

## **Comparative tables**



Table 1  
**Banknotes and coin in circulation**  
 End of year

	Total (USD millions) <sup>1</sup>					Value per inhabitant (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	12,694	12,055	11,045	6,257	nap	1,244	1,179	1,078	609	nap
Canada	20,698	25,518	23,539	23,697	25,475	685	837	764	761	810
France	48,303	44,907	41,500	25,822	nap	804	745	685	424	nap
Germany	144,327	131,703	117,150	59,928	nap	1,759	1,604	1,425	728	nap
Hong Kong SAR	10,479	12,807	11,770	13,035	14,520	1,601	1,938	1,766	1,938	2,139
Italy	69,410	66,123	64,633	50,807	nap	1,205	1,147	1,119	877	nap
Japan	471,446	581,944	539,144	507,160	597,537	3,728	4,594	4,248	3,984	4,689
Netherlands	19,974	17,400	15,753	8,055	nap	1,272	1,101	989	502	nap
Singapore	6,110	6,792	6,520	6,412	7,118	1,558	1,719	1,623	1,552	1,706
Sweden	9,579	10,231	9,409	9,166	10,988	1,082	1,155	1,061	1,030	1,232
Switzerland	21,858	19,830	19,562	21,418	24,590	3,065	2,767	2,714	2,950	3,347
United Kingdom	42,339	45,612	45,059	47,009	54,767	726	780	768	796	925
United States	463,500	521,700	535,600	585,400	630,600	1,679	1,868	1,896	2,050	2,185
CPSS <sup>2</sup>	1,340,719	1,496,619	1,440,684	1,364,167	1,365,595	1,804	2,002	1,915	1,801	2,558

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 1 (cont)

	As a percentage of GDP					As a percentage of narrow money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	4.8	5.1	4.8	2.8	nap	23.8	20.4	19.3	11.8	nap
Canada	3.5	3.7	3.3	3.4	3.5	14.5	15.6	13.7	13.0	13.4
France	3.2	3.3	3.1	2.0	nap	12.9	12.7	11.9	7.4	nap
Germany	6.4	6.6	6.2	3.3	nap	24.1	23.5	21.9	11.3	nap
Hong Kong SAR	6.4	8.1	7.2	8.0	9.0	45.5	48.5	45.0	44.2	43.6
Italy	5.5	5.9	6.0	4.7	nap	16.1	14.4	14.3	11.3	nap
Japan	10.6	11.7	12.1	13.2	14.3	25.3	24.8	25.0	23.7	20.5
Netherlands	4.8	4.6	4.2	2.1	nap	14.1	12.8	11.4	5.7	nap
Singapore	7.4	8.0	7.1	7.7	7.9	37.2	36.4	33.9	32.9	34.5
Sweden	4.1	4.3	4.1	4.3	4.1	nav	nav	nav	nav	nav
Switzerland	7.9	8.2	7.9	8.7	8.5	15.5	15.3	15.8	16.3	14.7
United Kingdom	3.0	3.1	3.2	3.3	3.3	5.0	5.0	5.1	5.0	4.8
United States	5.3	5.6	5.5	5.8	6.0	41.4	45.5	48.2	48.7	50.8
CPSS <sup>2</sup>	6.4	6.8	6.5	6.2	7.8	23.1	23.6	23.7	22.0	23.8

<sup>1</sup> Converted at end-of-year exchange rates.

CPSS: <sup>2</sup> Sum or average excluding those countries for which data are not available.

Table 2  
**Transferable deposits held by non-banks**  
 End of year

	Value per inhabitant (USD) <sup>1</sup>					As a percentage of GDP					As a percentage of narrow money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	3,984	4,609	4,504	4,558	5,592	15.5	19.9	20.0	20.9	21.1	76.2	79.6	80.8	88.2	nap
Canada	4,023	4,529	4,832	5,104	5,419	20.4	20.3	20.7	22.9	23.3	85.5	84.4	86.3	87.0	89.9
France	5,466	5,147	5,122	5,371	6,406	21.5	22.8	23.5	25.2	24.6	87.6	87.7	88.8	93.5	nap
Germany	5,543	5,220	5,080	5,712	7,419	20.2	21.6	22.1	25.8	27.7	75.9	76.5	78.1	88.7	nap
Hong Kong SAR	1,915	2,061	2,160	2,445	2,762	7.7	8.6	8.9	10.1	11.6	54.5	51.5	55.0	55.8	56.4
Italy	6,179	6,798	6,700	6,858	8,917	28.4	35.2	35.7	36.9	39.2	82.4	85.6	85.7	88.7	nap
Japan	10,988	13,931	12,748	12,854	18,186	31.1	35.5	36.3	42.5	55.5	74.7	75.2	75.0	76.3	79.5
Netherlands	7,767	7,525	7,712	8,294	9,906	29.5	31.7	32.8	35.2	34.4	86.1	87.5	88.8	94.6	nap
Singapore	2,625	3,007	3,158	3,167	3,240	12.4	13.9	13.8	15.8	15.1	62.8	63.6	66.1	67.1	65.5
Sweden	10,503	10,678	9,972	9,868	12,408	39.7	40.2	38.2	40.9	41.3	nav	nav	nav	nav	nav
Switzerland	9,682	8,714	8,228	8,593	11,711	25.0	25.7	23.9	25.3	29.7	48.9	48.2	47.9	47.5	51.6
United Kingdom	13,937	14,723	14,495	15,191	18,309	57.2	59.0	60.0	62.3	64.4	95.4	95.3	95.3	95.3	95.5
United States	2,348	2,212	2,012	2,135	2,086	7.4	6.7	5.8	6.0	5.8	57.9	53.8	51.1	50.7	48.5
CPSS <sup>2</sup>	5,999	6,502	6,173	6,410	8,059	21.3	22.1	20.8	22.1	27.0	75.8	75.6	75.5	77.3	105.8

Note: Please refer to the individual country tables for a detailed explanation.

<sup>1</sup> Converted at end-of-year exchange rates.

CPSS: <sup>2</sup> Average excluding those countries for which data are not available.

Table 3  
**Settlement media used by banks**  
 End of year

	Banks' reserves at central bank									
	USD billions <sup>1</sup>					As a percentage of narrow money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	1.0	7.4	6.7	6.7	7.7	1.8	12.5	11.8	12.6	nap
Canada	0.4	0.9	0.3	0.3	0.4	0.3	0.6	0.2	0.2	0.2
France <sup>2</sup>	19.4	24.1	26.0	26.3	34.8	5.2	6.8	7.4	7.5	nap
Germany	27.7	33.5	33.0	34.3	40.5	4.6	6.0	6.2	6.5	nap
Hong Kong SAR <sup>3</sup>	0.3	1.0	0.1	0.1	0.1	1.4	3.9	0.3	0.3	0.2
Italy	11.9	12.2	11.4	11.5	14.2	2.8	2.7	2.5	2.6	nap
Japan	33.2	94.9	36.9	82.6	151.6	1.8	4.0	1.7	3.9	5.2
Netherlands	9.1	7.3	8.7	9.0	8.9	6.4	5.4	6.3	6.4	nap
Singapore	3.3	4.5	3.3	3.8	3.7	19.9	24.2	17.1	19.3	18.0
Sweden	0.2	0.5	neg	neg	neg	nav	nav	nav	nav	nav
Switzerland	5.6	6.6	4.7	4.7	5.3	4.0	5.1	3.8	3.6	3.2
United Kingdom	2.6	3.3	2.3	2.5	3.0	0.3	0.4	0.3	0.3	0.3
United States	15.6	12.4	13.5	17.8	20.9	1.4	1.1	1.2	1.5	1.7
CPSS <sup>4</sup>	130.2	208.6	147.0	199.4	291.0	2.3	3.3	2.4	3.2	5.1

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 3 (cont)

	Transferable deposits at other banks									
	USD billions <sup>1</sup>					As a percentage of narrow money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	5.4	6.5	6.6	11.7	8.4	10.1	11.0	11.5	22.0	nap
Canada	4.2	5.2	4.5	3.3	3.3	2.9	3.2	2.6	1.8	1.7
France <sup>2</sup>	183.9	190.7	169.2	165.9	186.9	49.1	53.9	48.4	47.4	nap
Germany	281.9	114.9	105.5	108.5	133.8	47.1	20.5	19.7	20.5	nap
Hong Kong SAR <sup>3</sup>	nap	nap	nap	nap	nap	nap	nap	nap	nap	nap
Italy	64.2	59.3	88.1	75.0	101.5	14.9	12.9	19.5	16.7	nap
Japan	30.7	103.1	37.8	52.8	75.3	1.6	4.4	1.8	2.5	2.6
Netherlands	25.0	16.4	49.7	26.9	36.2	17.6	12.1	35.9	19.1	nap
Singapore	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Sweden	13.9	11.1	7.9	11.5	10.1	nav	nav	nav	nav	nav
Switzerland	37.2	26.2	30.8	27.4	27.8	26.3	20.3	24.8	20.9	16.6
United Kingdom	384.1	369.8	380.7	430.1	582.2	45.1	40.9	42.7	45.7	51.3
United States	32.8	27.5	32.1	34.8	35.7	2.9	2.4	2.9	2.9	2.9
CPSS <sup>4</sup>	1,063.2	930.6	912.7	947.9	1,201.2	18.4	14.7	15.1	15.3	nap <sup>5</sup>

<sup>1</sup> Converted at end-of-year exchange rates.

France: <sup>2</sup> Change in reserves policy from 16 October 1998.

Hong Kong SAR: <sup>3</sup> Banks do not maintain reserves with the HKMA as there are no reserve requirements in Hong Kong SAR. The data represent the closing balance of the aggregate balance of settlement accounts.

CPSS: <sup>4</sup> Sum or average excluding those countries for which data are not available. <sup>5</sup> Statistically not relevant.

Table 4  
Institutional framework

	Number of institutions <sup>1,2</sup>		Number of central bank branches <sup>1</sup>		Number of bank branches <sup>1,2</sup>		Number of post office branches <sup>1</sup>		Others <sup>1</sup>		Total number of branches <sup>1,2</sup>		Number of accounts on which payments can be made <sup>3</sup>	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
Belgium	11.2	10.9	0.7	0.2	599.9	537.1	131.1	129.9	nap	nap	731.1	666.9	1.0	1.0
Canada <sup>4,5</sup>	54.3	47.7	neg	neg	286.6	284.4	nap	nap	172.9	168.6	459.5	453.1	nav	nav
France	26.9	25.6	3.5	3.4	427.6	427.3	185.5	181.2	nav	nav	616.6	611.9	1.1	1.1
Germany <sup>6</sup>	30.6	29.3	1.6	1.4	640.5	611.4	nap	nap	nap	nap	642.0	612.8	1.1	1.0
Hong Kong SAR <sup>7</sup>	21.9	19.6	0.1	0.1	231.7	216.6	nap	nap	nap	nap	231.8	216.7	nav	nav
Italy	13.3	13.0	1.7	1.7	503.4	513.9	237.0	237.9	nap	nap	742.2	753.4	0.6	0.6
Japan	19.0	16.8	0.3	0.3	303.5	288.5	189.9	189.5	nap	nap	493.7	478.3	4.2	4.2
Netherlands <sup>8</sup>	6.9	6.4	0.2	0.2	218.6	200.3	140.4	142.7	nap	nap	359.3	343.2	1.4	1.3
Singapore <sup>9</sup>	48.9	43.6	0.7	0.7	150.6	135.2	nap	nap	nap	nap	150.8	135.5	nav	nav
Sweden	15.1	14.2	0.1	0.1	229.3	218.9	151.8	134.5	nap	nap	381.2	353.5	nav	nav
Switzerland	45.2	43.1	0.8	0.8	387.5	370.7	437.6	397.5	nap	nap	825.9	768.9	nav	nav
United Kingdom	8.1	7.6	neg	neg	248.7	244.9	296.5	295.6	nap	nap	545.2	540.5	2.7	2.7
United States	71.0	68.3	0.1	0.1	272.4	274.7	nap	nap	nap	nap	272.5	274.8	nav	nav
CPSS <sup>10</sup>	40.7	38.7	0.7	0.7	349.4	343.0	215.3	213.2	nap <sup>11</sup>	nap <sup>11</sup>	456.0	448.1	2.2	2.2

Note: Please refer to the individual country tables for a detailed explanation.

<sup>1</sup> Offering cashless payment services; per million inhabitants. <sup>2</sup> Excludes branches of foreign banks. <sup>3</sup> Per inhabitant.

Canada: <sup>4</sup> "Number of central bank branches": there are five branches but only one offers payment services. <sup>5</sup> "Others" includes trust and loan companies; local credit unions and caisses populaires; and governmental savings institutions.

Germany: <sup>6</sup> Postbank AG is a fully fledged credit institution, and those post office branches which are entrusted with the semi-cashless payment systems on behalf of Postbank AG are included under "Number of bank branches" (and not "Number of post office branches").

Hong Kong SAR: <sup>7</sup> "Number of central bank branches" excludes the HKMA's two overseas representative offices (London and New York).

Netherlands: <sup>8</sup> "Number of bank branches" excludes the counters of the postal institution.

Singapore: <sup>9</sup> As at end-March. The institutions offering payment services include banks and finance companies. "Number of central bank branches": representative offices in London and New York, which do not offer cashless payment services, and the main office in Singapore.

CPSS: <sup>10</sup> Average excluding those countries for which data are not available. <sup>11</sup> Statistically not relevant.



Table 5  
Cards with a cash function and ATMs

	Number of ATMs per million inhabitants (end of year)					Number of transactions per inhabitant					Average value per transaction (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	564	606	657	669	683	15.6	17.4	19.8	21.5	23.0	118.2	111.3	97.5	92.8	97.7
Canada <sup>3</sup>	778	877	1,037	1,145	1,272	47.5	47.3	48.4	47.9	45.6	62.0	65.3	66.6	69.4	74.9
France	490	538	580	606	637	15.5	17.0	17.9	19.1	19.8	62.8	64.8	56.0	54.7	59.1
Germany	556	563	580	603	612	17.1	18.4	20.4	19.4	19.7	169.5	155.9	134.2	140.2	148.0
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	487	524	549	632	683	8.5	8.7	9.1	9.9	10.9	178.7	170.6	150.3	148.4	184.0
Japan <sup>4</sup>	934	944	922	918	895	3.1	3.1	3.2	3.1	2.9	433.8	501.3	532.2	474.4	461.0
Netherlands	418	422	435	445	466	27.1	28.5	29.5	30.5	29.7	96.0	93.7	79.7	81.1	105.6
Singapore <sup>5</sup>	483	470	446	435	371	4.0	2.6	2.1	2.1	2.2	135.0	140.0	138.2	124.7	99.1
Sweden	281	291	295	289	297	37.6	35.0	36.2	37.7	36.0	108.4	100.2	92.1	81.4	86.2
Switzerland	642	655	675	694	706	11.3	12.2	18.0	20.0	21.5	180.3	173.2	117.9	112.9	113.7
United Kingdom	421	468	563	621	690	31.7	33.7	34.6	36.8	38.3	87.8	88.8	84.3	84.1	90.0
United States	677	813	967	1,135	1,220	40.6	39.0	45.3	47.6	36.7	68.0	68.0	69.6	68.0	68.0
CPSS <sup>6</sup>	648	717	794	879	927	25.4	25.3	28.4	29.6	25.6	88.7	89.7	86.2	83.5	89.1

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 5 (cont)

	Increase in the number of ATMs (%)					Increase in the number of transactions (%)					Increase in the value of transactions (%) <sup>2</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	15.0	7.7	8.6	2.1	2.7	-0.2	11.4	14.1	9.2	7.3	0.1	4.9	-0.1	4.0	12.9
Canada <sup>3</sup>	19.9	13.7	19.4	11.6	12.2	10.9	0.5	3.3	0.1	-3.8	29.9	7.5	3.8	2.2	2.8
France	8.6	10.3	8.4	5.0	5.6	11.4	10.3	5.5	7.7	4.1	5.7	13.9	-8.9	5.2	12.4
Germany	10.2	1.3	3.1	4.1	1.7	nav	7.7	11.0	-4.7	1.3	nav	-1.0	-4.4	-0.5	6.9
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	9.8	7.7	5.0	15.5	8.3	18.2	2.5	5.6	8.7	9.9	14.2	-2.1	-7.0	7.3	36.4
Japan <sup>4</sup>	1.3	1.2	-2.2	-0.1	-2.5	3.3	0.0	3.6	-2.2	-8.5	-6.9	15.6	10.0	-12.9	-11.1
Netherlands	2.7	1.6	3.7	3.2	5.4	5.2	5.9	4.4	4.3	-2.0	5.3	3.3	-11.1	6.0	27.6
Singapore <sup>5</sup>	-0.1	-2.0	-3.3	0.2	-13.9	2.0	-34.8	-15.4	2.7	4.1	-7.9	-32.4	-16.5	-7.3	-17.3
Sweden	4.9	3.8	1.4	-1.9	3.1	6.7	-6.9	3.5	4.4	-4.2	10.7	-13.9	-4.9	-7.7	1.5
Switzerland	6.7	2.5	3.7	3.6	2.9	-0.6	8.5	49.2	11.5	8.8	-4.0	4.2	1.5	6.7	9.6
United Kingdom	6.0	11.4	20.5	11.1	11.3	6.0	6.4	3.0	7.3	4.3	10.2	7.6	-2.2	7.0	11.6
United States	13.3	21.4	20.3	18.7	8.6	1.8	-2.7	17.4	6.3	-22.1	2.3	-2.7	21.1	3.0	-22.1
CPSS <sup>6</sup>	8.9	11.3	11.4	11.4	6.1	4.0	0.3	12.6	5.0	-12.9	4.0	1.5	8.7	1.2	-7.1

<sup>1</sup> Converted at yearly average exchange rates. <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Canada: <sup>3</sup> Data on the value of transactions refer to cash withdrawals only.

Japan: <sup>4</sup> Data on the volume and value of transactions refer to cash withdrawals only.

Singapore: <sup>5</sup> The transactions refer to shared ATM transactions.

CPSS: <sup>6</sup> Average excluding those countries for which data are not available.

Table 6  
Cards with a debit function and POS accepting terminals

	Number of POS terminals per million inhabitants (end of year)					Number of transactions per inhabitant					Average value per transaction (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	9,121	9,746	11,364	14,047	13,136	29.1	34.6	39.8	45.0	52.1	57.5	53.8	47.0	45.1	47.0
Canada	13,024	13,317	14,231	14,881	15,737	44.8	54.5	63.7	71.9	76.4	29.4	29.4	28.5	26.9	28.0
France	12,047	13,261	13,848	14,845	15,620	43.0	48.3	54.3	60.3	66.9	52.2	49.2	42.8	41.5	43.7
Germany <sup>3,4</sup>	4,423	5,761	7,194	5,291	5,584	8.2	10.5	12.7	14.7	16.7	84.7	79.7	67.7	65.7	66.4
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	6,001	7,549	9,878	12,918	14,109	3.0	4.3	5.5	7.5	9.5	90.8	81.5	66.6	66.1	83.5
Japan <sup>5</sup>	127	nav	nav	nav	nav	neg	neg	neg	neg	0.1	62.4	247.5	424.0	408.2	420.4
Netherlands	8,533	9,208	9,774	10,333	10,972	37.9	44.3	50.3	59.5	66.2	48.2	48.6	42.9	41.4	44.6
Singapore	4,088	4,506	4,851	5,067	5,625	14.8	16.6	19.1	21.2	23.3	36.4	36.7	35.7	34.9	35.5
Sweden	8,406	9,160	9,822	9,917	11,439	18.1	22.4	28.9	36.6	57.1	76.2	72.7	60.9	54.9	60.0
Switzerland	7,158	8,599	9,369	10,174	10,976	14.9	19.1	23.9	27.8	30.8	63.8	76.0	89.5	100.2	108.3
United Kingdom	10,462	11,970	12,533	13,078	13,691	30.3	35.9	40.7	46.7	51.7	52.2	51.6	50.2	51.7	55.2
United States	6,157	8,414	10,976	12,257	12,128	20.8	26.9	33.8	43.6	54.0	41.6	43.0	43.9	45.9	44.9
CPSS <sup>6</sup>	6,136	9,066	10,862	11,735	12,040	18.3	22.6	27.2	33.0	39.1	47.8	47.3	45.2	45.9	47.0

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 6 (cont)

	Increase in the number of POS terminals (%)					Increase in the number of transactions (%)					Increase in the value of transactions (%) <sup>2</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	8.6	7.1	16.9	24.0	-6.0	23.6	19.0	15.5	13.3	16.3	19.5	11.4	0.8	8.7	21.2
Canada	19.1	3.1	7.9	5.7	6.8	30.3	22.6	18.0	14.1	7.5	25.2	22.8	14.2	7.9	11.8
France	6.3	10.5	4.9	7.8	5.8	12.1	12.8	13.1	11.5	11.6	12.1	6.4	-1.7	8.1	17.6
Germany <sup>3, 4</sup>	44.1	30.3	25.0	nap	5.7	nap	27.7	20.5	16.7	13.3	nap	20.0	2.3	13.3	14.4
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	23.0	25.9	31.1	31.1	9.4	38.7	44.2	28.2	36.2	27.7	24.9	29.5	4.7	35.2	61.3
Japan <sup>5</sup>	-17.7	nav	nav	nav	nav	-5.4	-19.2	716	91.0	34.0	4.3	220.4	1,298	83.9	38.0
Netherlands	11.6	8.6	6.9	6.5	6.9	22.6	17.7	14.5	19.1	12.0	21.0	18.8	0.9	15.1	20.6
Singapore	6.9	11.0	9.5	7.4	12.1	13.8	13.5	17.0	14.0	10.8	-8.2	14.5	13.8	11.3	12.8
Sweden	8.1	9.1	7.4	1.3	15.6	32.2	23.8	29.3	27.3	56.1	20.9	18.0	8.4	14.7	70.8
Switzerland	23.0	20.7	9.6	9.4	9.2	9.5	28.9	25.9	17.3	12.1	-4.7	53.4	48.3	31.3	21.1
United Kingdom	15.1	14.8	5.0	5.0	5.0	15.6	18.8	13.6	15.6	11.1	20.9	17.4	10.5	19.0	18.7
United States	30.8	38.2	31.9	12.9	0.0	46.5	31.0	27.2	30.4	25.1	46.8	35.3	29.9	36.4	22.4
CPSS <sup>6</sup>	21.4	23.2	20.7	12.3	3.3	29.5	24.1	21.0	22.4	19.0	27.5	22.9	15.5	24.4	21.8

<sup>1</sup> Converted at yearly average exchange rates. <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Germany: <sup>3</sup> For the number of POS terminals, figures prior to 2001 include double-counting of replacement terminals; for this reason, the percentage change in 2001 cannot be calculated.

<sup>4</sup> The number and value of POS transactions in 1997 exclude POZ and ELV procedures; for this reason, the percentage change in these data in 1998 cannot be calculated.

Japan: <sup>5</sup> Figures for 1998 are for the local POS services. Thereafter, figures are for the nationwide debit card service launched in January 1999.

CPSS: <sup>6</sup> Average excluding those countries for which data are not available.

Table 7  
Cards with a credit function and accepting terminals

	Number of accepting terminals per million inhabitants (end of year)					Number of transactions per inhabitant					Average value per transaction (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	nav	nav	nav	nav	nav	4.3	4.8	5.2	5.9	5.5	111.1	107.6	94.7	97.3	100.2
Canada <sup>3</sup>	27,647	27,332	31,296	32,103	32,181	33.4	37.7	41.3	42.4	47.5	66.2	63.3	65.1	58.6	65.7
France	12,047	13,261	13,848	14,845	15,620	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Germany <sup>4,5</sup>	4,417	4,905	5,603	5,809	5,736	3.9	4.1	7.1	7.3	7.5	101.0	100.0	65.9	67.5	73.4
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	nav	nav	nav	nav	nav	3.0	4.0	4.7	5.4	6.2	102.0	97.6	84.6	85.5	89.5
Japan <sup>6</sup>	5,162	5,488	6,069	6,426	7,001	11.8	12.0	15.8	17.6	18.4	96.9	116.6	100.7	85.3	84.2
Netherlands <sup>7</sup>	nav	nav	nav	nav	nav	2.7	2.8	2.9	3.0	2.8	103.6	105.7	101.5	99.5	109.6
Singapore <sup>8</sup>	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Sweden <sup>9</sup>	8,406	9,160	9,822	9,917	11,439	5.9	6.4	7.6	8.3	7.8	123.3	116.7	110.7	92.8	98.2
Switzerland	nav	nav	nav	nav	nav	9.8	12.1	10.4	11.1	11.1	136.3	121.7	115.1	114.3	120.4
United Kingdom <sup>10</sup>	10,462	11,970	12,533	13,078	13,691	23.3	25.5	27.6	29.6	31.8	91.7	95.6	93.4	91.2	96.6
United States	40,925	40,459	44,612	46,227	47,124	48.6	52.3	57.3	59.9	61.9	84.2	86.6	88.7	88.6	90.1
CPSS <sup>11</sup>	22,675	22,922	25,299	26,346	27,068	26.7	28.9	32.6	34.4	35.9	85.7	88.9	88.3	86.4	88.3

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 7 (cont)

	Increase in the number of accepting terminals (%)					Increase in the number of transactions (%)					Increase in the value of transactions (%) <sup>2</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	nav	nav	nav	nav	nav	11.9	9.7	10.6	13.0	-6.1	12.3	6.3	-2.7	16.1	-3.3
Canada <sup>3</sup>	3.3	-0.3	15.6	3.7	1.3	5.4	13.8	10.7	3.9	13.1	7.5	8.8	14.0	-6.6	26.9
France	6.3	10.5	4.9	7.8	5.8	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Germany <sup>4,5</sup>	8.8	11.1	14.4	3.9	-1.1	4.6	6.1	4.4	3.8	2.4	-11.5	5.0	-8.5	6.3	11.3
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	nav	nav	nav	nav	nav	24.1	30.9	18.8	15.4	14.0	20.8	25.2	3.0	16.6	19.4
Japan <sup>6</sup>	17.8	6.5	10.8	6.2	9.1	17.4	1.4	32.3	11.8	4.2	-3.2	21.9	14.3	-5.3	2.8
Netherlands <sup>7</sup>	nav	nav	nav	nav	nav	8.2	4.6	6.2	1.5	-4.0	12.3	6.8	2.0	-0.5	5.7
Singapore <sup>8</sup>	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	-13.1	14.7	15.9	1.1	8.1
Sweden <sup>9</sup>	8.1	9.1	7.4	1.3	15.6	8.3	9.6	17.5	10.4	-5.8	4.2	3.7	11.5	-7.4	-0.3
Switzerland	nav	nav	nav	nav	nav	15.0	23.6	-13.1	7.1	1.6	12.4	10.4	-17.8	6.3	7.0
United Kingdom <sup>10</sup>	15.1	14.8	5.0	5.0	5.0	8.7	9.5	8.6	7.8	7.9	12.7	14.2	6.1	5.2	14.3
United States	0.9	neg	11.5	4.8	3.0	4.0	8.8	10.9	5.6	4.5	18.2	11.8	13.6	5.5	6.2
CPSS <sup>11</sup>	2.7	1.7	11.1	4.9	3.4	5.7	8.7	12.2	6.3	5.2	13.9	12.7	12.2	4.0	7.5

<sup>1</sup> Converted at yearly average exchange rates <sup>2</sup> In USD terms, converted using yearly average exchange rates.

Canada: <sup>3</sup> Includes both credit and charge cards.

Germany: <sup>4</sup> For 2000, the percentage change in the number and value of transactions excludes retailer card transactions. <sup>5</sup> The figures for card terminals have been revised and are for the largest market participant, since terminals usually accept different credit card brands.

Japan: <sup>6</sup> Includes cards with a delayed debit function.

Netherlands: <sup>7</sup> Includes cards with a delayed debit function.

Singapore: <sup>8</sup> For both credit and charge cards.

Sweden: <sup>9</sup> Includes delayed debit transactions.

United Kingdom: <sup>10</sup> Includes cards with a delayed debit function; figures for the number of terminals accepting such cards are not available.

CPSS: <sup>11</sup> Average excluding those countries for which data are not available.

Table 8

## Cards with an e-money function and accepting terminals

	Number of electronic money cards (end of year, in thousands)					Average value per reloading (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	5,606	7,898	7,931	7,998	8,271	32.2	27.9	24.3	27.3	34.7
Canada	36	58	87	74	77	nav	nav	nav	nav	nav
France	nap	neg	nav	319	838	nav	neg	neg	29.8	29.0
Germany	60,700	60,700	60,700	67,333	67,525	60.3	42.7	29.1	25.3	25.8
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	56	32	45	30	310	neg	neg	neg	neg	neg
Japan	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Netherlands	17,900	20,100	20,900	21,000	17,400	nav	nav	nav	nav	nav
Singapore	2,193	3,464	4,697	5,639	9,776	nav	nav	nav	nav	nav
Sweden	205	540	593	557	490	38.7	33.7	27.6	24.4	nav
Switzerland	2,953	3,137	3,355	3,524	3,692	nav	nav	nav	nav	nav
United Kingdom	140	160	nav	nav	nav	neg	neg	neg	neg	nav
United States	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
CPSS <sup>2</sup>	89,789	96,089	98,308	106,474	108,379	nap <sup>3</sup>	nap <sup>3</sup>	nap <sup>3</sup>	nap <sup>3</sup>	nap <sup>3</sup>

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 8 (cont)

	Number of purchase terminals					Average value per transaction (USD) <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	45,649	63,993	67,837	88,847	104,542	4.5	4.0	3.5	4.0	5.2
Canada	1,050	970	1,245	490	333	neg	neg	neg	neg	neg
France	nav	nav	nav	13,644	69,172	nav	neg	neg	3.2	3.6
Germany	60,000	59,732	66,946	80,191	98,492	7.3	3.8	2.5	2.1	2.0
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	3,910	3,605	6,485	6,644	5,481	neg	neg	neg	neg	neg
Japan	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Netherlands	107,589	125,807	133,548	148,207	164,863	4.2	3.3	2.7	2.5	2.6
Singapore	10,594	14,196	16,270	17,944	42,486	0.8	0.7	1.0	1.2	0.5
Sweden	33,938	43,921	43,000	47,000	37,909	6.3	5.8	7.4	4.9	6.2
Switzerland	18,498	22,948	27,215	31,290	33,508	neg	neg	3.3	3.0	3.2
United Kingdom	1,642	1,921	nav	nav	nav	neg	neg	neg	neg	nav
United States	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
CPSS <sup>2</sup>	282,870	337,093	362,546	434,257	556,786	3.6	2.3	2.2	2.3	1.4

<sup>1</sup> Converted at yearly average exchange rates.

CPSS: <sup>2</sup> Sum and average excluding those countries for which data are not available. <sup>3</sup> Statistically not relevant.



Table 9  
**Number of cards<sup>1</sup>**  
 Per thousand inhabitants

	Cards with a cash function		Cards with a debit function		Cards with a credit function		Cards with a debit function issued by retailers		Cards with an e-money function		Cards with a cheque guarantee function	
	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
Belgium	1,360.5	1,442.0	1,216.5	1,306.0	296.2	294.1	152.2	158.0	777.9	800.4	272.0	nap
Canada <sup>2</sup>	nav	nav	nav	nav	1,509.8	1,653.4	nap	nap	2.4	2.4	nap	nap
France <sup>3</sup>	711.1	741.5	652.3	683.5	nav	nav	nav	nav	5.2	13.7	nap	nap
Germany	1,480.2	1,443.0	1,252.3	1,129.0	381.4	390.7	nav	nav	817.8	818.7	689.4	nap
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Italy	429.2	476.6	404.0	458.6	345.2	374.9	nap	nap	0.5	5.3	neg	neg
Japan <sup>4</sup>	2,554.1	2,603.4	nav	nav	1,820.1	1,919.3	nap	nap	nav	nav	nap	nap
Netherlands <sup>5</sup>	1,608.2	1,634.9	1,315.2	1,337.6	311.7	315.8	nav	nav	1,309.0	1,077.5	nav	nav
Singapore <sup>6</sup>	745.1	1,417.6	745.1	1,417.6	681.7	773.2	nap	nap	1,365.0	2,343.8	nap	nap
Sweden <sup>7</sup>	536.1	642.9	541.6	548.7	418.7	472.3	nav	nav	62.6	54.9	nav	nav
Switzerland	1,190.6	1,232.4	745.2	789.1	451.9	453.6	nav	nav	485.4	502.4	762.1	789.1
United Kingdom	2,246.7	2,399.9	919.9	1,003.6	950.8	1,065.8	nap	nap	nav	nav	989.4	1,031.9
United States	2,886.4	2,995.5	887.8	902.3	4,321.6	4,355.2	39.9	39.5	nav	nav	nav	nav
CPSS <sup>8</sup>	2,097.2	2,199.8	879.5	893.8	2,374.5	2,434.0	nap <sup>9</sup>	nap <sup>9</sup>	364.2	369.0	nap <sup>9</sup>	nap <sup>9</sup>

Note: Please refer to the individual country tables for a detailed explanation.

<sup>1</sup> A card which has several functions is counted in each relevant column (for example, a eurocheque card which can be used to withdraw cash, to make payments and to guarantee cheques is counted under each of these three items). For this reason, the figures should not be added together.

Canada: <sup>2</sup> Data on cards with a credit function as at 31 October.

France: <sup>3</sup> Figures for cards with a credit function are not provided.

Japan: <sup>4</sup> Data on cards with a cash function are as at end-March of the following year. Data on cards with a credit function include cards with a delayed debit function, and are as at end-March of the current year.

Netherlands: <sup>5</sup> Data on cards with a credit function include cards with a delayed debit function.

Singapore: <sup>6</sup> Data on cards with a cash and/or debit function are based on a survey of selected local and foreign banks.

Sweden: <sup>7</sup> Data on cards with a credit function include cards with a delayed debit function.

CPSS: <sup>8</sup> Average excluding those countries for which data are not available. <sup>9</sup> Statistically not relevant.

Table 10  
Use of cards

	Average number of:							
	Cash withdrawals per card with a cash function		Payments per card with a debit function		Payments per card with a credit function		Payments per card with an e-money function	
	2001	2002	2001	2002	2001	2002	2001	2002
Belgium	15.8	15.9	37.0	39.9	20.0	18.8	7.6	14.6
Canada	nav	nav	nav	nav	28.1	28.7	nav	nav
France <sup>1</sup>	26.9	26.7	92.4	97.9	nav	nav	8.8	22.0
Germany	13.1	13.6	11.8	14.8	19.2	19.2	0.4	0.5
Hong Kong SAR	nav	nav	nav	nav	nav	nav	nav	nav
Italy	23.0	22.8	18.5	20.8	15.7	16.5	neg	neg
Japan <sup>2</sup>	1.2	1.1	nav	nav	9.7	9.6	nav	nav
Netherlands <sup>3</sup>	19.0	18.2	45.2	49.5	9.5	8.9	1.5	5.0
Singapore <sup>4</sup>	nav	nav	28.5	16.4	nav	nav	18.1	71.8
Sweden <sup>5</sup>	70.2	56.0	67.7	104.0	19.9	16.6	2.7	1.5
Switzerland	16.8	17.4	37.3	39.0	24.5	24.5	5.6	5.4
United Kingdom	16.4	16.0	50.8	51.5	31.1	29.8	nav	nav
United States	16.5	12.3	49.1	59.8	13.8	14.2	nav	nav
CPSS <sup>6</sup>	14.5	12.1	47.6	55.4	14.4	14.7	2.3	9.1

Note: Please refer to the individual country tables for a detailed explanation.

France: <sup>1</sup> Data on payments per card with a credit function are included in those per card with a debit function.

Japan: <sup>2</sup> Data on cards with a credit function include cards with a delayed debit function.

Netherlands: <sup>3</sup> Data on cards with a credit function include cards with a delayed debit function.

Singapore: <sup>4</sup> Payments per card with a debit function refer to shared ATM transactions.

Sweden: <sup>5</sup> Data on cards with a credit function include cards with a delayed debit function.

CPSS: <sup>6</sup> Average excluding those countries for which data are not available.

Table 11  
**Use of cashless payment instruments**  
 Total number of transactions, in millions

	Cheques					Payments by credit/debit cards				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	86.9	80.2	70.7	60.1	28.9	341.4	402.1	462.0	523.4	595.1
Canada	1,693.0	1,716.4	1,658.2	1,589.0	1,515.0	2,364.2	2,809.0	3,230.9	3,556.6	3,897.0
France	4,825.4	4,479.6	4,493.7	4,338.6	4,577.7	2,580.1	2,911.6	3,292.4	3,670.7	4,096.6
Germany <sup>2,3</sup>	455.4	424.0	393.3	319.8	149.7	993.0	1,199.4	1,622.2	1,817.8	1,993.6
Hong Kong SAR	135.8	134.1	138.6	133.5	129.6	nav	nav	nav	nav	nav
Italy	648.7	665.2	602.0	584.2	538.1	346.8	476.7	589.8	747.8	911.7
Japan	260.1	239.3	225.9	208.9	187.1	1,497.5	1,517.8	2,010.6	2,250.3	2,347.3
Netherlands <sup>4</sup>	46.6	26.7	14.2	5.3	0.1	637.1	744.4	848.3	1,001.9	1,115.2
Singapore <sup>5</sup>	87.6	92.6	91.7	92.0	90.7	73.4	75.8	85.5	96.5	106.3
Sweden	4.0	4.0	2.0	2.0	1.0	213.0	255.0	323.0	400.0	579.0
Switzerland <sup>6</sup>	7.7	6.7	11.2	7.2	4.5	175.9	223.0	243.5	282.1	307.9
United Kingdom	2,986.0	2,859.0	2,699.0	2,565.0	2,393.0	2,960.0	3,406.0	3,788.0	4,257.0	4,681.0
United States <sup>7</sup>	45,169.7	43,812.1	42,500.0	41,222.6	39,985.9	19,153.1	22,106.4	25,734.9	29,542.8	33,441.3
CPSS <sup>8</sup>	56,406.9	54,539.8	52,900.4	51,128.1	49,601.3	31,335.4	36,127.2	42,231.1	48,146.9	54,072.0

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 11 (cont)

	Credit transfers					Direct debits				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	674.7	723.0	656.8	752.4	808.1	117.4	142.3	166.2	176.8	168.8
Canada	463.5	508.5	569.5	639.2	657.6	361.9	405.4	444.4	488.5	520.4
France	1,951.8	2,050.7	2,093.6	2,175.5	2,493.4	1,577.9	1,730.6	1,968.6	2,063.5	2,183.8
Germany <sup>2,3</sup>	5,166.9	5,274.6	5,442.1	5,544.7	5,413.2	4,208.9	4,310.8	4,605.3	4,681.8	4,448.9
Hong Kong SAR	14.8	15.5	16.6	18.1	19.5	32.7	33.5	35.2	37.1	37.2
Italy	971.4	1,003.4	1,018.6	1,053.3	996.6	329.8	496.7	569.8	639.4	690.7
Japan	1,143.2	1,166.9	1,215.3	1,268.1	1,292.5	nav	nav	nav	nav	nav
Netherlands <sup>4</sup>	1,116.8	1,103.9	1,170.4	1,226.9	1,259.0	722.6	785.0	836.2	876.1	939.7
Singapore <sup>5</sup>	15.7	13.9	14.6	16.8	17.7	20.7	17.4	17.3	19.0	30.3
Sweden	724.0	797.0	793.0	764.0	444.0	74.0	85.0	91.0	98.0	119.0
Switzerland <sup>6</sup>	554.0	586.0	545.2	503.2	537.7	27.0	30.4	46.1	47.6	50.0
United Kingdom	1,726.0	1,797.0	1,845.0	1,931.0	2,008.0	1,736.0	1,863.0	2,010.0	2,152.0	2,289.0
United States <sup>7</sup>	2,899.2	3,167.8	3,486.1	3,890.3	3,976.9	1,530.9	1,676.9	1,947.3	2,385.4	2,760.7
CPSS <sup>8</sup>	17,421.9	18,208.3	18,866.8	19,783.4	19,924.2	10,739.7	11,576.9	12,737.3	13,665.2	14,238.5

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 11 (cont)

	Card-based e-money					Total <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	28.2	45.5	51.3	60.5	120.8	1,248.5	1,393.0	1,407.0	1,573.1	1,721.7
Canada	nav	nav	nav	nav	nav	4,882.6	5,439.3	5,903.0	6,273.3	6,590.0
France	nap	nav	nav	2.8	18.4	10,935.1	11,172.5	11,848.3	12,248.3	13,369.9
Germany <sup>2,3</sup>	13.6	20.7	26.6	29.4	35.9	10,837.8	11,229.5	12,089.5	12,393.5	12,041.3
Hong Kong SAR	nav	nav	nav	nav	nav	183.3	183.2	190.3	188.8	186.4
Italy	neg	neg	neg	neg	neg	2,296.7	2,642.0	2,780.2	3,024.7	3,137.1
Japan	nav	nav	nav	nav	nav	2,900.7	2,924.0	3,451.8	3,727.3	3,826.9
Netherlands <sup>4</sup>	17.0	21.8	25.3	30.9	87.0	2,540.1	2,681.8	2,894.4	3,141.1	3,400.9
Singapore <sup>5</sup>	26.3	77.0	100.1	102.2	702.1	223.7	276.6	309.1	326.4	947.2
Sweden	2.0	4.2	2.9	1.5	0.9	1,017.0	1,145.2	1,211.9	1,265.5	1,145.0
Switzerland <sup>6</sup>	4.1	10.7	18.0	19.8	20.0	768.7	856.8	864.0	859.9	920.1
United Kingdom	nav	nav	nav	nav	nav	9,408.0	9,925.0	10,342.0	10,905.0	11,371.0
United States <sup>7</sup>	nav	nav	nav	nav	nav	68,752.9	70,763.2	73,668.3	77,041.1	80,164.8
CPSS <sup>8</sup>	91.2	179.8	224.2	247.0	985.1	115,995.1	120,632.1	126,959.9	132,970.7	138,821.2

<sup>1</sup> Sum of the available data.

Germany: <sup>2</sup> Payments by credit cards: from 2000, the figure includes retailer card transactions. <sup>3</sup> Direct debits: debit card transactions are not included under this item but are shown under "Payments by credit/debit cards".

Netherlands: <sup>4</sup> Payments by credit/debit cards include cards with a delayed debit function.

Singapore: <sup>5</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).

Switzerland: <sup>6</sup> Includes eurocheques, bank cheques, Swiss banker traveller's cheques and, as from 2000, Postcheques.

United States: <sup>7</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

CPSS: <sup>8</sup> Sum and average excluding those countries for which data are not available.

Table 12  
**Use of cashless payment instruments**  
 Total number of transactions per inhabitant

	Cheques					Payments by credit/debit cards					Credit transfers				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	8.5	7.8	6.9	5.8	2.8	33.5	39.3	45.1	50.9	57.6	66.1	70.7	64.1	73.2	78.2
Canada	56.0	56.3	53.9	51.0	48.2	78.2	92.1	104.9	114.2	123.9	15.3	16.7	18.5	20.5	20.9
France	80.4	74.3	74.2	71.2	74.8	43.0	48.3	54.3	60.3	66.9	32.5	34.0	34.6	35.7	40.7
Germany <sup>2,3</sup>	5.6	5.2	4.8	3.9	1.8	12.1	14.6	19.7	22.1	24.2	63.0	64.3	66.2	67.3	65.6
Hong Kong SAR	20.8	20.3	20.8	19.9	19.1	nav	nav	nav	nav	nav	2.3	2.4	2.5	2.7	2.9
Italy	11.3	11.5	10.4	10.1	9.3	6.0	8.3	10.2	12.9	15.7	16.9	17.4	17.6	18.2	17.2
Japan	2.1	1.9	1.8	1.6	1.5	11.8	12.0	15.8	17.7	18.4	9.0	9.2	9.6	10.0	10.1
Netherlands <sup>4</sup>	3.0	1.7	0.9	0.3	neg	40.6	47.1	53.3	62.5	69.1	71.1	69.8	73.5	76.5	78.0
Singapore <sup>5</sup>	22.3	23.4	22.8	22.3	21.8	18.7	19.2	21.3	23.4	25.5	4.0	3.5	3.6	4.1	4.2
Sweden	0.5	0.5	0.2	0.2	0.1	24.1	28.8	36.4	45.0	64.9	81.8	90.0	89.4	85.9	49.8
Switzerland	1.1	0.9	1.6	1.0	0.6	24.7	31.1	33.8	38.9	41.9	77.7	81.8	75.6	69.3	73.2
United Kingdom	51.2	48.9	46.0	43.5	40.4	50.8	58.2	64.6	72.1	79.1	29.6	30.7	31.5	32.7	33.9
United States <sup>6</sup>	163.6	156.9	150.5	144.4	138.6	69.4	79.2	91.1	103.5	115.9	10.5	11.3	12.3	13.6	13.8
CPSS <sup>7</sup>	75.9	73.0	70.3	67.5	65.1	42.5	48.8	56.6	64.1	71.6	23.4	24.4	25.1	26.1	26.1

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 12 (cont)

	Direct debits					Card-based e-money					Total <sup>1</sup>				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	11.5	13.9	16.2	17.2	16.3	2.8	4.4	5.0	5.9	11.7	122.4	136.3	137.3	153.0	166.6
Canada	12.0	13.3	14.4	15.7	16.5	nav	nav	nav	nav	nav	161.5	178.4	191.7	201.5	209.5
France	26.3	28.7	32.5	33.9	35.7	nap	nav	nav	neg	0.3	182.1	185.3	195.6	201.1	218.0
Germany <sup>2,3</sup>	51.3	52.5	56.0	56.9	53.9	0.2	0.3	0.3	0.4	0.4	132.1	136.8	147.1	150.5	146.0
Hong Kong SAR	5.0	5.1	5.3	5.5	5.5	nav	nav	nav	nav	nav	28.0	27.7	28.6	28.1	27.4
Italy	5.7	8.6	9.9	11.0	11.9	neg	neg	neg	neg	neg	39.9	45.8	48.1	52.2	54.1
Japan	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav	22.9	23.1	27.2	29.3	30.0
Netherlands <sup>4</sup>	46.0	49.7	52.5	54.6	58.2	1.1	1.4	1.6	1.9	5.4	160.7	169.6	181.8	195.8	210.6
Singapore <sup>5</sup>	5.3	4.4	4.3	4.6	7.3	6.7	19.5	24.9	24.7	168.3	57.0	70.0	76.9	79.0	227.1
Sweden	8.4	9.6	10.3	11.0	13.3	0.2	0.5	0.3	0.2	0.1	114.7	129.3	136.6	142.3	128.3
Switzerland	3.8	4.2	6.4	6.6	6.8	0.6	1.5	2.5	2.7	2.7	107.8	119.5	119.9	118.4	125.2
United Kingdom	29.8	31.9	34.3	36.5	38.7	nav	nav	nav	nav	nav	161.4	169.7	176.4	184.7	192.1
United States <sup>6</sup>	5.5	6.0	6.9	8.4	9.6	nav	nav	nav	nav	nav	249.0	253.4	260.8	269.8	277.8
CPSS <sup>7</sup>	17.4	18.6	20.4	21.7	22.4	0.5	1.0	1.2	1.0	4.0	159.3	165.7	173.6	180.4	189.2

<sup>1</sup> Sum of the available data.

Germany: <sup>2</sup> Payments by credit cards: from 2000, the figure includes retailer card transactions. <sup>3</sup> Direct debits: debit card transactions are not included under this item but are shown under "Payments by credit/debit cards".

Netherlands: <sup>4</sup> Payments by credit/debit cards include cards with a delayed debit function.

Singapore: <sup>5</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).

United States: <sup>6</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

CPSS: <sup>7</sup> Sum and average excluding those countries for which data are not available.

Table 13  
**Relative importance of cashless payment instruments**  
 Percentage of total volume of cashless transactions<sup>1</sup>

	Cheques					Payments by credit/debit cards					Credit transfers				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	7.0	5.8	5.0	3.8	1.7	27.3	28.9	32.8	33.3	34.6	54.0	51.9	46.7	47.8	46.9
Canada	34.7	31.6	28.1	25.3	23.0	48.4	51.6	54.7	56.7	59.1	9.5	9.3	9.6	10.2	10.0
France	44.1	40.1	37.9	35.4	34.2	23.6	26.1	27.8	30.0	30.6	17.8	18.4	17.7	17.8	18.6
Germany <sup>2,3</sup>	4.2	3.8	3.3	2.6	1.2	9.2	10.7	13.4	14.7	16.6	47.7	47.0	45.0	44.7	45.0
Hong Kong SAR	74.1	73.2	72.8	70.7	69.5	nav	nav	nav	nav	nav	8.0	8.5	8.7	9.6	10.5
Italy	28.2	25.2	21.7	19.3	17.2	15.1	18.0	21.2	24.7	29.1	42.3	38.0	36.6	34.8	31.8
Japan	9.0	8.2	6.5	5.6	4.9	51.6	51.9	58.2	60.4	61.3	39.4	39.9	35.2	34.0	33.8
Netherlands <sup>4</sup>	1.9	1.0	0.5	0.2	neg	25.1	27.8	29.3	31.9	32.8	44.0	41.2	40.4	39.1	37.0
Singapore <sup>5</sup>	39.2	33.5	29.6	28.2	9.6	32.8	27.4	27.7	29.6	11.2	7.0	5.0	4.7	5.1	1.9
Sweden	0.4	0.3	0.2	0.2	0.1	20.9	22.3	26.7	31.6	50.6	71.2	69.6	65.4	60.4	38.8
Switzerland	1.0	0.8	1.3	0.8	0.5	22.9	26.0	28.2	32.8	33.5	72.1	68.4	63.1	58.5	58.4
United Kingdom	31.7	28.8	26.1	23.5	21.0	31.5	34.3	36.6	39.0	41.2	18.3	18.1	17.8	17.7	17.7
United States <sup>6</sup>	65.7	61.9	57.7	53.5	49.9	27.9	31.2	34.9	38.3	41.7	4.2	4.5	4.7	5.0	5.0
CPSS <sup>7</sup>	48.6	45.2	41.7	68.5	35.7	27.0	29.9	33.3	36.2	39.0	15.0	15.1	14.9	14.9	14.4

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.



Table 13 (cont)

	Direct debits					Card-based e-money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	9.4	10.2	11.8	11.2	9.8	2.3	3.3	3.6	3.8	7.0
Canada	7.4	7.5	7.5	7.8	7.9	nav	nav	nav	nav	nav
France	14.4	15.5	16.6	16.8	16.3	nap	nap	nav	neg	0.1
Germany <sup>2,3</sup>	38.8	38.4	38.1	37.8	36.9	0.1	0.2	0.2	0.2	0.3
Hong Kong SAR	17.8	18.3	18.5	19.7	20.0	nav	nav	nav	nav	nav
Italy	14.4	18.8	20.5	21.1	22.0	neg	neg	neg	neg	neg
Japan	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Netherlands <sup>4</sup>	28.4	29.3	28.9	27.9	27.6	0.7	0.8	0.9	1.0	2.6
Singapore <sup>5</sup>	9.2	6.3	5.6	5.8	3.2	11.8	27.8	32.4	31.3	74.1
Sweden	7.3	7.4	7.5	7.7	10.4	0.2	0.4	0.2	0.1	0.1
Switzerland	3.5	3.5	5.3	5.5	5.4	0.5	1.2	2.1	2.3	2.2
United Kingdom	18.5	18.8	19.4	19.7	20.1	nav	nav	nav	nav	nav
United States <sup>6</sup>	2.2	2.4	2.6	3.1	3.4	nav	nav	nav	nav	nav
CPSS <sup>7</sup>	9.3	9.6	10.0	10.3	10.3	0.1	0.1	0.2	0.2	0.7

<sup>1</sup> Where the total is the sum of the available data.

Germany: <sup>2</sup> Payments by credit cards: from 2000, the figure includes retailer card transactions. <sup>3</sup> Direct debits: debit card transactions are not included under this item but are shown under "Payments by credit/debit cards".

Netherlands: <sup>4</sup> Payments by credit/debit cards include cards with a delayed debit function.

Singapore: <sup>5</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).

United States: <sup>6</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

CPSS: <sup>7</sup> Average excluding those countries for which data are not available.

Table 14  
**Relative importance of cashless payment instruments**  
 Percentage of total value of cashless transactions<sup>1</sup>

	Cheques					Payments by credit/debit cards					Credit transfers				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	3.2	0.6	0.5	0.6	0.7	0.2	0.1	0.2	0.2	0.2	96.3	98.9	99.0	99.0	98.7
Canada	96.5	21.5	14.5	12.7	11.8	0.8	0.5	0.6	0.5	0.6	2.1	77.5	84.4	86.1	86.8
France	2.6	2.9	2.9	2.3	2.4	0.1	0.2	0.2	0.2	0.2	96.6	96.2	96.2	96.8	96.7
Germany <sup>2,3</sup>	10.4	3.8	3.2	2.7	2.3	0.3	0.3	0.4	0.4	0.4	75.6	83.1	85.6	84.7	85.4
Hong Kong SAR	94.2	93.2	93.1	90.6	89.5	nav	nav	nav	nav	nav	5.0	6.0	6.1	8.4	9.4
Italy	2.9	3.7	3.2	2.9	3.1	0.1	0.1	0.1	0.2	0.2	96.2	94.6	95.1	95.1	94.6
Japan	2.4	2.7	2.7	3.4	2.9	neg	neg	0.1	0.1	0.1	97.5	97.2	97.3	96.5	97.0
Netherlands <sup>4</sup>	0.1	0.1	0.1	neg	neg	1.2	1.3	1.3	1.4	1.6	93.8	93.4	93.5	93.6	93.1
Singapore <sup>5</sup>	4.9	5.1	4.7	3.6	3.8	0.2	0.2	0.2	0.2	0.2	94.8	94.6	95.0	96.1	95.8
Sweden	0.4	0.3	0.2	0.2	0.2	1.5	1.9	2.2	2.8	5.3	96.0	95.2	94.8	94.1	90.8
Switzerland	neg	neg	0.1	neg	neg	neg	0.1	0.1	0.1	0.1	99.8	99.8	99.7	99.7	99.7
United Kingdom	4.4	2.8	2.5	2.2	2.2	0.3	0.2	0.2	0.2	0.2	94.4	96.3	96.6	97.0	96.9
United States <sup>6</sup>	5.5	5.6	5.4	4.9	4.9	0.2	0.2	0.3	0.3	0.3	93.3	93.0	93.2	93.8	93.7
CPSS <sup>7</sup>	5.1	4.5	4.3	4.2	4.1	0.1	0.2	0.2	0.2	0.3	93.8	94.3	94.6	94.5	94.5

Note: For the footnotes, see the end of the table. Please refer to the individual country tables for a detailed explanation.

Table 14 (cont)

	Direct debits					Card-based e-money				
	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
Belgium	0.3	0.3	0.3	0.3	0.3	neg	neg	neg	neg	neg
Canada	0.7	0.5	0.5	0.6	0.8	nav	nav	nav	nav	nav
France	0.6	0.7	0.8	0.7	0.8	nap	nav	nav	neg	neg
Germany <sup>2,3</sup>	13.7	12.8	10.8	12.1	11.8	neg	neg	neg	neg	neg
Hong Kong SAR	0.8	0.8	0.8	1.0	1.1	nav	nav	nav	nav	nav
Italy	0.9	1.6	1.6	1.9	2.1	neg	neg	neg	neg	neg
Japan	nav	nav	nav	nav	nav	nav	nav	nav	nav	nav
Netherlands <sup>4</sup>	4.9	5.2	5.1	5.0	5.3	neg	neg	neg	neg	neg
Singapore <sup>5</sup>	0.2	0.2	0.2	0.2	0.3	neg	neg	neg	neg	neg
Sweden	2.1	2.5	2.7	2.9	3.7	neg	neg	neg	neg	neg
Switzerland	0.1	0.1	0.2	0.2	0.2	neg	neg	neg	neg	neg
United Kingdom	1.0	0.7	0.7	0.6	0.7	neg	nav	nav	nav	nav
United States <sup>6</sup>	1.1	1.2	1.1	1.1	1.1	nav	nav	nav	nav	nav
CPSS <sup>7</sup>	1.0	1.0	1.0	1.1	1.1	neg	neg	neg	neg	neg

<sup>1</sup> Where the total is the sum of the available data.

Germany: <sup>2</sup> Payments by credit cards: from 2000, the figure includes retailer card transactions. <sup>3</sup> Direct debits: debit card transactions are not included under this item but are shown under "Payments by credit/debit cards".

Netherlands: <sup>4</sup> Payments by credit/debit cards include cards with a delayed debit function.

Singapore: <sup>5</sup> Interbank transactions only. Payments by credit/debit cards exclude credit card transactions. Credit transfers include large-value transactions (MEPS).

United States: <sup>6</sup> A Federal Reserve study of the cheque clearing system, published in August 2002, estimated that the number of cheques paid in the United States was 49,500 million in 1995 and 42,500 million in 2000. Values for other years are derived from these estimates.

CPSS: <sup>7</sup> Average excluding those countries for which data are not available.

Table 15  
**Features of selected interbank funds transfer systems**  
 End of 2002, unless otherwise noted

	Type <sup>1</sup>	Owner/manager <sup>2</sup>	Number of participants		Processing <sup>3</sup>	Settlement <sup>4</sup>	Membership <sup>5</sup>
			Total	of which: direct			
Belgium							
ELLIPS	L	B+CB	93	17	RTT	RTGS	RM
Clearing House	R	B+CB	92	34	RTT	N	O
CEC	R	B+CB	95	30	RTT	N	O
Canada							
LVTS	L	PA	14	14	RTT	N	O
France							
CH Paris <sup>9</sup>	R	B/PA	nap	nap	M	N	RM
CH Province <sup>9</sup>	R	CB	nap	nap	M	N	O
SIT	R	CB+B/PA	660	17	ACH	N	O
CREIC <sup>9</sup>	R	B/CB	nap	nap	ACH	N	O
TBF	L	CB	705	195	RTT	RTGS	O
PNS	L	CB+B/PA	537	22	RTT	BN/RTGS	RM
Germany							
RPS (former DTA)	R	CB	2,188	2,188	ACH	GS	O
RTGS <sup>plus 10</sup>	L	CB	1,382	75	RTT	RTGS	RM
ELS <sup>11</sup>	nap	nap	nap	nap	nap	nap	nap
EAF (former EAF2) <sup>11</sup>	nap	nap	nap	nap	nap	nap	nap
Hong Kong SAR							
HKD CHATS	L+R	CMA <sup>12</sup>	130	130	RTT	RTGS	RM
USD CHATS	L+R	B	212	64	RTT	RTGS	O
Italy							
BI-REL	L	CB	844	663	RTT	RTGS	RM
Local Clearing	R	CB	116	116	RTT <sup>14</sup>	N	O
Retail	R	CB <sup>15</sup>	nav	205	ACH	N	O
Japan							
FXYCS	L	B	234	37 <sup>17</sup>	RTT	N/RTGS	RM
BOJ-NET Funds Transfer System	L	CB	378	378	RTT	RTGS	RM

Note: For the footnotes, see the end of the table.

Table 15 (cont)

	Type <sup>1</sup>	Owner/manager <sup>2</sup>	Number of participants		Processing <sup>3</sup>	Settlement <sup>4</sup>	Membership <sup>5</sup>
			Total	of which: direct			
Netherlands							
Interpay	R	B	73	73	ACH	N	RM
TOP	L	CB	158	108	RTT	RTGS	RM
Singapore							
SGDCCS	R	PA	85	36	ACH	N	O
USDCCS	R	PA	48	31	ACH	GS	O
Interbank GIRO	R	PA	38	35	ACH	N	O
EFTPOS	R	B	3	3	RTT	N	RM
MEPS	L	CB	119	76	RTT	RTGS	O
Sweden							
K-RIX	L	CB	19	19	RTT	RTGS	RM
E-RIX	L	CB	13	13	RTT	RTGS	RM
Bankgirot	R	B	19	19	ACH	N	O
Dataclearing	R	B	19	19	ACH	N	O
Postgirot <sup>23</sup>	R	B	1,200,000	1,200,000	ACH	GS	O
Switzerland							
SIC	L+R	B+CB	314	314	RTT	RTGS	O <sup>25</sup>
DTA/LSV	R	B	155	155	ACH	GS	O <sup>25</sup>
United Kingdom							
CHAPS Sterling	L	B+CB	289	13	RTT	RTGS	RM
CHAPS Euro <sup>26</sup>	L	B+CB	44	20	RTT	RTGS	RM
BACS	R	B	62,000	14	ACH	N	RM
Cheque/credit	R	B	418	12	M	N	RM
United States							
Fedwire	L	CB	7,899 <sup>29</sup>	7,899 <sup>29</sup>	RTT	RTGS	O <sup>30</sup>
CHIPS <sup>28</sup>	L	B	51	51	RTT	N/BN/GS	RM
European Union							
EURO1	L	B	74	74	RTT	SOS <sup>31</sup>	RM
TARGET <sup>32</sup>	L	CB	3,351	1,525	RTT	RTGS	RM

Note: For the footnotes, see the end of the table.

Table 15 (cont)

	Degree of centralisation <sup>6</sup>	Prices charged to participants <sup>7</sup>	Closing time for same day transactions (local time)	Number of transactions (thousands)		Value of transactions (USD billions) <sup>8</sup>		Ratio of transactions value to GDP (at annual rate)	
				2001	2002	2001	2002	2001	2002
Belgium									
ELLIPS	C	F	18:00	1,840	1,730	12,808	12,573	56.3	51.2
Clearing House	D	V	15:00	3,520	1,730	80	71	0.3	0.3
CEC	C	F	15:00	919,050	985,400	455	501	2.0	2.0
Canada									
LVTS	C	F	18:30	3,740	3,903	18,061	18,573	25.7	25.1
France									
CH Paris <sup>9</sup>	C	F	nap	677,765	93,303	683	173	0.5	0.1
CH Province <sup>9</sup>	D	N	nap	2,469,057	53,640	883	22	0.7	neg
SIT	C	F	13:30	7,131,087	11,043,476	2,187	4,187	1.7	2.9
CREI <sup>9</sup>	D	V	nap	270,165	4,316	21	neg	neg	neg
TBF domestic	C	F	18:00	3,801	3,825	78,365	85,660	59.3	59.8
PNS	C	F	16:00	8,004	7,571	19,977	18,820	15.1	13.1
Germany									
RPS (former DTA)	D	F	nap	2,197,487	2,156,752	1,971	1,991	1.1	1.0
RTGS <sup>plus 10</sup>	C	F	18:00	4,829	31,893	17,392	117,621	9.4	59.2
ELS <sup>11</sup>	nap	nap	nap	19,031	nap	44,109	nap	23.8	nap
EAF (former EAF2) <sup>11</sup>	nap	nap	nap	11,014	nap	31,343	nap	16.9	nap
Hong Kong SAR									
HKD CHATS	C	F	17:30 <sup>13</sup>	3,470	3,418	11,134	10,536	68.4	65.2
USD CHATS	C	F	17:30	691	814	931	1,274	5.7	7.9
Italy									
BI-REL	C	F	18:00	10,247	9,612	24,291	23,706	22.2	20.0
Local Clearing	C	V	12:00	105,360	102,698	641	685	0.6	0.6
Retail	C	F	nap <sup>16</sup>	1,269,828	1,630,549	1,551	1,763	1.4	1.5
Japan									
FXYCS	C	V <sup>18</sup>	13:45(N)/19:00(G) <sup>19</sup>	9,564	9,238	56,587	48,887	13.6	12.3
BOJ-NET Funds Transfer System	C	V <sup>18</sup>	19:00 <sup>19</sup>	5,046	4,788	156,640	143,989	37.6	36.2

Note: For the footnotes, see the end of the table.

Table 15 (cont)

	Degree of centralisation <sup>6</sup>	Prices charged to participants <sup>7</sup>	Closing time for same day transactions (local time)	Number of transactions (thousands)		Value of transactions (USD billions) <sup>8</sup>		Ratio of transactions value to GDP (at annual rate)	
				2001	2002	2001	2002	2001	2002
Netherlands									
<i>Interpay</i>	C	F	17:00	2,558,284	2,812,350	1,410	1,582	3.7	3.8
<i>TOP</i>	C	F	18:00	4,023	4,548	18,530	19,670	48.2	46.8
Singapore									
<i>SGDCCS</i>	C	V	16:45 <sup>20</sup>	91,599	90,283	233	212	2.7	2.4
<i>USDCCS</i>	C	V	15:30	399	443	11	11	0.1	0.1
<i>Interbank GIRO</i>	C	V	12:00 <sup>21</sup>	33,640	45,980	45	51	0.5	0.6
<i>EFTPOS</i>	C	V	23:59	87,728	97,202	3.1	3.4	neg	neg
<i>MEPS</i>	C	V	18:30 <sup>22</sup>	2,065	2,037	6,447	5,604	75.3	64.4
Sweden									
<i>K-RIX</i>	C	F	17:00	655	1,100	10,962	11,731	50.0	48.7
<i>E-RIX</i>	C	F	17:00	70	100	1,265	1,305	5.8	5.4
<i>Bankgirot</i>	C	F	nap <sup>24</sup>	345,200	363,000	376	416	1.7	1.7
<i>Dataclearing</i>	C	F	nap <sup>24</sup>	66,910	73,000	107	124	0.5	0.5
<i>Postgirot</i> <sup>23</sup>	C	F	nap <sup>24</sup>	450,000	127,000	367	123	1.7	0.5
Switzerland									
<i>SIC</i>	C	F	16:15	161,200	177,000	26,905	28,767	109.4	107.2
<i>DTA/LSV</i>	C	F	09:00	103,700	103,300	225	229	0.9	0.9
United Kingdom									
<i>CHAPS Sterling</i>	C	F	17:00	23,962	25,563	76,167	77,863	53.3	49.7
<i>CHAPS Euro</i> <sup>26</sup>	C	F	17:00	2,600	3,700	26,836	28,200	18.8	18.0
<i>BACS</i>	C	F	nap <sup>27</sup>	3,527,340	3,734,774	3,118	3,574	2.2	2.3
<i>Cheque/credit</i>	D	F	nap <sup>27</sup>	1,940,000	1,817,000	2,073	2,170	1.4	1.4
United States									
<i>Fedwire</i>	C	F	18:30	112,500	115,000	423,867	405,762	42.0	38.8
<i>CHIPS</i> <sup>28</sup>	C	F	17:00	60,400	63,300	311,707	315,709	30.9	30.2
European Union									
<i>EURO1</i>	C	F	16:00	28,633	34,401	58,101	45,241	nap	nap
<i>TARGET</i> <sup>32</sup>	D	F	18:00	53,664	64,519	368,469	372,927	nap	nap

Note: For the footnotes, see the end of the table.

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<sup>1</sup> L = large-value system; R = retail system. <sup>2</sup> B = bank(s); CB = central bank(s); PA = payment association. <sup>3</sup> M = manual; ACH = automated clearing house (offline); RTT = real-time transmission. <sup>4</sup> N = multilateral netting; BN = bilateral netting; RTGS = real-time gross settlement; GS = other gross settlement. <sup>5</sup> O = open membership (any bank can apply); RM = restricted membership (subject to criteria). <sup>6</sup> C = centralised (one processing centre where all settlement instructions are processed and accounts settled); D = decentralised (presence of more than one such processing centre). <sup>7</sup> F = full cost (including investments); V = variable costs; S = symbolic cost (below variable cost); N = no cost. <sup>8</sup> Converted at yearly average exchange rates.

France: <sup>9</sup> Closed during 2002.

Germany: <sup>10</sup> The number of participants includes solely direct participants and indirect participants of the Deutsche Bundesbank. Others, which are addressable via RTGS<sup>plus</sup>, are not included.

<sup>11</sup> RTGS<sup>plus</sup>, the new RTGS system, opened for business on 5 November 2001. On the same day, ELS (the former RTGS system) and EAF were closed down. For the time being, ELS serves as a procedure for accessing RTGS<sup>plus</sup>.

Hong Kong SAR: <sup>12</sup> Central Monetary Authority. <sup>13</sup> 12:00 on Saturdays.

Italy: <sup>14</sup> Transactions can also be submitted on floppy disk. <sup>15</sup> System managed by SIA (Interbank Company for Automation) in the name and on behalf of the Bank of Italy. <sup>16</sup> Except for credit transfers entered before 10:00, which are settled on the same day.

Japan: <sup>17</sup> CLS is counted as a direct participant in this table. <sup>18</sup> Prices are set on the principle that the institutions that are to benefit from online processing should pay the relevant fees.

<sup>19</sup> As from 20 May 2002, participants who made an application for extension of the closing time can access the system until 19:00.

Singapore: <sup>20</sup> 13:15 on Saturdays. <sup>21</sup> 09:00 on Saturdays. <sup>22</sup> 14:45 on Saturdays.

Sweden: <sup>23</sup> The Postgirot system was purchased by a Swedish bank in the course of 2002. <sup>24</sup> No same day transactions.

Switzerland: <sup>25</sup> With restriction criteria for remote members.

United Kingdom: <sup>26</sup> Volume and value figures include domestic outward cross-border payments. <sup>27</sup> No same day transactions.

United States: <sup>28</sup> CHIPS, the Clearing House Interbank Payments System, is operated by CHIPCo, which is owned by the Clearing House (formerly known as the New York Clearing House Association). <sup>29</sup> Number of depository institutions that used the Fedwire Funds Transfer Service in 2002. Other Fedwire Funds Transfer participants not included here are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations. <sup>30</sup> Any depository institution, including a US branch or agency of a foreign bank, may maintain an account with a Federal Reserve Bank. To obtain an account, an institution must execute an account agreement pursuant to Operating Circular 1 (Account Relationships), which outlines the terms and conditions for a master account. An institution with an account at a Federal Reserve Bank may access Fedwire subject to the conditions detailed in Federal Reserve Operating Circular 6 and the Federal Reserve Board's Policy Statement on Payment System Risk.

European Union: <sup>31</sup> The legal structure of EURO1 is based on the Single Obligation Structure (SOS), whereby on each settlement day, at any given time, each participant will have only one single payment obligation or claim with respect to the community of the other participants as joint creditors/debtors, which will be settled at the end of the day. In accordance with the SOS, no bilateral payments, claims or obligations between participants will be created by the processing of payments in the system. Nor will there be any form of setoff, novation or netting resulting from the continuous adjustment of the participants' single claim or obligation. <sup>32</sup> The RTGS systems of the countries which have adopted the euro and the ECB payment mechanism are integral parts of the TARGET system. The euro RTGS systems of Denmark, Greece, Sweden and the United Kingdom were allowed to connect to TARGET on the basis of a decision taken by the Governing Council of the ECB in July 1998. On 1 January 2001 Greece joined the euro area. The HERMES Payment System in drachmas and the EURO-HERMES System were unified into a single HERMES Payment System. The figure for TARGET participants is based on a survey of direct and indirect participants. The previously published number of indirect participants was an estimate. In addition, there is a substantial change in the number of direct participants due to the fact that in Germany EAF closed down when RTGS<sup>plus</sup> opened for business on 5 November 2001.

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Table 16  
**Operating hours of selected large-value interbank funds transfer systems**  
 End of 2002

System	Gross or net	Opening/closing time for same day value (local time)	Settlement finality (local time)	Cutoff for all third- party payment orders (local time)	Cutoff for international correspondents' payment orders (local time)	<i>Memo:</i> <i>Standard money market hours (local time)</i>
Belgium <i>ELLIPS</i>	<i>Gross</i>	<i>07:00-18:00</i>	<i>real-time</i>	<i>17:00</i>	<i>18:00</i>	<i>07:00-18:00</i>
Canada <sup>1</sup> <i>LVTS</i>	<i>Net</i>	<i>01:00-18:30<sup>2</sup></i>	<i>intraday<sup>3</sup></i>	<i>18:00</i>	<i>18:00</i>	<i>nap<sup>4</sup></i>
France <i>TBF</i>	<i>Gross</i>	<i>07:00-18:00</i>	<i>real-time</i>	<i>17:00</i>	<i>nap</i>	<i>09:00-17:00</i>
<i>PNS</i>	<i>Gross/Net</i>	<i>08:00-16:00</i>	<i>real-time</i>	<i>16:00</i>	<i>nap</i>	<i>09:00-17:00</i>
Germany <sup>5</sup> <i>RTGS<sup>plus</sup></i>	<i>Gross</i>	<i>07:00-18:00</i>	<i>real-time</i>	<i>17:00</i>	<i>nap</i>	<i>08:30-18:00</i>
Hong Kong SAR <i>HKD CHATS</i>	<i>Gross</i>	<i>09:00-17:30<sup>6</sup></i>	<i>real-time<sup>6</sup></i>	<i>17:00</i>	<i>17:30</i>	<i>09:00-17:30</i>
<i>USD CHATS</i>	<i>Gross</i>	<i>09:00-17:30</i>	<i>real-time</i>	<i>17:00</i>	<i>17:30</i>	<i>09:00-17:30</i>
Italy <i>BI-REL</i>	<i>Gross</i>	<i>07:00-18:00</i>	<i>real-time</i>	<i>17:00</i>	<i>nap</i>	<i>07:00-18:00</i>
Japan <i>FXYCS<sup>7</sup></i>	<i>Net</i>	<i>09:00-13:45</i>	<i>14:30</i>	<i>13:45</i>	<i>13:45</i>	<i>08:30-19:00</i>
	<i>Gross</i>	<i>09:00-19:00</i>	<i>real-time</i>	<i>19:00</i>	<i>19:00</i>	<i>08:30-19:00</i>
<i>BOJ-NET Funds Transfer System<sup>7</sup></i>	<i>Gross</i>	<i>09:00-19:00</i>	<i>real-time</i>	<i>14:00</i>	<i>14:00</i>	<i>08:30-19:00</i>
Netherlands <i>TOP</i>	<i>Gross</i>	<i>07:00-18:00</i>	<i>real-time</i>	<i>17:00</i>	<i>17:00</i>	<i>07:00-18:00</i>

Note: For the footnotes, see the end of the table.

Table 16 (cont)

System	Gross or net	Opening/closing time for same day value (local time)	Settlement finality (local time)	Cutoff for all third-party payment orders (local time)	Cutoff for international correspondents' payment orders (local time)	Memo: Standard money market hours (local time)
Singapore MEPS	Gross	06:00-18:30 <sup>8,9</sup>	09:00-18:30 <sup>9</sup>	18:30 <sup>10,11</sup>	18:30 <sup>10,11</sup>	09:00-18:30 <sup>9</sup>
Sweden K-RIX	Gross	07:00-17:00	real-time	17:00	17:00	09:00-16:15
E-RIX	Gross	07:00-18:00	real-time	17:00	18:00	09:00-16:15
Switzerland SIC	Gross	17:00-16:15 <sup>12</sup>	real-time	15:00	08:00	09:00-16:00
United Kingdom CHAPS Sterling	Gross	06:00-17:00	real-time	16:00	16:00	07:00-16:00
CHAPS Euro	Gross	06:00-17:00	real-time	16:00	16:00	–
United States <sup>13</sup> Fedwire	Gross	00:30-18:30	real-time	18:00	17:00	08:30-18:30 <sup>14</sup>
CHIPS	Gross/Net	00:30-17:00	intraday <sup>15</sup>	16:30	16:30	08:30-18:30 <sup>14</sup>
European Union EURO1	Net	07:30-16:00	after 16:00	16:00	16:00	07:00-18:00
TARGET	Gross	07:00-18:00	real-time	17:00	nap	07:00-18:00

Canada: <sup>1</sup> Local times are Eastern time. <sup>2</sup> The initialisation period for collateral pledging/valuation, setting of bilateral limits, etc begins at 00:30. The payment message exchange period begins at 08:00. <sup>3</sup> Final settlement occurs at 19:30. However, due to the risk controls in place, the LVTS provides intraday settlement finality. <sup>4</sup> No standard hours.

Germany: <sup>5</sup> RTGS<sup>plus</sup>, the new RTGS system, opened for business on 5 November 2001. On the same day, ELS (the former RTGS system) and EAF were closed down. For the time being, ELS serves as a procedure for accessing RGTS<sup>plus</sup>.

Hong Kong SAR: <sup>6</sup> To 12:00 on Saturdays.

Japan: <sup>7</sup> As from 20 May 2002, participants who made an application for extension of the closing time can access the system until 19:00.

Singapore: <sup>8</sup> MEPS accepts forward-dated transactions from 06:00 to 20:00 on Mondays-Fridays and from 06:00 to 15:00 on Saturdays. <sup>9</sup> To 14:45 on Saturdays. <sup>10</sup> 14:45 on Saturdays. <sup>11</sup> MEPS does not impose a cutoff time for third-party/international correspondents' payments, but the Association of Banks in Singapore (ABS) bye-laws on MEPS require all such payments to be made by 17:30 on Mondays-Fridays and 12:30 on Saturdays.

Switzerland: <sup>12</sup> The system is open for input 24 hours a day. Settlement services are limited by the indicated opening and closing times. A value day starts at 17:00 local time on the previous business day and ends at 16:15 on the value day. Third-party payments may be entered for same day settlement until 15:00. Between 15:00 (cutoff 1) and 16:00 (cutoff 2) only cover (bank-to-bank) payments are accepted for same day settlement. From 16:00 to 16:15 transactions are restricted to the processing of lombard credits (collateralised loans from the Swiss National Bank at a penalty rate).

United States: <sup>13</sup> Local times are Eastern time. <sup>14</sup> Trading occurs among dealers for funds on deposit at Federal Reserve Banks (ie federal funds) as early as 06:30. <sup>15</sup> Payments over CHIPS become final on completion of settlement, which occurs throughout the day.

Table 17  
**Features of selected securities settlement systems**  
 End of 2002

Name of system	Belgium			Canada		France	
	NBB SSS	Euronext-CIK	Euroclear	SSS/BBS	DCS	RGV	RELIT
Type of securities <sup>1</sup>	G, O	E, O	G, E, O	E, B, O	B, G, O	B, C, G, O, E	
Owner/manager <sup>2</sup>	CB	B	B	B, SE, O	B, SE, O	Euroclear France	
Number of participants	123	97	1,634	107	82	637 <sup>7</sup>	
<i>of which: direct participants</i>	123	97	1,634	nav	6	325 <sup>7</sup>	
Settlement of cash leg <sup>3</sup>	G	G	G/N	N	N	RTGS	N
Securities settlement (delivery) <sup>3</sup>	G	N	G/N	N	G	RTGS	GS
Delivery lag (T+n)	T+2, T+3 <sup>5</sup>	T+3	T+3, T+n (OTC)	T+3	T+0, T+1 <sup>6</sup>	from T to T+100	from T to T+30
DVP mechanism	DVP1	DVP1	DVP1	DVP3	DVP2	DVP1	DVP2
Intraday finality	Yes	Yes	Yes	No	Yes	Yes	Yes
Central securities depository	NBB	CIK	Euroclear (eurobonds) + others	CDS	CDS	Euroclear France	
Cash settlement agent <sup>2</sup>	NBB	NBB	Euroclear/NBB	B	CB	CB	
Number of transactions (thousands)	159	358	18,400	28,500	1,880	29,004 <sup>7</sup>	
Value of transactions (USD billions) <sup>4</sup>	2,576	92	97,559	962	15,776	49,954 <sup>7</sup>	
Ratio of transactions value to GDP (at annual rate)	10.5	0.4	nap	1.3	21.3	34.8 <sup>7</sup>	

Note: For the footnotes, see the end of the table.

Table 17 (cont)

	Germany	Hong Kong SAR		Italy		
Name of system	Clearstream Banking Frankfurt (CBF)	CCASS	CMU	LDT	EXPRESS	Monte Titoli
Type of securities <sup>1</sup>	G, E, B, O	E, O	G, O	G, E, B, O	G, E, B, O	G, E, B, O
Owner/manager <sup>2</sup>	SE	SE	CMA <sup>9</sup>	CB	Monte Titoli	Monte Titoli
Number of participants of which: direct participants	437 437	529 529	157 <sup>10</sup> 157 <sup>10</sup>	266 266	125 125	1,916 570 <sup>12</sup>
Settlement of cash leg <sup>3</sup>	RTGS, N	G/N	G/N	N	RTGS	nap
Securities settlement (delivery) <sup>3</sup>	RTGS, G	G/N	G/N	N	RTGS	RTGS
Delivery lag (T+n)	T+0 to T+40	T+2	T+0	G, B: T+3 <sup>11</sup> E, O: T+5	From T to T+n	T
DVP mechanism	DVP1 DVP2/DVP3 <sup>8</sup>	DVP1/DVP3	DVP1/DVP3	DVP3	DVP1	nap
Intraday finality	Yes	No	Yes	No	Yes	Yes
Central securities depository	CBF	CCASS	CMU	Monte Titoli	Monte Titoli	Monte Titoli
Cash settlement agent <sup>2</sup>	CB	B	CMA <sup>9</sup>	CB	CB	nap
Number of transactions (thousands)	67,282	24,550	37	40,922	103	1,770 <sup>13</sup>
Value of transactions (USD billions) <sup>4</sup>	nav	808	756	31,178	1,050	nap
Ratio of transactions value to GDP (at annual rate)	nav	5.0	4.7	26.3	0.9	nap

Note: For the footnotes, see the end of the table.

Table 17 (cont)

	Japan		Netherlands	Singapore		
Name of system	BOJ-NET JGB Services	JASDEC <sup>15</sup>	Euroclear Netherlands <sup>19</sup>	CDP	DCSS	MEPS-SGS
Type of securities <sup>1</sup>	G	E, O <sup>16</sup>	G, B, E	E, O	B	G
Owner/manager <sup>2</sup>	CB	B, SE, O	Euroclear	SE	SE	CB
Number of participants	348 (Book-entry System) / 379 (Registration System)	272	82	76	52	119
<i>of which: direct participants</i>	<i>348/379</i>	<i>272</i>	<i>82</i>	<i>25</i>	<i>52</i>	<i>76</i>
Settlement of cash leg <sup>3</sup>	RTGS	N/G	RTGS	N	G	RTGS
Securities settlement (delivery) <sup>3</sup>	RTGS	N/G	RTGS	G	G	G
Delivery lag (T+n)	T+0 to T+3 <sup>14</sup>	T+3/T+1, T+2 <sup>17</sup>	T+3	T+3	T+n <sup>21</sup>	T+0
DVP mechanism	DVP1	DVP3/DVP1 <sup>18</sup>	DVP1	DVP2	DVP1	DVP1
Intraday finality	Yes	Yes	Yes	Yes	Yes	Yes
Central securities depository	CB	JASDEC	Euroclear Netherlands <sup>19</sup>	CDP	CDP	CB
Cash settlement agent <sup>2</sup>	CB	CB, B	CB, B	B	CB	CB
Number of transactions (thousands)	2,850/11	35,216	2,995	111,837,000 <sup>20</sup>	5.3	52
Value of transactions (USD billions) <sup>4</sup>	88,169/29.1	nav	684	66	5	414
Ratio of transactions value to GDP (at annual rate)	22.2/neg	nav	1.6	0.8	neg	4.8

Note: For the footnotes, see the end of the table.

Table 17 (cont)

Name of system	Sweden		Switzerland	United Kingdom		United States	
	Stockholmsbörsen	VPC	SECOM	CREST	CMO	NBES <sup>22</sup>	DTC
Type of securities <sup>1</sup>	O	G, E, O	G, B, E, O	G, B, E, O	G, C, O	G, O	E, O, B, C
Owner/manager <sup>2</sup>	O	B, O	B, O	B, CB, SE, O	B, CB, O	CB	B, SE, O
Number of participants	83	45	489	52,881	58	1,793 <sup>23</sup>	474
<i>of which: direct participants</i>	83	45	489	<i>nap</i>	<i>nap</i>	1,793 <sup>23</sup>	474
Settlement of cash leg <sup>3</sup>	N	G/N	G	RTGS	N	RTGS	N
Securities settlement (delivery) <sup>3</sup>	N	G	G	RTGS	RTGS	RTGS	G
Delivery lag (T+n)	T+3	T+2, T+3	T+3	T+3	T	T, T+1 <sup>24</sup>	T, T+3 <sup>25</sup>
DVP mechanism	No	DVP2/ DVP3/DVP1	DVP1	DVP1	DVP2	DVP1	DVP2
Intraday finality	Yes	Yes	Yes	Yes	Yes	Yes	No
Central securities depository	OM	VPC	SIS SegalInterSettle	<i>nap</i>	CMO	CB	DTC
Cash settlement agent <sup>2</sup>	CB	CB	CB	B, CB	CB	CB	CB
Number of transactions (thousands)	64,100	10,858	15,300	75,700	100	17,400	224,300
Value of transactions (USD billions) <sup>4</sup>	278	9,126	4,800	77,361	2,566	228,900	104,000
Ratio of transactions value to GDP (at annual rate)	1.2	37.9	17.9	49.3	1.6	21.9	10.0

Note: For the footnotes, see the end of the table.

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<sup>1</sup> B = bonds; C = CDs; G = government securities; E = equity; O = other. <sup>2</sup> B = bank(s); CB = central bank(s); SE = stock exchange; O = other. <sup>3</sup> G = gross; N = net; RTGS = real-time gross settlement. <sup>4</sup> Converted at yearly average exchange rates.

Belgium: <sup>5</sup> For Treasury bills, T+2; for bonds, T+3.

Canada: <sup>6</sup> Although all securities have the potential for T+0 delivery, money market mutual funds tend to be T+1.

France: <sup>7</sup> RGV and RELIT combined.

Germany: <sup>8</sup> Mixture of DVP 2 + DVP 3 (securities disposition on a gross basis without finality until final settlement of net cash position).

Hong Kong SAR: <sup>9</sup> Central Monetary Authority. <sup>10</sup> Recognised dealer for Exchange Fund Bills and Notes.

Italy: <sup>11</sup> For government bills, T+2. <sup>12</sup> Number of intermediaries. <sup>13</sup> Free of payment (FOP) transfers not including multilateral net balances from LdT.

Japan: <sup>14</sup> T+3 is the norm for outright transactions. Most repo transactions are settled on a T+2 or T+3 basis. Settlement for the BOJ's open market operations takes place on a T+0 to T+3 basis.

<sup>15</sup> End-March 2003. <sup>16</sup> JASDEC started to handle commercial paper (CP) in March 2003. <sup>17</sup> Most CP transactions are settled on a T+1 or T+2 basis. <sup>18</sup> DVP3 for stocks and DVP1 for CP.

Netherlands: <sup>19</sup> Formerly known as Necigef.

Singapore: <sup>20</sup> Number of securities cleared. <sup>21</sup> By mutual agreement between counterparties.

United States: <sup>22</sup> NBES is the Federal Reserve's National Book-Entry System. <sup>23</sup> Number of depository institutions that used the Federal Reserve's Securities Service in 2002. Other participants not included here are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations. <sup>24</sup> Securities are settled on a same day basis within the Federal Reserve's National Book-Entry System. The market convention for the settlement of repurchase agreements is T+0. The convention for US Treasury securities is T+1. Other non-US Treasury securities have different conventions. <sup>25</sup> The market convention for the settlement of corporate equities and bonds is T+3; for money market instruments, the convention is T.

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Table 18  
**Direct participants in CPSS real-time gross settlement systems**  
 End of 2002

	Belgium	Canada	France	Germany	Hong Kong SAR		Italy	Japan
<b>Name of system</b>	<b>ELLIPS</b>	<b>nap</b>	<b>TBF</b>	<b>RTGS<sup>plus</sup></b>	<b>HKD CHATS</b>	<b>USD CHATS</b>	<b>BI-REL</b>	<b>BOJ-NET Funds Transfer System</b>
Direct participants	17		175	75	130	64	663	378
Credit institutions	15		148	74	130	63	652 <sup>2</sup>	322
Central bank	1		1	1	1 <sup>1</sup>	1	1	0
Non-banks	1		26	0	0	0	10 <sup>3</sup>	56 <sup>4</sup>
<i>of which:</i>								
<i>public authorities</i>	0		<i>nap</i>				1	0
<i>postal administration</i>	1		1				1	0
<i>supervised financial institutions</i>	0		25				6	50

Note: For the footnotes, see the end of the table.



Table 18 (cont)

Name of system	Netherlands	Singapore	Sweden		Switzerland	United Kingdom		United States	European Union
	TOP	MEPS	K-RIX	E-RIX	SIC	CHAPS Sterling	CHAPS Euro	Fedwire	TARGET
Direct participants	108	76	19	13	314	13	20	7,899 <sup>6</sup>	1,525
Credit institutions	100	75	14	8	300	12	19	7,899 <sup>6</sup>	nav
Central bank	1	1	1	1	1	1	1	1	16
Non-banks	7 <sup>5</sup>	0	4	4	13	0	0	nav	nav
<i>of which:</i>									
<i>public authorities</i>	2		0	0	1				
<i>postal administration</i>	0		0	0	1				
<i>supervised financial institutions</i>	4		4	4	11				

Hong Kong SAR: <sup>1</sup> The central bank is not a direct participant.

Italy: <sup>2</sup> Of which: 30 branches of other EU banks; 13 branches of non-EU banks; one remote participant. <sup>3</sup> Includes Cassa Compensazione e Garanzia (clearing house) and Monte Titoli (Central Securities Depository).

Japan: <sup>4</sup> Includes stock exchanges, a bankers' association and the Deposit Insurance Corporation of Japan.

Netherlands: <sup>5</sup> Includes clearing and settlement organisations.

United States: <sup>6</sup> Number of depository institutions that used the Fedwire Funds Transfer Service in 2002. Other Fedwire Funds Transfer participants not included here are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations.

Table 19  
Direct participants in other CPSS large-value payment systems  
End of 2002

	Belgium	Canada	France	Germany	Hong Kong SAR		Italy	Japan
<b>Name of system</b>	<b>nap</b>	<b>LVTS</b>	<b>PNS</b>	<b>nap</b>	<b>HKD CHATS</b>	<b>USD CHATS</b>	<b>nap<sup>2</sup></b>	<b>FXYCS</b>
Direct participants		14	22		130	64		37 <sup>3</sup>
Credit institutions		13	21		130	63		37
Central bank		1	nap		1 <sup>1</sup>	1		0
Non-banks		0	1		0	0		0
<i>of which:</i>								
<i>public authorities</i>			nap					
<i>postal administration</i>			1					
<i>supervised financial institutions</i>			nap					

  

	Netherlands	Singapore	Sweden	Switzerland	United Kingdom	United States		European Union
<b>Name of system</b>	<b>nap</b>	<b>MEPS</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>Fedwire</b>	<b>CHIPS</b>	<b>EURO1</b>
Direct participants		76				7,899 <sup>4</sup>	51	74
Credit institutions		75				7,899 <sup>4</sup>	nav	74
Central bank		1				1	nav	0
Non-banks		0				nav	nav	nap
<i>of which:</i>								
<i>public authorities</i>								
<i>postal administration</i>								
<i>supervised financial institutions</i>								

Hong Kong SAR: <sup>1</sup> The central bank is not a direct participant.

Italy: <sup>2</sup> The only large-value payment system in Italy is BI-REL. For details, see Table 18.

Japan: <sup>3</sup> CLS is counted as a direct participant in this table.

United States: <sup>4</sup> Number of depository institutions that used the Fedwire Funds Transfer Service in 2002. Other Fedwire Funds Transfer participants not included here are: the US Treasury and any entity specifically authorised by federal statute to use the Reserve Banks as fiscal agents or depositories; entities designated by the Secretary of the Treasury; foreign central banks, foreign monetary authorities, foreign governments and certain international organisations.

Table 20  
**Direct participants in CPSS retail interbank funds transfer systems**  
 End of 2002

	Belgium		Canada	France		Germany	Hong Kong SAR
Name of system	Clearing House	CEC	ACSS	CH and CREIC <sup>1</sup>	SIT	RPS	nap
Direct participants	34	30	12	nap	17	2,188	
Credit institutions	31	26	11	nap	15	2,187	
Central bank	1	1	1	nap	1	1	
Non-banks	2	3	0	nap	1	0	
<i>of which:</i>							
<i>public authorities</i>	1	2			0		
<i>postal administration</i>	1	1			1		
<i>supervised financial institutions</i>	0	0			0		

	Italy		Japan		Netherlands	Singapore		
Name of system	BI-COMP		Zengin system	Tokyo Clearing House	Interpay	SGDCCS	IBG	EFTPOS
	Local Clearing	Retail						
Direct participants	116	205	153	116	73	36	35	3
Credit institutions	113 <sup>2</sup>	202 <sup>3</sup>	153	114	73	35	35	3
Central bank	1	1	0	1	0	1	0	0
Non-banks	2	2	0	1	0	0	0	0
<i>of which:</i>								
<i>public authorities</i>	1	1		0				
<i>postal administration</i>	1	1		1				
<i>supervised financial institutions</i>	0	0		0				

Note: For the footnotes, see the end of the table.

Table 20 (cont)

Name of system	Sweden			Switzerland	United Kingdom		United States
	Bankgirot	Dataclearing	Postgirot	DTA/LSV	BACS	Cheque and credit clearing	ACH
Direct participants	19	19	1,200,000	155	14	12	nav
Credit institutions	19	19	nap	155	13	11	
Central bank	nap	nap	nap	0	1	1	
Non-banks	nap	nap	1,200,000	0	0	0	
<i>of which:</i>							
<i>public authorities</i>			1,200,000		0	0	
<i>postal administration</i>			0		0	0	
<i>supervised financial institutions</i>			0		0	0	

France: <sup>1</sup> Closed during 2002.

Italy: <sup>2</sup> Of which: one branch of another EU bank. <sup>3</sup> Of which: 15 branches of other EU banks and six branches of non-EU banks.

Table 21  
**Access criteria for CPSS real-time gross settlement systems**  
 End of 2002

	Belgium	Canada	France	Germany	Hong Kong SAR	Italy	Japan
<b>Name of system</b>	<b>ELLIPS</b>	<b>nap</b>	<b>TBF</b>	<b>RTGS<sup>plus</sup></b>	<b>HKD RTGS</b>	<b>BI-REL</b>	<b>BOJ-NET Funds Transfer System</b>
Access criteria	+		+	+	+	+	+
Written rules	+		+	+	+	+	+
Minimum level of data or ratios representative of financial strength	+		–	–	+	–	+
Minimum number of transactions	–		–	–	–	–	– <sup>3</sup>
Payment of an entry fee	+		+	–	+	–	–
Approval from the owner/manager or the direct participants	+		+	+ <sup>1</sup>	+	+ <sup>2</sup>	+ <sup>4</sup>
Approval from the local central bank	+		+	+	+	+	+
Technical requirements	+		+	+	+	+	+
Removal rules	+		+	+	+	+	+

Note: For the footnotes, see the end of the table.

Table 21 (cont)

Name of system	Netherlands	Singapore	Sweden		Switzerland	United Kingdom	United States
	TOP	MEPS	K-RIX	E-RIX	SIC	CHAPS Sterling/Euro	Fedwire
Access criteria	+	+	+	+	+	+	+
Written rules	+	+	+	+	+	+	+
Minimum level of data or ratios representative of financial strength	-	+	+	+	-	-	-
Minimum number of transactions	-	-	-	-	-	-	-
Payment of an entry fee	-	-	+	+	+	+	-
Approval from the owner/manager or the direct participants	+ <sup>5</sup>	+ <sup>6</sup>	+	+	+	+	+
Approval from the local central bank	+	+	+	+	+	+	+
Technical requirements	+	+	+	+	+	+	+
Removal rules	+	+	+	+	+	+	+

Key: + = yes; - = no.

Germany: <sup>1</sup> The owner/manager is the central bank.

Italy: <sup>2</sup> The owner/manager is the central bank.

Japan: <sup>3</sup> To open a current account at the Bank of Japan, securities companies are required to meet certain standards on market presence set by the Bank of Japan. <sup>4</sup> The owner/manager is the central bank.

Netherlands: <sup>5</sup> The owner/manager is the central bank.

Singapore: <sup>6</sup> The owner/manager is the central bank.

Table 22  
**Access criteria for other CPSS large-value payment systems**  
 End of 2002

	Belgium	Canada	France	Germany	Hong Kong SAR	Italy	Japan
<b>Name of system</b>	<b>nap</b>	<b>LVTS</b>	<b>PNS</b>	<b>nap</b>	<b>USD RTGS</b>	<b>nap<sup>2</sup></b>	<b>FXYCS</b>
Access criteria		+	+		+		+
Written rules		+	+		+		+
Minimum level of data or ratios representative of financial strength		–	+		+		+
Minimum number of transactions		–	–		–		+
Payment of an entry fee		+	+		+ <sup>1</sup>		+
Approval from the owner/manager or the direct participants		+	+		+		+
Approval from the local central bank		–	+		+		+
Technical requirements		+	+		+ <sup>1</sup>		+
Removal rules		+	+		–		+

Note: For the footnotes, see the end of the table.

Table 22 (cont)

	Netherlands	Singapore	Sweden	Switzerland	United Kingdom	United States	European Union
<b>Name of system</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>CHIPS</b>	<b>EURO1</b>
Access criteria						+	+
Written rules						+	+
Minimum level of data or ratios representative of financial strength						+	+
Minimum number of transactions						-	-
Payment of an entry fee						+	+
Approval from the owner/manager or the direct participants						+	+
Approval from the local central bank						-	-
Technical requirements						+	+
Removal rules						+	+

Key: + = yes; - = no.

Hong Kong: <sup>1</sup> Not applicable to indirect participants.

Italy: <sup>2</sup> The only large-value payment system in Italy is BI-REL. For details, see Table 21.



Table 23  
**Risk control measures in other CPSS large-value payment systems**  
 End of 2002

	Belgium	Canada	France	Germany	Hong Kong SAR	Italy	Japan
<b>Name of system</b>	nap	LVTS	PNS	nap	nap	nap <sup>8</sup>	FXYCS
<b>1. Settlement in central banks' accounts</b>		+	+				+
<b>2. Same day settlement</b>		+	+				+
<b>3. Compliance with Lamfalussy standards</b>		+	+				nap
a. Legal framework							
contractual (+) or advisory (–) netting		+ <sup>1</sup>	+				
if contractual: legally enforceable (+) or not (–)		+	nap <sup>5</sup>				
b. Participants' awareness		+	+				
		+					
c. Risk management		+					
<i>monitoring of intraday balance</i>			nap <sup>6</sup>				
<i>multilateral limits</i>		+ <sup>2</sup>	nap <sup>6</sup>				
<i>collateral requirements</i>		+	nap <sup>6</sup>				
<i>intraday closures</i>		+ <sup>3</sup>	+ <sup>7</sup>				
d. Timely settlement completion		+	nap <sup>5</sup>				
<i>risk-sharing agreements</i>		+					
<i>full collateralisation of largest net debit position</i>		+ <sup>4</sup>	nap <sup>6</sup>				
e. Fair open access		+	+				
f. Technical reliability		+	+				

Note: For the footnotes, see the end of the table.

Table 23 (cont)

	Netherlands	Singapore	Sweden	Switzerland	United Kingdom	United States	European Union
<b>Name of system</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>nap</b>	<b>CHIPS</b>	<b>EURO1</b>
<b>1. Settlement in central banks' accounts</b>						+	+
<b>2. Same day settlement</b>						+	+
<b>3. Compliance with Lamfalussy standards</b>						+	+
a. Legal framework contractual (+) or advisory (-) netting if contractual: legally enforceable (+) or not (-)						+	nap <sup>10</sup>
						+	nap <sup>10</sup>
b. Participants' awareness						+	+
c. Risk management <i>monitoring of intraday balance</i>						+	+
<i>multilateral limits</i>						-	+
<i>collateral requirements</i>						-	+
<i>intraday closures</i>						-	-
d. Timely settlement completion <i>risk-sharing agreements</i>						-	+
<i>full collateralisation of largest net debit position</i>						-	+
e. Fair open access						+	+
f. Technical reliability						+	+

Key: + = yes; - = no.

Canada: <sup>1</sup> The LVTS employs multilateral netting by novation. Once the payment instruction passes the risk controls and is accepted by the system, the bilateral obligations are extinguished and replaced by a multilateral obligation vis-à-vis the system as a whole. <sup>2</sup> The LVTS employs bilateral and multilateral limits. <sup>3</sup> Final settlement occurs at the end of the LVTS processing period. However, the risk control mechanisms of the LVTS ensure that, once a payment has passed the risk control mechanisms and been accepted by the system, it is certain to settle and irrevocable. Therefore, the LVTS provides intraday receiver finality. <sup>4</sup> The LVTS is certain to settle even if the defaulter with the largest net debit position defaults.

France: <sup>5</sup> PNS is a hybrid system; the legal and risk framework is comparable to that of the RTGS system. <sup>6</sup> PNS functions on the basis of positive balances, ie multilateral debit cap set to 200. <sup>7</sup> Continuous settlement mechanism.

Italy: <sup>8</sup> There are no large-value net settlement systems in Italy.

United States: <sup>9</sup> Since January 2001, CHIPS has been a real-time final settlement system that continuously matches, nets and settles payment orders. To facilitate this process, each CHIPS participant is required to transfer, via Fedwire, a pre-established opening position requirement to a CHIPS account at the Federal Reserve Bank of New York. Throughout the day, payment orders are settled with real-time finality on the books of CHIPS against positive positions, simultaneously offset by incoming payment orders, or both. At the end of the day, each participant with a final position requirement must transfer, via Fedwire, its requirement to the CHIPS account at the Federal Reserve Bank of New York.

European Union: <sup>10</sup> The system is based on a special legal arrangement, the Single Obligation Structure (SOS).

Table 24a  
**SWIFT traffic: intra-CPSS message flows in 2002**  
 Number of messages

From/to	Belgium	Canada	France	Germany	Hong Kong SAR	Italy	Japan	Netherlands
Belgium	14,447,532	364,008	4,794,218	4,277,640	817,397	2,430,515	1,331,745	6,146,446
Canada	383,167	6,253,852	470,409	519,327	388,211	176,521	377,621	145,591
France	3,744,827	397,960	25,628,460	6,232,712	583,626	3,136,484	1,069,657	2,685,072
Germany	3,937,202	481,606	6,314,197	34,657,904	721,039	6,327,574	1,198,320	5,080,253
Hong Kong SAR	1,323,307	473,686	367,440	601,579	4,334,770	258,613	2,603,160	175,570
Italy	2,328,383	149,780	3,231,234	5,420,685	268,143	6,161,230	442,754	1,209,536
Japan	1,306,309	308,983	992,131	1,297,964	1,708,318	519,876	7,134,840	310,885
Netherlands	4,802,150	172,113	3,123,980	5,183,169	264,347	1,100,076	334,454	30,314,141
Singapore	274,934	155,077	319,288	556,172	1,418,239	106,162	1,865,779	206,395
Sweden	949,923	72,680	660,349	1,567,047	220,910	376,614	126,082	673,328
Switzerland	2,203,995	452,734	3,091,251	6,450,926	531,715	1,592,457	1,132,483	1,351,595
United Kingdom	7,580,115	2,334,556	11,917,110	14,459,539	4,173,553	7,941,758	10,225,241	9,525,327
United States	5,755,763	4,621,637	7,551,673	10,609,592	8,981,808	4,811,381	11,157,262	5,412,527
<b>Total CPSS</b>	<b>49,037,607</b>	<b>16,238,672</b>	<b>68,461,740</b>	<b>91,834,256</b>	<b>24,412,076</b>	<b>34,939,261</b>	<b>38,999,398</b>	<b>63,236,666</b>
<b>Total non-CPSS</b>	<b>11,506,242</b>	<b>2,359,840</b>	<b>18,099,829</b>	<b>44,711,924</b>	<b>7,054,502</b>	<b>14,722,110</b>	<b>7,061,487</b>	<b>9,345,791</b>
<b>Total all countries</b>	<b>60,543,849</b>	<b>18,598,512</b>	<b>86,561,569</b>	<b>136,546,180</b>	<b>31,466,578</b>	<b>49,661,371</b>	<b>46,060,885</b>	<b>72,582,457</b>

Source: SWIFT.

Table 24a (cont)

From/to	Singapore	Sweden	Switzerland	United Kingdom	United States	CPSS	Non-CPSS	All countries
Belgium	489,042	434,481	3,444,652	19,398,138	9,735,453	68,111,267	13,738,094	81,849,361
Canada	156,842	59,303	530,346	3,070,562	6,257,677	18,789,429	2,970,742	21,760,171
France	300,331	442,582	2,331,652	22,723,550	11,822,154	81,099,067	12,773,891	93,872,958
Germany	377,996	1,083,931	5,620,614	20,008,899	16,905,573	102,715,108	35,223,674	137,938,782
Hong Kong SAR	1,491,448	117,251	550,567	6,477,301	8,673,163	27,447,855	9,780,300	37,228,155
Italy	81,713	208,173	1,512,222	12,796,657	6,539,384	40,349,894	9,759,395	50,109,289
Japan	1,842,495	122,127	1,090,494	11,375,378	13,561,118	41,570,918	8,494,343	50,065,261
Netherlands	186,520	461,078	1,813,205	15,654,773	7,320,868	70,730,874	7,558,857	78,289,731
Singapore	2,763,779	77,942	494,530	2,833,628	5,105,773	16,177,698	4,250,725	20,428,423
Sweden	75,385	4,097,857	408,964	6,869,591	2,942,301	19,041,031	6,786,563	25,827,594
Switzerland	465,580	358,722	16,140,939	16,653,433	12,639,333	63,065,163	12,080,129	75,145,292
United Kingdom	1,871,696	4,028,577	7,774,734	95,274,243	40,604,749	217,711,198	39,806,549	257,517,747
United States	4,112,627	1,786,946	11,440,983	34,113,184	84,876,687	195,232,070	89,473,064	284,705,134
<b>Total CPSS</b>	<b>14,215,454</b>	<b>13,278,970</b>	<b>53,153,902</b>	<b>267,249,337</b>	<b>226,984,233</b>	<b>962,041,572</b>	<b>252,696,326</b>	<b>1,214,737,898</b>
<b>Total non-CPSS</b>	<b>4,533,254</b>	<b>6,348,301</b>	<b>13,597,387</b>	<b>62,284,749</b>	<b>80,894,377</b>	<b>282,519,793</b>	<b>320,186,303</b>	<b>602,706,096</b>
<b>Total all countries</b>	<b>18,748,708</b>	<b>19,627,271</b>	<b>66,751,289</b>	<b>329,534,086</b>	<b>307,878,610</b>	<b>1,244,561,365</b>	<b>572,882,629</b>	<b>1,817,443,994</b>

Source: SWIFT.

Table 24b  
**Geographical breakdown of SWIFT message flows**  
 In 2002

	Messages sent			Messages received		
	Total	To domestic users (% of total)	To other CPSS countries (% of total)	Total	From domestic users (% of total)	From other CPSS countries (% of total)
Belgium	81,849,361	17.65	65.56	60,543,849	23.86	57.13
Canada	21,760,171	28.74	57.61	18,598,512	33.63	53.69
France	93,872,958	27.30	59.09	86,561,569	29.61	49.48
Germany	137,938,782	25.13	49.34	136,546,180	25.38	41.87
Hong Kong SAR	37,228,155	11.64	62.08	31,466,578	13.78	63.81
Italy	50,109,289	12.30	68.23	49,661,371	12.41	57.95
Japan	50,065,261	14.25	68.78	46,060,885	15.49	69.18
Netherlands	78,289,731	38.72	51.62	72,582,457	41.77	45.36
Singapore	20,428,423	13.53	65.66	18,748,708	14.74	61.08
Sweden	25,827,594	15.87	57.86	19,627,271	20.88	46.78
Switzerland	75,145,292	21.48	62.44	66,751,289	24.18	55.45
United Kingdom	257,517,747	37.00	47.55	329,534,086	28.91	52.19
United States	284,705,134	29.81	38.76	307,878,610	27.57	46.16
<b>Total CPSS</b>	<b>1,214,737,898</b>	<b>27.34</b>	<b>51.86</b>	<b>1,244,561,365</b>	<b>26.68</b>	<b>50.62</b>
<b>Total non-CPSS</b>	<b>602,706,096</b>	<b>17.35</b>	<b>46.88</b>	<b>572,882,629</b>	<b>18.25</b>	<b>49.32</b>
<b>Total all countries</b>	<b>1,817,443,994</b>	<b>24.02</b>	<b>68.48</b>	<b>1,817,443,994</b>	<b>24.02</b>	<b>68.48</b>

Source: SWIFT.

Table 24c  
**Total SWIFT members, submembers and participants in CPSS countries**  
 In 2002

	Number of users of the SWIFT network			
	Members	Submembers	Participants	Total number of users
Belgium	21	46	19	86
Canada	13	36	10	62
France	59	124	64	247
Germany	111	113	54	278
Hong Kong SAR	21	156	25	202
Italy	134	87	37	258
Japan	124	100	37	261
Netherlands	25	49	33	107
Singapore	6	141	16	163
Sweden	8	10	13	31
Switzerland	98	84	68	250
United Kingdom	60	278	116	454
United States	91	316	219	626
<b>Total CPSS</b>	<b>771</b>	<b>1,540</b>	<b>714</b>	<b>3,025</b>
<b>Total non-CPSS</b>	<b>1,446</b>	<b>1,590</b>	<b>1,540</b>	<b>4,576</b>
<b>Total all countries</b>	<b>2,217</b>	<b>3,130</b>	<b>2,254</b>	<b>7,601</b>

Source: SWIFT.

Table 24d  
**Relative share of CPSS countries in SWIFT traffic, membership and shareholding**  
 In 2002

	Share of messages (%)		Share of total (%)		Share of equity holding	
	Sent	Received	Members	Users	Quantity	Percentage
Belgium	4.50	3.33	0.95	1.13	2,434	2.81
Canada	1.20	1.02	0.59	0.82	1,972	2.28
France	5.17	4.76	2.66	3.25	6,725	7.77
Germany	7.59	7.51	5.01	3.66	6,705	7.75
Hong Kong SAR	2.05	1.73	0.95	2.66	1,832	2.12
Italy	2.76	2.73	6.04	3.39	3,337	3.86
Japan	2.75	2.53	5.59	3.43	4,778	5.52
Netherlands	4.31	3.99	1.13	1.41	3,901	4.51
Singapore	1.12	1.03	0.27	2.14	573	0.66
Sweden	1.42	1.08	0.36	0.41	1,547	1.79
Switzerland	4.13	3.67	4.42	3.29	4,322	5.00
United Kingdom	14.17	18.13	2.71	5.97	5,563	6.43
United States	15.67	16.94	4.10	8.24	16,150	18.67
<b>Total CPSS</b>	<b>66.84</b>	<b>68.48</b>	<b>34.78</b>	<b>39.80</b>	<b>59,839</b>	<b>69.18</b>
<b>Total non-CPSS</b>	<b>33.16</b>	<b>31.52</b>	<b>65.22</b>	<b>60.20</b>	<b>26,664</b>	<b>30.82</b>
<b>Total all countries</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>86,503</b>	<b>100.00</b>

Source: SWIFT.

