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## **Turnover in foreign exchange and derivatives markets**

### Latest survey reveals substantial expansion

In April and June 2007, a global survey on foreign exchange and derivatives market activity was conducted. The triennial survey is coordinated by the Bank for International Settlements (BIS) and covers over 50 countries. The objective was to examine the size and structure of the markets, the significance of the individual financial centres and currencies, and the types and maturities of the transactions. As in the last survey in 2004, data on both traditional foreign exchange transactions and over-the-counter (OTC) derivatives were included.

The survey consisted of two parts, which covered different data and were conducted consecutively.

- The first part covered the turnover of domestic bank offices in the foreign exchange and derivatives markets in April 2007. This press release presents the results for banks operating in Switzerland. The figures on global turnover will be simultaneously published by the BIS ([www.bis.org/triennial.htm](http://www.bis.org/triennial.htm)).
- In the second part of the survey, data on the amounts outstanding on derivatives products (notional amounts and gross market values) as at 30 June 2007 was collected. This part only covers the transactions of internationally operating banking groups domiciled in Switzerland. A national evaluation would not make sense; the BIS will publish the global results at a later date.

The Swiss National Bank has participated in the survey for the seventh time. Data was requested from 23 banks that operate in Switzerland and have a sizeable share in the local foreign exchange and derivatives markets (2004: 22 banks). The collected data on turnover was broken down by type of transaction, counterparty, currency and contract term.

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## Summary of results

In April 2007, the 23 reporting institutions traded an average of USD 242 billion per trading day (19 days in total) in traditional foreign exchange markets and USD 73 billion in OTC derivatives markets. Turnover thus tripled compared with the last survey. In April 2004, the daily trading volume had averaged USD 79 billion in the traditional foreign exchange markets and USD 18 billion in OTC derivatives.

Steep growth rates were observed across all instruments. In the traditional foreign exchange markets, spot transactions, with a share of 45% of turnover (2004: 29%), and foreign exchange swaps, with 48% (2004: 62%), remained the most important instruments by far. Reversing the trend of previous years, spot transactions thus increased their proportion of turnover. In the OTC derivatives markets, interest rate swaps (75%) and foreign exchange options (16%) were the principal instruments used, with swaps again exhibiting above-average growth in turnover. In 2004, these two instruments had accounted for 57% and 34% of turnover respectively.

The maturities of forward transactions were very short in general; transactions with maturities of seven days or less captured 64% of turnover, while contracts with maturities ranging from eight days to one year accounted for 35%.

## Turnover in traditional foreign exchange markets

Turnover in the traditional foreign exchange markets<sup>1</sup>, as recorded by the 23 reporting institutions, totalled USD 4,592 billion in April 2007, averaging USD 242 billion per trading day. Daily turnover thus rose by USD 162 billion from April 2004.

### Instruments

Daily turnover amounted to USD 108 billion in spot transactions and USD 133 billion in forward transactions (comprising USD 17 billion in the form of outright forwards and USD 117 billion in foreign exchange swaps). Reversing the trend of the last few years, the turnover in spot transactions rose even more sharply (USD 85 billion) than that in foreign exchange swaps (USD 67 billion). This development is also due to trading desks for spot transactions having been shifted to Switzerland. Foreign exchange swaps and spot transactions were therefore the major instruments, accounting for 48% and 45% of turnover respectively. The proportion of outright forwards remained virtually steady at 7%.

### Counterparties

Once again, the banks' main trading partners in the traditional foreign exchange markets were banks abroad, accounting for 77%, or USD 186 billion, of daily turnover. These were followed by customers in Switzerland and abroad with 8%, or USD 19 billion, each. Banks

<sup>1</sup> Traditional foreign exchange transactions consist of spot and forward transactions in foreign exchange. Forward transactions are divided into outright forwards and foreign exchange swaps.

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in Switzerland accounted for a 7% share (USD 17 billion). Overall, this distribution remained relatively constant.

## Currencies

Euro/US dollar was the most traded currency pair, capturing 31% of total turnover, followed by US dollar/Swiss franc contracts with a 22% share. Other major currency pairs were sterling/US dollar (12%), US dollar/yen (9%) and euro/Swiss franc (6%).

## Maturities

Forward transactions continued to be concluded with mostly very short maturities. Contracts with maturities of seven days or less accounted for 64% of turnover, up from 58% in 2004. Contracts with maturities between eight days and one year captured 35% of turnover (2004: 41%). Once again, hardly any maturities exceeding one year were observed. Maturities differed considerably depending on the type of forward transaction. Whereas foreign exchange swaps were mostly concluded with maturities of up to seven days (70% share of turnover as against 64% in 2004), the maturities of outright forwards (76% of turnover compared with 73% in 2004) ranged primarily from eight days to one year.

## Turnover in OTC derivatives markets

Turnover in the OTC derivatives markets<sup>2</sup> also tripled. Between April 2004 and April 2007, the turnover surged from USD 365 billion to USD 1,379 billion, or from USD 18 billion to USD 73 billion per trading day. This increase was primarily due to the growth in turnover of OTC interest rate derivatives, which rose from USD 12 billion to USD 61 billion per trading day. Turnover of OTC foreign exchange derivatives also increased to reach USD 12 billion per trading day; a rise of 93%.

## Instruments

Interest rate derivatives, comprising 84% of turnover, were considerably more significant than foreign exchange derivatives, with a 16% share. In April 2004, the equivalent figures had been 66% and 34% respectively. The shift from foreign exchange derivatives to interest rate derivatives, which has been observed since 1998, thus continued. Among interest rate derivatives, swaps were the major instrument, with a 90% share of the daily turnover, corresponding to USD 54 billion. These were followed by forward rate agreements, with an average daily turnover of USD 6 billion. Once again, options were hardly used at all. By contrast, foreign exchange derivatives were traded almost exclusively in the form of options, while currency swaps played only a marginal role, with a share of less than 1%.

<sup>2</sup> OTC derivatives were divided into OTC foreign exchange derivatives and OTC interest rate derivatives.

Foreign exchange derivatives include currency swaps and foreign exchange options. Interest rate derivatives are divided into forward rate agreements, swaps and options.

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## Counterparties

As in the traditional foreign exchange markets, banks abroad were also the major counterparties in the OTC derivatives markets, attracting 89% of turnover, or USD 65 billion per trading day, up from 75% in April 2004. This increase came largely at the expense of the second most important counterparty category, namely customers abroad. Their share dropped from 13% in April 2004 to 6% in April 2007. Domestic counterparties (banks and customers), each with a 2% share of turnover, continued to play a subordinate role.

## Currencies

Interest rate derivatives turnover, which amounted to approximately USD 61 billion in total, involved the euro (46%), the pound sterling (18%), the Swiss franc (16%) and the US dollar (15%). Forward rate agreements were mostly concluded in euros and Swiss francs (more than 30% each), as well as in US dollars (13%) and sterling (10%). Where interest rate swaps are concerned, 47% were concluded in euros, followed by sterling (19%), US dollars (16%) and Swiss francs (14%). The major currencies involved in foreign exchange derivatives were the US dollar (47%), the Swiss franc (28%) and the euro (21%). The most common currency pairs were euro/yen (17%), euro/US dollar (14%), Swiss franc/ US dollar (12%), Swiss franc/euro (12%) and pound sterling/US dollar (11%). This breakdown was dominated by options, as was the entire market for foreign exchange derivatives. Quite strikingly, the few foreign exchange swaps were exclusively conducted in Swiss francs.

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# Annexe to the press release Turnover in foreign exchange and derivatives markets

Statistics  
Zurich 2007

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## Conventions used in this publication

0	Smaller than half of the unit used, but larger than zero (rounded zero).
—	No data reported or a rate of change or a difference was calculated based on two exactly equal values (absolute zero).
.	Figure unknown, confidential, not relevant, no longer reported or no reporting institutions (missing value).

## Notes

### **Rounding differences**

The figures in the tables are rounded. Where rounded figures are used in calculations (totals, balances, rates of change, shares), deviations from the exact values can result.

### **Further information**

publications@snb.ch

## Internet

### **OTC Derivatives Statistics (BIS)**

These tables are available on the internet at [www.snb.ch](http://www.snb.ch), *Publications, Foreign exchange and derivatives markets*. Data on the global survey are published on the website of the Bank for International Settlements (BIS) at [www.bis.org/triennial.htm](http://www.bis.org/triennial.htm).

Table 1

## Traditional foreign exchange markets: overview

	1995	1998	2001	2004	2007
<b>Total turnover</b> In USD billions	1 556	1 634	1 346	1 585	4 592
<b>Turnover per trading day</b> (share of total turnover in brackets) In USD millions					
<b>Total turnover</b>	86 462	81 719	70 823	79 239	241 692
<b>Instruments</b>					
Spot transactions	44 186 (51%)	34 464 (42%)	23 388 (33%)	23 168 (29%)	108 449 (45%)
Forward transactions	42 276 (49%)	47 255 (58%)	47 435 (67%)	56 071 (71%)	133 242 (55%)
Outright forwards	8 351 (10%)	5 465 (7%)	6 331 (9%)	6 653 (9%)	16 824 (7%)
Foreign exchange swaps	33 925 (39%)	41 790 (51%)	41 104 (58%)	49 418 (62%)	116 418 (48%)
<b>Counterparties</b>					
<b>Banks</b>	73 594 (85%)	68 581 (84%)	57 677 (81%)	63 841 (81%)	203 107 (84%)
Local	12 584 (15%)	11 146 (14%)	9 220 (13%)	8 040 (10%)	16 791 (7%)
Cross-border	61 010 (71%)	57 435 (70%)	48 457 (68%)	55 801 (70%)	186 316 (77%)
<b>Customers</b>	12 867 (15%)	13 139 (16%)	13 147 (19%)	15 398 (19%)	38 585 (16%)
Local	5 630 (7%)	6 332 (8%)	7 694 (11%)	9 547 (12%)	19 175 (8%)
Cross-border	7 237 (8%)	6 807 (8%)	5 453 (8%)	5 851 (7%)	19 409 (8%)
<b>Currency pairs</b>					
USD/CHF	22 876 (26%)	23 811 (29%)	18 664 (26%)	17 851 (23%)	52 676 (22%)
EUR/USD	.	.	24 595 (35%)	25 977 (33%)	74 009 (31%)
USD/DEM	20 231 (23%)	17 349 (21%)	.	.	.
USD/JPY	6 326 (7%)	8 895 (11%)	8 458 (12%)	6 256 (8%)	20 679 (9%)
GBP/USD	1 935 (2%)	3 842 (5%)	4 560 (6%)	9 937 (13%)	28 647 (12%)
EUR/CHF	.	.	4 446 (6%)	6 675 (8%)	13 680 (6%)
DEM/CHF	9 830 (11%)	5 574 (7%)	.	.	.
<b>Average exchange rates in April</b>					
USD in					
CHF	1.134	1.505	1.712	1.297	1.212
EUR	.	.	1.120	0.834	0.740
DEM	1.378	1.814	.	.	.
JPY	83.61	132.03	123.73	107.58	118.91
GBP	0.617	0.598	0.697	0.555	0.503
<b>Number of banks</b>	114	63	42	22	23
<b>Number of trading days</b>	18	20	19	20	19



Table 2

## Traditional foreign exchange markets: breakdown by currency

CHF against						USD against					Other	Total
USD	EUR	JPY	GBP	Other	Total	EUR	JPY	GBP	Other	Total		

### Turnover per trading day

In USD millions

	29 104	8 476	901	597	263	39 341	30 149	10 207	8 737	7 765	56 859	12 249	108 449
<b>Spot transactions</b>													
Banks	26 004	6 268	417	412	118	33 219	26 720	8 645	7 300	6 924	49 589	9 543	92 350
Customers	3 101	2 207	484	185	145	6 122	3 429	1 562	1 438	842	7 270	2 706	16 099
<b>Forward transactions</b>	<b>23 572</b>	<b>5 205</b>	<b>311</b>	<b>451</b>	<b>420</b>	<b>29 958</b>	<b>43 860</b>	<b>10 472</b>	<b>19 909</b>	<b>21 817</b>	<b>96 059</b>	<b>7 226</b>	<b>133 242</b>
Outright forwards	2 550	1 314	143	227	210	4 444	5 567	1 726	1 814	1 665	10 772	1 608	16 824
Banks	1 100	374	66	71	113	1 724	1 411	328	465	701	2 906	693	5 323
Customers	1 450	940	76	156	97	2 719	4 156	1 397	1 349	964	7 867	916	11 502
Foreign exchange swaps	21 022	3 891	168	224	210	25 514	38 293	8 747	18 095	20 152	85 286	5 617	116 418
Banks	19 089	3 149	92	146	149	22 624	35 409	8 051	16 472	18 852	78 783	4 027	105 434
Customers	1 933	742	76	78	61	2 890	2 884	696	1 623	1 300	6 503	1 591	10 984
<b>Total</b>	<b>52 676</b>	<b>13 680</b>	<b>1 212</b>	<b>1 049</b>	<b>683</b>	<b>69 299</b>	<b>74 009</b>	<b>20 679</b>	<b>28 647</b>	<b>29 582</b>	<b>152 918</b>	<b>19 475</b>	<b>241 692</b>

Table 3

## Traditional foreign exchange markets: further details

	1995	1998	2001	2004	2007
<b>Currencies traded</b>					
Share of total turnover					
USD	72%	83%	86%	85%	85%
EUR	.	.	45%	46%	43%
DEM	47%	35%	.	.	.
CHF	41%	39%	34%	33%	29%
Other	39%	43%	35%	36%	42%
Total	200%	200%	200%	200%	200%
<b>Currency pairs</b>					
Share of total turnover					
EUR/USD	.	.	35%	33%	31%
USD/DEM	23%	21%	.	.	.
USD/CHF	26%	29%	26%	23%	22%
GBP/USD	2%	5%	6%	13%	12%
USD/JPY	7%	11%	12%	8%	9%
EUR/CHF	.	.	6%	8%	6%
DEM/CHF	11%	7%	.	.	.
GBP/CHF	0.3%	0.6%	0.8%	1.0%	0.4%
JPY/CHF	0.7%	0.4%	0.6%	0.7%	0.5%
EUR/GBP	.	.	0.9%	1.8%	2.0%
DEM/GBP	2%	2%	.	.	.
EUR/JPY	.	.	2%	2%	3%
DEM/JPY	1%	2%	.	.	.
Other	27%	22%	10%	10%	16%
Total	100%	100%	100%	100%	100%
<b>Maturities and instruments</b>					
Share of turnover of instrument category					
Outright forwards					
Up to 7 days	45%	39%	19%	26%	23%
> 7 days to 1 year	54%	65%	70%	73%	76%
> 1 year	1%	2%	11%	1%	1%
Total	100%	100%	100%	100%	100%
Foreign exchange swaps					
Up to 7 days	89%	83%	66%	64%	70%
> 7 days to 1 year	10%	26%	34%	36%	30%
> 1 year	1%	2%	1%	1%	1%
Total	100%	100%	100%	100%	100%
All forward contracts					
Up to 7 days	80%	75%	60%	58%	64%
> 7 days to 1 year	19%	23%	39%	41%	35%
> 1 year	1%	2%	1%	1%	1%
Total	100%	100%	100%	100%	100%

Table 4

## OTC derivatives markets: overview

	1995	1998	2001	2004	2007
<b>Total turnover</b> In USD billions	79	316	288	365	1 379
<b>Turnover per trading day</b> (share of total turnover in brackets) In USD millions					
<b>Total turnover</b>	4 411	15 783	15 131	18 245	72 602
<b>Instruments</b>					
Foreign exchange derivatives	1 969 (45%)	9 900 (63%)	5 516 (36%)	6 196 (34%)	11 948 (16%)
Currency swaps	23 (1%)	250 (2%)	62 (0%)	32 (0%)	77 (0%)
Options	1 946 (44%)	9 650 (61%)	5 453 (36%)	6 164 (34%)	11 871 (16%)
Interest rate derivatives	2 442 (55%)	5 883 (37%)	9 615 (64%)	12 049 (66%)	60 654 (84%)
Forward rate agreements	1 623 (37%)	1 922 (12%)	7 846 (52%)	1 578 (9%)	6 270 (9%)
Swaps	483 (11%)	3 908 (25%)	1 729 (11%)	10 435 (57%)	54 319 (75%)
Options	336 (8%)	53 (0%)	40 (0%)	36 (0%)	66 (0%)
<b>Counterparties</b>					
Banks	3 139 (71%)	12 485 (79%)	13 713 (91%)	14 831 (81%)	66 425 (91%)
Local	602 (14%)	2 130 (13%)	898 (6%)	1 061 (6%)	1 715 (2%)
Cross-border	2 537 (58%)	10 355 (66%)	12 815 (85%)	13 770 (75%)	64 710 (89%)
Customers	1 271 (29%)	3 298 (21%)	1 417 (9%)	3 414 (19%)	6 177 (9%)
Local	835 (19%)	739 (5%)	871 (6%)	954 (5%)	1 754 (2%)
Cross-border	437 (10%)	2 559 (16%)	546 (4%)	2 460 (13%)	4 422 (6%)

Table 5

## OTC derivatives markets: breakdown by currency

CHF against						USD against					Other	Total
USD	EUR	GBP	JPY	Other	Total	EUR	GBP	JPY	Other	Total		

### Turnover per trading day

In USD millions

	USD	EUR	GBP	JPY	Other	Total	EUR	GBP	JPY	Other	Total	Other	Total
<b>Foreign exchange derivatives</b>	<b>1 446</b>	<b>1 378</b>	<b>192</b>	<b>177</b>	<b>141</b>	<b>3 334</b>	<b>1 635</b>	<b>1 370</b>	<b>1 113</b>	<b>1 442</b>	<b>5 559</b>	<b>521</b>	<b>11 948</b>
Currency swaps	60	18	0	0	0	77	0	0	0	0	0	0	77
Options	1 386	1 360	192	177	141	3 257	1 635	1 370	1 113	1 442	5 559	521	11 871

EUR	GBP	CHF	USD	AUD	SEK	JPY	NZD	NOK	CAD	DKK	Other	Total
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### Turnover per trading day

In USD millions

	EUR	GBP	CHF	USD	AUD	SEK	JPY	NZD	NOK	CAD	DKK	Other	Total
<b>Interest rate derivatives</b>	<b>27 745</b>	<b>10 869</b>	<b>9 762</b>	<b>9 365</b>	<b>866</b>	<b>995</b>	<b>349</b>	<b>185</b>	<b>148</b>	<b>85</b>	<b>90</b>	<b>195</b>	<b>60 654</b>
Forward rate agreements	2 074	616	1 977	811	136	225	179	0	141	0	9	102	6 270
Swaps	25 658	10 253	7 733	8 554	730	770	170	185	7	85	81	93	54 319
Options	12	0	52	1	0	0	0	0	0	0	0	0	66