2,342	2,745	3,207
Paper-based credit transfers	-	-	-	-	-
<i>customer initiated</i>	-	-	-	-	-
<i>interbank/large-value</i>	-	-	-	-	-
Paperless credit transfers	4,311,906.0	3,987,393	4,872,061	5,166,470	7,195,921
<i>customer initiated</i>	49,938	151,185	190,552	181,317	132,604
<i>interbank/large-value</i>	4,286,498	3,836,208	4,681,509	4,985,153	7,063,317
Direct debits	22,810	21,401	22,343	27,573	30,509
Electronic money	-	-	0.04	1.0	1.0
of which:					
<i>payments by card-based products</i>	-	-	0.04	1.0	1.0
<i>payments by network-based products</i>	-	-	-	-	-
Others					
<i>bills of exchange</i>	30,376	34,439	33,267	27,871	31,858
<b>TOTAL</b>	<b>4,481,729</b>	<b>4,150,350</b>	<b>5,028,266</b>	<b>5,339,136</b>	<b>7,382,305</b>

(1) Since 1995 a new source of data has been used and, therefore, some of the 1995 figures may differ from those contained in the Addendum to the "Blue Book", January 1997.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	115	119	114	115	115
of which:					
<i>members</i>	52	54	54	53	53
<i>sub-members</i>	63	64	58	60	58
<i>participants</i>	-	1	4	2	4
Memorandum item:					
Total S.W.I.F.T. world-wide	4623	5229	5,632	6,165	6,557
of which:					
<i>members</i>	2412	2259	2,874	2,969	3,052
<i>sub-members</i>	2023	2259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	12,564,221	13,927,485	15,716,791	17,723,342	20,494,319
<i>of which:</i>					
<i>category I</i>	2,643,318	3,151,216	3,488,406	3,961,209	4,934,156
<i>category II</i>	4,043,649	4,458,351	4,724,488	5,127,961	5,299,941
<i>sent/received to/from domestic users</i>	3,086,299	3,388,794	3,842,649	4,195,726	4,149,673
Total messages received	12,158,220	13,528,503	15,041,769	17,485,986	19,309,880
<i>of which:</i>					
<i>category I</i>	2,858,001	3,334,738	3,710,237	4,235,230	4,891,081
<i>category II</i>	4,225,242	4,594,817	4,979,247	5,271,626	5,363,135
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



France





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	57,900.0	58,139.0	58,375.0	58,607.0	58,847.0
Gross domestic product (FRF billions)	7,499.7	7,752.4	7,951.4	8,224.9	8,564.7
Exchange rate vis-à-vis ECU <sup>(1)</sup>	6.5835	6.5251	6.4930	6.6126	6.6014

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	FRF billions				
	1994	1995	1996	1997	1998
Notes and coins	252.2	255.8	257.8	260.7	n.a.
Transferable deposits <sup>(1)</sup>	1,419.7	1,544.0	1,556.8	1,673.3	1,785.7
<i>of which held by:</i>					
<i>households</i>	748.0	822.4	795.3	815.0	842.2
<i>corporate sector</i>	414.7	433.4	453.2	489.6	561.9
<i>other</i>	257.0	288.2	308.3	368.7	381.6
Narrow money supply (M1) <sup>(2)</sup>	1,671.9	1,799.8	1,814.7	1,934.0	2,000.7
Memoranda item:					
Transferable deposits in foreign currencies	35.5	46.8	46.9	57.2	n.a.
Outstanding value on electronic money schemes	-	-	n.a.	n.a.	n.a.
<i>of which:</i>					
<i>on card-based products</i>	-	-	n.a.	n.a.	n.a.
<i>on network-based products</i>	-	-	n.a.	n.a.	n.a.

(1) Excluding deposits in foreign currencies.

(2) Narrow money supply (M1): coins, French Franc-denominated sight deposits held by non-banks (French overseas territories excluded).

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	FRF billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1)</sup>	7.3	5.8	6.3	5.1	27.4
<i>of which can be used for settlement</i>	-	-	-	-	-
Free reserves held at central bank	0.8	1.4	1.0	2.5	4.3
Transferable deposits at other institutions <sup>(2)</sup>	2,839.	3,189.1	3,260.7	3,609.8	n.a.
Memorandum item:					
Broad money aggregate	5,282.	5,463.4	5,289.0	5,393.1	5,536.3
	2				

(1) December monthly average.

(2) Time deposits are included.

**Table 4****Banknotes and coins***(total value, end of year)*

	FRF billions				
	1994	1995	1996	1997	1998
Total banknotes issued	266.7	268.9	270.4	273.0	277.2
<i>of which <sup>(1)</sup>:</i>					
FRF 500	129.9	124.3	129.2	133.4	143.2
FRF 200	81.0	87.3	85.8	85.2	84.1
FRF 100	48.3	49.8	48.3	47.1	42.6
FRF 50	6.5	6.5	6.1	6.3	6.3
FRF 20	1.0	1.0	1.0	1.0	1.0
FRF 10	-	-	-	-	-
Total coins issued <sup>(2)</sup>	17.8	18.2	18.5	19.0	19.4
Notes and coins held by credit institutions <sup>(2)</sup>	15.8	17.0	18.2	20.0	n.a.
Notes and coins in circulation outside credit institutions <sup>(3)</sup>	252.3	255.8	257.8	260.7	264.9
Memorandum item:					
Banknotes held in French overseas territories	16.4	14.3	12.9	11.3	n.a.

(1) Including banknotes issued in French overseas territories.

(2) Excluding French overseas territories.

(3) Banknotes issued in French overseas territories are not included.

Table 5

**Institutional framework**

(end of 1998)

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (FRF billions)
Central bank	1	211	81	4.0
Commercial banks	306	10,137	19,517	686.6
Savings banks	35	4,220	9,838	169.6
Co-operative and rural banks	145	11,074	25,010	476.9
Post office	1	17,025	10,089	179.4
Treasury	1	4,013	820	223.5
<b>TOTAL</b>	<b>489</b>	<b>46,680</b>	<b>65,355</b>	<b>1,740.0</b>
Branches of foreign banks	89	n.a.	n.a.	n.a.
<i>of which EC-based</i>	53	n.a.	n.a.	n.a.

Table 6

**Cash dispensers, ATMs and EFTPOS terminals**

(end of year)

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	1	1	1	1	1
Number of machines	20,533	22,852	24,531	27,077	29,407
Volume of transactions (thousands) <sup>(1)</sup>	822,137	913,444	1,060,494	1,165,225	1,205,868
Value of transactions (FRF millions) <sup>(1)</sup>	347,031	370,861	430,535	474,724	477,595
<b>EFTPOS terminals</b>					
Number of networks	1	1	1	1	1
Number of points of sale <sup>(2) (3)</sup>	540,000	543,000	546,000	560,000	586,000
Volume of transactions (thousands) <sup>(3)</sup>	1,672,404	1,866,803	1,894,614	1,922,237	2,164,661
Value of transactions (FRF millions) <sup>(3)</sup>	534,376	590,214	599,731	589,042	656,893
<b>Electronic money loading machines</b>					
Number of machines	-	-	n.a.	n.a.	n.a.
Volume of transactions (thousands)	-	-	n.a.	n.a.	n.a.
Value of transactions (millions)	-	-	n.a.	n.a.	n.a.
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	n.a.	n.a.	n.a.
Volume of transactions (thousands)	-	-	n.a.	n.a.	n.a.
Value of transactions (millions)	-	-	n.a.	n.a.	n.a.

(1) Including interbank cash withdrawals and cash withdrawals processed through selected interbank payment systems.

(2) Number of machines.

(3) Estimated figures.

Table 7

**Number of payment cards in circulation***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	22,812	24,430	27,219	30,156	33,860
Cards with a debit/credit function	22,240	23,617	25,510	27,703	30,267
<i>of which:</i>					
<i>cards with a debit function</i>	22,240	23,617	25,510	27,703	30,267
<i>cards with a credit function</i>	579	654	735	780	1,038
Cards with a cheque guarantee function	n.a.	n.a.	n.a.	n.a.	n.a.
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards	-	-	n.a.	n.a.	n.a.

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Clearing houses	3,659.0	3,588.4	3,633.8	3,623.0	3,600.4
Cheques	3,650.0	3,582.1	3,630.3	3,620.7	3,599.2
Credit transfers	2.2	1.6	0.3	0.1	1.1
Bills of exchange	1.9	-	-	-	-
Avals de trésorerie	0.4	0.3	0.2	0.1	-
Large-value credit transfers	4.5	4.4	3.0	2.1	0.1
CREIC <sup>(1) (2)</sup>	259.9	281.8	293.0	285.2	296.7
Ordinateur de compensation <sup>(2) (3)</sup>	635.7	-	-	-	-
Credit transfers	341.7	-	-	-	-
Paperless bills of exchange	49.8	-	-	-	-
Direct debits	156.0	-	-	-	-
Titres Interbancaires de Paiement	23.0	-	-	-	-
ATM withdrawals	65.0	-	-	-	-
Card payments	0.2	-	-	-	-
Système Interbancaire de Télécompensation (SIT) <sup>(2)</sup>	1,791.8	2,590.3	3,940.0	4,919.5	5,410.5
Credit transfers	679.8	1,081.3	1,166.4	1,242.4	1,322.6
LCR and paperless bills of exchange	88.7	129.3	129.3	124.8	125.2
Direct debits	636.5	850.4	927.8	987.2	1,098.9
Titres Interbancaires de Paiement	55.4	91.1	114.4	122.6	129.7
Card payments	0	1.9	1,130.1	1,922.2	2,164.7
ATM withdrawals	331.4	436.3	472.0	520.3	569.4
Cartes Bancaires <sup>(2) (4)</sup>	1,677.0	1,872.6	775.0	-	-
ATM withdrawals	4.8	7.7	10.5	-	-
Card payments	1,672.2	1,864.9	764.5	-	-
Banque de France	34.3	29.4	15.0	1.6	0.4
Public Treasury transfers	32.0	27.3	13.8	0.5	-
Interbank credit transfers	0.4	0.4	-	-	-
Large-value credit transfers	0.9	0.9	0.7	0.6	0.1
Telegraphic credit transfers	1.0	0.8	0.5	0.5	0.3
SAGITTAIRE	4.1	4.5	4.7	4.7	1.3
TBF	-	-	-	0.1	0.6
SNP	-	-	-	0.5	5.5

(1) Centres Régionaux d'Echanges d'Images-Chèques (truncated cheques).

(2) Automated clearing houses.

(3) The system closed at the end of 1994.

(4) In the course of 1996, the exchange of card payments and ATM withdrawals was transferred to the SIT.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	FRF billions				
	1994	1995	1996	1997	1998
Clearing houses	150,624.1	137,412.8	131,353.9	90,258.0	13,956.6
Cheques	11,300.9	11,025.3	11,629.9	11,550.4	12,215.5
Credit transfers	1,244.5	1,312.7	124.0	10.6	197.1
Bills of exchange	36.3	-	-	-	-
Avals de trésorerie	71,416.5	62,263.3	54,942.0	32,371.0	181.0
Large-value credit transfers	66,625.9	62,811.5	64,658.0	46,326.0	1,363.0
CREIC <sup>(1) (2)</sup>	143.4	155.0	161.3	156.8	164.1
Ordinateur de compensation <sup>(2) (3)</sup>	3,463.7	-	-	-	-
Credit transfers	1,913.5	-	-	-	-
Paperless bills of exchange	1,230.5	-	-	-	-
Direct debits	267.4	-	-	-	-
Titres Interbancaires de Paiement	28.4	-	-	-	-
ATM withdrawals	23.8	-	-	-	-
Card payments	0.1	-	-	-	-
Système Interbancaire de Télécompensation (SIT) <sup>(2)</sup>	5,454.5	9,625.6	12,339.7	13,820.7	14,653.1
Credit transfers	2,518.6	5,158.3	7,345.0	8,519.8	9,039.3
LCR and paperless bills of exchange	1,825.8	2,950.8	2,948.0	2,868.8	2,950.2
Direct debits	929.0	1,248.0	1,359.1	1,454.9	1,580.2
Titres Interbancaires de Paiement	59.1	112.5	179.1	213.0	237.4
Card payments	0.0	0.5	345.4	589.0	656.9
ATM withdrawals	122.0	155.5	163.1	175.2	189.1
Cartes Bancaires <sup>(2) (4)</sup>	537.5	594.8	261.2	-	-
ATM withdrawals	3.3	5.1	6.9	-	-
Card payments	534.2	589.7	254.3	-	-
Banque de France	43,741.8	36,838.4	34,822.2	27,828.2	3,293.0
Public Treasury transfers	429.8	470.5	480.2	213.2	-
Interbank credit transfers	190.5	279.2	-	-	-
Large-value credit transfers	38,107.1	29,645.6	24,532.0	19,597.0	1,475.0
Telegraphic credit transfers	5,014.4	6,443.1	9,810.0	8,018.0	1,818.0
SAGITTAIRE	110,847.0	104,567.0	113,886.0	120,377.0	29,566.0
TBF	-	-	-	28,713.0	274,321.0
SNP	-	-	-	47,608.0	237,207.0

(1) Centres Régionaux d'Echanges d'Images-Chèques (truncated cheques).

(2) Automated clearing houses.

(3) The system closed at the end of 1994.

(4) In the course of 1996, the exchange of card payments and ATM withdrawals was transferred to the SIT.

**Table 10****Participants in securities settlement systems <sup>(1)</sup>***(end of 1998)*

		Number of participants
RGV		
Banks		217
Stockbrokers	) investment firms	37
Securities houses	)	
Cedel / Euroclear	) issuers	105
Others (CSDs)	)	12

(1) Since the launch in 1998 of RGV, that handles the transactions previously settled in Saturne, the former categories of participants are not relevant any more.

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
RGV	222,610	316,076	340,836	328,518	439,619
Government securities	182,109	248,056	265,376	248,584	324,641
CDs	18,170	38,857	38,839	36,479	47,326
Medium-term notes	7,859	7,687	7,126	6,905	7,808
Commercial paper	14,472	21,476	29,495	36,550	59,844
RELIT	15,000,000	12,000,000	13,700,000	17,800,000	21,216,908

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	FRF billions				
	1994	1995	1996	1997	1998
<b>RGV</b>	25,763.2	44,041.1	51,796.5	55,840.2	186,304.4
Government securities	23,306.0	40,042.9	46,441.4	49,718.4	-
Government securities Bills (Treasury Bills and Treasury Notes)	-	-	-	-	85,228.2
CDs	1,470.9	2,597.5	2,973.2	3,028.3	4,828.4
Medium-term notes	290.3	269.2	282.7	277.1	931.4
Commercial paper	696.0	1,131.5	2,099.2	2,816.4	5,133.9
Government Bonds	-	-	-	-	87,104.8
Bonds	-	-	-	-	3,077.7
<b>RELIT</b>	35,500.0	42,155.0	61,166.6	77,643.7	13,154.7
Government securities	25,250.0	34,203.0	51,838.2	64,670.7	-
Bonds	4,050.0	3,586.0	3,628.3	3,441.1	-
Shares	6,200.0	4,366.0	5,700.1	9,531.9	13,154.7

**Table 13****Nominal values registered by securities settlement systems***(end of year)*

	FRF billions				
	1994	1995	1996	1997	1998
<b>RGV</b>	1,590.8	1,834.0	1,977.3	2,142.9	7,293.1
Government securities	898.9	1,018.8	1,036.1	1,153.1	-
Government securities Bills (Treasury Bills and Treasury Notes)	-	-	-	-	1,292.0
CDs	304.8	389.1	401.6	456.3	528.0
Medium-term notes	305.6	316.4	335.9	325.1	329.9
Commercial paper	81.5	109.7	203.7	208.4	278.0
Government Bonds	-	-	-	-	2,917.0
Bonds	-	-	-	-	1,948.2
<b>RELIT</b>	6,350.0	6,547.6	7,614.8	8,718.6	5,501.0
Government securities	1570	1,676.6	2,207.3	2,491.8	-
Bonds	3,650.0	2,269.0	2,147.8	2,043.9	-
Shares	2,700.0	2,602.0	3,259.7	4,182.9	5,501.0



Table 14

**Indicators of use of various cashless payment instruments: <sup>(1)</sup>  
 volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	4,876.4	4,844.7	4,952.3	4,903.0	4,825.8
Payments by debit and credit cards	1,672.4	1,866.8	2,084.3	1,922.2	2,164.7
Paper-based credit transfers	58.2	53.8	33.5	15.6	11.2
<i>customer initiated</i>	51.0	47.0	29.1	12.3	11.2
<i>interbank/large-value</i>	7.2	6.8	4.4	3.3	-
Paperless credit transfers	1,556.5	1,608.5	1,748.2	1,841.8	1,940.3
<i>customer initiated</i>	1,552.4	1,604.0	1,743.5	1,836.5	1,932.4
<i>interbank/large-value</i>	4.1	4.5	4.7	5.3	7.9
Direct debits	1,155.3	1,205.9	1,343.9	1,430.6	1,578.2
Bills of exchange	151.2	142.6	142.6	137.6	137.6
Electronic money	-	-	n.a.	n.a.	n.a.
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	n.a.	n.a.	n.a.
<i>payments by network-based products</i>	-	-	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>9,470.0</b>	<b>9,722.3</b>	<b>10,304.8</b>	<b>10,250.8</b>	<b>10,657.8</b>

(1) These figures relate to exchanges both in interbank funds transfer systems (official exchanges) and through other circuits (interbank exchanges).

Table 15

**Indicators of use of various cashless payment instruments: <sup>(1)</sup>  
value of transactions**

	FRF billions				
	1994	1995	1996	1997	1998
Cheques issued	14,286	13,904	14,613	14,793	15,075
Payments by debit and credit cards	534	590	600	589	657
Paper-based credit transfers	183,850	164,099	155,406	106,768	400
<i>customer initiated</i>	2,496	2,656	1,464	456	400
<i>interbank/large-value</i>	181,354	161,443	153,942	106,312	-
Paperless credit transfers	119,162	113,332	125,107	208,995	558,685
<i>customer initiated</i>	8,315	8,765	11,221	12,297	12,754
<i>interbank/large-value</i>	110,847	104,567	113,886	196,698	545,931
Direct debits	2,554	2,710	3,059	3,438	3,763
Bills of exchange	3,313	3,217	3,211	3,127	3,208
Electronic money	-	-	n.a.	n.a.	n.a.
of which:					
<i>payments by card-based products</i>	-	-	n.a.	n.a.	n.a.
<i>payments by network-based products</i>	-	-	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>323,699</b>	<b>297,852</b>	<b>301,996</b>	<b>337,710</b>	<b>581,788</b>

(1) These figures relate to exchanges both in interbank funds transfer systems (official exchanges) and through other circuits (interbank exchanges).

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	203	206	208	238	247
of which:					
<i>members</i>	103	104	101	100	102
<i>sub-members</i>	96	95	100	104	100
<i>participants</i>	4	7	7	34	45
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
of which:					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	36,494,832	41,025,110	43,779,359	48,756,990	56,257,693
<i>of which:</i>					
<i>category I</i>	9,608,391	10,379,951	11,084,517	12,137,346	13,701,758
<i>category II</i>	12,253,787	13,937,393	14,291,099	15,400,655	15,345,713
<i>sent/received to/from domestic users</i>	11,455,375	13,405,442	14,020,407	15,992,898	18,931,262
Total messages received	33,446,733	37,811,258	40,775,879	45,940,168	53,393,461
<i>of which:</i>					
<i>category I</i>	9,910,743	10,711,093	11,534,499	12,943,528	14,737,823
<i>category II</i>	12,224,274	13,895,771	14,011,490	14,688,233	14,872,003
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Ireland



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	3,586.0	3,601.0	3,626.0	3,661.0	3,703.0
Gross domestic product (IEP billions)	36.4790	41.0280	45.2100	51.8230	59.6370
Exchange rate vis-à-vis ECU <sup>(1)</sup>	0.7936	0.8155	0.7935	0.7475	0.7862

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	IEP billions				
	1994	1995	1996	1997	1998
Notes and coins	1,656.1	1,844.3	1,968.0	2,260.0	2,592.0
Transferable deposits	2,798.6	3,225.2	3,931.0	5,199.0	6,802.0
Narrow money supply (M1)	4,454.7	5,069.5	5,899.0	7,458.0	9,394.0
Outstanding value on electronic money schemes	-	-	-	-	-
<i>on card-based products</i>	-	-	-	-	-
<i>on network-based products</i>	-	-	-	-	-

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	IEP millions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	682.0	886.2	978.0	959.0	2,200.0
<i>of which can be used for settlement</i>	0	0	0	902.0	2045.0
Free reserves held at central bank	2.6	301.5	52.0	367.0	58.0
Transferable deposits at other institutions	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 4****Banknotes and coins***(total value, end of year)*

	IEP millions				
	1994	1995	1996	1997	1998
Total banknotes issued	1,756.0	1,926.7	2,106.1	2,416.5	2,815.9
of which:					
IEP 100	4.8	4.6	26.7	54.6	79.1
IEP 50	191.2	206.5	229.6	303.7	453.8
IEP 20	1,264.1	1,401.1	1,524.5	1,711.3	1,910.2
IEP 10	201.8	213.6	217.6	230.2	250.7
IEP 5	79.1	86.1	93.1	102.2	107.9
IEP 1 <sup>(1)</sup>	14.3	14.1	13.9	13.8	13.6
Other notes <sup>(1)</sup>	0.7	0.7	0.7	0.6	0.6
Total coins issued	149.9	165.0	179.5	200.9	222.9
Notes and coins held by credit institutions	250.1	248.0	319.0	360.0	448.0
Notes and coins in circulation outside credit institutions	1,656.1	1,844.3	1,968.0	2,260.0	2,592.0

(1) In the course of withdrawal from circulation.

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands) <sup>(1)</sup>	Value of accounts (IEP millions) <sup>(1)</sup>
Central bank	1	0	1	35.8
Commercial banks	50	1,316	6,045	7,233.0 <sup>(3)</sup>
Savings banks <sup>(2)</sup>	4	134	777	n.a.
Building societies	3	101	713	n.a.
Post office	1	1,911	1,700	473.0
<b>TOTAL</b>	<b>59</b>	<b>3,462</b>	<b>9,236</b>	<b>7,741.8</b>
Branches of foreign banks	21	n.a.	n.a.	n.a.
of which EU-based	n.a.	n.a.	n.a.	n.a.

(1) These are current accounts. Increasingly payments can be made through deposit accounts.

(2) Trustee Savings Bank and state-sponsored credit institutions.

(3) Includes Savings Banks and Building Societies.



**Table 6**

*Cash dispensers, ATMs and EFTPOS terminals  
(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	3	3	3	3	3
Number of machines	862	918	1,051	1,051	1,229
Volume of transactions (millions)	56.3	63.9	74.8	87.1	178.1
Value of transactions (IEP millions)	3,178.4	3,555.2	4,520.3	4,252.9	6,313.0
<b>EFTPOS terminals</b>					
Number of networks	-	-	n.a.	n.a.	1
Number of points of sale	-	-	4,400	5,150	14,784
Volume of transactions (millions)	-	-	n.a.	n.a.	6
Value of transactions (IEP millions)	-	-	n.a.	n.a.	11
<b>Electronic money loading machines <sup>(1)</sup></b>					
Number of machines	-	-	-	-	20
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (IEP millions)	-	-	-	-	-
<b>Electronic money purchase terminals <sup>(1)</sup></b>					
Number of machines	-	-	-	-	338
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (IEP millions)	-	-	-	-	-

(1) Data relate to 'Pilot Scheme' introduced during 1998.

**Table 7**

**Number of payment cards in circulation**  
*(end of year)*

	1994	1995	1996	1997	1998
					thousands
Cards with a cash function	3,359	3,606	2,879	2,697	3,130
Cards with a debit/credit function	974	1,221	988	1,458	1,825
<i>of which:</i>					
<i>cards with a debit function</i>	<i>n.a.</i>	48	123	350	695
<i>cards with a credit function</i>	974	1,173	865	1,108	1,130
Cards with a cheque guarantee function	830	865	822	946	1,340
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards <sup>(2)</sup>	-	-	-	-	3

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) Data relate to 'Pilot Scheme' introduced during 1998.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
Dublin Bankers' Clearing <sup>(1)</sup>	151,357	142,754	174,249	190,106	202,413
<i>cheques</i>	91,689	91,912	111,776	121,581	124,392
<i>direct debits</i>	18,863	22,822	31,647	35,216	40,717
<i>credit transfers - paper</i>	17,653	5,818	5,918	6,279	8,471
<i>credit transfers - electronic</i>	23,152	22,202	24,908	27,030	28,833
The Central Exchange (cheques) <sup>(2)</sup>	4,678	n.a.	n.a.	n.a.	n.a.
Special presentations (large-value cheques) <sup>(3)</sup>	7.4	5.2	3.3	1.3	1.0
IRIS <sup>RTGS</sup> <sup>(4)</sup>	153	168	152	343	376

- (1) The Dublin Bankers' Clearing comprises four clearing banks, one savings bank and the Central Bank. In addition, seven other banks have an interface with the DBC for the clearance of paper debits.
- (2) The Central Exchange was discontinued in 1995. Members now have an interface with Dublin Bankers' Clearing.
- (3) Special Presentation minimum was increased from IEP 100,000 to IEP 500,000 on 18 November 1994.
- (4) IRIS RTGS system since March 1997.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	IEP billions				
	1994	1995	1996	1997	1998
Dublin Bankers' Clearing <sup>(1)</sup>	313.3	193.7	157.7	294.3	269.8
<i>cheques</i>	130.7	156.4	109.2	245.9	210.1
<i>direct debits</i>	5.6	5.2	5.6	7.2	8.4
<i>credit transfers - paper</i>	172.2	28.8	38.7	24.2	46.0
<i>credit transfers - electronic</i>	4.8	3.3	4.2	17.0	5.3
The Central Exchange (cheques) <sup>(2)</sup>	9.1	n.a.	n.a.	n.a.	n.a.
Special presentations (large-value cheques) <sup>(3)</sup>	8.4	8.0	6.7	9.0	0.6
IRIS <sup>(4)</sup>	853.1	608.2	738.9	1700.0	1900.0

- (1) The Dublin Bankers' Clearing comprises four clearing banks, one savings bank and the Central Bank. In addition, seven other banks have an interface with the DBC for the clearance of paper debits.
- (2) The Central Exchange was discontinued in 1995. Members now have an interface with Dublin Bankers' Clearing.
- (3) Special Presentation minimum was increased from IEP100,000 to IEP500,000 on 18 November 1994.
- (3) Daily Interbank Settlement (paper based large value interbank credit transfers) prior to March 1997.

**Table 10****Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
Central Bank of Ireland Securities Settlement Office (CBISSO)	38	11	8
Banks	13	-	6
Stockbrokers	8	-	-
Securities houses	9	9	-
Insurance companies	4	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	2	2	-
Authorities	2	-	2

- 1) Banks and building societies are included in the "bank" category.
- 2) Nominee companies are classified as securities houses.
- 3) Data for banks and securities houses reflect nominee companies of banks operating several accounts under one CBISSO membership. Banks in this instance are not direct members of the CBISSO, but hold stock on their own behalf and on behalf of customers.

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
Central Bank of Ireland Securities Settlement Office (CBISSO)					
Government securities	29,052	41,104	70,383	73,338	46,806

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	IEP millions				
	1994	1995	1996	1997	1998
Central Bank of Ireland Securities Settlement Office (CBISSO)					
Government securities	79,320	139,811	389,175	644,821	475,956

**Table 13****Nominal values registered by securities settlement systems***(end of year)*

	IEP millions				
	1994	1995	1996	1997	1998
Central Bank of Ireland Securities Settlement Office (CBISSO)					
Government securities	14,439	15,288	16,351	17,210	19,551

**Table 14****Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1)</sup>	155.8	154.3	191.9	200.0	200.8
<i>of which truncated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Payments by debit and credit cards	22.7	28.5	31.4	34.8	59.3
Paper-based credit transfers	38.1	58.3	51.9	59.2	67.4
<i>customer initiated</i>	37.9	58.1	51.7	59.2	67.4
<i>interbank/large-value</i>	0.2	0.2	0.2	0.0	0.0
Paperless credit transfers	35.3	34.7	40.2	46.5	47.7
<i>customer initiated</i>	35.3	34.7	40.2	46.2	47.3
<i>interbank/large-value</i> <sup>(2)</sup>	0	0	0	0.3	0.4
Direct debits	32.4	41.7	54.7	60.8	67.2
Electronic money	-	-	-	-	-
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>284.3</b>	<b>317.5</b>	<b>370.1</b>	<b>401.3</b>	<b>442.4</b>

(1) This category does not include the use of payment instruments to obtain cash and does not include travellers' cheques.

(2) IRIS RTGS system, which commenced in March 1997, is an automated SWIFT paperless credit transfer system.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	IEP billions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1)</sup>	342.1	350.5	322.0	350.8	362.1
<i>of which truncated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Payments by debit and credit cards	1.0	1.4	1.6	0.2	3.0
Paper-based credit transfers	1,119.2	811.7	1,132.7	418.7	491.8
<i>customer initiated</i>	266.2	203.5	393.8	418.7	491.8
<i>interbank/large-value</i>	853.1	608.2	738.9	0	0
Paperless credit transfers	35.3	33.0	38.7	1,761.9	1,954.6
<i>customer initiated</i>	35.3	33.0	38.7	61.9	54.6
<i>interbank/large-value</i> <sup>(2)</sup>	0	0	0	1,700.0	1,900.0
Direct debits	36.4	39.9	42.7	54.6	60.9
Electronic money	-	-	-	-	-
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>1,534.0</b>	<b>1,236.5</b>	<b>1,537.7</b>	<b>2,586.2</b>	<b>2,872.4</b>

(1) This category does not include the use of payment instruments to obtain cash and does not include travellers' cheques.

(2) IRIS RTGS system, which commenced in March 1997, is an automated SWIFT paperless credit transfer system.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	38	46	51	55	60
<i>of which:</i>					
<i>members</i>	11	13	13	13	13
<i>sub-members</i>	18	21	23	25	27
<i>participants</i>	9	12	15	17	20
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	2,002,311	2,485,986	2,905,351	3,608,935	4,491,367
<i>of which:</i>					
<i>category I</i>	426,779	562,098	656,950	783,846	984,080
<i>category II</i>	587,531	735,867	786,581	955,814	1,192,949
<i>sent/received to/from domestic users</i>	414,670	635,647	761,784	936,523	1,106,840
Total messages received	2,206,878	2,679,787	3,270,756	4,392,502	5,575,441
<i>of which:</i>					
<i>category I</i>	628,096	766,105	864,594	1,018,241	1,222,146
<i>category II</i>	338,556	450,953	535,854	679,023	795,169
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Italy





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	57,204.0	57,301.0	57,397.0	57,523.0	57,618.0
Gross domestic product (ITL billions)	1,653,402	1,787,278	1,896,022	1,974,618	2,057,731
Exchange rate vis-à-vis ECU <sup>(1)</sup>	1,913.95	2,130.14	1,958.96	1,929.30	1,943.65

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	ITL billions				
	1994	1995	1996	1997	1998
Notes and coins	96,221	98,281	100,113	107,433	115,200
Transferable deposits	488,055	490,240	509,035	544,776	590,301
of which held by:					
households	357,766	355,924	378,456	405,796	-
corporate sector	92,597	93,118	91,581	96,645	-
others <sup>(1)</sup>	37,692	41,198	38,998	42,335	-
Others <sup>(2)</sup>	15,702	15,971	13,125	14,095	11,305
Narrow money supply (M1)	599,978	604,492	622,273	666,304	716,806
Outstanding value on electronic money schemes (ITL millions)	-	-	-	1,442	1,309
of which:					
on card-based products (ITL millions)	-	-	-	1,442	1,309
on network-based products	-	-	-	-	-

(1) Insurance companies and public authorities.

(2) Banker's drafts, cashiers' cheques and current accounts at the Treasury.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	ITL billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1)</sup>	92,468	73,736	71,958	82,626	18,701
of which can be used for settlement	7,397	7,373	8,995	18,591	18,701
Free reserves held at central bank	151	202	244	323	404
Transferable deposits at other institutions	56,352	64,156	85,319	97,331	105,572

(1) Average reserves for the period from 15 December to 14 January except for 1998 (from 15 to 31 December).

Table 4

**Banknotes and coins***(total value, end of year)*

	ITL billions				
	1994	1995	1996	1997	1998
Total banknotes issued	100,025	103,249	106,106	114,074	122,411
of which:					
ITL 500,000	-	-	-	3,919	9,972
ITL 100,000	72,346	74,815	78,264	81,677	83,227
ITL 50,000	21,531	22,177	21,429	21,873	22,469
ITL 10,000	3,996	4,077	4,173	4,299	4,438
ITL 5,000	905	938	967	1,016	1,096
ITL 2,000	333	292	270	255	231
ITL 1,000	914	950	1,003	1,035	973
Coins in circulation	1,763	1,897	1,986	2,130	2,487
Notes and coins held by credit institutions	5,567	6,865	7,979	8,771	9,698
Notes and coins in circulation outside credit institutions	96,221	98,281	100,113	107,433	115,200

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (ITL billions)
Central bank	1	99	-	-
Commercial banks	302	19,211	23,341	487,950
Savings banks	-	-	-	-
Co-operative and rural banks	619	7,047	4,848	102,351
Post office	1	13,956	n.a.	-
<b>TOTAL</b>	<b>923</b>	<b>40,214</b>	<b>n.a.</b>	<b>590,301</b>
Branches of foreign banks:	59	84	18	1,879
<i>of which EC-based</i>	43	66	13	1,129

**Table 6****Cash dispensers, ATMs and***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	1	1	1	1	1
Number of machines	18,672	21,670	24,223	25,644	27,766
Volume of transactions (thousands)	276,928	330,490	367,762	411,643	486,504
Value of transactions (ITL billions)	85,389	106,756	115,051	129,493	151,134
<b>EFTPOS terminals</b>					
Number of networks	-	-	-	-	-
Number of points of sale <sup>(1)</sup>	104,051	153,752	214,705	281,023	344,300
Volume of transactions (thousands) <sup>(2)</sup>	89,190	121,565	169,187	253,696	323,642
Value of transactions (ITL billions) <sup>(2)</sup>	16,808	23,475	30,867	46,162	57,243
<b>Electronic money loading machines</b>					
Number of machines	-	-	n.a.	945	916
Volume of transactions (thousands)	-	-	n.a.	30	29
Value of transactions (millions)	-	-	n.a.	3,730	3,047
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	n.a.	4,406	3,910
Volume of transactions (thousands)	-	-	n.a.	294	309
Value of transactions (millions)	-	-	n.a.	3,878	3,178

(1) Number of machines.

(2) With debit and credit cards.

Table 7

**Number of payment cards in circulation***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	12,396	13,824	15,270	17,317	17,989
Cards with a debit/credit function	18,210	20,482	22,549	24,521	27,150
<i>of which:</i>					
<i>cards with a debit function</i>	12,124	13,791	14,906	15,693	17,000
<i>cards with a credit function</i>	6,086	6,691	7,643	8,828	10,150
Cards with a cheque guarantee function	1,766	1,655	1,151	894	488
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards <sup>(2)</sup>	-	-	n.a.	62	56

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) Data refer to the cards in circulation which have been loaded by users.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
<b>BI-COMP</b>					
<b>LOCAL CLEARING</b>	240,676	235,665	225,622	217,577	182,660
Cheques	238,504	233,698	223,927	215,827	181,749
<i>out-of-town cheques</i>	85,782	90,259	89,061	91,822	97,774
Bills of exchange <sup>(1)</sup>	-	-	-	-	-
Credit transfers	283	263	151	104	52
Other items <sup>(2)</sup>	1,889	1,704	1,544	1,646	859
<b>ELECTRONIC MEMORANDA</b>	2,083	1,810	1,651	1,452	317
Interbank deposits	731	725	776	763	55
Foreign operations	562	208	82	41	2
Credit transfers	221	285	145	53	14
Other items <sup>(3)</sup>	569	592	648	595	246
<b>INGROSSO (SIPS)</b>	3,526	4,462	5,326	6,057	303
<b>RETAIL</b>	489,582	586,865	664,097	710,609	825,518
Cheque truncation	287,179	283,937	287,635	285,659	336,518
Bancomat	61,616	74,383	91,117	103,529	118,751
Collection orders	140,333	154,061	170,648	189,529	215,987
Credit transfers	454	74,484	114,637	129,169	147,967
Other items <sup>(4)</sup>	-	-	60	2,723	6,295
<b>BI-REL <sup>(5)</sup></b>	1,016	1,027	1,129	2,694	10,840
Large value and cross border credit transfers <sup>(6)</sup>	-	-	-	1,566	3,767
GEC <sup>(7)</sup>	-	-	-	-	4,760
Interbank credit transfers (BISS)	43	46	50	82	238
MID <sup>(8)</sup>	-	-	-	-	619
Payments between banks and the Banca d'Italia or the Treasury	973	981	1,079	1,046	1,455

(1) Since 1994 bills of exchange are included among the "other items".

(2) Payments between the banking system and the Treasury, the Banca d'Italia or the Postal Administration and Bills of Exchange (from 1994).

(3) In particular settlement of securities transactions. Since November 1998, the cash balances of securities transactions are settled in the RTGS system (BI-REL).

(4) Mainly transactions through e-money; interests and dividends on the securities deposited at the Monte Titoli; transactions with debit cards at the Post Office; electronic notification of unpaid cheques.

(5) Debits/credits for the settlement of clearing balances are not included.

(6) Since June 1997.

(7) Since January 1998, it replaces INGROSSO.

(8) Since January 1998, it replaces MEMORANDA Interbank deposits.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	ITL billions				
	1994	1995	1996	1997	1998
<b>BI-COMP</b>					
<b>LOCAL CLEARING</b>	4,255,270	3,574,629	2,897,869	2,561,307	1,911,366
Cheques	1,587,415	1,635,293	1,647,404	1,645,946	1,600,361
<i>out-of-town cheques</i>	629,890	659,491	661,971	692,263	827,193
Bills of exchange <sup>(1)</sup>	-	-	-	-	-
Credit transfers	634,657	593,773	254,402	64,600	25,194
Other items <sup>(2)</sup>	2,033,198	1,345,563	996,063	850,761	285,811
<b>ELECTRONIC MEMORANDA</b>	17,972,187	18,408,052	23,099,794	25,225,920	8,938,910
Interbank deposits	11,782,702	11,557,140	15,052,765	16,641,197	1,137,307
Foreign operations	894,808	493,336	327,058	224,848	16,891
Credit transfers	857,732	1,029,143	796,409	225,524	87,792
Other items <sup>(3)</sup>	4,436,945	5,328,433	6,923,562	8,134,351	7,696,920
<b>INGROSSO (SIPS)</b>	25,928,601	27,377,138	34,530,551	41,511,463	2,503,033
<b>RETAIL</b>	675,298	1,239,833	1,582,504	1,789,819	2,176,587
Cheque truncation	286,985	290,343	298,483	299,915	381,251
Bancomat	17,821	21,303	25,818	29,173	33,244
Collection orders	367,504	468,342	520,246	570,125	675,939
Credit transfers	2,988	459,845	731,562	863,538	1,037,894
Other items <sup>(4)</sup>	-	-	6,395	27,068	48,259
<b>BI-REL <sup>(5)</sup></b>	2,428,800	2,737,756	2,719,900	4,374,800	70,931,126
Large value and cross border credit transfers <sup>(6)</sup>	-	-	-	1,529,000	3,343,348
<b>GEC <sup>(7)</sup></b>	-	-	-	-	44,037,769
Interbank credit transfers (BISS)	109,900	137,956	139,200	303,000	1,621,406
<b>MID <sup>(8)</sup></b>	-	-	-	-	15,452,357
Payments between banks and the Banca d'Italia or the Treasury	2,318,900	2,599,800	2,580,700	2,542,800	6,476,246

(1) Since 1994 bills of exchange are included among the "other items".

(2) Payments between the banking system and the Treasury, Banca d'Italia or the Postal Administration and Bills of Exchange (from 1994)

(3) In particular settlement of securities transactions. Since November 1998, the cash balances of securities transactions are settled in the RTGS system (BI-REL).

(4) Mainly transactions through e-money; interests and dividends on the securities deposited at the Monte Titoli; transactions with debit cards at the Post Office; electronic notification of unpaid cheques.

(5) Debits/credits for the settlement of clearing balances are not included.

(6) Since June 1997.

(7) Since January 1998, it replaces INGROSSO.

(8) Since January 1998, it replaces MEMORANDA Interbank deposits.

Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
LDT	278	269	160
Banks	163	159	160
Stockbrokers	38	38	-
Securities investment firms	77	72	-
CAT	455	415	321
Banks	321	295	321
Stockbrokers	46	46	-
Securities investment firms	77	74	-
Others	11	-	-
MONTE TITOLI	426	420	230
Banks	230	225	230
Stockbrokers	43	43	-
Securities investment firms	89	88	-
Others	64	-	-

Table 11

**Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
LDT <sup>(1)</sup>	14,127,128	16,236,625	23,476,342	30,609,421	40,104,473
Government securities	5,343,790	8,164,353	10,637,127	10,816,889	12,644,593
Equity bonds	834,641	931,054	1,357,638	1,657,081	2,199,877
Shares	7,948,697	7,141,218	11,481,577	18,135,451	25,260,003
CAT (government securities)	845,792	960,553	1,004,258	927,001	714,615
MONTE TITOLI (corporate securities) <sup>(2)</sup>	68,433	79,349	107,400	134,348	188,779

(1) Bilateral credit and debit balances.

(2) Transfer instructions carried out directly through the accounts held at the Monte Titoli - the data only refer to bonds.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	ITL billions				
	1994	1995	1996	1997	1998
LDT <sup>(1)</sup>	12,539,583	15,134,844	29,882,833	42,069,723	53,187,000
Government securities	12,100,697	14,801,877	29,344,943	41,017,980	51,070,000
Equity bonds	37,619	45,405	89,648	84,139	164,000
Shares	401,267	287,562	448,242	967,604	1,952,000
CAT <sup>(2)</sup> (government securities)	1,743,402	1,575,070	1,805,554	2,240,512	2,486,283
MONTE TITOLI (corporate securities) <sup>(3)</sup>	48,926	31,667	68,619	132,150	101,120

(1) Bilateral balances.

(2) Figures refer to the nominal value of securities.

(3) Transfer instructions carried out directly through the accounts held at the Monte Titoli. The data refers only to the nominal value of the bonds exchanged.

**Table 13****Nominal values registered by securities settlement systems  
(end of year)**

	ITL billions				
	1994	1995	1996	1997	1998
CAT (government securities)	1,686,211	1,797,191	1,895,621	1,924,588	1,983,972
MONTE TITOLI (corporate securities)	148,002	158,652	209,259	286,289	407,219



Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions <sup>(1)</sup>**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	574.8	563.6	676.9	656.8	648.7
<i>of which truncated</i>	285.2	270.0	273.9	272.8	336.5
Payments by debit and credit cards	100.6	130.6	190.5	263.9	346.8
Paper-based credit transfers	2.9	2.7	2.6	1.0	1.3
<i>customer initiated <sup>(2)</sup></i>	-	-	-	-	-
<i>interbank/large-value</i>	2.9	2.7	2.6	1.0	1.3
Paperless credit transfers	911.5	919.1	941.4	975.0	970.1
<i>customer initiated <sup>(2)</sup></i>	906.1	913.1	934.5	968.4	963.9
<i>interbank/large-value</i>	5.4	6.0	6.9	6.6	6.2
Direct debits	78.7	90.9	162.8	200.7	226.4
Electronic money	-	-	-	0.3	0.3
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	0.3	0.3
<i>payments by network-based products</i>	-	-	-	-	-
Others	153.1	157.3	242.5	249.7	256.4
<i>paper-based transactions <sup>(3)</sup></i>	47	33	59.3	58.6	46.5
<i>paperless transactions <sup>(4)</sup></i>	107	125	183.2	191.1	209.9
<b>TOTAL</b>	<b>1,821.6</b>	<b>1,864.2</b>	<b>2,216.7</b>	<b>2,347.4</b>	<b>2,450.0</b>

- (1) Up to 1995 the figures for payment operations effected by banking instruments were provided by seventy-five banks accounting for approximately 80% of the current account deposits in all banking systems. Since 1996 figures relate to the entire system.
- (2) Excluding payments between credit institutions and their customers, and payments to and from accounts held under the same name at the same deposit-taking institution.
- (3) Collections of commercial bills and paper-based bank receipts executed through the banking system.
- (4) Collections of electronic bank receipts executed through the banking system.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions <sup>(1)</sup>**

	ITL billions				
	1994	1995	1996	1997	1998
Cheques issued	2,108,124	2,190,634	2,544,373	2,557,610	2,471,187
<i>of which truncated</i>	291,749	284,763	247,656	291,880	381,251
Payments by debit and credit cards	19,218	24,718	34,562	47,070	57,870
Paper-based credit transfers	4,352,098	3,945,363	3,576,763	2,542,800	2,564,775
<i>customer initiated <sup>(2)</sup></i>	-	-	-	-	-
<i>interbank/large-value</i>	4,352,098	3,945,363	3,576,763	2,542,800	2,564,775
Paperless credit transfers	48,123,253	50,168,310	62,804,524	72,653,507	80,659,164
<i>customer initiated <sup>(2)</sup></i>	4,970,266	5,274,307	5,831,388	6,927,326	8,225,671
<i>interbank/large-value</i>	43,152,987	44,894,003	56,973,136	65,726,181	72,433,493
Direct debits	106,721	116,309	158,429	250,904	279,228
Electronic money	-	-	-	4	3
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	4	3
<i>payments by network-based products</i>	-	-	-	-	-
Others	463,821	534,787	777,969	802,781	925,255
<i>paper-based transactions <sup>(3)</sup></i>	164,891	133,844	230,079	214,859	187,357
<i>paperless transactions <sup>(4)</sup></i>	298,930	400,943	547,890	587,922	737,898
<b>TOTAL</b>	<b>55,173,235</b>	<b>56,980,121</b>	<b>69,896,620</b>	<b>78,854,676</b>	<b>86,957,482</b>

- (1) Up to 1995 the figures for payment operations effected by banking instruments were provided by seventy-five banks accounting for approximately 80% of the current account deposits in all banking systems. Since 1996 figures relate to the entire system.
- (2) Excluding payments between credit institutions and their customers, and payments to and from accounts held under the same name at the same deposit-taking institution.
- (3) Collections of commercial bills and paper-based bank receipts executed through the banking system.
- (4) Collections of electronic bank receipts executed through the banking system.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	218	219	238	227	238
<i>of which:</i>					
<i>members</i>	186	182	185	181	184
<i>sub-members</i>	32	36	40	44	50
<i>participants</i>	-	1	3	2	4
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	24,681,961	27,584,947	30,081,128	31,672,855	35,347,305
<i>of which:</i>					
<i>category I</i>	7,596,603	8,360,220	8,903,858	7,968,583	8,556,232
<i>category II</i>	6,063,052	6,512,180	6,659,465	7,091,972	7,369,906
<i>sent/received to/from domestic users</i>	4,235,252	4,959,227	5,419,805	4,127,570	3,906,821
Total messages received	25,066,961	28,480,765	31,508,461	32,742,840	34,939,777
<i>of which:</i>					
<i>category I</i>	8,061,681	9,502,849	10,487,061	9,980,426	10,758,471
<i>category II</i>	5,448,679	6,239,393	6,736,480	6,881,867	6,904,785
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Luxembourg



**Table 1****Basic statistical data <sup>(1)</sup>**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	403.8	409.7	415.6	421.0	426.5
Gross domestic product (LUF billions)	498.6	518.8	546.3	587.0	631.3
Exchange rate vis-à-vis ECU <sup>(1)</sup>	30.6565	38.5519	39.2986	40.5332	40.6207

(1) Average for the year.

**Table 2****Settlement media used by non-banks***(end of year)*

	LUF billions				
	1994	1995	1996	1997	1998
Notes and coins	15.7	15.9	16.6	18.3	23.8
Transferable deposits	88.8	86.8	94.8	96.7	105.8
Narrow money supply (M1)	104.5	102.7	111.4	115.0	129.6
Other	-	-	-	-	-
Outstanding value on electronic money	-	-	-	-	-
Schemes					
<i>of which:</i>					
<i>on card-based products</i>	-	-	-	-	-
<i>on network-based products</i>	-	-	-	-	-

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	LUF billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	-	-	-	-	-
Free reserves held at central bank					
Transferable deposits at other credit institutions	n.a.	n.a.	n.a.	n.a.	n.a.
Broad money aggregate	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 4****Banknotes and coins***(total value, end of year)*

			LUF millions		LUF millions
	1994	1995	1996	1997	1998
Total banknotes issued	4,845.3	4,203.7	5,007.1	4,975.9	4,262.3
<i>of which:</i>					
<i>LUF 5,000</i>	2,950.6	2,749.0	3,298.0	3,497.7	3,065.9
<i>LUF 1,000</i>	1,613.7	1,191.7	1,465.5	1,284.1	1,041.2
<i>LUF 100</i>	281.0	263.0	243.6	194.1	185.2
Total coins issued	919.5	926.7	926.8	926.8	926.6
Notes and coins held by credit institutions	8,736.1	9,501.1	10,874.1	11,369.6	11,337.7
Notes and coins in circulation outside credit institutions <sup>(1)</sup>	15,700	15,900	16,600	18,300	23,800

(1) These data include the Belgian notes and coins which are legal tender in Luxembourg.

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (LUF billions)
Central bank	1	0	0	0
Commercial banks	209	353	n.a.	n.a.
Savings banks	0	0	0	0
Co-operative and rural banks	2	35	n.a.	n.a.
Post Office	1	0	108	42.6
<b>TOTAL</b>	<b>213</b>	<b>388</b>	<b>n.a.</b>	<b>n.a.</b>
Branches of foreign banks	n.a.	n.a.	n.a.	n.a.
<i>of which EC-based</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>



**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	2	2	2	2	2
Number of machines	151	187	223	258	284
Volume of transactions (millions)	4.1	3.8	4.1	4.4	4.8
Value of transactions (LUF billions)	20.3	17.3	19.0	20.5	22.1
<b>EFTPOS terminals</b>					
Number of networks	3	3	3	3	3
Number of points of sale <sup>(1)</sup>	3,663	3,340	4,661	4,656	5,072
Volume of transactions (millions)	11.8	15.0	16.0	20.2	22.1
Value of transactions (LUF billions)	32.2	39.2	43.4	56.9	63.1
<b>Electronic money loading machines</b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-

(1) Electronic terminals only.

**Table 7****Number of payment cards in circulation***(end of year)*

	1994	1995	1996	1997	1998
					thousands
Cards with a cash function	359.8	420.9	471.3	504.6	527.5
Cards with a debit/credit function	421.6	485.0	516.5	533.7	557.9
<i>of which:</i>					
<i>cards with a debit function</i>	209.5	260.7	272.5	277.0	277.8
<i>cards with a credit function</i>	212.1	224.3	244.0	256.7	280.1
Cards with a cheque guarantee function	248.6	260.7	290.2	277.0	277.8
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards	-	-	-	-	-

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

**Table 8****Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Clearing house	6.3	6.5	6.7	7.0	10.5
Automated clearing house	n.a.	2.2	3.6	4.3	9.3
Large-value systems	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 9****Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	LUF billions				
	1994	1995	1996	1997	1998
Clearing house	801.4	599.0	529.2	503.4	1,004.5
Automated clearing house	n.a.	158.4	114.4	101.8	820.0
Large-value systems	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 10****Participants in securities settlement systems  
(end of 1998)**

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
Cedelbank	2.000 <sup>(1)</sup>	2.000 <sup>(1)</sup>	n.a.

(1) Approximation.

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
Cedelbank	6,670,027	7,068,945	7,428,508	9,249,165	10,079,657

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	LUF billions <sup>(1)</sup>				
	1994	1995	1996	1997	1998
Cedelbank	223,766.	277,868.58	398,604.63	433,541.7	552,554.1
Short and medium-term notes	40,998.2	53,980.6	69,723.5	77,488.6	80,638.5

(1) Figures are converted from USD to LUF using end-of-year exchange rate.

**Table 13****Nominal values registered by securities settlement systems**

(end of year)

	LUF billions <sup>(1)</sup>				
	1994	1995	1996	1997	1998
Cedelbank					
Market value of securities deposited as of 31 December	27,723.9	30,106.89	37,496.3	39,590.0	60,843.2

(1) Figures are converted from USD to LUF using end-of-year exchange rate.

**Table 14****Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994 <sup>(1)</sup>	1995	1996	1997	1998
Cheques issued	2.5	n.a.	n.a.	n.a.	n.a.
Payments by debit and credit cards	15.5	n.a.	n.a.	n.a.	n.a.
Credit transfers	30.0	n.a.	n.a.	n.a.	n.a.
Direct debits	2.0	n.a.	n.a.	n.a.	n.a.
Electronic money	-	-	-	-	-
of which:					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	n.a.	n.a.	n.a.	n.a.
TOTAL	50.0	n.a.	n.a.	n.a.	n.a.

(1) These figures were based on an estimate from an ad hoc enquiry performed in December 1995. Unlike the enquiry of 1991, this enquiry includes the intra-bank credit transfers.

Inter-bank credit transfers amounted to 17.3 million transactions and to a global value of LUF 4,378.7 million.

**Table 15****Indicators of use of various cashless payment instruments:  
value of transactions**

	LUF millions				
	1994 <sup>(1)</sup>	1995	1996	1997	1998
Cheques issued	145	n.a.	n.a.	n.a.	n.a.
Payments by debit and credit cards	49	n.a.	n.a.	n.a.	n.a.
Credit transfers	9,644	n.a.	n.a.	n.a.	n.a.
Direct debits	38	n.a.	n.a.	n.a.	n.a.
Electronic money	-	-	-	-	-
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	n.a.	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>9,877</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>

(1) These figures were based on an estimate from an ad hoc enquiry performed in December 1995. Unlike the enquiry of 1991, this enquiry includes the intra-bank credit transfers. Inter-bank credit transfers amounted to 17.3 million transactions and to a global value of LUF 4,378.7 million.

**Table 16****Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	140	150	156	158	165
<i>of which:</i>					
<i>members</i>	26	29	27	29	29
<i>sub-members</i>	114	121	127	125	130
<i>participants</i>	-	-	2	4	6
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	11,334,220	12,280,307	13,810,105	16,613,659	20,856,244
of which:					
category I	2,212,835	2,496,990	2,578,108	2,706,042	2,914,482
category II	3,658,917	3,692,809	3,974,317	4,567,451	5,043,127
sent/received to/from domestic users	1,952,674	2,158,482	2,408,283	2,903,884	3,852,394
Total messages received	9,611,417	10,784,350	12,881,997	16,280,473	20,743,032
of which:					
category I	1,051,652	1,158,863	1,190,481	1,365,912	1,645,170
category II	1,040,092	1,097,793	1,206,425	1,400,894	1,616,620
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,99

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Netherlands





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	15,381.0	15,460.0	15,523.0	15,605.0	15,694.0
Gross domestic product (NLG billions)	612,990	666,098	695,556	738,365	781,974
Exchange rate vis-à-vis ECU <sup>(1)</sup>	2.15827	2.09891	2.13973	2.21081	2.21967

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	NLG billions				
	1994	1995	1996	1997	1998
Notes and coins	38.1	38.2	38.3	38.7	38.0
Transferable deposits	114.1	134.8	156.4	170.4	218.5
of which held by:					
households	47.0	51.7	59.4	63.5	72.3
corporate sector	54.5	65.2	77.5	84.0	114.2
other	12.6	17.8	19.5	23.0	32.0
Narrow money supply (M1)	152.2	173.0	194.7	209.1	256.2
Outstanding value on electronic money schemes	n.a.	n.a.	n.a.	n.a.	0.1
of which:					
on card-based products	n.a.	n.a.	n.a.	n.a.	0.1
on network-based products	n.a.	n.a.	n.a.	n.a.	n.a.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	NLG millions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	11,361	0.0	0.0	6,112	17,139
of which can be used for settlement	11,361	0.0	0.0	6,112	17,139
Free reserves held at central bank	25	37	59	20	20
Transferable deposits at other institutions <sup>(1)</sup>	2,462	3,061	3,116	2,382	n.a.

(1) Data for 1998 on transferable deposits at other institutions are not available owing to a change in reporting to the Nederlandsche Bank.

**Table 4****Banknotes and coins***(total value, end of year)*

	NLG billions				
	1994	1995	1996	1997	1998
Total banknotes issued	38.3	38.6	39.0	39.3	38.1
of which:					
NLG 1,000	15.8	14.9	14.4	14.5	13.6
NLG 250	5.0	5.2	5.4	5.3	5.0
NLG 100	13.2	13.8	14.6	14.8	14.8
NLG 50	1.8	1.9	1.7	1.8	1.7
NLG 25	1.8	1.8	2.0	2.0	2.1
NLG 10	0.8	0.8	0.8	0.8	0.8
NLG 5	0.1	0.0	0.0	0.0	0.0
Total coins issued	2.6	2.7	2.7	2.8	2.8
of which:					
NLG 5.00	0.9	0.9	1.0	1.0	1.0
NLG 2.50	0.5	0.5	0.5	0.5	0.5
NLG 1.00	0.7	0.7	0.7	0.7	0.7
NLG 0.25	0.3	0.3	0.3	0.3	0.3
NLG 0.10	0.2	0.2	0.2	0.2	0.2
NLG 0.05	0.1	0.1	0.1	0.1	0.1
Notes and coins held by institutions	2.8	3.1	3.4	3.4	2.8
Notes and coins in circulation outside credit institution	38.1	38.2	38.3	38.7	38.0

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (millions)	Value of accounts (NLG billions)
Central bank	1	9	neg.	0.02
Commercial banks	93	2,707	n.a.	n.a.
Savings banks	24	24	n.a.	n.a.
Co-operative and rural banks	1	1,797	n.a.	n.a.
Postbank	1	2,325	n.a.	n.a.
<b>TOTAL</b>	<b>120</b>	<b>6,862</b>	<b>21.0</b>	<b>218</b>
Branches of foreign banks	26	neg.	n.a.	n.a.
<i>of which EC-based</i>	15	neg.	n.a.	n.a.

**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	2	2	2	2	1
Number of machines	4,998	5,489	5,793	6,397	6,568
Volume of transactions (millions) <sup>(1)</sup>	299	345	371	396	427
Value of transactions (NLG billions) <sup>(1)</sup>	60	69	74	77	81
<b>EFTPOS terminals</b>					
Number of networks	1	1	1	1	1
Number of points of sale	47,588	73,376	96,044	120,417	134,479
Volume of transactions (millions)	144	256	371	486	595
Value of transactions (NLG billions)	14	24	35	46	57
<b>Electronic money loading machines</b>					
Number of machines	n.a.	n.a.	n.a.	n.a.	n.a.
Volume of transactions (thousands)	n.a.	n.a.	n.a.	n.a.	n.a.
Value of transactions (millions)	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Electronic money purchase terminals</b>					
Number of machines	n.a.	n.a.	n.a.	n.a.	n.a.
Volume of transactions (thousands)	n.a.	n.a.	n.a.	n.a.	n.a.
Value of transactions (millions)	n.a.	n.a.	n.a.	n.a.	n.a.

(1) Series have been recalculated based on new estimates and data.

**Table 7****Number of payment cards in circulation***(end of year)*

	1994	1995	1996	1997	1998
					thousands
Cards with a cash function	13,988	16,419	18,933	22,633	23,168
Cards with a debit/credit function	1,257	1,493	1,846	3,800	4,100
<i>of which:</i>					
<i>cards with a debit function</i>	1,257	1,493	1,846	n.a.	n.a.
<i>cards with a credit function</i>	n.a.	n.a.	n.a.	3,800	4,100
Cards with a cheque guarantee function	1,297	724	591	411	705
Retailer cards	n.a.	n.a.	n.a.	n.a.	n.a.
Electronic money cards	n.a.	n.a.	n.a.	n.a.	n.a.

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

**Table 8**

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Interpay	1,241.7	1,407.1	1,588.5	1,782.9	2,012.3
Cheques	86.3	63.2	50.6	39.9	29.3
Other	1,155.4	1,343.9	1,537.9	1,743.0	1,983.0
TOP	2.4	2.5	2.7	3.2	3.5
Cheques	-	-	-	-	-
Other	2.4	2.5	2.7	3.2	3.5

**Table 9**

**Payment instructions handled by selected interbank funds  
value of transactions**

	NLG billions				
	1994	1995	1996	1997	1998
Interpay	2,195.0	2,189.1	2,319.5	2,520.0	2,727.9
Cheques	13.4	9.9	8.4	6.5	4.8
Other	2,181.6	2,179.2	2,311.1	2,513.5	2,723.1
TOP	19,322.2	18,791.0	22,613.8	27,693.0	34,468.7
Cheques	-	-	-	-	-
Other	19,322.2	18,791.0	22,613.8	27,693.0	34,468.7

**Table 10****Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
Necigef <sup>(1)</sup>	69	59	64
Banks <sup>(2)</sup>	48	48	48
Securities credit institutions	11	11	11
Securities clearing institutions <sup>(3)</sup>	2	n.a.	2
CSDs	5	n.a.	n.a.
Money market brokers	3	n.a.	3
<b>AEX Effectenclearing</b>			
General clearing members	15	15	15
Direct clearing members	16	16	16
<b>AEX Optieclearing <sup>(4)</sup></b>			
Clearing members	13	3 <sup>(5)</sup>	n.a.

(1) Necigef data refer to deliveries against payment.

(2) Including DNB.

(3) Data refer to AEX-Effectenclearing and AEX-Optieclearing.

(4) AEX Optieclearing data refer to derivatives contracts.

(5) Clearing members that also clear on behalf of other professional traders.

**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
Necigef	1,061	906	1,325	1,685	2,061
Deliveries against payment	0	0	286	529	764
Free transfers	1,061	906	1,039	1,156	1,297
Clearing institute central bank <sup>(1)</sup>	2	3	3	3	-
<b>AEX Effectenclearing</b>					
AEX Optieclearing <sup>(2)</sup>	1,155	1,350	2,300	3,800	5,985
Options, contracts cleared	12,604	15,873	26,975	46,166	61,431
Futures, contracts cleared	1,395	1,290	1,690	2,776	3,684
Options, contracts exercised	1,139	1,343	1,945	2,978	4,281
Futures, contracts exercised	56	32	48	74	155

(1) Merged with AEX-Clearing &amp; Depository as of 1998; data from 1998 on are included in data AEX Effectenclearing consequently.

(2) Sum refers to contracts cleared.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	NLG billions				
	1994	1995	1996	1997	1998
Necigef	0	0	295	569	925
Deliveries against payment	0	0	295	569	925
Free transfers	n.a.	n.a.	n.a.	n.a.	n.a.
Clearing institute central bank <sup>(1)</sup>	79	100	127	187	-
CDs	25	50	45	44	-
CPs	40	37	60	120	-
MTNs	15	13	22	23	-
AEX Effectenclearing	580	681	984	1,107	1,393
Government securities	397	433	597	488	515
Bonds	27	49	63	63	70
Shares	156	200	323	556	808
AEX Optieclearing <sup>(2)</sup>	107	110	200	505	164
Options, contracts cleared	8	9	19	56	164
Futures, contracts cleared	99	101	181	448	n.a.
Options, contracts exercised	19	19	35	66	90
Futures, contracts exercised	5	3	6	13	34

(1) Merged with AEX-Clearing & Depository as of 1998; data from 1998 on are included in data AEX Effectenclearing consequently.

(2) Sum refers to contracts cleared.

**Table 13****Nominal values registered by the securities settlement systems**

(end of year)

	NLG billions				
	1994	1995	1996	1997	1998
Necigef	414.0	425.2	471.2	501.5	556.9
Clearing institute central bank (1)	57	66	64	64	-
CDs	14	16	12	14	-
CPs	11	16	18	17	-
MTNs	32	34	33	34	-

(1) Clearing institute central bank stopped its operations in 1998; activities are taken over by AEX-Clearing Depository.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	177.0	109.9	84.3	64.9	46.6
Payments by debit and credit cards <sup>(1)</sup>	125.8	255.9	370.9	485.5	595.0
Paper-based credit transfers	390.5	-	-	-	-
<i>customer initiated</i>	390.5	-	-	-	-
<i>interbank/large-value</i>	-	-	-	-	-
Paperless credit transfers	849.9	1,003.3	1,035.8	1,064.6	1,091.0
<i>customer initiated</i>	847.4	1,000.8	1,033.1	1,061.4	1,087.5
<i>interbank/large-value</i>	2.4	2.5	2.7	3.2	3.5
Direct debits	531.0	533.9	587.8	636.1	691.9
Electronic money	n.a.	n.a.	n.a.	n.a.	n.a.
<i>of which:</i>					
<i>payments by card-based products</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<i>payments by network-based products</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>2,074.2</b>	<b>1,903.0</b>	<b>2,078.9</b>	<b>2,251.0</b>	<b>2,424.5</b>

(1) Credit card transactions are not included.

**Table 15****Indicators of use of various cashless payment instruments:  
value of transactions**

	NLG billions				
	1994	1995	1996	1997	1998
Cheques issued	25.2	16.1	13.1	10.2	7.6
Payments by debit and credit cards <sup>(1)</sup>	14.4	24.3	35.3	46.2	56.6
Paper-based credit transfers	145.0	-	-	-	-
<i>customer initiated</i>	145.0	-	-	-	-
<i>interbank/large-value</i>	-	-	-	-	-
Paperless credit transfers	21,953.9	22,842.8	26,799.2	32,524.5	39,851.4
<i>customer initiated</i>	2,631.8	4,051.7	4,185.4	4,831.5	5,382.7
<i>interbank/large-value</i>	19,322.2	18,791.0	22,613.8	27,693.0	34,468.7
Direct debits	239.8	207.6	224.4	242.6	264.6
Electronic money	n.a.	n.a.	n.a.	n.a.	n.a.
of which:					
<i>payments by card-based products</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<i>payments by network-based products</i>	n.a.	n.a.	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>22,378.4</b>	<b>23,090.8</b>	<b>27,072.0</b>	<b>32,823.5</b>	<b>40,180.2</b>

(1) Credit card transactions are not included.

**Table 16****Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	55	62	65	65	72
of which:					
<i>members</i>	27	28	28	29	28
<i>sub-members</i>	28	32	34	32	36
<i>participants</i>	-	2	3	4	8
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
of which:					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785



Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	15,253,265	16,903,885	18,667,326	21,967,507	26,868,470
<i>of which:</i>					
<i>category I</i>	6,508,032	6,747,310	7,032,141	7,544,714	8,398,068
<i>category II</i>	3,107,787	3,275,847	3,420,058	3,951,510	4,500,328
<i>sent/received to/from domestic users</i>	1,750,991	1,870,671	2,052,952	2,456,699	3,051,321
Total messages received	14,538,364	16,027,297	17,802,379	20,199,570	23,965,593
<i>of which:</i>					
<i>category I</i>	5,279,922	5,498,322	5,726,242	6,205,747	6,775,293
<i>category II</i>	2,081,037	2,204,721	2,362,906	2,602,689	2,856,930
<b>Memorandum item:</b>					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



Austria



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	8,031.0	8,047.0	8,059.0	8,072.0	8,078.0
Gross domestic product (ATS billions)	2,237.9	2,328.7	2,414.6	2,514.4	2,622.6
Exchange rate vis-à-vis ECU <sup>(1)</sup>	13.54	13.18	13.43	13.82	13.85

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	ATS billions				
	1994	1995	1996	1997	1998
Notes and coins <sup>(1)</sup>	133.6	142.7	146.7	146.2	145.5
Transferable deposits <sup>(2)</sup>	222.0	266.4	284.5	306.1	350.3
Narrow money supply (M1) <sup>(1)</sup>	355.6	409.1	431.2	452.3	495.8
Transferable deposits in foreign currencies	27.2	27.9	34.5	35.5	38.4
Outstanding value on electronic money schemes	-	-	0.03	0.03	0.04
of which:					
on card-based products	-	-	0.03	0.03	0.04
on network-based products	-	-	-	-	-

(1) Without coins in gold and silver.

(2) In local currency only.

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	ATS billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	61.47	55.10	56.50	57.70	60.13
Free reserves held at central bank <sup>(1)</sup>	-	-	-	-	-
Transferable deposits at other institutions <sup>(2)</sup>	222.01	253.19	279.30	294.30	351.28

(1) Average of end-of-month figures.

(2) Average of end-of-quarter figures.

Table 4

**Banknotes and coins***(total value, end of year)*

	ATS millions				
	1994	1995	1996	1997	1998
Total banknotes issued (banknotes in circulation)	151,449.92	161,412.77	169,224.40	171,125.38	168,822.63
<i>of which denomination belongs to the new series:</i>					
5,000II	38,294.52	43,878.27	50,507.76	54,657.73	56,804.68
1,000IV	82,061.12	85,650.17	86,434.23	52,882.98	73,774.73
500III	12,396.72	12,729.17	12,822.25	8,335.18	11,047.90
100VI	12,809.57	13,221.72	13,464.20	13,637.76	13,667.10
50IV	2,194.90	2,241.05	2,296.58	2,297.97	2,321.10
20IV	1,962.02	2,044.26	2,118.13	2,168.71	2,233.82
<i>old series:</i>					
1,000III	660.72	621.79	589.28	567.20	542.76
1,000IV	82,061.12	85,650.17	86,434.23	30,491.87	5,932.04
500III	12,396.72	12,729.17	12,822.25	5,122.96	1,564.58
500III	274.17	257.08	244.38	233.99	223.08
100IV	377.31	363.35	351.81	341.97	332.34
50III	168.20	162.60	158.21	154.37	150.58
20IV	250.67	243.31	237.57	232.69	227.92
Total coins issued (coins in circulation)	6,890.62	7,194.56	7,503.54	7,720.51	7,885.98
<i>of which:</i>					
ATS 50			49.52	114.90	155.64
ATS 20	470.57	496.83	517.88	513.44	505.75
ATS 10	2,702.62	2,832.98	2,949.32	3,004.96	3,035.93
ATS 5	1,782.38	1,848.43	1,912.33	1,963.12	2,015.46
ATS 1	1,390.86	1,451.99	1,498.72	1,540.63	1,583.85
ATS 0.50	254.46	263.62	267.75	271.17	274.86
ATS 0.10	272.33	283.32	290.74	295.12	297.52
ATS 0.05	12.97	12.96	12.87	12.76	12.59
ATS 0.02	4.19	4.19	4.18	4.17	4.14
ATS 0.01	0	0.24	0.24	0.24	0.24
Notes and coins held by credit institutions	24,767	25,869.00	30,059.00	32,635.00	31,163.00
Notes and coins in circulation outside credit institutions	133,574	142,738.34	146,668.94	146,210.89	145,545.61

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (ATS billions)
Central bank	1	7	0.9	58.5
Credit institutions	970	4,576	6,103.6	350.1
Postcheque	1	2,331	n.a.	n.a.
<b>TOTAL</b>	<b>972</b>	<b>6,914</b>	<b>6,104.5</b>	<b>408.6</b>
Branches of foreign banks	12	-	2.6	1.3
<i>of which EC-based</i>	10	-	2.5	1.2

**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks <sup>(1)</sup>	1	1	1	1	1
Number of machines <sup>(2)</sup>	3,063	3,390	3,862	4,300	4,776
Volume of transactions (millions) <sup>(3)</sup>	63.5	68.2	74.2	78.7	81.3
Value of transactions (ATS billions) <sup>(3)</sup>	118.3	129.1	141.1	146.8	154.6
<b>EFTPOS terminals</b>					
Number of networks <sup>(1)</sup>	1	1	1	1	1
Number of POS terminals	2,410	3,382	5,095	13,331	19,240
Volume of transactions (millions)	8.9	11.1	15.1	24.0	38.8
Value of transactions (ATS billions)	5.1	7.2	11.2	17.8	27.5
<b>Electronic money loading machines</b>					
Number of machines	-	-	1,066	3,495	4,954
Volume of transactions (thousands)	-	-	48.3	159.6	227.6
Value of transactions (millions)	-	-	29.7	110.0	154.0
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	3,333	12,756	19,118
Volume of transactions (thousands)	-	-	86.6	426	1,161
Value of transactions (millions)	-	-	17.5	78.0	126.8

(1) APSS network.

(2) Including vestibule cash dispensers (1993: 994, 1994: 1242, 1995: 1397, 1996: 1698).

(3) Without vestibule cash dispensers.

**Table 7****Number of payment cards in circulation***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	3,512	3,853	4,113	4,652	5,975
Cards with a debit/credit function	4,022	4,418	4,759	5,340	6,124
<i>of which:</i>					
<i>cards with a debit function</i>	3,003	3,292	3,566	4,041	4,632
<i>cards with a credit function</i>	1,019	1,126	1,193	1,299	1,492
Cards with a cheque guarantee function	2,324	2,370	2,372	2,444	2,461
Retailer cards	224	22	81	100	245
Electronic money cards	-	17	3,101	3,400	3,700

**Table 8****Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
ARTIS <sup>(1)</sup>	-	-	-	0.05	0.11
EBK	0.89	0.91	0.92	0.90	0.99

(1) The ARTIS system was started in July 1997

**Table 9****Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	ATS billions				
	1994	1995	1996	1997	1998
ARTIS <sup>(1)</sup>	-	-	-	6,785	18,328
EBK	n.a.	n.a.	n.a.	n.a.	n.a.

(1) The ARTIS system was started in July 1997.



Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
“Arrangement” system (transactions on the Vienna Stock Exchange)	71	-	-
Banks	64	-	-
Stockbrokers	7	-	-
Securities houses	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Direct Settlement (DS) (transactions outside the VSE)	117 <sup>(1)</sup>	-	-
Banks	104	-	-
Stockbrokers	8	-	-
Securities houses	-	-	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	1	-	-
Foreign CSD	4	-	-
ÖTOB-Clearing (for standardised derivative products)	7	7	-
Banks	7	7	-
Stockbrokers	-	-	-
Securities houses	-	-	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-

(1) Excluding "passive DS participants".

Table 11

**Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
"Arrangement" system (transactions on the Vienna Stock Exchange)	298,375	1,016,669	659,830	1,446,870	1,569,212
Government securities	11,176	35,921	37,064	134,460	118,986
Bonds	52,431	100,752	110,626	)	)
Shares	234,768	879,996	426,184	822,371	1,064,700
CDs	)	)	)	)	)
Others (warrants, investment certificates)	)	)	85,956	490,039	385,526
Futures	-	-	-	-	-
Options	-	-	-	-	-
Direct Settlement (DS) system (transactions outside the VSE) <sup>(1)</sup>	139,914	295,808	313,345	276,431	309,997
Government securities	28,252	93,349	112,804	99,515	111,598
Bonds	39,884	77,377	75,202	66,343	74,400
Shares	71,778	125,082	125,339	110,573	123,999
CDs	)	-	)	)	)
Others (warrants, investment certificates)	)	-	)	)	)
Futures	-	-	-	-	-
Options	-	-	-	-	-
Direct Settlement (DS) system (transactions outside the VSE) <sup>(2)</sup>	124,443	139,929	109,790	110,216	130,199
Government securities	-	-	-	-	-
Bonds	-	-	-	-	-
Shares	-	-	-	-	-
CDs	-	-	-	-	-
Others (warrants, investment certificates)	-	-	-	-	-
Futures	24,131	28,473	21,774	33,004	46,962
Options	100,312	111,456	88,016	77,212	83,237

(1) Database: central securities depository (CSD).

(2) The Vienna Stock Exchange and the Austrian Futures and Options Exchange (ÖTOB) merged in December 1997.

Table 12

**Transfer instructions handled by securities settlement systems:  
value of transactions**

	ATS millions				
	1994	1995	1996	1997	1998
"Arrangement" system (transactions on the Vienna Stock Exchange) <sup>(1)</sup>	64,703	285,815	246,833	324,783	482,537
Government securities	5,579	18,978	20,130	14,253	14,864
Bonds	)	)	)	)	)
Shares	57,298	266,618	226,451	310,429	465,864
CDs	-	-	)	)	)
Warrants	1,721	121	153	40	1,773
Investment certificates	105	98	99	61	36
Futures	-	-	-	-	-
Options	-	-	-	-	-
Direct Settlement (DS) system (transactions outside the VSE) <sup>(2)</sup>	1,780,266	2,862,477	6,489,107	4,125,492	4,947,326
Government securities	778,613	1,422,324	3,833,698	2,340,458	2,757,849
Bonds	884,896	1,025,988	2,451,053	1,496,358	1,763,215
Shares	50,535	246,698	204,356	288,676	426,262
CDs	66,222	167,467	)	)	)
Others (warrants, investment certificates)	)	)	)	)	)
Futures	-	-	-	-	-
Options	-	-	-	-	-
Derivative market (for standardised derivative products) <sup>(3)</sup>	704,560	515,490	743,270	761,407	608,040
Government securities	-	-	-	-	-
Bonds	-	-	-	-	-
Shares	-	-	-	-	-
CDs	-	-	-	-	-
Futures	320,120	44,250	402,100	460,759	300,390
Options	384,440	471,240	341,170	300,648	307,650

(1) Turnover on the Vienna Stock Exchange (VSE).

(2) Database: central securities depository (CSD); free-of-payment transactions are not included.

(3) The Vienna Stock Exchange and the Austrian Futures and Options Exchange (ÖTOB) merged in December 1997.

**Table 13****Nominal values registered by securities settlement systems***(end of year)*

	ATS millions				
	1994	1995	1996	1997	1998
"Arrangement" system (transactions on the Vienna Stock Exchange) <sup>(1)</sup>	1,448,587	1,552,662	1,641,155	1,800,024	1,849,643
Government securities and bonds	1,127,246	1,238,273	1,283,664	1,348,076	1,449,971
Shares, CDs and others	321,341	314,389	357,491	451,948	399,672
Direct Settlement (DS) system (transactions outside the VSE) <sup>(2)</sup>	1,133,766	1,229,101	1,281,497	1,407,850	1,519,900
Government securities and bonds	1,133,766	1,229,101	1,281,497	1,407,850	1,519,900
Shares, CDs and others	n.a.	n.a.	n.a.	n.a.	n.a.

(1) Total value.

(2) Securities registered by the central securities depository (CSD), the figures only refer to government securities and bonds.

**Table 14****Indicators of use of various cashless payment instruments:  
volume of transactions <sup>(1)</sup>**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	36	33	28	26	23
Payments by debit and credit cards	20	25	32	44	67
Paper-based credit transfers	310	282	277	266	276
Paperless credit transfers	122	150	185	200	208
Direct debits	188	210	205	219	210
Electronic money	-	-	0.08	0.42	1.16
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	0.08	0.42	1.16
<i>payments by network-based products</i>	-	-	-	-	-
Other					
ARTIS <sup>(2)</sup>	-	-	-	0.05	0.11
EBK	0.89	0.91	0.92	0.90	0.99
<b>TOTAL</b>	<b>676.89</b>	<b>700.91</b>	<b>728.00</b>	<b>756.37</b>	<b>786.29</b>

(1) Apart from ARTIS and EBK, only customer-initiated transactions have been counted.

(2) The ARTIS system was started in July 1997.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions <sup>(1)</sup>**

	ATS billions				
	1994	1995	1996	1997	1998
Cheques issued	1,009	1,014	546	469	485
Payments by debit and credit cards	25	32	40	48	65
Paper-based credit transfers	3,407	3,169	5,877	5,374	6,824
Paperless credit transfers	1,593	2,004	5,180	5,584	7,134
Direct debits	401	457	525	1,098	1,851
Electronic money	-	-	0.002	0.08	0.13
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	0.002	0.08	0.13
<i>payments by network-based products</i>	-	-	-	-	-
Other					
ARTIS <sup>(2)</sup>	-	-	-	6,785	18,328
EBK	n.a.	n.a.	n.a.	n.a.	n.a.
<b>TOTAL</b>	<b>6,435</b>	<b>6,676</b>	<b>12,168</b>	<b>19,358</b>	<b>34,687</b>

(1) Apart from ARTIS and EBK only customer-initiated transactions have been counted.

(2) The ARTIS system was started in July 1997.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	77	75	77	81	83
<i>of which:</i>					
<i>members</i>	62	61	62	62	62
<i>sub-members</i>	15	14	15	16	17
<i>participants</i>	-	-	-	3	4
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	11,725,379	12,829,110	13,480,754	14,531,271	15,888,958
<i>of which:</i>					
<i>category I</i>	4,739,357	4,974,386	5,163,626	5,221,236	5,838,867
<i>category II</i>	2,969,812	3,273,130	3,304,533	3,593,009	3,762,443
<i>sent/received to/from domestic users</i>	2,698,880	2,843,140	2,945,226	3,269,698	3,826,572
Total messages received	9,521,143	10,439,996	11,141,807	12,239,259	13,515,128
<i>of which:</i>					
<i>category I</i>	3,892,118	4,027,894	4,195,693	4,420,556	4,850,305
<i>category II</i>	1,692,293	1,906,614	2,039,355	2,192,675	2,447,766
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Portugal





**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	9,840.0	9,847.0	9,866.0	9,878.0	9,887.0
Gross domestic product (PTE billions)	14,616.9	15,802.1	16,808.7	17,858.5	19,245.7
Exchange rate vis-à-vis ECU <sup>(1)</sup>	196.896	196.105	195.761	198.589	201.695

(1) Average for the year.

**Table 2****Settlement media used by non-banks***(end of year)*

	1994	1995	1996	1997	1998
					PTE billions
Notes and coins	795.8	841.0	857.5	765.2	914.8
Transferable deposits	2,965.3	3,348.8	3,795.8	5,617.0	6,566.1
<i>of which held by:</i>					
<i>households</i>	1,732.6	2,086.0	2,235.1	3,052.1	3,545.9
<i>corporate sector</i>	1,057.9	983.5	1,199.5	1,802.9	1,969.7
<i>other</i>	174.8	279.3	361.0	762.0	1,050.5
Other	93.4	64.5	79.4	115.2	-
Narrow money supply (M1)	3,854.5	4,254.3	4,784.9	5,438.9	5,757.4
Deposits in foreign currencies	509.3	178.0	204.9	457.1	655.4
Outstanding value on electronic money schemes	-	0.3	0.4	0.4	0.4
<i>of which:</i>					
<i>on card-based products</i>	-	0.3	0.4	0.4	0.4
<i>on network-based products</i>	-	-	-	-	-

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	PTE billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank <sup>(1)</sup>	330.9	264.2	364.9	352.0	511.0
<i>of which can be used for settlement</i>	330.9	264.2	364.9	352.0	511.0
Free reserves held at central bank	3.7	6.5	1.2	4.3	0.5
Transferable deposits at other institutions	23.7	46.3	28.0	122.2	320.3
Memorandum item:					
Broad money aggregate	10,783.7	11,664.4	12,593.5	13,385.7	14,423.9

(1) Including free reserves held at the central bank.

**Table 4****Banknotes and coins***(total value, end of year)*

	PTE billions				
	1994	1995	1996	1997	1998
Total banknotes issued	841.2	894.9	937.0	873.5	1,018.8
of which:					
PTE 10,000	281.4	317.0	296.4	223.5	292.7
PTE 5,000	431.4	438.3	490.1	504.1	571.6
PTE 2,000	57.8	68.0	76.7	80.5	80.6
PTE 1,000	56.7	56.8	59.1	49.3	59.1
PTE 500	13.9	14.8	14.7	16.1	14.8
PTE 100	-	-	-	-	-
Total coins issued	44.4	46.2	48.6	52.8	63.1
of which:					
PTE 200	8.8	8.8	8.8	9.8	13.4
PTE 100	13.3	13.3	13.2	13.7	15.9
PTE 50	5.3	5.3	5.3	5.3	5.6
PTE 20	4.0	4.0	4.0	4.0	4.3
PTE 10	1.3	1.3	1.4	1.5	1.7
PTE 5	1.2	1.3	1.3	1.4	1.8
PTE 2.5	1.3	1.2	1.2	1.2	1.2
PTE 1	0.4	0.4	0.4	0.4	0.4
PTE 0.5	0.1	0.1	0.1	0.1	0.1
Commemorative	8.7	10.5	12.9	15.4	18.7
Notes and coins held by credit institutions	88.8	104.0	128.3	161.1	167.1
Notes and coins in circulation outside credit institutions	795.8	841.0	857.5	765.2	914.8

Table 5

**Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (PTE billions)
Central bank	1	11	-	-
Commercial banks	81	4,263	18,642.7	6,278.2
Mutual agricultural credit banks and savings banks	166	528	1,225.3	286.7
Post office	1	1,068	57.0	1.2
Treasury	1	1	-	-
<b>TOTAL</b>	<b>250</b>	<b>5,871</b>	<b>19,925.0</b>	<b>6,566.1</b>
Branches of foreign banks	19	108	69.1	116.1
<i>of which EC-based</i>	<i>16</i>	<i>105</i>	<i>59.9</i>	<i>113.2</i>

Table 6

**Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs<sup>(1)</sup></b>					
Number of networks	1	1	1	1	1
Number of machines	3,329	3,674	5,366	6,280	7,081
Volume of transactions (millions)	116.1	136.8	180.9	216.7	260.3
Value of transactions (PTE billions)	1,236.9	1,450.0	2,147.9	3,002.7	3,492.1
<b>EFTPOS terminals</b>					
Number of networks	1	1	1	1	1
Number of points of sale	25,318	29,364	39,865	47,185	53,005
Number of machines	32,700	38,178	49,533	59,899	70,549
Volume of transactions (millions)	90.3	124.2	174.9	219.5	276.3
Value of transactions (PTE billions)	573.7	745.1	832.8	1,042.4	1,428.7
<b>Electronic money loading machines</b>					
Number of machines <sup>(2)</sup>	-	1,740	3,103	5,129	5,834
Volume of transactions (thousands)	-	309	777	683	572
Value of transactions (millions)	-	853	2,322	2,186	1,833
<b>Electronic money purchase terminals</b>					
Number of machines	-	30,760	55,646	63,703	72,429
Volume of transactions (thousands)	-	1,648	6,235	5,913	5,128
Value of transactions (millions)	-	608	2,303	2,193	1,908

(1) From 1996 includes figures for ATMs of the banks' internal networks not operated by SIBS.

(2) Includes ATM terminals.

**Table 7****Number of payment cards in circulation***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function	5,291	6,266	7,024	8,132	9,315
Cards with a debit/credit function	6,759	7,113	7,815	9,098	10,432
<i>of which:</i>					
<i>cards with a debit function</i>	5,669	6,266	7,024	8,132	9,315
<i>cards with a credit function</i>	1,090	1,298	1,437	1,818	2,011
Cards with a cheque guarantee function	542	564	654	529	326
Retailer cards	91	115	137	235	296
Electronic money cards	-	161	299	384	411

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

**Table 8****Payment instructions handled by selected interbank funds transfer volume of transactions**

	millions				
	1994	1995	1996	1997	1998
<b>GROSS SETTLEMENT SYSTEMS</b>					
SPGT	-	-	0.4	0.5	0.5
SLOD	-	-	0.03	0.03	0.03
<b>NET SETTLEMENT SYSTEMS</b>					
Telecompensação (teleclearing)	424.2	485.4	576.6	668.6	767.6
cheques	214.2	219.9	227.5	234.3	244.2
others <sup>(1)</sup>	210.0	265.5	-	-	-
TEI	n.a.	n.a.	11.9	13.6	16.8
MULTIBANCO	n.a.	n.a.	332.1	414.6	503.5
EFEITOS (Bills of exchange)	n.a.	n.a.	5.1	6.1	3.1
Traditional clearing <sup>(2)</sup>	12.1	11.6	10.4	7.6	3.0
cheques	6.8	6.6	6.6	5.5	2.3
Others <sup>(3)</sup>	5.3	5.0	3.8	2.1	0.7

(1) Mainly electronic transfers.

(2) Closed on 30 June 1998

(3) Mainly payment transfers.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	PTE billions				
	1994	1995	1996	1997	1998
<b>GROSS SETTLEMENT SYSTEMS</b>					
SPGT	-	-	495,192	729,855	910,173
SLOD	-	-	8,200	8,260	8,410
<b>NET SETTLEMENT SYSTEMS</b>					
Telecompensação (teleclearing)	50,045	86,524	97,084	68,293	74,688
cheques	44,642	46,433	49,886	54,264	58,507
others <sup>(1)</sup>	5,403	40,091	-	-	-
TEI	n.a.	n.a.	43,964	10,212	11,604
MULTIBANCO	n.a.	n.a.	2,566	3,105	3,811
EFEITOS(Bills of exchange)	n.a.	n.a.	668	712	766
Traditional clearing <sup>(2)</sup>	177,119	154,274	1,841	1,388	609
cheques	1,346	1,383	1,412	1,282	590
Others <sup>(3)</sup>	175,773	152,891	429	106	19

(1) Mainly electronic transfers.

(2) Closed on 30 June 1998.

(3) Mainly payment transfers.

Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
<b>INTERBOLSA</b>	57	55	55
Banks	35	35	35
Stockbrokers	20	20	20
Securities houses	-	-	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others (Treasury bodies)	2	-	-
<b>OPORTO DERIVATIVES EXCHANGE</b>	33	-	28
Banks	18	-	18
Stockbrokers	15	-	10
<b>SISTEM</b>	92	-	92
Banks	49	-	49
Stockbrokers	4	-	4
Securities houses	3	-	3
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others (public bodies)	4	-	4
Others (leasing companies; factoring companies; credit-purchase finance companies)	32	-	32

Table 11

**Transfer instructions handled by securities settlement systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
INTERBOLSA	422.4	475.5	717.2	1,787.9	4,773.0
Cash Market <sup>(1)</sup>	420.7	468.4	696.2	1,761.7	4,738.0
Special Market for Wholesale Transactions in Government Securities <sup>(1)(2)</sup>	1.7	7.1	21.0	26.2	35.0
OPORTO DERIVATIVES EXCHANGE <sup>(3)</sup>	-	-	0.2	0.4	1.0
Futures	-	-	0.2	0.4	0.4
Options	-	-	-	-	-
Repos	-	-	-	0.0	0.6
SISTEM	18.3	5.0	3.1	3.3	2.0
Government Securities	15.7	2.3	1.5	1.3	0.5
Others (securities issued by the Banco de Portugal)	2.6	2.7	1.6	2.0	1.5

(1) This figure cannot be subdivided.

(2) In 1994: Figure for the period from June to December.

(3) Since June 1996.

Table 12

**Transfer instructions handled by securities settlement systems:  
value of transactions**

	PTE billions				
	1994	1995	1996	1997	1998
INTERBOLSA	6,597	7,999	28,239	37,004	64,604
Cash Market <sup>(1)</sup>	5,089	3,196	7,111	12,043	19,901
Special Market for Wholesale Transactions in Government Securities <sup>(2)</sup>	1,508	4,803	21,128	24,961	44,703
OPORTO DERIVATIVES EXCHANGE <sup>(3)</sup>	-	-	35	290	844
Futures	-	-	35	150	193
Options	-	-	-	-	-
Repos	-	-	-	140	651
SISTEM	27,666	25,200	16,674	19,657	15,572
Government Securities	19,387	6,997	4,475	3,471	1,657
Others (securities issued by the Banco de Portugal)	8,279	18,203	12,199	16,186	13,915

(1) This figure cannot be subdivided.

(2) In 1994: figure for the period from June to December.

(3) Since June 1996.



Table 13

**Nominal values registered by securities settlement systems***(end of year)*

	PTE billions				
	1994	1995	1996	1997	1998
<b>INTERBOLSA</b>	7,075	9,040	10,197	12,049	14,319
Government securities	3,785	4,540	4,913	5,150	5,808
Bonds	1,256	1,674	2,241	2,984	3,784
Shares	1,882	2,615	2,819	3,697	4,422
CDs	-	-	-	-	-
Participating bonds	113	77	73	51	50
Units of collective investment undertakings	39	134	151	167	255
<b>OPORTO DERIVATIVES EXCHANGE <sup>(1)</sup></b>	-	-	9	16	20
Futures	-	-	9	16	20
Options	-	-	-	-	-
Repos	-	-	-	-	-
<b>SISTEM</b>	3,179	3,203	2,962	2,315	1,724
Government securities	1,325	1,348	1,418	1,087	389
Bonds	-	-	-	-	-
Shares	-	-	-	-	-
CDs	-	-	-	-	-
Securities issued by the Banco de Portugal	1,854	1,855	1,544	1,228	1,335

(1) Since June 1996.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	255.5	236.1	261.9	272.7	285.9
<i>of which truncated</i>	187.8	193.7	201.0	217.9	229.9
Payments by debit and credit cards <sup>(1)</sup>	114.0	140.0	196.8	251.7	315.8
Paper-based credit transfers	4.3	3.8	5.8	6.5	8.6
<i>customer initiated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>interbank</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Paperless credit transfers <sup>(2)</sup>	38.0	36.8	38.6	32.4	36.6
<i>customer initiated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>interbank</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Direct debits	43.3	58.5	65.0	67.9	66.1
Bills of exchange	<i>n.a.</i>	<i>n.a.</i>	6.1	6.7	3.9
Electronic money	-	1.6	6.2	5.9	5.1
<i>of which:</i>					
<i>payments by card-based products</i>	-	1.6	6.2	5.9	5.1
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>455.1</b>	<b>476.8</b>	<b>580.4</b>	<b>643.8</b>	<b>722.0</b>

(1) Before 1997 does not include retailer cards.

(2) Since February 1996 includes transfers of the RTGS system, which were previously processed through the netting systems.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	PTE billions				
	1994	1995	1996	1997	1998
Cheques issued	61,619.0	52,265.4	56,782.9	62,571.5	67,988.0
<i>of which truncated</i>	6,280.0	6,631.0	7,370.0	11,661.0	14,752.0
Payments by debit and credit cards <sup>(1)</sup>	743.2	919.1	1,120.7	1,418.4	1,882.2
Paper-based credit transfers	14,332.3	18,972.3	17,741.1	20,518.0	24,700.8
<i>customer initiated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>interbank</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Paperless credit transfers <sup>(2)</sup>	7,655.2	16,806.8	552,176.3	740,067.1	952,561.0
<i>customer initiated</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
<i>interbank</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>	<i>n.a.</i>
Direct debits	4,506.8	3,945.6	4,447.8	4,952.9	4,738.8
Bills of exchange	<i>n.a.</i>	<i>n.a.</i>	1,279.2	1,273.6	1,545.4
Electronic money	-	0.6	2.3	2.2	1.9
<i>of which:</i>					
<i>payments by card-based products</i>	-	0.6	2.3	2.2	1.9
<i>payments by network-based products</i>	-	-	-	-	-
<b>TOTAL</b>	<b>88,856.5</b>	<b>92,909.8</b>	<b>633,550.3</b>	<b>830,803.7</b>	<b>1,053,418.1</b>

(1) Before 1997 does not include retailer cards.

(2) Since February 1996 includes transfers of the RTGS system, which were previously processed through the netting systems.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	39	43	44	46	47
<i>of which:</i>					
<i>members</i>	26	29	30	29	28
<i>sub-members</i>	13	14	14	16	16
<i>participants</i>	-	-	-	1	3
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	3,578,502	4,010,814	4,345,301	4,897,672	5,658,690
<i>of which:</i>					
<i>category I</i>	853,872	977,018	1,023,514	1,185,554	1,414,573
<i>category II</i>	883,332	978,193	1,011,152	1,055,148	1,079,595
<i>sent/received to/from domestic users</i>	430,960	483,748	404,919	436,757	418,400
Total messages received	3,339,670	3,679,672	3,950,010	4,503,748	4,962,798
<i>of which:</i>					
<i>category I</i>	894,471	988,755	1,040,731	1,156,416	1,337,987
<i>category II</i>	591,849	637,447	640,528	768,321	824,781
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Finland



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	5,088.0	5,108.0	5,125.0	5,140.0	5,161.0
Gross domestic product (FIM billions)	521.4	561.4	587.6	630.5	676.1
Exchange rate vis-à-vis ECU <sup>(1)</sup>	6.1908	5.7086	5.8282	5.8806	5.9825

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	FIM billions				
	1994	1995	1996	1997	1998
Notes and coins <sup>(1)</sup>	10.8	12.4	13.6	14.5	14.8
Transferable deposits	143.6	163.5	191.2	201.6	211.6
Narrow money supply (M1)	154.4	175.9	204.8	216.1	226.4
Transferable deposits in foreign currencies	12.8	13.7	12.4	12.3	10.9
Outstanding value on electronic money schemes (FIM millions)	5.0	9.9	10.4	1.8	3.0
of which:					
on card-based products	5.0	9.9	10.4	1.8	3.0
on network-based products	-	-	0	0	-

(1) Cash in ATMs is included in this item from the year 1994, because Automatia Ltd, the company that has governed cash dispensing ATMs since 1994, is not a credit institution. Values of cash in ATMs were (FIM mill.) 218 (1994), 418 (1995), 788 (1996), 872 (1997) and 914 (1998).

**Table 3****Settlement media used by deposit-taking institutions**

(end of year)

	FIM billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	6.5	15.7	6.8	7.9	7.0
Free reserves held at central bank	1.4	1.1	1.5	2.8	5.9
Transferable deposits at other institutions	4.3	2.5	2.8	3.1	2.7

Table 4

Banknotes and coins  
(total value, end of year)

	FIM millions				
	1994	1995	1996	1997	1998
Total banknotes issued	12,381	13,625	14,836	15,689	15,512
of which:					
FIM 1,000	3,829	4,440	5,153	5,580	5,636
FIM 500	2,287	2,505	2,562	2,597	2,542
FIM 100	5,196	5,541	6,008	6,430	6,256
FIM 50	647	693	654	616	609
FIM 20	364	396	413	423	428
FIM 10	58	50	45	43	41
FIM 5	-	-	-	-	-
FIM 1	-	-	-	-	-
Total coins issued	1,284	1,365	1,439	1,494	1,350
of which:					
FIM 10	326	365	392	415	440
FIM 5	416	428	436	440	368
FIM 1	371	390	414	429	323
50 penniä	85	86	92	97	101
20 penniä	-	-	-	-	-
10 penniä	86	96	106	113	119
5 penniä	-	-	-	-	-
1 penniä	-	-	-	-	-
Notes and coins held by credit institutions	3,504	3,210	3,246	3,300	2,886
Notes and coins in circulation outside credit institutions	10,810	12,401	13,645	14,517	14,803
of which cash in ATMs	218	418	788	872	914
Memorandum items:					
Commemorative coins <sup>(1)</sup>	262	281	283	309	188
Notes and coins which ceased to be legal tender on 1 January 1994	387	339	333	326	639

(1) This item is included in "banknotes and coins in circulation" in the balance sheet of Suomen Pankki.



Table 5

**Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (thousands)	Value of accounts (FIM billions)
Central bank <sup>(1)</sup>	1	4	0,018	12.9
Commercial banks	15	504	5,700	123.9
Savings banks	40	248	428	66.6
Co-operative and rural banks	289	837	3,277	21.1
Post office <sup>(2)</sup>		477	-	-
<b>TOTAL</b> <sup>(3)</sup>	<b>345</b>	<b>2,070</b>	<b>9,405</b>	<b>211.6</b>
Branches of foreign banks	6	20	22	5.3
<i>of which EC-based</i>	6	20	22	5.3

(1) Number of accounts: Number of settlement accounts.

(2) Post offices are also used as branches of Postipankki (since June 1998 Leonia bank plc), which is a state owned commercial bank.

(3) In 'Value of accounts': The Total differs from "Transferable deposits" in Table 2, because the central bank figures are not included in figures in table 2. There are also some differences in defining the concept "non-bank".

Table 6

**Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	1	1	1	1	1
Number of machines <sup>(1)</sup>	2,833	2,421	2,298	2,285	2,208
Volume of transactions (millions) <sup>(2)</sup>	191.9	201.2	212.8	222.7	230.9
Value of transactions (FIM billions) <sup>(2)</sup>	72.9	75.8	82.2	88.1	92.7
<b>EFTPOS terminals</b>					
Number of networks <sup>(3)</sup>	-	-	-	-	-
Number of points of sale	48,000	49,000	51,000	54,000	57,000
Volume of transactions (millions)	195.2	217.3	236.5	241.6	270.3
Value of transactions (FIM billions)	44.9	51.9	59.5	68.6	69.8
<b>Electronic money loading machines</b>					
Number of machines <sup>(4)</sup>	n.a.	100	100	2,100	2,208
Volume of transactions (thousands)	n.a.	20	30	27	38
Value of transactions (millions)	n.a.	4.0	8.5	3.0	4.5
<b>Electronic money purchase terminals <sup>(5)</sup></b>					
Number of machines	n.a.	1,500	5,000	1,344	3,627
Volume of transactions (thousands)	n.a.	3,425	3,760	77	159
Value of transactions (millions)	n.a.	17.4	17.1	1.0	1.9

(1) Only cash dispensing ATMs. The respective numbers of ATMs with funds transfer facility (bill / giro payment possibility and no cash functions) were 1984 (1994), 2153 (1995), 2363 (1996), 2482 (1997) and 2458 (1998).

(2) Only cash withdrawals. Volumes of credit transactions via ATMs with funds transfer facility (in millions) 39.6 (1994), 55.9 (1995), 67.8 (1996), 68.3 (1997) and 81.1 (1998). Values of credit transactions via ATMs with funds transfer facility are not available.

(3) Off-line system connected to merchant's bank.

(4) In 1997: in addition around 5000 machines installed in bus stations and buses.

(5) Figures from 1997 onwards include only the new multipurpose card product (introduced in March 1997) that replaced previous respective products.

**Table 7****Number of payment cards in circulation***(end of year)*

	thousands				
	1994	1995	1996	1997	1998
Cards with a cash function <sup>(1)</sup>	4,225	4,415	4,768	5,148	5,405
Cards with a debit/credit function	3,153	3,195	3,271	3,561	3,834
<i>of which:</i>					
<i>cards with a debit function</i> <sup>(2)</sup>	1,956	1,962	2,071	2,211	2,323
<i>delayed debit cards</i> <sup>(2)</sup>	824	844	884	907	956
<i>cards with a credit function</i>	373	389	316	443	555
Cards with a cheque guarantee function	7	7	4	3	2
Retailer cards	1,726	1,749	1,580	1,582	1,849
Electronic money cards <sup>(3)</sup>	468	846	1,175	189	324
<i>of which re-loadable cards</i>	7	14	18	156	324

(1) Year 1998: of which 135,000 cards includes e-money loading facility.

(2) Year 1998: of which 10,000 cards includes e-money loading facility.

(3) A new source of data has been used from 1996 onwards, which makes figures not comparable with previous years.

**Table 8****Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
Banks' payment clearing	373,982	355,858	267,200	277,400	321,800
Giro transfers	275,034	261,878	165,317	163,679	199,064
Debit cards	94,733	91,241	99,363	111,820	121,602
Cheques	4,159	2,739	2,520	1,901	1,134
Banks' bills <sup>(1)</sup>	56	n.a.	n.a.	n.a.	n.a.
BoF-RTGS	105	110	99	101	181
Credit transfers between banks	63	69	63	65	147
Credit transfers between Suomen Pankki and the banks	42	41	36	36	35

(1) Included in cheques since 1995.

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	FIM billions				
	1994	1995	1996	1997	1998
Banks' payment clearing	1,865.4	1,972.6	2,343.5	2,183.4	1,202.4
Giro transfers	845.5	1,002.2	1,370.2	1,249.9	521.2
Debit cards	22.1	20.6	23.3	25.8	29.4
Cheques <sup>(1)</sup>	993.5	949.8	950.0	907.6	651.8
Banks' bills <sup>(1)</sup>	4.3	n.a.	n.a.	n.a.	n.a.
BoF-RTGS	6,356.8	8,507.5	7,969.6	9,013.2	11,508.0
Credit transfers between banks	5,880.6	8,087.0	7,380.9	8,189.0	10,577.0
Credit transfers between Suomen Pankki and the banks	476.2	420.5	588.7	824.2	931.0

(1) Included in cheques since 1995.

Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
APK <sup>(1)</sup> , settlement of money market operations	17	13	11
Banks	8	8	8
Stockbrokers	5	5	-
Securities houses	-	-	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others	4	-	3
APK, settlement of shares	29	20	24
Banks	6	6	6
Stockbrokers	18	10	-
Securities houses	4	4	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others	-	-	-
HEX Ltd	28	28	-
Banks	8	8	-
Stockbrokers	19	19	-
Securities houses	1	1	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others	-	-	-
Finnish Options Exchange <sup>(1)</sup>	-	-	-
Banks	-	-	-
Stockbrokers	-	-	-
Securities houses	-	-	-
Insurance companies	-	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others	-	-	-

- (1) The derivatives and clearing operations of the Finnish Options Exchange were transferred to HEX Helsinki Exchanges in summer and autumn of 1998.

Table 11

**Transfer instructions handled by securities settlement systems:  
volume of transactions**

	1994	1995	1996	1997	1998
APK, settlement of money market operations	44,465	41,050	46,683	61,818	71,237
Government securities	7,479	11,922	33,441	42,028	49,474
CDs	36,986	29,128	13,242	19,790	21,763
Others	-	-	-	-	366
APK, settlement of shares	339,264	373,070	534,018	784,347	1,212,536
Shares	339,264	373,070	534,018	784,347	1,212,536
HEX Ltd	1,034,633	1,593,534	4,046,174	7,474,708	3,032,262
Futures	358,160	534,330	2,247,617	3,469,628	2,061,605
Options	676,473	1,059,204	1,798,557	4,005,080	970,657
Finnish Options Exchange	47,438	77,703	58,327	58,309	30,529
Futures	22,357	20,306	13,461	7,178	2,450
Options	25,081	57,397	44,866	51,131	28,079

Table 12

**Transfer instructions handled by securities settlement systems:  
value of transactions**

	1994	1995	1996	1997	FIM millions 1998
APK, settlement of money market operations	1,933,791	2,039,475	2,363,296	4,196,737	4,783,628
Government securities	333,286	570,254	1,562,161	3,045,961	3,967,658
CDs	1,600,505	1,469,221	801,135	1,150,776	811,651
Others	-	-	-	-	4,319
APK, settlement of shares	68,921	83,019	101,265	186,161	633,220
Shares	68,921	83,019	101,265	186,161	633,220
Hex Ltd	91,513	186,200	1,548,089	2,341,248	3,168,822
Futures	63,659	140,500	1,503,002	2,248,499	n.a.
Options	27,854	45,700	45,087	92,749	n.a.
Finnish Options Exchange	23,800	12,766	5,237	4,477	2,934
Futures	11,164	12,651	4,645	2,168	2,732
Options	12,636	115	592	2,309	202

Table 13

**Nominal values registered by securities settlement systems***(end of December)*

	FIM millions				
	1994	1995	1996	1997	1998
APK, settlement of money market operations	163,509	136,200	234,500	279,800	350,328
Government securities	34,288	40,900	148,500	187,530	202,641
CDs	129,221	95,300	86,000	92,270	108,111
Others	-	-	-	-	39,576
APK, settlement of shares	181,559	191,700	284,900	389,400	773,540
Shares <sup>(1)</sup>	181,559	191,700	284,900	389,400	773,540
Hex Ltd	3,909	9,313	60,057	77,417	27,046
Futures and options <sup>(2)</sup>	3,909	9,313	60,057	77,417	27,046
Finnish Options Exchange	1,116	608	279	200	-
Futures and options <sup>(2)</sup>	1,116	608	279	200	-

(1) Market value of listed shares.

(2) Notional open interest.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	5.7	4.0	3.7	2.9	1.9
Payments by debit and credit cards	229.4	246.7	262.0	273.0	297.0
Credit transfers	395.5	418.1	424.3	443.6	465.1
of which:					
<i>paperless credit transfers</i> <sup>(1)</sup>	395.5	418.1	424.3	443.6	465.1
<i>paper-based credit transfers</i> <sup>(1)</sup>	-	-	-	-	-
Direct debits	17.9	25.6	23.7	26.2	31.1
Electronic money	-	3.4	3.9	0.1	0.2
of which:					
<i>payments by card-based products</i>	n.a.	3.4	3.8	0.1	0.2
<i>payments by network-based products</i>	-	-	0.1	0	0
<b>TOTAL</b>	<b>648.5</b>	<b>697.8</b>	<b>717.6</b>	<b>745.8</b>	<b>795.3</b>
Cross-border payments	1.6	1.7	3.2	3.5	3.7
<i>of which payments to EU countries</i>	0.7	1.1	2.3	2.6	2.8

- (1) On interbank level. The percentage of automation degree (i.e. share of electronically submitted to the bank) for customer payments were 65% (1994), 73% (1995), 75% (1996), 79% (1997) and 82% (1998), when measured in volume terms.



Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	FIM billions				
	1994	1995	1996	1997	1998
Cheques issued	1,058	1,071	999	733	718
Payments by debit and credit cards	54	59	65	71	77
Credit transfers	7,709	8,268	8,662	8,374	8,760
of which:					
<i>paperless credit transfers</i> <sup>(1)</sup>	7,709	8,268	8,662	8,374	8,760
<i>paper-based credit transfers</i> <sup>(1)</sup>	-	-	-	-	-
Direct debits	34	65	66	87	105
Electronic money	n.a.	0.02	0.02	2.60	0.002
of which:					
<i>payments by card-based products</i>	n.a.	0.02	0.02	2.60	0.002
<i>payments by network-based products</i>	-	-	0	0	-
<b>TOTAL</b>	<b>8,854.9</b>	<b>9,462.9</b>	<b>9,792.0</b>	<b>9,267.5</b>	<b>9,660.0</b>
Cross-border payments	289.7	302.7	491.2	608.6	826.6
of which payments to EU countries	163.9	191.7	363.8	476.6	675.0

(1) On interbank level. The percentage of the automation degree (i.e. share of electronically submitted to the bank) for customer payments were 53% (1994), 61% (1995), 52% (1996), 59% (1997) and 58% (1998), when measured in value terms.

Table 16

**Participation in S.W.I.F.T. by domestic institutions**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	14	13	14	15	16
of which:					
<i>members</i>	10	9	9	9	9
<i>sub-members</i>	4	4	5	6	6
<i>participants</i>	-	-	-	-	1
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
of which:					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

**S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	3,951,479	4,646,108	5,030,370	5,751,091	6,723,267
<i>of which:</i>					
<i>category I</i>	1,883,044	2,119,344	2,146,159	2,282,875	2,586,846
<i>category II</i>	1,014,105	1,157,502	1,065,054	1,116,193	1,226,368
<i>sent/received to/from domestic users</i>	522,748	617,520	421,391	390,903	521,669
Total messages received	2,805,753	3,281,266	3,375,655	3,792,939	4,419,950
<i>of which:</i>					
<i>category I</i>	1,054,813	1,167,447	1,180,787	1,287,983	1,447,029
<i>category II</i>	608,804	737,603	686,231	733,604	851,434
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Sweden



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population (thousands)	8,816.0	8,834.0	8,844.0	8,848.0	8,852.0
Gross domestic product (SEK billions)	1,587.9	1,705.5	1,751.8	1,804.8	1,872.8
Exchange rate vis-à-vis ECU	9.1631	9.3319	8.5147	8.6512	8.9159

(1) Average for the year.

**Table 2****Settlement media used by non-banks***(end of year)*

	SEK billions				
	1994	1995	1996	1997	1998
Notes and coins	68.6	68.5	72.2	74.4	78.1
Transferable deposits <sup>(1)</sup>	617.3	638.0	703.2	698.2	724.3
Narrow money supply (M1)	-	-	-	-	-
Transferable deposits in foreign currencies	21.6	17.2	27.0	35.1	31.4
Outstanding value on electronic money schemes	-	-	-	-	-
<i>of which:</i>					
<i>on card-based products</i>	-	-	-	-	-
<i>on network-based products</i>	-	-	-	-	-

(1) Local currency.

**Table 3****Settlement media used by deposit-taking institutions***(end of year)*

	SEK billions				
	1994	1995	1996	1997	1998
Required reserves held at central bank	5.0	-	-	-	-
Free reserves held at central bank	1.5	1.3	1.5	2.0	1.7
Transferable deposits at other institutions	62.3	54.2	73.4	94.5	113.4

**Table 4****Banknotes and coins***(total value, end of year)*

	SEK millions				
	1994	1995	1996	1997	1998
Total banknotes issued	72,992	73,064	77,134	78,986	82,288
<i>of which:</i>					
SEK 1,000	39,569	37,841	38,636	39,226	40,999
SEK 500	19,903	22,316	25,565	27,157	29,211
SEK 100	11,298	10,649	10,332	9,906	9,431
SEK 50	205	185	913	962	955
SEK 20	1,608	1,679	1,309	1,366	1,355
SEK 10	315	300	286	277	251
SEK 5	94	94	93	92	86
Total coins issued	3,450	3,596	3,656	3,809	3,980
Notes and coins held by credit institutions	7,848	8,357	8,774	8,681	8,389
Notes and coins in circulation outside credit institutions	68,594	68,303	72,016	74,114	77,879

**Table 5****Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branch offices	Number of accounts (millions)	Value of accounts (SEK billions)
Central bank	1	10	n.a.	n.a.
Commercial banks	19	3,334	n.a.	878.8
Savings banks	85	322	n.a.	73.1
<b>TOTAL</b>	<b>105</b>	<b>3,666</b>	<b>n.a.</b>	<b>951.9</b>
Branches of foreign banks	17	17	n.a.	21.7
<i>of which EC-based</i>	14	14	n.a.	21.2

**Table 6****Cash dispensers, ATMs and EFTPOS terminals***(end of year)*

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	2	2	2	2	2
Number of machines	2,281	2,359	2,379	2,370	2,485
Volume of transactions (millions)	270	281	297	312	333
Value of transactions (SEK billions)	218	226	239	249	287
<b>EFTPOS terminals <sup>(1)</sup></b>					
Number of networks	2	2	2	2	2
Number of points of sale	25,536	54,400	61,400	68,800	74,400
Volume of transactions (millions)	77	92	111	141	171
Value of transactions (SEK billions)	48	53	69	84	92
<b>Electronic money loading machines</b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-
<b>Electronic money purchase terminals</b>					
Number of machines	-	-	-	-	-
Volume of transactions (thousands)	-	-	-	-	-
Value of transactions (millions)	-	-	-	-	-

(1) Terminals administrated by the two data processing companies BABS and CEKAB.

**Table 7****Number of payment cards in circulation***(end of year)*

	1994	1995	1996	1997	1998
					thousands
Cards with a cash function <sup>(2)</sup>	6,037	6,171	6,317	6,849	6,950
Cards with a debit/credit function <sup>(3)</sup>	12,076	4,742	5,622	6,111	6,870
<i>of which:</i>					
<i>cards with a debit function</i>	10,379	3,525	3,731	4,188	5,229
<i>cards with a credit function</i>	1,697	1,217	1,931	1,923	1,641
Cards with a cheque guarantee function	-	-	-	-	-
Retailer cards	9,121	n.a.	n.a.	n.a.	n.a.
Electronic money cards	-	-	-	-	-

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) There was a new source of statistics from 1992.

(3) As from 1995 cards issued by oil companies and retail trade companies are not included.

**Table 8****Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
RIX system	84	119	310	326	313

**Table 9****Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	SEK billions				
	1994	1995	1996	1997	1998
RIX system	39,920	53,591	78,189	82,051	91,701

**Table 10****Participants in securities settlement systems***(end of 1998)*

	Settling securities <sup>(1)</sup>	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
VPC	57	45	13
Banks	18	17	11
Stockbrokers	19	19	-
Insurance companies	7	-	-
Foreign central banks	-	-	-
Cedel / Euroclear	-	-	-
Others <sup>(2) (3)</sup>	13	9	2

(1) Defined as account operators in the system.

(2) Sveriges Riksbank, the National Debt Office and the National Pension Fund (three funds), mortgage institutions (two), the OM Group and its subsidiary company VPA.

(3) Sveriges Riksbank and the National Debt Office.



**Table 11****Transfer instructions handled by securities settlement systems:  
volume of transactions**

	thousands				
	1994	1995	1996	1997	1998
VPC	3,000	2,912	3,678	5,313	5,780
Government securities and bonds <sup>(1)</sup>	500	498	601	594	459
Shares <sup>(2)</sup>	2,500	2,414	3,077	4,719	5,321

(1) Includes Sveriges Riksbank certificates.

(2) Includes private bonds.

**Table 12****Transfer instructions handled by securities settlement systems:  
value of transactions**

	SEK billions				
	1994	1995	1996	1997	1998
VPC	47,055	41,547	67,937	82,618	97,914
Government securities and bonds <sup>(1)</sup>	46,000	40,428	66,432	80,272	94,782
Shares <sup>(2)</sup>	1,055	1,119	1,505	2,346	3,132

(1) Includes Sveriges Riksbank certificates.

(2) Includes private bonds.

**Table 13****Nominal values registered by securities settlement systems  
(end of year)**

	SEK billions				
	1994	1995	1996	1997	1998
VPC	2,668	2,987	3,497	3,998	4,524
Government securities <sup>(1)</sup>	921	1,058	1,029	1,028	1,068
Bonds <sup>(2)</sup>	702	679	701	726	961
Shares <sup>(3)</sup>	1,025	1,192	1,714	2,156	2,495
CDs	20	58	53	88	n.a.

(1) Includes Sveriges Riksbank certificates.

(2) Excludes Government bonds.

(3) Market values.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Cheques issued	49	46	40	18	3
Payments by debit and credit cards	97	111	120	173	204
Paper-based credit transfers	170	189	196	208	175
Paperless credit transfers	435	431	441	452	458
Direct debits	45	50	54	65	74
Electronic money	-	-	-	-	-
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	-	-	-	-
<b>TOTAL</b>	<b>796</b>	<b>827</b>	<b>851</b>	<b>916</b>	<b>914</b>

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	SEK billions				
	1994	1995	1996	1997	1998
Cheques issued	n.a.	n.a.	n.a.	n.a.	5.
Payments by debit and credit cards	79	91	103	127	136
Paper-based credit transfers <sup>(1)</sup>	1,933	1,946	1,656	1,973	1,407
Paperless credit transfers <sup>(1)</sup>	4,282	4,405	5,076	5,344	6,091
Direct debits	183	194	202	193	210
Electronic money	-	-	-	-	-
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	-	-	-
<i>payments by network-based products</i>	-	-	-	-	-
Others	-	-	-	-	-
<b>TOTAL</b>	<b>6,477</b>	<b>6,636</b>	<b>7,037</b>	<b>7,637</b>	<b>7,849</b>

(1) From customer to bank.

Table 16

## Participation in S.W.I.F.T. by domestic institutions

	1994	1995	1996	1997	1998
S.W.I.F.T. users	17	20	22	21	29
<i>of which:</i>					
<i>members</i>	8	8	8	7	7
<i>sub-members</i>	9	11	12	12	13
<i>participants</i>	-	1	2	2	9
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

Table 17

## S.W.I.F.T. message flows to/from domestic users

	1994	1995	1996	1997	1998
Total messages sent	8,701,454	10,019,610	11,256,498	12,512,774	14,627,952
<i>of which:</i>					
<i>category I</i>	3,335,280	3,816,919	4,349,901	4,890,247	5,389,136
<i>category II</i>	2,029,226	2,223,462	2,400,631	2,576,992	2,866,339
<i>sent/received to/from domestic users</i>	1,213,723	1,455,832	1,722,933	2,049,871	2,398,305
Total messages received	7,021,354	7,971,173	8,992,702	10,296,368	11,844,938
<i>of which:</i>					
<i>category I</i>	2,427,632	2,833,733	3,167,954	3,649,313	4,122,240
<i>category II</i>	1,925,165	2,104,694	2,357,508	2,635,197	2,942,456
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.



United Kingdom



**Table 1****Basic statistical data**

	1994	1995	1996	1997	1998
Population <sup>(1)</sup> (thousands)	58,395.0	58,606.0	58,802.0	59,009.0	59,216.0
Gross domestic product (GBP billions)	676.0	712.5	754.6	800.9	837.6
Exchange rate vis-à-vis ECU <sup>(1)</sup>	0.7756	0.8288	0.8138	0.6923	0.6764

(1) Average for the year.

**Table 2****Settlement media used by non-banks**

(end of year)

	GBP billions				
	1994	1995	1996	1997	1998
Notes and coins	18.8	19.9	20.8	22.5	23.3
Narrow money deposits	391.7	417.1	439.5	462.4	492.5
Narrow money supply (M2)	410.5	437.0	460.3	484.9	515.8
Outstanding value on electronic money schemes <sup>(1)</sup>	-	-	0	0	0 <sup>(2)</sup>
<i>of which:</i>					
<i>on card-based products</i>	-	-	0 <sup>(3)</sup>	0 <sup>(4)</sup>	0 <sup>(5)</sup>
<i>on network-based products</i>	-	-	n.a.	n.a.	0 <sup>(6)</sup>

(1) There is no fully operational electronic money scheme currently in place. Figures are taken from trials being carried out in various parts of the country.

(2) Actual figure is GBP 159,375.

(3) Actual figure is GBP 99,900.

(4) Actual figure is GBP 194,687.

(5) Actual figure is GBP 153,375.

(6) Actual figure is GBP 6,000.

Table 3

**Settlement media used by deposit-taking institutions***(end of year)*

	GBP billions				
	1994	1995	1996	1997	1998
Cash ratio deposit <sup>(1)</sup>	1.50	1.69	2.40	2.56	1.21
Free reserves held at central bank	0.10	0.11	0.54	0.23	0.39
Transferable deposits at other credit institutions <sup>(2)</sup>	55.3	50.1	53.5	69.3	56.8

(1) Authorised institutions with average eligible liabilities of £10 million or more are liable to lodge with the Bank of England non-operational, non-interest-bearing deposits of 0.35% (as at 31 December 1993) of their eligible liabilities (0.25% for institutions for which Northern Ireland is the main place of business in the UK).

(2) Includes some time deposits.



Table 4

**Banknotes and coins***(total value, end of year)*

	GBP millions				
	1994	1995	1996	1997	1998
Total banknotes issued <sup>(1)</sup>	18,513	19,605	20,904	22,404	23,663
of which:					
GBP 50	2,989	3,205	3,368	3,709	3,992
GBP 20	8,362	9,098	10,021	11,138	12,378
GBP 10	5,945	6,111	6,340	6,426	6,205
GBP 5	1,160	1,135	1,119	1,076	1,088
GBP 1	57	56	56	55	n.a. <sup>(6)</sup>
Notes held by credit institutions <sup>(2) (3) (4)</sup>	4,328	4,403	5,116	5,170	5,777
Total coins issued <sup>(5)</sup>	1,958	1,992	2,094	2,244	2,318
of which:					
£2	n.a.	n.a.	n.a.	n.a.	133
£1	1,012	1,033	1,095	1,142	1,111
50p	240	223	221	291	250
20p	297	309	326	337	343
10p	134	136	142	146	144
5p	133	140	150	161	164
2p	78	83	88	92	95
1p	64	68	72	75	78
Notes and coins in circulation outside credit institutions <sup>(3) (4)</sup>	18,752	19,896	20,843	22,472	23,318

(1) Bank of England banknotes only.

(2) Not seasonally adjusted.

(3) Average for the month of December.

(4) Figures include coins.

(5) Estimated as at 31 December.

(6) £ 1 notes "written off" as at March 1998.

Table 5

**Institutional framework***(end of 1998)*

Categories	Number of institutions	Number of branches	Number of accounts (millions)	Value of accounts (GBP billions)
Central bank	1	1 <sup>(1)</sup>	109.8 <sup>(2)</sup>	387.4 <sup>(2)</sup>
Commercial banks	464	13,332 <sup>(3)</sup>		
Building societies	71	2,502	22.1	105.1 <sup>(4)</sup>
Post office	1	18,863	16.1 <sup>(5)</sup>	1.4
<b>TOTAL</b>	<b>537</b>	<b>34,698</b>	<b>148.0</b>	<b>493.9</b>
Branches of foreign banks	259	-	-	-
<i>of which EC-based</i>	<i>119</i>	<i>-</i>	<i>-</i>	<i>-</i>

(1) Only operational function concerned note issue.

(2) The Central Bank and Commercial Bank figure is amalgamated.

(3) Estimated figure.

(4) Private sector ordinary share and deposit accounts with UK building societies and shares and deposits below £50,000 from corporate bodies. Retail issues of subscribed capital, e.g. Perpetual Interest Bearing Shares, are excluded.

(5) National Savings Ordinary Accounts only. NSB facilities are available at post offices on an agency basis.

Table 6

**Cash dispensers, ATMs and EFTPOS terminals**

	1994	1995	1996	1997	1998
<b>Cash dispensers and ATMs</b>					
Number of networks	3	3	3	3	3
Number of machines (thousands)	20.0	20.9	22.1	23.2	24.6
Volume of transactions (millions) <sup>(1)</sup>	1,335	1,471	1,599	1,745	1,850
Value of transactions (GBP billions) <sup>(1)</sup>	65	72	80	90	98
<b>EFTPOS terminals</b>					
Number of networks <sup>(2)</sup>	3	3	3	3	3
Number of machines <sup>(1) (3)</sup>	350,000	505,000	550,000	530,000	610,000
Volume of transactions	n.a.	n.a.	n.a.	n.a.	n.a.
Value of transactions	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Electronic money loading machines<sup>(4)</sup></b>					
Number of machines	-	-	1,340	1,295	171
Volume of transactions (thousands)	-	-	57	98	185
Value of transactions (millions)	-	-	1	2	2
<b>Electronic money purchase terminals<sup>(4)</sup></b>					
Number of machines	-	-	1,922	3,537	1,642
Volume of transactions (thousands)	-	-	n.a.	n.a.	n.a.
Value of transactions (millions)	-	-	1	1	2

(1) Estimated figure.

(2) SWITCH, VISA and MasterCard.

(3) SWITCH, VISA and MasterCard. The number of points of sale is not available (several machines can be installed at one point of sale).

(4) There is no fully operational electronic money scheme currently in place. Figures are taken from trials being carried out in various parts of the country.

Table 7

**Number of payment cards in circulation***(end of year)*

	millions				
	1994	1995	1996	1997	1998
Cards with a cash function	77.3	83.7	89.0	96.8	106.1
Cards with a debit/credit function	54.5	59.2	66.6	75.0	84.1
<i>of which:</i>					
<i>cards with a debit function</i>	26.0	28.4	32.5	36.6	42.5
<i>cards with a credit function</i> <sup>(2)</sup>	28.5	30.8	34.1	38.4	41.6
Cards with a cheque guarantee function <sup>(3)</sup>	45.5	48.0	50.7	53.3	54.9
Retailer cards <sup>(4) (5)</sup>	10.3	13.0	15.4	17.6	18.6
Electronic money cards <sup>(6)</sup>	-	-	0.03	0.11	0.14

(1) A card with multiple functions may appear in several categories. It is, therefore, not meaningful to add the figures.

(2) Bank VISA, MasterCard and travel and entertainment (charge cards) cards only (excludes cards issued by some building societies).

(3) Includes eurocheque cards.

(4) This figure does not include the number of cards issued by smaller retailers.

(5) Estimated figure.

(6) There is no fully operational electronic money scheme currently in place. Figures are taken from trials being carried out in various parts of the country.

Table 8

**Payment instructions handled by selected interbank funds transfer systems:  
volume of transactions**

	millions				
	1994	1995	1996	1997	1998
Town Clearing <sup>(1) (2)</sup>	<0.1	0	-	-	-
CHAPS	11.7	12.6	14.4	16.5	18.0
Cheque and Credit Clearings	2,451	2,377	2,347	2,296	2,242
Cheques <sup>(1) (3)</sup>	2,278	2,206	2,171	2,115	2,060
Paper-based credit transfers <sup>(1) (3)</sup>	173	171	176	181	182
BACS	2,058	2,268	2,476	2,682	2,905
Credit transfers <sup>(1)</sup>	910	969	1,033	1,098	1,169
Direct debits	1,148	1,299	1,443	1,584	1,736
<b>TOTAL</b>	<b>4,520.7</b>	<b>4,657.6</b>	<b>4,837.4</b>	<b>4,994.5</b>	<b>5,165.0</b>

(1) Excludes inter-branch items.

(2) Town Clearing ceased operation on 24 February 1995.

(3) Includes Northern Ireland and Scotland (includes estimates).

Table 9

**Payment instructions handled by selected interbank funds transfer systems:  
value of transactions**

	GBP billions				
	1994	1995	1996	1997	1998
Town Clearing <sup>(1) (2)</sup>	681	59	-	-	-
CHAPS	25,053	26,719	28,881	36,032	41,501
Cheque and Credit Clearings	1,311	1,333	1,400	1,453	1,466
Cheques <sup>(1) (3)</sup>	1,210	1,234	1,298	1,351	1,367
Paper-based credit transfers <sup>(1) (3)</sup>	101	99	102	102	99
BACS	941	1,054	1,251	1,432	1,602
Credit transfers <sup>(1)</sup>	657	742	898	1,025	1,147
Direct debits	284	312	353	407	455
<b>TOTAL</b>	<b>27,986</b>	<b>29,165</b>	<b>31,532</b>	<b>38,917</b>	<b>44,569</b>

(1) Excludes inter-branch items.

(2) Town Clearing ceased operation on 24 February 1995.

(3) Includes Northern Ireland and Scotland (includes estimates).

Table 10

**Participants in securities settlement systems***(end of 1998)*

	Settling securities	Holding securities accounts on behalf of customers	Settling cash directly in central bank accounts
CGO <sup>(1)</sup>	322	-	-
Participants	322	-	-
CMO	84	-	-
Banks	80	-	-
Stockbrokers	0	-	-
Securities houses	2	-	-
Stock exchange money-brokers	0	-	-
Others	2	-	-
CREST <sup>(1)</sup>	5,422	5,365	-
Market Participants	1,713	1,713	-
Payment Banks	18	0	-
Registrars	39	0	-
Private Clients (individuals)	3,652	3,652	-
LCH <sup>(2)</sup>	117	117	-
Participants	117	117	-

(1) Figures are for UK and Ireland. Irish transactions account for 4%.

(2) It is not possible to distinguish different classes of participants.

Table II

**Transfer instructions handled by securities settlement systems:  
volume of transactions <sup>(1)</sup>**

	thousands				
	1994	1995	1996	1997	1998
CGO <sup>(2) (9)</sup>	768.4	747.5	960.1	949.8	1,114.3
Government securities	-	-	-	-	-
Non-British Government Securities	-	-	-	-	-
CMO <sup>(2)</sup>	285.3	269.0	268.0	263.1	221.2
Government securities	)	)	)	)	)
Bills of exchange	)	)	)	)	)
Bank CDs	)285.3	)269	)268	)263.1	)221.2
Building society CDs	)	)	)	)	)
Commercial paper	)	)	)	)	)
Stock exchange STCs	)	)	)	)	)
ESO <sup>(2) (3)</sup>	9.1	14.2	18.5	22.6	-
Government securities	)	)	)	)	-
Bonds	)9.1	)14.2	)18.5	)22.6	-
CDs	)	)	)	)	-
TALISMAN <sup>(2) (4)</sup>	9,386	9,817	10,962	n.a. <sup>(8)</sup>	-
Shares <sup>(5)</sup>	9,386	9,817	10,962	-	-
CREST <sup>(4) (6)</sup>	-	-	1,598	29,005 <sup>(8)</sup>	35,801
Shares <sup>(5)</sup>	-	-	1,598	29,005	35,801
LCH <sup>(7)</sup>	219,138	198,561	233,811	304,017	267,130
Futures	186,208	168,610	198,758	264,078	232,477
Options	32,930	29,951	35,053	39,939	34,653

(1) Figures altered from previous edition due to revised method of calculation.

(2) Volumes include one side of each transaction.

(3) ESO was inaugurated on 31 August 1993 and was closed on 31 December 1997.

(4) CREST commenced operations on 15 July 1996. Following the transfer of securities from TALISMAN to CREST, TALISMAN closed on 7 April 1997.

(5) Figures represent number of bargains settled.

(6) Figures are for UK and Ireland. Irish transactions account for 4%.

(7) Number of contracts.

(8) TALISMAN and CREST figures are combined.

(9) The CGO system was upgraded on 10 November 1997.

**Table 12**

**Transfer instructions handled by securities settlement systems:  
value of transactions <sup>(1)</sup>**

	GBP billions				
	1994	1995	1996	1997	1998
<b>CGO <sup>(2) (9)</sup></b>	15,266	16,001	24,288	28,283	32,962
Government securities	-	-	-	-	-
Non-British Government Securities	-	-	-	-	-
<b>CMO <sup>(2)</sup></b>	2,547	3,305	3,483	3,842	3,316
Government securities	)2,547	)3,305	)3,483	)3,842	)3,316
Bills of exchange	)	)	)	)	)
Bank CDs	)	)	)	)	)
Building society CDs	)	)	)	)	)
Commercial paper	)	)	)	)	)
Stock exchange STCs	)	)	)	)	)
<b>ESO <sup>(2) (3) (4)</sup></b>	59	84	90	141	-
Government securities	)59	)84	)90	)141	-
Bonds	)	)	)	)	-
CDs	)	)	)	)	-
<b>TALISMAN <sup>(2) (5)</sup></b>	606	646	741	n.a. <sup>(8)</sup>	-
Shares <sup>(6)</sup>	606	646	741	-	-
<b>CREST <sup>(5) (7)</sup></b>	-	-	109	3,996 <sup>(8)</sup>	13,404
Shares	-	-	109	3,996	13,404

(1) Figures altered from previous edition due to revised method of calculation.

(2) Turnover includes one side of each transaction.

(3) ESO was inaugurated until 31 August 1993 and was closed on 31 December 1997.

(4) Nominal value of securities traded (trading is in ECU - figures quoted are GBP).

(5) CREST commenced operations on 15 July 1996. Following the transfer of securities from TALISMAN to CREST, TALISMAN closed on 7 April 1997.

(6) Figures represent value of bargains settled.

(7) Figures are for UK and Ireland. Irish transactions account for 4%.

(8) TALISMAN and CREST figures are combined.

(9) The CGO system was upgraded on 10 November 1997.



Table 13

**Nominal values registered by securities settlement systems***(end of year)*

	GBP billions				
	1994	1995	1996	1997	1998
CGO	)227.9	)210.9	)243.3	261.9	261.1
Government securities	)	)	)	260.5	259.1
Non-British Government Securities	)	)	)	1.4	2.0
CMO	86.4	106.0	118.2	121.6	136.8
Government securities	5.2	16.7	3.0	1.4	1.3
Bills of exchange	17.6	17.9	20.5	20.8	17.9
Bank CDs	52.5	57.9	82.0	95.7	113.1
Building society CDs	7.0	6.2	7.5	3.7	4.5
Commercial paper	neg.	neg.	neg.	neg.	neg.
Stock exchange STCs	4.1	7.3	5.2	neg.	0.0
ESO <sup>(1) (2)</sup>	4.3	5.3	5.2	-	-
Government securities	)	)	)	-	-
Bonds	)	)	)	-	-
CDs	)	)	)	-	-
TALISMAN <sup>(3) (4)</sup>	811.8	942.7	1,055.3	n.a.	-
Equities and unlisted securities <sup>(5)</sup>	779.5	906.9	1,017.0	-	-
Fixed interest	32.3	35.8	38.3	-	-
CREST <sup>(4) (6)</sup>	-	-	348.3	1,066.0	1,075.0

(1) Trading is in ECU; figures are quoted in GBP.

(2) ESO was not inaugurated until 31 August 1993 and was closed on 31 December 1997.

(3) Figures are market values of UK companies; other securities traded at the Stock Exchange are not eligible for settlement in TALISMAN.

(4) CREST commenced operations on 15 July 1996. Following the transfer of securities from TALISMAN to CREST, TALISMAN closed on 7 April 1997.

(5) From 1995, includes Alternative Investment Market (AIM).

(6) Figures are for UK and Ireland. Irish transactions account for 4%.

Table 14

**Indicators of use of various cashless payment instruments:  
volume of transactions**

	Millions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1) (2)</sup>	2,802	2,699	2,643	2,582	2,510
<i>large-value (Town)</i> <sup>(3)</sup>	<0.1	0	0	n.a.	-
<i>others</i>	2,802	2,699	2,643	2,582	2,510
Payments by card	1,623	1,907	2,305	2,631	2,960
<i>debit</i>	808	1,004	1,270	1,503	1,736
<i>credit</i> <sup>(4)</sup>	815	903	1,035	1,128	1,224
Paper-based credit transfers <sup>(2) (5)</sup>	415	405	419	419	407
Paperless credit transfers	987	1,045	1,170	1,241	1,319
<i>large-value (CHAPS)</i>	12	13	14	17	18
<i>others</i> <sup>(2)</sup>	975	1,032	1,156	1,224	1,301
Direct debits	1,148	1,299	1,443	1,584	1,736
Electronic money <sup>(6)</sup>	-	-	n.a.	n.a.	n.a.
<i>of which:</i>					
<i>payments by card-based products</i>	-	-	n.a.	n.a.	n.a.
<i>payments by network-based products</i>	-	-	-	-	0 <sup>(8)</sup>
<b>TOTAL</b> <sup>(7)</sup>	<b>6,975</b>	<b>7,355</b>	<b>7,980</b>	<b>8,457</b>	<b>8,932</b>

- (1) Excludes cheques processed at branch level, but includes cheques used by customers to obtain cash from a bank other than their own.
- (2) Includes inter-branch items (values are estimates).
- (3) Town clearing ceased operation on 24 February 1995.
- (4) VISA, MasterCard and charge cards only.
- (5) Excludes items processed at branch level.
- (6) There is no fully operational electronic money scheme currently in place.
- (7) Excludes postal orders and government payments in cash from post offices against state benefit vouchers.
- (8) Actual figure is 1,800.

Table 15

**Indicators of use of various cashless payment instruments:  
value of transactions**

	GBP billions				
	1994	1995	1996	1997	1998
Cheques issued <sup>(1) (2)</sup>	2,177	1,577.2	1,590.8	1,652.0	1,659.0
<i>large-value (Town)</i> <sup>(3)</sup>	681	59.3	n.a.	n.a.	n.a.
<i>others</i>	1,496	1,517.9	1,590.8	1,652.0	1,659.0
Payments by card	59.9	70.8	88.1	103.2	118.5
<i>debit</i>	22.4	28.5	37.1	45.1	53.7
<i>credit</i> <sup>(4)</sup>	37.5	42.3	51.0	58.1	64.5
Paper-based credit transfers <sup>(2) (5)</sup>	397.2	371.2	401.9	394.9	380.2
Paperless credit transfers	25,733	27,486	29,832	37,124	42,728
<i>large-value (CHAPS)</i>	25,052	26,719	28,881	36,032	41,501
<i>others</i> <sup>(2)</sup>	681	767	951	1,092	1,227
Direct debits	284	312	353	407	455
Electronic money <sup>(6)</sup>	-	-	0.001 <sup>(8)</sup>	0.001 <sup>(9)</sup>	n.a.
of which:					
<i>payments by card-based products</i> <sup>(6)</sup>	-	-	0.001 <sup>(8)</sup>	0.001 <sup>(9)</sup>	0.002 <sup>(10)</sup>
<i>payments by network-based products</i>	-	-	n.a.	n.a.	n.a.
<b>TOTAL</b> <sup>(7)</sup>	<b>28,651.1</b>	<b>29,817.2</b>	<b>32,265.8</b>	<b>39,681.1</b>	<b>45,340.7</b>

- (1) Excludes cheques processed at branch level, but includes cheques used by customers to obtain cash from a bank other than their own.
- (2) Includes inter-branch items (values are estimates).
- (3) Town clearing ceased operation on 24 February 1995.
- (4) VISA, MasterCard and charge cards only.
- (5) Excludes items processed at branch level.
- (6) There is no fully operational electronic money scheme currently in place.
- (7) Excludes postal orders and government payments in cash from post offices against state benefit vouchers.
- (8) Actual figure is GBP 1,291,985.
- (9) Actual figure is GBP 1,435,362.
- (10) Actual figure is GBP 1,828,261.

**Table 16****Participation in S.W.I.F.T. by domestic institutions <sup>(1)</sup>**

	1994	1995	1996	1997	1998
S.W.I.F.T. users	344	366	382	408	429
<i>of which:</i>					
<i>members</i>	59	62	66	63	63
<i>sub-members</i>	228	235	236	241	250
<i>participants</i>	57	69	80	104	116
Memorandum item:					
Total S.W.I.F.T. world-wide	4,623	5,229	5,632	6,165	6,557
<i>of which:</i>					
<i>members</i>	2,412	2,259	2,874	2,969	3,052
<i>sub-members</i>	2,023	2,259	2,404	2,590	2,720
<i>participants</i>	188	277	354	606	785

(1) The UK and the Isle of Man.

**Table 17****S.W.I.F.T. message flows to/from domestic users**

	1994	1995	1996	1997	1998
Total messages sent	60,967,184	71,035,477	82,578,192	100,441,417	116,671,655
<i>of which:</i>					
<i>category I</i>	10,352,681	11,181,501	12,312,467	13,797,623	15,438,669
<i>category II</i>	19,379,515	21,654,710	23,419,297	26,714,116	29,200,240
<i>sent/received to/from domestic users</i>	14,154,000	16,386,855	19,335,978	23,902,129	28,685,906
Total messages received	55,179,903	66,015,464	79,741,899	101,914,835	124,101,890
<i>of which:</i>					
<i>category I</i>	12,540,347	13,987,532	15,500,253	17,009,249	18,595,169
<i>category II</i>	8,350,297	8,906,827	9,429,168	11,142,323	12,208,457
Memorandum item:					
Global S.W.I.F.T. traffic	518,097,873	582,192,512	687,785,294	812,117,556	937,039,995

(1) The UK and the Isle of Man.

## Definitions

- Sub-members: domestic users sponsored by members abroad;
- Participants: users which are not shareholders in S.W.I.F.T.; their message traffic over the network is restricted;
- Category I: customer (funds) transfers;
- Category II: bank (funds) transfers.

Comparative tables



**Table I****Notes and coins in circulation outside credit institutions***(end of year)*

	Total (ECU millions) <sup>(1)</sup>		Value per inhabitants (ECU)		As a percentage of GDP		As a percentage of narrow money <sup>(2)</sup>	
	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	10,887	10,802	1,069	1,059	5.06%	4.84%	26.5%	23.8%
Denmark	4,436	4,600	840	868	2.96%	2.94%	n.a.	n.a.
Germany	125,739	123,203	1,532	1,502	6.72%	6.39%	26.3%	23.3%
Greece	7,056	6,741	671	638	6.66%	6.25%	45.3%	42.0%
Spain	50,504	50,459	1,284	1,282	10.26%	9.71%	23.6%	20.8%
France	39,425	40,127	673	682	3.17%	3.09%	13.5%	13.2%
Ireland	3,023	3,297	826	890	4.36%	4.35%	30.3%	27.6%
Italy	55,685	59,270	968	1,029	5.44%	5.60%	16.1%	16.1%
Luxembourg	451	586	1,072	1,374	3.12%	3.77%	15.9%	18.4%
Netherlands	17,521	17,140	1,123	1,092	5.25%	4.87%	18.5%	14.9%
Austria	10,576	10,505	1,310	1,300	5.81%	5.55%	32.3%	29.3%
Portugal	3,853	4,536	390	459	4.28%	4.75%	14.1%	15.9%
Finland	2,466	2,474	480	479	2.30%	2.19%	6.7%	6.5%
Sweden	8,600	8,760	972	990	4.12%	4.17%	n.a.	n.a.
United Kingdom	33,658 <sup>(2)</sup>	34,447	571 <sup>(2)</sup>	582	2.81%	2.78%	4.6%	4.5%
EU total <sup>(3)</sup>	373,881	336,820	999	1,005	5.1%	5%	29.2%	26.8%

(1) M1, except for the United Kingdom: M2; EU: Percentage of money supply without Denmark, Sweden and UK.

(2) End of year exchange rate vis-à-vis ECU used (0.6685).

(3) Weighted average without countries where data are not available (except Total in ECU millions).

**Table 2****Points of entry into the payment system***(end of year)*

	Number of institutions offering payment services <sup>(1)</sup>		Number of central bank branches <sup>(1)</sup>		Number of bank branches		Number of post office branches <sup>(1) (2)</sup>		Others <sup>(1)</sup>		Total number of branches offering payment services <sup>(1)</sup>		Number of accounts on which payments can be made (per capita)	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	13	12	1.4	1.3	730	703	156	137	-	-	888	841	1.23	1.39
Denmark	37	36	0.2	0.0	449	448	220	226	-	-	670	674	1.63	1.70
Germany	42	39	2.0	1.8	726	731	-	-	-	-	728	733	0.98	1.00
Greece	5	6	9.0	9.0	191	230	12	12	12	3	224	255	0.12	0.13
Spain	8	7	1.3	1.3	958	984	n.a.	n.a.	-	-	960	986	1.79	1.82
France	9	8	3.6	3.6	435	432	289	289	69	68	796	793	1.08	1.11
Ireland	15	16	0.3	0.0	254	392	524	516	50	27	828	935	1.83	2.49
Italy	16	16	1.7	1.7	439	456	254	242	-	-	694	698	0.48	n.a.
Luxembourg	520	499	0.0	0.0	950	910	0	0	-	-	950	910	3.79	n.a.
Netherlands	8	8	0.6	0.6	304	289	149	148	-	-	453	437	1.39	1.34
Austria	123	120	0.9	0.9	581	566	289	289	-	-	871	856	0.72	0.76
Portugal	24	25	1.1	1.1	455	485	111	108	-	-	568	594	2.01	2.02
Finland	68	67	0.8	0.8	320	309	97	92	-	-	418	401	2.31	1.82
Sweden	12	12	1.1	1.1	407	413	n.a.	n.a.	-	-	408	414	n.a.	n.a.
United Kingdom	9	9	0.0	0.0	232	225	322	319	43	42	597	586	2.44	2.50
EU <sup>(3)</sup>	22	21	1.8	1.8	518	525	253	248	52	50	703	706	1.30	1.48

(1) Per 1,000,000 inhabitants.

(2) If the post offices offer payment services. In Germany: Postbank AG as a fully fledged credit institution appears with its branches under "Number of bank branches",

(3) Weighted average without countries where data are not available.



**Table 3****Cash dispensers and ATMs***(end of year)*

	Number of machines per 1,000,000 inhabitants (end of year)		Number of transactions per capita		Average value per transaction (ECU)		Increase in the number of machines		Increase in the number of transactions		Increase in the value of transactions	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	492	562	15.7	15.6	104	106	19%	14%	4%	0%	6%	1%
Denmark	253	310	n.a.	n.a.	n.a.	n.a.	6%	23%	n.a.	n.a.	n.a.	n.a.
Germany	505	556	n.a.	17.1	n.a.	151	10%	10%	n.a.	n.a.	n.a.	n.a.
Greece	208	205	5.9	7.4	162	168	13%	-1%	6.7%	25.6%	32%	39%
Spain <sup>(1)</sup>	863	962	15.4	16.2	82	82	12%	12%	4%	5%	4%	7%
France	462	500	19.9	20.5	62	60	10%	9%	10%	3%	10%	1%
Ireland	287	332	23.8	48.1	65	45	0%	17%	16%	104%	-6%	48%
Italy	446	482	7.2	8.4	163	160	6%	8%	12%	18%	13%	17%
Luxembourg	613	666	10.5	11.3	115	113	16%	10%	7%	9%	8%	8%
Netherlands	410	419	25.4	27.2	88	85	10%	3%	7%	8%	4%	5%
Austria	533	591	9.7	10.1	135	137	11%	11%	6%	3%	4%	5%
Portugal	636	716	21.9	26.3	70	67	17%	13%	20%	20%	40%	16%
Finland <sup>(2)</sup>	445	428	43.3	44.7	67	67	-1%	-3%	5%	4%	7%	5%
Sweden	268	281	35.3	37.6	92	97	0%	5%	5%	7%	4%	15%
United Kingdom	393	415	29.6	31.2	74	78	5%	6%	9%	6%	13%	9%
EU <sup>(3)</sup>	488	532	19.1	19.9	98	109	9%	9%	11%	4%	-8%	12%

- (1) In "Average value per transaction": only cash withdrawals.  
(2) Only cash-dispensing ATMs.  
(3) Weighted average without countries where data are not available.

**Table 4****EFTPOS***(end of year)*

	Number of POS per 1,000,000 inhabitants (end of year)		Number of transactions per capita		Average value per transaction (ECU)		Increase in the number of POS		Increase in the number of transactions		Increase in the value of transactions	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	8,420	9,122	27.2	32.7	58	56	5%	7%	14%	21%	14%	18%
Denmark	11,923	12,936	57.7	64.2	46	47	50%	9%	11%	12%	11%	12%
Germany <sup>(1)</sup>	1,984	2,815	2.8	4.4	65	79	42%	42%	5%	61%	-11%	95%
Greece	2,826	5,233	1.3	1.9	74	73	58%	86%	64%	41%	64%	48%
Spain	16,691	18,351	8.8	10.2	48	48	14%	10%	18%	15%	17%	17%
France	9,555	9,958	32.8	36.8	46	46	3%	5%	1%	13%	-2%	12%
Ireland	1,407	3,992	n.a.	1.6	n.a.	2	17%	187%	n.a.	n.a.	n.a.	n.a.
Italy	4,885	5,976	4.4	5.6	94	91	31%	23%	50%	28%	50%	24%
Luxembourg	11,059	11,892	48.0	51.8	69	70	0%	9%	26%	9%	31%	11%
Netherlands	7,717	8,569	31.1	37.9	43	43	25%	12%	31%	23%	32%	23%
Austria	1,652	2,382	3.0	4.8	54	51	162%	44%	59%	62%	59%	54%
Portugal	6,064	7,136	22.2	27.9	24	26	18%	12%	26%	26%	25%	37%
Finland	10,506	11,044	47.0	52.4	48	43	6%	6%	2%	12%	15%	2%
Sweden	7,776	8,405	15.9	19.3	69	61	12%	8%	27%	21%	22%	10%
United Kingdom	8,982	10,301	n.a.	n.a.	n.a.	n.a.	-4%	15%	n.a.	n.a.	n.a.	n.a.
EU <sup>(2)</sup>	7,203	8,231	14.4	16.9	62	64	12%	14%	11%	19%	-7%	3%

(1) In 1997 only electronic cash procedures.

(2) Weighted average without countries where data is not available.

**Table 4A****E-Money loading machines and purchase terminals and cards***(end of year)*

	Electronic money cards (thousands)		Number of loading machines		Average value per (re)loading (ECU)		Number of purchase terminal		Average value per purchase (ECU)	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	3,430	5,606	6,438	18,198	32.1	37.6	21,263	45,649	3.9	4.0
Denmark	n.a.	651	3	5	n.a.	n.a.	5,230	4,383	1.3	1.2
Germany	35,000	60,700	20,000	22,000	n.a.	53.4	50,000	60,000	10.3	6.5
Greece <sup>(1)</sup>	-	-	-	-	-	-	-	-	-	-
Spain	3,502	5,691	10,942	16,774	16.0	16.2	77,092	99,335	3.1	2.8
France	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	-	-
Ireland	-	3	-	20	-	-	-	338	-	-
Italy	62	56	945	916	64.4	54.1	4,406	3,910	6.8	5.3
Luxembourg	-	-	-	-	-	-	-	-	-	-
Netherlands	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Austria	3,400	3,700	3,495	4,954	49.9	48.9	12,756	19,118	13.2	7.9
Portugal	384	411	5,129	5,834	16.1	15.9	63,703	72,429	1.9	1.8
Finland	189	324	2,100	2,208	18.9	19.8	1,344	3,627	2.2	2.0
Sweden	-	-	-	-	-	-	-	-	-	-
United Kingdom	110	140	1,295	171	29.5	16.0	3,537	1,642	n.a.	n.a.
EU total <sup>(3)</sup>	46,077	77,282	50,347	71,080	25.5	36.9	239,331	310,431	4.0	4.1

(1) E-money schemes are in pilot phase.

(2) In Spain the figures for 1997 and 1998 also include unloading transactions other than purchases.

(3) Weighted average without countries where data are not available for the average value per re/loading) and per purchases.

Table 5

## Use of debit/credit cards

(end of year)

	Number of cards per 1,000 inhabitants								Average number of			
	Cards with a cash function		Cards with a debit or a credit function <sup>(1)</sup>		Cards with a cheque guarantee function		Retailer cards		Cash withdrawals per card with a cash function		Payments per card with a credit-debit function <sup>(2)</sup>	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	1,116	1,178	1,116	1,178	468	465	140	153	14	13	25	29
Denmark	583	627	583	627	10	8	n.a.	n.a.	n.a.	n.a.	102	105
Germany	n.a.	n.a.	1,038	1,114	508	535	61	61	n.a.	n.a.	6	8
Greece	234	323	293	239	n.a.	n.a.	n.a.	n.a.	25	23	7	10
Spain	910	1,000	897	981	-	-	n.a.	n.a.	17	16	10	10
France	515	575	473	514	n.a.	n.a.	n.a.	n.a.	39	36	69	72
Ireland	737	845	398	493	258	362	n.a.	n.a.	32	57	24	32
Italy	301	312	426	471	16	8	n.a.	n.a.	24	27	11	13
Luxembourg	1,199	1,237	1,268	1,308	658	651	n.a.	n.a.	9	9	n.a.	n.a.
Netherlands	1,450	1,476	244	261	26	45	n.a.	n.a.	17	18	128	145
Austria	576	740	662	758	303	305	12	30	17	14	8	11
Portugal	823	942	921	1,055	54	33	24	30	27	28	28	30
Finland	1,002	1,047	693	743	1	0	308	358	43	43	77	77
Sweden	774	785	691	776	-	-	n.a.	n.a.	46	48	28	30
United Kingdom	1,640	1,792	1,271	1,420	903	927	298	314	18	17	35	35
EU <sup>(2)</sup>	848	924	789	862	410	424	149	158	25	25	31	33

(1) In Germany: including bank customer cards.

(2) Weighted average without countries where data are not available.

Table 6

## Major Interbank Funds Transfer Systems in the European Union

(end-1998)

(I) LARGE-VALUE SYSTEMS									Number of transactions (thousands)	Value of transactions (ECU billions)		Average value of transactions (ECU millions)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Name of the system		1997	1998	1997	1998	1997
BE	(a)	RTT	RTGS	RM	C	F	16.45	ELLIPS	955	1,005	8,455	9,349	8.85	9.30
DK	CB	RTT	RTGS	O	C	V	15.30	DN Inquiry and transfer system	369	384	2,421	2,887	6.56	7.52
DE	CB	RTT	N/GS	RM	C	F	12.45	EAF****	22,400	22,500	92,481	95,605	4.13	4.25
DE	CB	RTT	RTGS	O	D	F	15.30	ELS ****	10,600	13,500	17,001	19,993	1.60	1.48
ES	CB	RTT	RTGS	O	C	F	14.00	SLBE *****	1,375	2,210	20,061	32,370	14.59	14.65
ES	B	RTT	N	O	C	F	12.00	Madrid Clearing House (SEPI) *****	2,147	2,200	9,904	9,879	4.61	4.49
FR	CB	RTT	RTGS	O	C	F	18.15	TBF**	100	600	4,342	41,555	43.42	69.26
FR	B	RTT	N/BN	RM	C	F	16.00	SNP**	500	5,500	7,200	35,933	14.40	6.53
FR	CB	RTT	N	RM	C	F	13.00	SAGITTAIRE*****	4,700	1,300	18,204	4,479	3.87	3.45
IE	B	RTT	GS	RM	C	S	15.00	Special Presentations	1	1	12	1	9.26	0.76
IE	CB	RTT	RTGS	RM	C	F	16.00	IRIS RTGS System*	343	376	2,274	2,417	6.63	6.43
IT	CB	RTT	N	O	C	F	15.30	Ingrosso (SIPS)***	6,057	303	21,516	1,288	3.55	4.25
IT	CB	RTT	RTGS	O	C	V	16.20	BI-REL	2,694	10,840	2,268	36,494	0.84	3.37
IT	CB	RTT	N	O	C	V	13.30	Electronic Memoranda***	1,452	317	13,075	4,599	9.00	14.51
NL	CB	RTT	RTGS	O	C	F	17.30	TOP	3,163	3,548	12,526	15,529	3.96	4.38
AT	B	RTT	RTGS	RM	C	F	16.00	ARTIS	53	114	491	1,323	9.25	11.64
PT	CB	RTT	RTGS	O	C	F	16.00	SPGT	507	493	3,675	4,513	7.25	9.15
FI	CB	RTT	RTGS	RM	C	F	17.00	BOF-RTGS	101	181	1,533	1,924	15.19	10.63
SE	CB	RTT	RTGS	RM	C	F	16.30	RIX	326	313	9,484	10,285	29.09	32.86
UK	B	RTT	RTGS	RM	D	V	16.00	CHAPS	16,500	18,000	52,046	61,356	3.15	3.41
EU	B	RTT	N	RM	C	F	14.00	ECU Clearing and Settlement System	1,607	1,607	11,876	14,312	7.39	8.91

- (1) Country.
  - (2) Owner/manager: B = banks; CB = central banks.
  - (3) Processing method: M = manual; ACH = Automated Clearing House (offline); RTT = Real-Time Transmission.
  - (4) N = multilateral netting; BN = bilateral netting; RTGS = real-time gross settlement; GS = other gross settlement
  - (5) O = open membership (any bank can apply) or RM = restricted membership (subject to criteria).
  - (7) Prices charged to participants: F = full costs ( including investments); V = variable costs; S = symbolic (below variable cost); N = no costs.
  - (8) Closing time for same-day transactions.
- \* RTGS from 3/1997.
  - \*\* Since 1997.
  - \*\*\* Replaced by the RTGS system BI-REL as from 1998.
  - \*\*\*\* Elektronische Abrechnung Frankfurt, former: EAF 2.
  - \*\*\*\*\* Elektronischer Schalter (ELS), former: EIL-ZV.
  - \*\*\*\*\* Closed in July 1998.
  - \*\*\*\*\* "Servicio de liquidación del Banco de España", formerly known as STMD.
  - \*\*\*\*\* The large-value net settlement service performed at the Madrid Clearing House is called SEPI (Servicio Español de Pagos Interbancarios).
- (a) Owner: B; Manager: CB.

Table 6

(continued)

**(2) SYSTEMS WHICH PROCESS LARGE-VALUE AND RETAIL TRANSACTIONS**

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) Name of the system	Number of transactions (thousands)		Value of transactions (ECU billions)		Average value of transactions (ECU thousands)	
								1997	1998	1997	1998	1997	1998
BE	(a)	(b)	N	O	C	F	15.00 CEC	880,603	929,100	455	479	0.5	0.5
BE	CB	M	N	O	D	S	15.00 Clearing House of Belgium	6,780	5,750	134	118	20	21
DE	CB	M	GS	O	D	N	13.00 Conventional local credit transfer system <sup>(9)</sup>	600	n.a.	1,007	n.a.	1,678	n.a.
DE	CB	M	N	O	D	V	13.00 Daily local clearing <sup>(10)</sup>	300	100	549	44	1,829	442
GR	B	M	N	O	D	V	16.00 Athens Clearing Office	7,477	6,071	630	643	84	106
FR	CB	M	GS	O	D	N	15.30 Banque de France	1,600	400	4,208	499	2,630	1,247
LU	B	M	N	O	C	F	14.00 LIPS-Net	6,950	10,500	12	25	2	2
FI	B	(c)	BN	O	D	F	14.30 Banks' Payment Clearing	277,400	321,800	371	201	1	1

(1) Country.

(2) Owner/manager: B = banks; CB = central banks.

(3) Processing method: M = manual; ACH = Automated Clearing House (offline); RTT = Real-Time Transmission.

(4) N = multilateral netting; BN = bilateral netting; RTGS = real-time gross settlement; GS = other gross

(5) O = open membership (any bank can apply) or RM = restricted membership (subject to criteria).

(6) Geographical access to the system: C = centralised (one processing centre only) or D = decentralised membership (subject to criteria).

(7) Prices charged to participants: F = full costs (including investments); V = variable costs; S = symbolic (below variable cost); N = no costs.

(8) Closing time for same-day transactions centre

(9) System was closed down end of May 1997.

(10) Since the introduction of full EZÜ requirement by June 1997 only collection items.

(a) Owner: B; Manager: CB.

(b) ACH and RTT.

(c) Batch processing and transmission.

**Table 6**  
(continued)

<b>(3) RETAIL SYSTEMS</b>								Number of transactions (millions)	Value of transactions (ECU millions)		Average value of transactions (ECU)		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8) Name of the system		1997	1998	1997	1998	1997
DK	CB	ACH	N	O	C/D	S	9.00 DN Retail clearing	656	714	433	490	661	686
DE	CB	<sup>(a)</sup>	GS	O	D	V	NO Machine-optical voucher reading procedure (MAOBE)	28	11	111	75	4,021	6,762
DE	CB	ACH	GS	O	D	V	NO Elektronischer Massenzahlungsverkehr (EMZ) <sup>(e)</sup>	2,217	2,239	2,200	2,177	992	972
GR	B	ACH	N	O	C	F	19.00 DIAS	11.2	11.9	31.4	34.4	2.8	2.9
ES	CB	RTT	BN	RM	C	V	NO SNCE	736	790	902	1,001	1,226	1,267
FR	B/CB	M	N	O	D	N	11.00/ Clearing Houses 15.00	3,623	3,600	13,649	2,114	3,767	587
FR	CB	ACH	N	RM	D	F	11.00 Computer Clearing Centres	-	-	-	-	-	-
FR	CB	ACH	N	O	D	V	NO CREIC	285	297	24	25	83	84
FR	B	ACH	N	RM	D	F	10.30 National system for payment by cards	-	-	18	-	-	-
FR	B	RTT	BN	RM	D	F	13.30 Interbank Teleclearing System (SIT)	4,920	5,411	2,090	2,220	425	410
IE	B	<sup>(b)</sup>	N	RM	C	F	NO Dublin Bankers' Clearing	190	202	394	343	2,071	1,695
IT	CB	RTT <sup>(c)</sup>	N	O	D	V	12.30 Local Clearing	218	183	1,328	983	6,102	5,384
IT	CB	ACH	N	O	C	F	NO <sup>(d)</sup> Retail	711	826	928	1,120	1,306	1,357
NL	B	ACH	N	O	C	F	11.30 Interpay	1,783	2,012	1,140	1,229	639	611
PT	B	RTT	N	RM	C	V	NO SICOI	676	771	351	373	519	484
SE	B	ACH	N	O	C	F	NO Bank Giro System	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
UK	B	ACH	N	RM	C	F	NO BACS	2,682	2,905	2,068	2,368	771	815
UK	B	M	N	RM	D	F	NO Cheque and Credit Clearings	2,239	2,831	2,050	2,936	916	1,037



- (1) Country.
- (2) Owner/manager: B = banks; CB = central banks.
- (3) Processing method: M = manual; ACH = Automated Clearing House (offline); RTT = Real-Time Transmission.
- (4) N = multilateral netting; BN = bilateral netting; RTGS = real-time gross settlement; GS = other gross settlement.
- (5) O = open membership (any bank can apply) or RM = restricted membership (subject to criteria).
- (6) Geographical access to the system: C = centralised (one processing centre only) or D = decentralised.
- (7) Prices charged to participants: F = full costs (including investments); V = variable costs; S = symbolic (below variable cost); N = no costs.
- (8) Closing time for same-day transactions.
  - (a) ACH for paper-based instruments.
  - (b) M and ACH.
  - (c) Transactions can also be transmitted by floppy disk.
  - (d) Except for the credit transfers entered before noon which are settled on the same day.
  - (e) Former: Paperless exchange of data media (DTA).

**Table 7****Use of cashless payment instruments***(total number of transactions, in millions)*

	Cheques		Payments by credit/debit/retailer cards		Credits transfers		Direct debits		Others <sup>(1)</sup>		TOTAL	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	96	87	282	343	697	675	118	117	10.2	28.2	1,203	1,250
Denmark	77	71	314	351	n.a.	n.a.	105	113	5.5	7.3	501	542
Germany	729	656	529	691	6,178	6,905	5,393	5,391	4.2	13.6	12,834	13,657
Greece	3.6	4.5	21	26	6.3	n.a.	0.9	3.8	n.a. <sup>(2)</sup>	n.a.	32	34
Spain	217	220	348	402	240	256	753	837	108.2	105.8	1,666	1,821
France	4,903	4,826	1,922	2,165	1,857	1,952	1,431	1,578	138.0	138.0	10,251	10,658
Ireland	200	201	35	59	106	115	61	67	-	-	401	442
Italy	657	649	264	347	976	971	201	226	250.0	256.7	2,347	2,450
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	65	47	486	595	1,065	1,091	636	692	n.a.	n.a.	2,251	2,425
Austria	26	23	44	67	466	484	219	210	0.4	1.2	755	785
Portugal	273	286	252	316	39	45	68	66	12.6	9.1	644	722
Finland	3	2	273	297	444	465	26	31	0.1	0.2	746	795
Sweden	n.a.	n.a.	173	204	660	633	65	74	-	-	898	911
United Kingdom	2,582	2,510	2,631	2,960	1,660	1,726	1,584	1,736	n.a.	n.a.	8,457	8,932
EU total <sup>(3)</sup>	9,830	9,581	7,573	8,821	14,394	15,318	10,660	11,143	391.2	422.0	42,848	45,286

(1) Includes the items "electronic money payments" and "other" from country table I4.

(2) E-money schemes are in pilot phase.

(3) Sum without countries where data are not available.

**Table 8****Use of cashless payment instruments***(number of instruments per inhabitant)*

	Cheques		Payments by credit/debit/retailer cards		Credit transfers		Direct debits		Others <sup>(1)</sup>		TOTAL	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	9	9	28	34	68	66	12	12	1.0	2.8	118	122
Denmark	14	13	59	66	n.a.	n.a.	20	21	1.0	1.4	95	102
Germany	9	8	6	8	75	84	66	66	0.1	0.2	156	166
Greece	0.3	0.4	2.0	2.5	0.6	n.a.	0.1	0.4	n.a. <sup>(2)</sup>	n.a.	3.1	3.3
Spain	6	6	9	10	6	6	19	21	2.8	2.7	42	46
France	84	82	33	37	32	33	24	27	2.3	2.3	175	181
Ireland	55	54	10	16	29	31	17	18	-	-	110	119
Italy	11	11	5	6	17	17	3	4	4.3	4.5	41	43
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	4	3	31	38	68	70	41	44	n.a.	n.a.	144	154
Austria	3	3	5	8	58	60	27	26	0.1	0.1	94	97
Portugal	28	29	25	32	4	5	7	7	1.3	0.9	65	73
Finland	1	0	53	58	86	90	5	6	0.01	0.04	145	154
Sweden	n.a.	n.a.	20	23	75	72	7	8	-	-	101	103
United Kingdom	44	42	45	50	28	29	27	29	-	-	143	151
EU <sup>(3)</sup>	27	26	20	24	39	43	31	34	1.9	2.0	115	121

(1) This item includes the items "electronic money payments" and "others" from country table 14.

(2) E-money schemes are in pilot phase.

(3) Weighted average without countries where data are not available.

**Table 9****Use of cashless payment instruments***(as a percentage of total number of transactions)*

	Cheques		Payments by credit/debit/retailer cards		Credit transfers		Direct debit		Others <sup>(1)</sup>	
	1997	1998	1997	1998	1997	1998	1997	1998	1997	1998
Belgium	8.0%	7.0%	23.4%	27.4%	58.0%	54.0%	9.8%	9.4%	0.8%	2.3%
Denmark	15.3%	13.1%	62.6%	64.7%	n.a.	n.a.	21.0%	20.8%	1.1%	1.3%
Germany	5.7%	4.8%	4.1%	5.1%	48.1%	50.6%	42.0%	39.5%	neg.	neg.
Greece	11.1%	13.0%	66.5%	76.0%	19.6%	n.a.	2.7%	11.0%	n.a. <sup>(2)</sup>	n.a.
Spain	13.0%	12.1%	20.9%	22.1%	14.4%	14.0%	45.2%	46.0%	6.5%	5.8%
France	47.8%	45.3%	18.8%	20.3%	18.1%	18.3%	14.0%	14.8%	1.3%	1.3%
Ireland	49.8%	45.4%	8.7%	13.4%	26.3%	26.0%	15.1%	15.2%	-	-
Italy	28.0%	26.5%	11.2%	14.2%	41.6%	39.6%	8.6%	9.2%	10.6%	10.5%
Luxembourg	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Netherlands	2.9%	1.9%	21.6%	24.5%	47.3%	45.0%	28.3%	28.5%	n.a.	n.a.
Austria	3.4%	2.9%	5.8%	8.5%	61.7%	61.6%	29.0%	26.8%	neg.	neg.
Portugal	42.4%	39.6%	39.1%	43.7%	6.0%	6.3%	10.5%	9.2%	2.0%	1.3%
Finland	0.4%	0.2%	36.6%	37.3%	59.5%	58.5%	3.5%	3.9%	neg.	neg.
Sweden	n.a.	n.a.	19.3%	22.4%	73.5%	69.5%	7.2%	8.1%	-	-
United Kingdom	30.5%	28.1%	31.1%	33.1%	19.6%	19.3%	18.7%	19.4%	neg.	neg.
EU average	22.9%	21.2%	17.7%	19.5%	33.6%	33.8%	24.9%	24.6%	0.9%	0.9%

(1) This item includes "electronic money payments" and "others" from country table 14.

(2) E-money schemes are in pilot phase.

**Table 10**
**Features of selected securities settlement systems in the European Union**

COUNTRY	BE		DK	DE		ES		
Name of the system	NBB Clearing	CIK	VP	BOSCA <sup>(1)</sup>	CASCADE	CADE <sup>(2)</sup>	SCLV	ESPACLEAR
Type of securities <sup>(3)</sup>	G, O, CDs	S, B	G, B, S, O	G, B, O	G, S, B	G, C	S, B	B
Owner/manager <sup>(4)</sup>	CB	B	VP	CB	SE	CB	SE	SE
Number of participants	197	128	215	ca. 2400	385	269	105	92
<i>of which direct participants</i>	<i>197</i>	<i>128</i>	<i>200</i>		<i>385</i>	<i>269</i>	<i>105</i>	<i>92</i>
Settlement of cash leg <sup>(5)</sup>	GS	GS	N	GS	N, RTGS	RTGS	N	N
Securities settlement (delivery)	GS	N	N	RTGS, GS	RTGS, GS	GS	GS	GS
Delivery lag	T+2, T+3 <sup>(6)</sup>	T+3 <sup>(7)</sup>	T+3	T	T+0-40	T	T+3	T+1
DVP mechanism <sup>(8)</sup>	DVP I	DVP I	DVP3	DVP I	DVP I + 2	DVP I	DVP 2	DVP 2
Intraday finality <sup>(9)</sup>	Y	Y	Y	Y	Y	N	N	N
Central securities depository	NBB	CIK	VP	Deutsche Börse Clearing	Deutsche Börse Clearing	CADE	SCLV	ESPACLEAR
Cash settlement agent <sup>(10)</sup>	CB	CB	CB, B	CB	CB	SLBE <sup>(13)</sup>	SLBE <sup>(13)</sup>	SLBE <sup>(13)</sup>
Number of transactions (thousands)	157	n.a.	n.a.	n.a.	58,000	3,473	19,916	27.15
Value of transactions (ECU millions)	2,683,213	29,837	n.a.	n.a.	12,766,746	42,755,676	261,887	49,239
Ratio of value of transactions to GDP (at annual rate)	12.02	0.13	n.a.	n.a.	6.62	82.30	0.50	0.09

Table 10

(continued)

COUNTRY	GR	FR		IE	IT	NL	AT
Name of the system	SCS	RGV <sup>(14)</sup>	RELIT	CBISSO	LDT	Necigef	DS System
Type of securities <sup>(3)</sup>	G	B,C,G	B, C, G, O,S	G	G, S, B, O	G, S, B	G, C, B, S, O
Owner/manager <sup>(4)</sup>	CB	SICOVAM SA	SICOVAM SA	CB	CB	SE	B
Number of participants	101	164	371	38	278	69	117
of which direct participants	101	n.a.	n.a.	38	278	69	117
Settlement of cash leg <sup>(5)</sup>	N	RTGS	N	N	N	RTGS	N
Securities settlement (delivery)	Y	RTGS	GS	GS	N	RTGS	GS
Delivery lag	From T to T+365	From T to T+100	From T to T+30	T+3	T+3 G, B <sup>(15)</sup> T+5 S, O	T+3	From T to T+60
DVP mechanism <sup>(8)</sup>	DVP 3	DVP 1	DVP 2	DVP 2/3	DVP 3	DVP 1	DVP 2
Intraday finality <sup>(9)</sup>	N	Y	N	Y	N	Y	Y
Central securities depository	SCS	SicoVAM SA	SICOVAM SA	CBISSO	BI-CAT G Montetitoli S, B, O	Necigef	OeKB
Cash settlement agent <sup>(10)</sup>	CB	CB	CB	CB	CB	CB, B	B
Number of transactions (thousands)	55.8	440	21,217		40,104	8,046	310
Value of transactions (ECU millions)	187,705	28,221,953	1,992,714	n.a.	27,364,495	1,044,181	357,208
Ratio of value of transactions to GDP (at annual rate)	1.74	21.75	1.54	n.a.	25.8	2.96	1.89

**Table 10**  
(continued)

COUNTRY	PT			FI				SE
Name of the system	SISTEM	INTERBOLSA	OPORTO DERIVATIVES STOCK EXCHANGE (BDP)	APK MONEY MARKET	APK SHARES	HEX	FOEX	VP
Type of securities <sup>(3)</sup>	G, O	B, S	S, O	G, C, O, B	S	O	O	G, S, B, C
Owner/manager <sup>(4)</sup>	CB	INTERBOLSA	CB	CB, B, O	CB, B, O	B, O	B, O	B, O
Number of participants	92	57	33	17	29	28	- <sup>(15)</sup>	57
<i>of which direct participants</i>	92	55	28	17	25	28	-	
Settlement of cash leg <sup>(5)</sup>	RTGS	N	N	RTGS, N	N	N	N	N, RTGS
Securities settlement (delivery)	RTGS/ INTERBOLSA	N	N	RTGS, N	GS	N, GS	N, GS	GS, RTGS
Delivery lag	10/15 minutes	T+3	T	T+2, T+3	T+3	T+3	T+3	T+2, T+3, RTGS T
DVP mechanism <sup>(8)</sup>	DVP I	DVP 3	-	DVP I + 2 + 3	DVP2	-	-	DVP 2/3/ DVP I
Intraday finality <sup>(9)</sup>	Y	N	N	Y	Y	N	N	Y
Central securities depository	CB/ INTERBOLSA	INTERBOLSA	INTERBOLSA	APK MONEY MARKET	APK	HEX	FOEX	VPC
Cash settlement agent <sup>(10)</sup>	CB	CB	CB	CB	CB	B	B	CB
Number of transactions (thousands)	2.0	4,773	1.0	71.2	1,213	3,032.3	30.5	5,780
Value of transactions (ECU millions)	77,206	320,307	4,183	799,604	105,845	529,682	490	10,981,954
Ratio of value of transactions to GDP (at annual rate)	0.81	3.36	0.04	7.07	0.94	4.69	0.00	52.28

**Table 10**

(continued)

COUNTRY	UK		
Name of the system	CGO	CMO	CREST <sup>(12)</sup>
Type of securities <sup>(3)</sup>	G+O	G, C, O, B	S
Owner/manager <sup>(4)</sup>	CB	CB	B, SE, O
Number of participants	n.a.	n.a.	n.a.
<i>of which direct participants</i>	232	88	3,432
Settlement of cash leg <sup>(5)</sup>	N	N	N
Securities settlement (delivery)	RTGS	RTGS	RTGS
Delivery lag	T,-T+1	T	T+5
DVP mechanism <sup>(8)</sup>	DVP 2	DVP 2	DVP 2
Intraday finality <sup>(9)</sup>	Y	Y	Y
Central securities depository	n.a.	CMO	n.a.
Cash settlement agent <sup>(10)</sup>	CB	CB	B
Number of transactions (thousands)	1,114	221	35,801
Value of transactions (ECU millions)	48,731,520	4,902,425	19,816,677
Ratio of value of transactions to GDP (at annual rate)	39.35	3.96	16.00

Footnotes to Table 10:

- (1) T+2 for government bills.
- (2) "Central de Anotaciones de Deuda Española", formerly SACDE.
- (3) B = bonds; C = CDs; G = government securities; S = shares; O = others.
- (4) B = banks; CB = central banks; SE = stock exchange; O = others.
- (5) GS = gross settlement, N = net; RTGS = real-time gross settlement.
- (6) T+2 for Treasury Bills, T+3 for bonds.



- (7) The seller keeps the initiative of delivering securities.  
DVP schemes as defined by the G-10 group:  
DVP 1: In model 1, transfer instructions for both securities and funds are settled on a trade-by-trade basis, with final transfer of the securities from the seller to the buyer (delivery) occurring at the same time as final transfer of the funds from the buyer to the seller (payment) DVP 2: In model 2, securities transfer instructions are settled on a gross basis with final transfer of securities from the seller to the buyer (delivery) occurring throughout the processing cycle, but funds transfer instructions are settled on a net basis, with final transfers of funds from the buyer to the seller (payment) occurring at the end of the processing cycle.
- (8) DVP 3: In model 3, transfer instructions for both securities and funds are settled on a net basis, with final transfers of both securities and funds occurring at the end of the processing cycle.
- (9) Y = yes; N = no.
- (10) B = banks; CB = central banks; SE = stock exchange; O = others.
- (11) The system has been operating since mid-1995.
- (12) ESO was suspended before the end of 1997. CREST commenced operations on 15 July 1996. Following the orderly transfer of securities from TALISMAN to CREST, TALISMAN closed on 7 April 1997.
- (13) "Servicio de Liquidación del Banco de España", formerly known as STMD.
- (14) In the course of 1998, the operations of the Saturne have been transferred in RGV systems.
- (15) The derivatives and clearing operations of the Finnish Options Exchange were transferred to HEX Helsinki Exchanges in summer and autumn of 1998.

Table 11

**Geographical breakdown of S.W.I.F.T. message flows**  
(in 1998)

	Messages sent			Messages received		
	Total (thousands)	To domestic users (% of total)	To other EU countries (% of total)	Total (thousands)	From domestic users (% of total)	From other EU countries (% of total)
Belgium	36,455	19.20%	52.93%	31,618	22.14%	51.52%
Denmark	9,962	15.10%	52.63%	9,131	16.47%	52.09%
Germany	61,964	12.22%	44.85%	72,099	10.50%	48.64%
Greece	6,088	27.00%	45.96%	5,411	30.37%	43.96%
Spain	20,494	20.25%	49.76%	19,310	21.49%	48.35%
France	56,258	33.65%	38.35%	53,393	35.46%	36.95%
Ireland	4,491	24.65%	46.90%	5,575	19.85%	48.38%
Italy	35,347	11.06%	55.34%	34,940	11.18%	55.05%
Luxembourg	20,856	18.47%	52.00%	20,743	18.57%	50.23%
Netherlands	26,868	11.36%	53.98%	23,966	12.73%	54.72%
Austria	15,889	24.09%	46.54%	13,515	28.31%	42.31%
Portugal	5,659	7.39%	67.62%	4,963	8.43%	65.09%
Finland	6,723	7.76%	59.78%	4,420	11.80%	54.78%
Sweden	14,628	16.40%	52.51%	11,845	20.25%	48.21%
United Kingdom	116,672	24.60%	32.62%	124,102	23.11%	36.04%
Total EU	438,354	20.21%	44.46%	435,031	20.36%	44.79%
Total non-EU	498,686	18.26%	30.16%	505,912	18.15%	30.60%
Total all countries	937,040	19.17%	36.82%	940,943	19.17%	37.16%

Table 12

**S.W.I.F.T. traffic: intra-EU message flows***(in 1998, number of messages, in thousands)*

From / To	BE	DK	DE	GR	ES	FR	IE	IT	LU	NL	AT	PT	FI	SE	UK	Total EU	Non-EU	All countries
Belgium	7,000	287	2,405	159	713	2,602	274	1,352	1,838	2,731	292	252	147	315	5,927	26,293	10,162	36,455
Denmark	358	1,504	1,298	45	152	302	43	322	203	329	97	60	181	669	1,184	6,747	3,215	9,962
Germany	1,918	933	7,572	590	1,465	3,011	284	3,557	1,610	2,488	2,332	446	318	735	8,105	35,363	26,601	61,964
Greece	171	43	567	1,643	96	251	15	470	94	115	52	19	13	42	850	4,441	1,647	6,088
Spain	643	148	1,623	71	4,150	1,605	87	1,230	311	437	152	562	55	147	3,125	14,346	6,148	20,494
France	2,316	268	3,798	196	1,586	18,931	174	2,977	1,242	1,207	351	503	118	298	6,506	40,473	15,784	56,258
Ireland	162	33	277	14	71	156	1,107	118	50	141	26	23	16	36	982	3,213	1,279	4,491
Italy	1,364	269	3,857	276	1,043	2,845	121	3,907	1,479	765	893	215	89	224	6,116	23,462	11,885	35,347
Luxembourg	1,939	184	2,073	100	305	1,383	58	1,254	3,852	800	187	144	71	209	2,138	14,698	6,158	20,856
Netherlands	2,604	253	3,398	86	448	1,163	134	799	853	3,051	261	143	98	243	4,019	17,554	9,314	26,868
Austria	272	108	3,680	68	170	384	36	1,061	160	323	3,827	51	48	118	917	11,222	4,667	15,889
Portugal	255	47	535	19	815	526	25	374	87	156	42	418	19	49	878	4,245	1,414	5,659
Finland	306	244	710	16	97	167	21	180	132	171	57	30	522	691	1,198	4,540	2,183	6,723
Sweden	363	767	1,357	63	197	368	59	343	277	343	132	80	545	2,398	2,788	10,080	4,548	14,628
United Kingdom	3,618	1,172	9,490	677	2,179	4,967	1,367	5,195	2,082	3,109	845	703	702	1,934	28,686	66,726	49,945	116,672
Total EU	23,289	6,260	42,640	4,022	13,486	38,661	3,804	23,140	14,271	16,166	9,545	3,649	2,943	8,109	73,418	283,403	154,951	438,354
Total non-EU	8,329	2,870	29,460	1,389	5,824	14,732	1,771	11,800	6,472	7,799	3,970	1,314	1,477	3,736	50,684	151,628	347,058	498,686
Total all countries	31,618	9,131	72,099	5,411	19,310	53,393	5,575	34,940	20,743	23,966	13,515	4,963	4,420	11,845	124,102	435,031	502,009	937,040

Table 13

## S.W.I.F.T. members, sub-members and participants

	Number of users of S.W.I.F.T. network			
	Members	Sub-members	Participants	Total number of users
Belgium	29	41	9	79
Denmark	36	9	3	48
Germany	154	104	10	268
Greece	22	21	1	44
Spain	53	58	4	115
France	102	100	45	247
Ireland	13	27	20	60
Italy	184	50	4	238
Luxembourg	29	130	6	165
Netherlands	28	36	8	72
Austria	62	17	4	83
Portugal	28	16	3	47
Finland	9	6	1	16
Sweden	7	13	9	29
United Kingdom	63	250	116	429
Total EU	819	878	243	1,940
Total non-EU	2,233	1,842	542	4,617
Total all countries	3,052	2,720	785	6,557

**Table 14****Relative share of EU countries in S.W.I.F.T. traffic, membership and shareholding**

	Share of messages		Share of total		Share of equity holding	
	sent	received	members	users	quantity	percentage
Belgium	3.89%	3.36%	0.95%	1.20%	2,549	2.90%
Denmark	1.06%	0.97%	1.18%	0.73%	1,157	1.32%
Germany	6.61%	7.66%	5.05%	4.09%	7,181	8.17%
Greece	0.65%	0.58%	0.72%	0.67%	442	0.50%
Spain	2.19%	2.05%	1.74%	1.75%	2,079	2.36%
France	6.00%	5.67%	3.34%	3.77%	6,608	7.52%
Ireland	0.48%	0.59%	0.43%	0.92%	392	0.45%
Italy	3.77%	3.71%	6.03%	3.63%	4,585	5.21%
Luxembourg	2.23%	2.20%	0.95%	2.52%	1,112	1.26%
Netherlands	2.87%	2.55%	0.92%	1.10%	3,482	3.96%
Austria	1.70%	1.44%	2.03%	1.27%	1,984	2.26%
Portugal	0.60%	0.53%	0.92%	0.72%	773	0.88%
Finland	0.72%	0.47%	0.29%	0.24%	836	0.95%
Sweden	1.56%	1.26%	0.23%	0.44%	1,539	1.75%
United Kingdom	12.45%	13.19%	2.06%	6.54%	6,075	6.91%
Total EU	46.78%	46.23%	26.83%	29.59%	40,794	46.40%
Total non-EU	53.22%	53.77%	73.17%	70.41%	47,127	53.60%
Total all countries	100.00%	100.00%	100.00%	100.00%	87,921	100.00%



Comparative tables:

Direct participation and access  
criteria in EU IFTS

Risk control measures in EU large  
value net settlement systems

Situation at 31 December 1998





**Table A(1)****Direct participants in EU RTGS systems**

	BE	DK	DE	ES	FR	IE	IT	NL	AT	PT	FI	SE	UK
	ELLIPS	DN- Inquiry	ELS <sup>(2)</sup>	SLBE <sup>(3)</sup>	TBF	IRIS	BI-REL	TOP	ARTIS	SPGT	BOF System	RIX	CHAPS
<b>Direct participants</b>	20	102	2,773	240	216	24	769	124	64	42	19	23	17
Credit Institutions	18	94	2,772	217	202	23	758	108	62	40	14	18	16
<i>Branches of other EU banks</i>	3	6	46	23	6	4	28	10	2	7	6	8	3
<i>Branches of non-EU banks</i>	2	2	31	15	3	0	15	10	0	2	0	2	1
<i>Remote participants</i>	1	0	15	0	1	0	0	0	0	0	0	0	0
Central bank	1	0	1	1		1	0	1	1	1	1	1	1
Non-banks	1	7	0	22	14	0	11	10	1	1	4	4	0
<i>Public authorities</i>	0	4	0	0	0	0	6	6	0	1	2	1	0
<i>Postal administration</i>	1	0	0	0	1	0	1	0	0	0	0	0	0
<i>Supervised financial institutions</i>	0	3	0	22	13	0	4	4	1	0	2	3	0
Institutions not meeting Principle I <sup>(1)</sup>	0	0	0	0	0	0	0	0	0	0	0	0	0

(1) Principle I of the Report on Minimum Common Features for Domestic Payment Systems (1993): Direct access to IFTS. As a rule, only central banks and credit institutions, as defined under the Second Banking Co-ordination Directive, can be admitted as direct participants in funds transfer systems which process third party payments. As exceptions, certain other bodies authorised to hold accounts for customer may also be, with the approval of the central bank, direct participants in such systems provided that (a) their public nature ensures little risk of failure or (b) they are supervised by a recognised competent authority.

(2) Elektronischer Schalter (ELS), former: EIL-ZV.

(3) "Servicio de Liquidación del Banco de España", formerly STMD.

**Table A(2)****Direct participants in EU large-value/mixed net settlement systems**

	DE	GR	ES	FR		LU	FI
	EAF <sup>(1)</sup>	ACO	SEPI <sup>(2)</sup>	Sagittaire <sup>(3)</sup>	SNP	LIPS-Net	POPS
<b>Direct participants</b>	<b>66</b>	<b>58</b>	<b>41</b>	<b>57</b>	<b>26</b>	<b>11</b>	<b>9</b>
Credit Institutions	66	56	40	56	25	10	9
<i>Branches of other EU banks</i>	14	12	4	3	3	8	3
<i>Branches of non-EU banks</i>	5	8	3	4	2	0	0
<i>Remote participants</i>	1	0	0	0	0	0	0
Central bank	0	1	1	1	0	0	0
Non-banks	0	2	0	0	1	1	0
<i>Public authorities</i>	0	0	0	0	0	0	0
<i>Postal administration</i>	0	1	0	0	1	1	0
<i>Supervised financial institutions</i>	0	1	0	0	0	0	0
Institutions not meeting Principle I	0	0	0	0	0	0	0

- (1) Transformed into a hybrid system (risk situation comparable to that of a gross settlement system), former: EAF 2.  
(2) Spanish Service of Interbank Payments, the large-value net settlement system performed at the Madrid Clearing House.  
(3) Closed in July 1998.

**Table A(3)**
**Direct participants in retail EU IFTSs**

	BE	DK	DE <sup>(7)</sup>		GR	ES	FR		IE	IT		PT	NL	FI	UK	
	CEC <sup>(1)</sup>	DN Retail Clearing	MAOBE	EMZ	DIAS	SNCE	Paris and Provence	SIT	DBC	BI-COMP		SICOI <sup>(6)</sup>	Interpay	PMJ	BACS	Cheque and Credit Clearing
							CH and CREIC <sup>(4)</sup>			Retail System	Local Clearing					
<b>Direct participants</b>	23	68	5202 <sup>(3)</sup>	5202 <sup>(3)</sup>	32	65	238	21	13 <sup>(5)</sup>	213	130	42	72	9	16	13
Credit Institutions	20	60	5201 <sup>(3)</sup>	5201 <sup>(3)</sup>	31	64	234	18	12	211	127	40	71	9	15	12
<i>Branches of other EU banks</i>	4	5	42	42	8	5	12	0	4	14	2	7	7	3	0	0
<i>Branches of non-EU banks</i>	1	2	32	32	4	2	2	0	0	8	2	2	7	0	0	0
<i>Remote participants</i>	1	0	8	8	0	0	0	0	0	0	0	0	0	0	0	0
Central bank	1	1	1	1	0	1	1	1	1	1	1	1	1	0	1	1
Non-banks	2	0	0	0	1	0	3	2	0	1	2	1	0	0	0	0
<i>Public authorities</i>	1 <sup>(2)</sup>	0	0	0	0	0	2		0	0	1	1	0	0	0	0
<i>Postal administration</i>	1	0	0	0	0	0	1	1	0	1	1	0	0	0	0	0
<i>Supervised financial institutions</i>	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0
Institutions not meeting Principle I	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

(1) Revised figures: the previous figures were related to the number of members in the CEC and not to the number of direct participants.

(2) Rediscount and Guarantee Institute, a semi-official market-maker in discount bills.

(3) Number of accounts at the Deutsche Bundesbank of participating credit institutions.

(4) Truncated cheque system.

(5) The Dublin Bankers' Clearing comprises four clearing banks, one savings bank and the Central Bank. In addition, seven other banks have an interface with the DBC for the

(6) Includes Teleclearing and Traditional clearing.

(7) EMZ (Elektronischer Massenzahlungsverkehr) former: DTA.

Table B(1)

## Access criteria to EU RTGS systems

	BE	DK	DE	ES	FR	IE	IT	NL	AT	PT	FI	SE	UK
	ELLIPS	DN- Inquiry	ELS <sup>(2)</sup>	SLBE <sup>(3)</sup>	TBF	IRIS	BI-REL	TOP	ARTIS	SPGT	BoF- RTGS	RIX	CHAPS
Access criteria													
<i>Written rules</i>	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Minimum level of data or ratios representative of the financial strength</i>	+	-	-	+	-	-	-	-	-	-	+	+	-
<i>Minimum number of transactions</i>	-	-	-	-	-	-	-	-	-	-	-	-	+
<i>Payment of an entry fee</i>	+	+	-	-	+	+	-	-	-	+	+	-	+
<i>Approval from the owner/manager or the direct participants</i>	+	+	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+ <sup>(1)</sup>	+	+
<i>Approval from the local central bank</i>	+	+	+	+	+	+	+	+	+	+	+	+	+
<i>Technical requirements</i>	+	+	+	+	+	+	+	+	+	+	+	+	+
Removal rules	+	+	+	+	+	+	+	+	+	+	+	+	+

Key: + = Yes, - = No

(1) The owner/manager is the central bank.

(2) Elektronischer Schalter (ELS), former: EIL-ZV.

(3) "Servicio de Liquidación del Banco de España", formerly STMD.

**Table B(2)**

**Access criteria on EU large-value net settlement systems**

	DE EAF <sup>(2)</sup>	GR ACO	ES SEPI	FR Sagittaire <sup>(3)</sup>   SNP		LU LIPS-Net	FI POPS
<b>Access criteria</b>							
<i>Written rules</i>	+	+	+	+	+	+	+
<i>Minimum level of data or ratios representative of the financial strength</i>	-	-	+	-	+	-	-
<i>Minimum number of transactions</i>	+	-	-	+	+	-	-
<i>Payment of an entry fee</i>	-	-	+	+	+	+	+
<i>Approval from the owner/manager or the direct participants</i>	+ <sup>(1)</sup>	+	+	+	+	+	+
<i>Approval from the local central bank</i>	+	+	+	+	+	+	+
<i>Technical requirements</i>	+	+	+	+	+	+	+
<b>Removal rules</b>	+	+	+	+	+	+	+

Key: + = Yes, - = No

- (1) The owner/manager is the central bank.
- (2) Elektronische Abrechnung Frankfurt, former: EAF 2.
- (3) Closed in July 1998.

Table C

## Risk control measures in EU large value NSS

	DE	GR	ES	FR	LU	FI
	EAF	ACO <sup>(8)</sup>	SEPI	SNP	LIPS	POPS
<b>1. Settlement in central banks' accounts</b>		+	+	+	+	+
<b>2. Same-day settlement</b>		+	+	+	+	+
<b>3. Compliance with Lamfalussy standards</b>		+	+	as of Nov. 1998 <sup>(3)</sup>	+	
1. Legal framework						<sup>(5)</sup>
<i>contractual (+) or advisory (-) netting</i>		+	+	+	+	
<i>if contractual: legally enforceable (+) or not (-)</i>		+	+	+	+	
2. Participants awareness		+	+	+	+	+
3. Risk management	Transformed into a hybrid system in March 1996 <sup>(1)</sup>		+	+		+
<i>monitoring of intraday balance</i>		-	+		+	+
<i>multilateral limits</i>		-	+	Sept. 1998	+	- <sup>(6)</sup>
<i>collateral requirements</i>		-	+	Nov. 1998	+	-
<i>intraday closures</i>		-	-	-	+ <sup>(4)</sup>	+
4. Timely settlement completion		+	+ <sup>(2)</sup>	+ <sup>(2)</sup>	+	<sup>(7)</sup>
<i>risk-sharing agreements</i>		-	+			-
<i>full collateralisation of all debit positions</i>		-	+ <sup>(2)</sup>	+ <sup>(2)</sup>	+	-
5. Fair open access		+	+	+	+	+
6. Technical reliability		+	+	+	+	+

Key: + = Yes, - = No

- (1) The risk situation is comparable to that of a gross settlement system.
- (2) Understood as “full collateralisation of the largest debit position”, as the Lamfalussy standard 4 is formulated instead of “all debit positions”.
- (3) No particular provision for multi-default.
- (4) LIPS-net has several clearing cycles per day. Only the last cycle is the final one. But in case of a failure of a technical incident, it closes the system after one of the previous cycles.
- (5) The prevailing view in Finnish jurisprudence is that contractual bilateral netting as employed in the POPS-system is binding. The Act on Netting will be amended during 1999.
- (6) As from June 1998 the settlement method applied to POPS payments depends on the value of the transfer. Payments exceeding the interbank bilateral limit - the RTGS limit - are settled on a gross basis in the BoF-RTGS system. Smaller payments are netted bilaterally so that banks' net position vis-à-vis each other are updated constantly during the day by the exchange of payment clearing data. When an interbank bilateral net debit cap nears its limit, the indebted bank is obliged to effect a covering transfer in the BoF-RTGS system to clear the limit. At the end of the day funds transfers are effected to clear bilateral debt positions.
- (7) Risk-sharing agreements have not been implemented because of the small number of participants and the possibility to reduce risks by adjusting the bilateral limits. Collateralisation has not been implemented due to the bilateral structure. The POPS-limits are small and incorporated in overall interbank limits.
- (8) Traditional paper-based NSS.





Annex

Methodology for  
the  
statistical data



## Standard methodology for the statistical data of the Blue Book

**Table 1: Basic statistical data**

<i>Population and GDP:</i>	Source: EUROSTAT. As to GDP, most EU Member States have implemented ESA95 (the European System of Account 1995) in 1998, calculating back data up to 1990.
<i>Exchange rate:</i>	Source: ECB on the basis of the daily figures in its databasis received from EUROSTAT.

**Table 2: Settlement media used by non-banks**

<i>Notes and coins:</i>	In accordance with monetary statistics, <i>notes and coins</i> represent the value of cash in circulation in the economy. They exclude the value of notes and coins kept in vaults at central banks or at deposit-taking institutions mentioned in Table 5.
<i>Transferable deposits:</i>	These are deposits which can be used to make cashless payments using one of the instruments mentioned in Tables 14 and 15. They include deposits in foreign currencies unless these are included in M1; in the latter case, they are mentioned under a separate item “ <i>transferable deposits in foreign currencies</i> ”m.
<i>M1:</i>	Cash in circulation and sight deposits held by non-banks.
<i>Others:</i>	Mentioned in the case of M1 includes items other than “ <i>notes and coins</i> ” and “ <i>transferable deposits</i> ”.
<i>Outstanding value of electronic money schemes</i>	The difference between the value loaded on the electronic devices/chip card or hard disk of a computer and the value redeemed. For these statistics electronic money is broadly defined as an electronic store of monetary value on a technical device that may be widely used for making payments to undertakings other than the issuer without necessarily involving bank accounts in the transaction but acting as a prepaid bearer instrument. At present, two types of electronic money can be distinguished (i) electronic money stored on a chip card (card money); and (ii) electronic money used in systems which employ specialised software on a personal computer and which is typically transferred over telecommunication networks (software-based money).

### **Table 3: Settlement media used by deposit-taking institutions ♦**

<i>Required reserves held at central bank:</i>	Deposits held at the central bank to fulfil minimum reserve requirements.
<i>Of which can be used as working balances</i>	<ul style="list-style-type: none"><li>♦ If minimum reserves are required to be held as an average over a period of time, the whole required reserves are considered as working balances;</li><li>♦ In some countries only part of the required reserves can be used for payment purposes. This part is mentioned here.</li></ul>
<i>Free reserves held at central bank:</i>	Deposits held at the central bank in excess of <i>required reserves held at central bank</i> .
<i>Transferable deposits other institutions:</i>	Deposits held at other institutions (not at the domestic central banks) which can be used to make payments.

### **Table 4: Banknotes and coins**

*(end-of-year figures)*

<i>Total banknotes issued:</i>	Value of banknotes which are part of the liabilities of the central bank.
<i>Notes and coins held by credit institutions:</i>	Notes and coins in vaults of credit institutions and thus not in circulation.
<i>Notes and coins in circulation outside credit institutions:</i>	Total banknotes and coins issued less notes and coins held by credit institutions (identical to “ <i>notes and coins</i> ” in Table 2).

### **Table 5: Institutional framework**

*(end-of-year figures)*

<i>Columns 1 and 2:</i>	Number of points of entry into the cashless payment system.
<i>Column 1: Number of institutions</i>	Any institution which executes cashless payments.
<i>Column 2: Number of branches:</i>	All branches of an institution; as a rule, the head office of the institution is counted as a branch if it offers payment services.
<i>Columns 3 and 4:</i>	Number of accounts on which cashless payments (see definition in Tables 14 and 15) can be made.
<i>Column 3: Number of accounts:</i>	Accounts which: <ul style="list-style-type: none"><li>♦ are held by deposit-taking institutions for non-deposit-taking institutions;</li><li>♦ can be debited directly using one of the instruments mentioned in Tables 14 and 15.</li></ul>

<i>Column 4: Value of accounts:</i>	Aggregate amount of deposits held on accounts mentioned in Column 3. As a rule, the total of the first five lines of the last column is identical to “transferable deposits” in Table 2.
<i>Branches of foreign banks:</i>	Branches or agencies of foreign banks. Banks which are foreign-owned, or subsidiaries of foreign banks are not included.
<i>Of which based in EU countries:</i>	Sub-item to <i>branches of foreign banks</i> , giving the number of branches incorporated in the EU.

### **Table 6: Cash dispensers, ATMs and EFTPOS terminals**

*(end-of-year figures)*

As a rule, all items include systems operated by banks and by non-banks.

<i>Cash dispensers:</i>	Electro-mechanical device allowing the authorised user to withdraw banknotes and, in some cases, coins.
<i>ATMs:</i>	Electro-mechanical device allowing the authorised user to withdraw cash from his/her account and/or to access a varying range of other services such as balance enquiry, transfer of funds and acceptance of deposits. The ATM may be operated online (with real-time reference to an authorisation database) or offline.
<i>Number of networks:</i>	A network of ATMs is defined as a group of ATMs managed by one or several service providers for a bank or group of banks. The customer of this bank/group of banks can use any ATM within the network without being charged additional fees.
<i>Number of machines:</i>	As a rule, each terminal is counted as one machine.
<i>EFTPOS:</i>	A terminal at a retail location which is designed to capture, and in some cases also transmit, payment information by electronic means.
<i>Number of points of sale:</i>	As a rule, each location (e.g. shop) in which one or several terminals are installed is counted as one point of sale.
<i>Number of machines</i>	As a rule, each EFTPOS terminal is counted as one machine.
<i>Electronic money loading machines</i>	Electro-mechanical device allowing the authorised user to load and reload electronic money cards.
<i>Electronic money purchase terminals</i>	A terminal at a retail location or incorporated in a vending machine which allows payments to be made by means of electronic money cards.

### **Table 7: Number of payment cards in circulation**

*(end-of-year figures in thousands)*

A card which has several functions is counted in each relevant line (e.g. a eurocheque card which can be used to withdraw cash, to make payments and to guarantee cheques is counted in each of the first three main items).

Travel and entertainment cards (e.g. charge cards) are mentioned in the relevant category.

Delayed debit cards are mentioned in the debit category.

*Cards with a cash function:* All cards enabling the holder to withdraw cash from a cash dispenser.

*Cards with a debit/  
credit function:  
Of which*

*Debit cards:* Card enabling the holder to have his purchases directly charged to funds on his account at a deposit-taking institution (may sometimes be combined with another function, e.g. that of a cash card or cheque guarantee card).

*Delayed debit cards:* Card issued by banks indicating that the holder may charge his account up to an authorised limit. It enables him to make purchases but does not offer extended credit, the full amount of the debt incurred having to be settled at the end of a specified period. The holder is usually charged an annual fee.

*Credit cards:* Card indicating that the holder has been granted a line of credit. It enables him to make purchases and/or draw cash up to a pre-arranged ceiling; the credit granted can be settled in full by the end of a specific period, or can be settled in part, with the balance taken as extended credit. Interest is charged on the amount of any extended credit and the holder is sometimes charged an annual fee.

*Cards with a cheque guarantee function:* Transactions with this card are, in connection with the use of a PIN, guaranteed by the issuing bank up to a specific amount.

*Retailer cards:* A card issued by non-banking institutions, to be used at specified retail outlets. The holder of the card is usually granted a line of credit.

*Electronic money cards* Chip card that allows electronic money payments to be carried out.

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As a rule, only the number of valid cards in circulation is provided, not the number of cards issued.

## **Tables 8 and 9: Payment instructions handled by selected IFTS**

<i>IFTs:</i>	Interbank Funds Transfer Systems in which most (or all) direct participants are credit institutions and which are used primarily to process cashless payments.  As a rule, all IFTS are mentioned, including those managed by the central banks and by private operators.
<i>Funds Transfer Systems (FTS):</i>	A formal arrangement, based on private contract or statute law, with multiple membership, common rules and standardised arrangements, for the transmission and settlement of money obligations arising between the members.

## **Table 10: Participants in securities settlement systems**

*(end-of-year figures)*

Securities settlement systems (SSS) are transfer systems which settle transfer instructions for both securities and funds.

As a rule, all SSS are mentioned, not only those managed by the central banks, but also those managed by private operators.

Figures are provided system by system with categories of various participants (such as banks, stockbrokers, etc.) as sub-items.

<i>Column 2:</i>	In some systems certain participants are allowed to maintain both their own securities accounts and customers' securities accounts, while other participants are not allowed to maintain customers' accounts. In this column, the number of participants allowed to maintain customers' accounts is specified.
<i>Column 3:</i>	In most systems, all participants hold securities settlement accounts but only some of them hold cash settlement accounts with the central bank to settle their cash positions, while others settle funds indirectly through another participant. In this column, the number of participants allowed to hold cash settlement accounts is indicated.

## **Tables 11 and 12: Transfer instructions handled by securities settlement systems**

*(volume and value of transactions)*

Figures are provided system by system, with categories of various securities (such as government securities, bonds, shares, CDs, futures, options, etc.) as sub-items. Should some of the sub-items not be available, the row is marked "n.a."; if the sub-system does not exist in the country, it is marked "-".

Transfer instructions comprise all transfer instructions entered in the system (including free deliveries). As regards options, all the contracts settled in the system are included.

As far as CDs are concerned, all CDs settled in the system are considered regardless of their issuers (banks, central bank, mortgage institutions).

With regard to the volume and value of transactions, each transaction is counted once (not twice for sale and purchase orders).

### **Table 13: Nominal values registered by securities settlement systems**

Figures are provided system by system, with categories of various securities. They refer to the nominal value at the end of the year.

### **Tables 14 and 15: Indicators of use of various cashless payment instruments**

The objective of these tables is to estimate the volume and value of payment instruments used in the country. As a rule, figures concerning only a sample of banks or customers are projected to figures covering the whole volume and value of payment instruments used in the country.

“Payment” is defined as the “satisfaction and discharge of an obligation by the debtor’s irrevocable provision of an unconditional claim on a third party acceptable to the creditor”. This definition excludes any funds transfer in which the originator and the beneficiary are the same institution or individual. Therefore, any instrument which is used by banks’ customers to obtain cash should not be counted (e.g. cheques used to obtain cash, or ATM withdrawals - although these operations might be included in Tables 8 and 9, whose focus is different). To the extent possible, transfers to and from accounts held under the same name - either with the same institution (e.g. from a cheque account to a savings account), or between two institutions - are excluded.

Strictly speaking, “cashless” means without the involvement of cash. Such a narrow definition would exclude those money (postal) orders, which involve cash at one or both ends of the transaction, as well as the majority of travellers’ cheques, which are often paid in cash. It is not realistic to use such a narrow definition because it is very doubtful whether available statistics would permit a breakdown of the number of money orders or travellers’ cheques according to the way they are paid for or settled. Therefore, all payment instruments which involve cashless interbank settlement are included in the statistics.

The distinction between paper-based and paperless credit transfers is based on the interbank exchange: credit transfer orders which are exchanged on a paperless basis between banks are deemed to be paperless even if the originator and/or the beneficiary submitted or received a piece of paper.

Cross-border cashless payments are counted in the country of the originator.

According to the above principles, the following guidelines are followed:

- ◆ no distinction is made between payments in foreign and domestic currencies;
- ◆ no distinction is made between interbank items (bank A to bank B), inter-branch items (bank A branch to another bank A branch), or intra-branch items (bank A customer to another bank A customer at the same branch): all are included in the statistics;
- ◆ transfers to and from the account-holding institution and its customers (e.g. interest or fee payments) are excluded but, where available, are mentioned in a footnote;



- ◆ commercial bills are included if funds transfers can be made on the basis of these, without using another medium;
- ◆ funds transfers used to settle payment card balances are included (payment between the issuer and the user);
- ◆ travellers' cheques, eurocheques and bankers' drafts are included under cheques;
- ◆ money orders are included under credit transfers (if the volume is significant they could constitute a sub-item).

**Tables 16 and 17: S.W.I.F.T. tables**

These figures are provided by S.W.I.F.T.