



Survey of the Danish foreign-exchange and derivatives market  
turnover in April 2010

1 September 2010

SUMMARY

Turnover in the Danish foreign-exchange market rose by 24 per cent from 2007 to 2010, a considerable, but more moderate increase than the doubling seen in 2004-07. Turnover of interest-rate derivatives rose sharply, following a slight decline in 2004-07.

A considerable increase in turnover in the foreign-exchange market ...

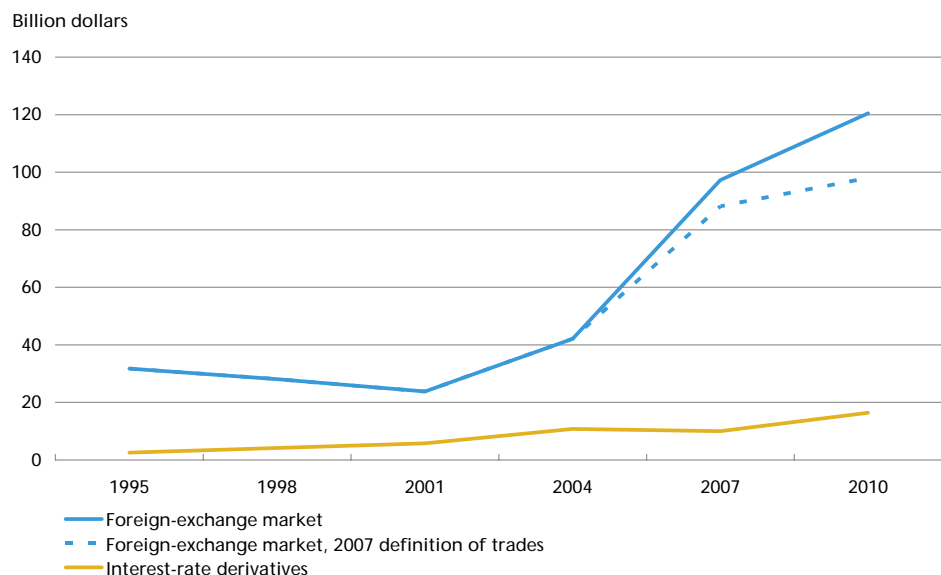
In April 2010, turnover in the Danish foreign-exchange market (spot, forward, FX swaps, currency swaps and FX options) totalled 120 billion dollars per banking day for all currency pairs. This is equivalent to an increase of 23 billion dollars, or 24 per cent, in relation to April 2007, of which 13 billion dollars is attributable to foreign-exchange transactions with no exchange of liquidity on the value date.<sup>1</sup>

... and a relatively large increase in the market for interest-rate derivatives

In April 2010, turnover of OTC interest-rate derivatives was 16.4 billion dollars per banking day. Trading in interest-rate derivatives has increased by 6.4 billion dollars, or 64 per cent, in relation to April 2007. Particularly turnover of interest-rate swaps has shown a pronounced increase.

TURNOVER IN THE DANISH FOREIGN-EXCHANGE AND DERIVATIVES MARKET  
PER BANKING DAY IN APRIL

Chart 1



Note: See footnote below.

<sup>1</sup> At the request of the Bank for International Settlements, BIS, the 2010 survey includes not only traditional foreign-exchange transactions, but also transactions not involving exchange of liquidity. A characteristic of these transactions is that only the difference between the exchange rates on the trade and value dates is exchanged. Trading by SAXO Bank falls under this category and consequently SAXO Bank has supplied data for the 2010 survey and for the revision of the 2007 survey. Data for 2004 and earlier does *not* include such transactions. SAXO Bank's daily turnover in the foreign-exchange market was 9 billion dollars in 2007, rising to 23 billion dollars in 2010.

Danish banks primarily trade foreign-exchange and interest-rate derivatives with foreign counterparties, especially foreign banks.

Information about the survey

Every third year the BIS conducts a survey of the global foreign-exchange and derivatives market in cooperation with 53 central banks worldwide. Danmarks Nationalbank collects and submits data from the Danish market participants. See page 6 and 7 for further details of the survey.

Denmark in the global foreign-exchange market

In April 2010, turnover in the Danish foreign-exchange market for trading in all currencies accounted for 2.4 per cent of global trade. This means that it is the ninth largest in the world. Total foreign-exchange trading has risen by 20 per cent since 2007 so that the Danish market has developed in line with the global trend.

### A CONSIDERABLE INCREASE IN TURNOVER IN THE FOREIGN-EXCHANGE MARKET

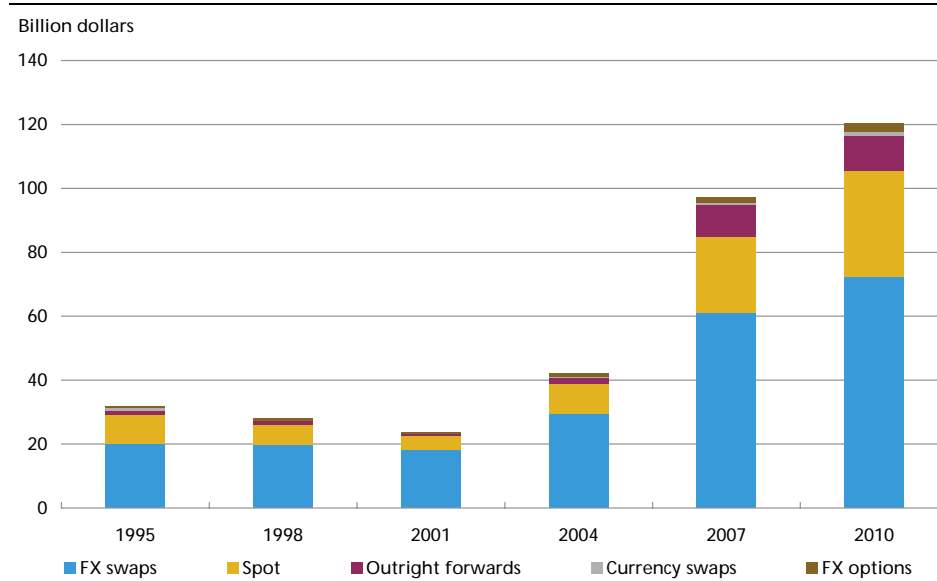
In April 2010, turnover in the Danish foreign-exchange market<sup>1</sup> was 120 billion dollars per banking day. Turnover of both spot transactions and all types of foreign-exchange derivatives was higher in April 2010 than in 2007.

A smaller increase in 2007-10 than in 2004-07

Turnover in the foreign-exchange market rose substantially from 2004 to 2007, both in Denmark and globally. From 2007 to 2010 the increase was more moderate, but nevertheless reached 24 per cent. The pronounced increase in global foreign-exchange trading from 2004 to 2007 was partly attributable to a major increase in foreign-exchange transactions without exchange of liquidity.

TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET PER BANKING DAY IN APRIL BY INSTRUMENT

Chart 2



<sup>1</sup> See page 6 and 7 for definitions of transactions in the survey.

FX swaps account for the largest share of the market

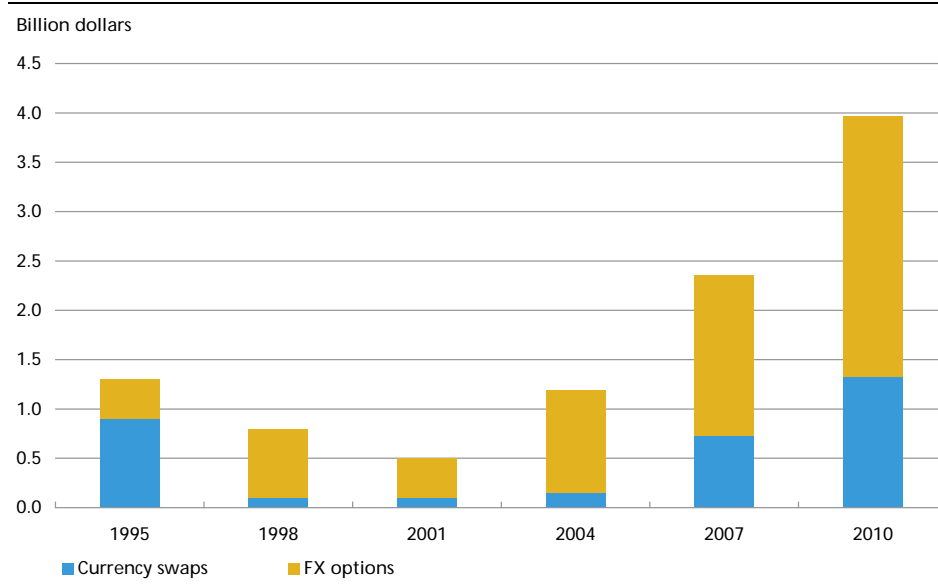
At 60 per cent, FX swaps account for the largest share by far of transactions in the market. Turnover of FX swaps has increased by 11 billion dollars, or 19 per cent, in relation to 2007. Spot transactions increased by 38 per cent, primarily as a result of a rising volume of transactions without exchange of liquidity.

Large increase in turnover of currency swaps and FX options

Trading in currency swaps and options showed the largest relative increases. Currency swaps grew by 81 per cent, while turnover in options was 63 per cent higher in April 2010 than in 2007. All the same, both types of instrument make up only a small share of turnover in the foreign-exchange market.

TURNOVER IN CURRENCY SWAPS AND FX OPTIONS

Chart 3



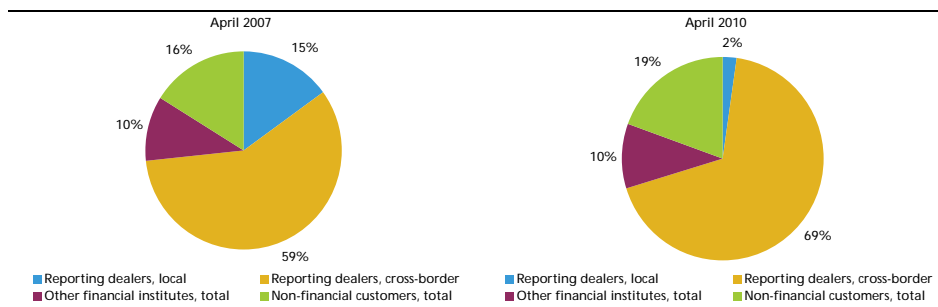
Counterparties are still mainly foreign banks ...

The Danish banks primarily trade with foreign banks. In April 2007 the share was 59 per cent; by April 2010 it had risen to 69 per cent, mainly at the expense of trading with other Danish banks.

The share of transactions where the counterparty is a non-financial customer has risen since 2007.

TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET IN APRIL 2007 AND 2010 BY COUNTERPART

Chart 4



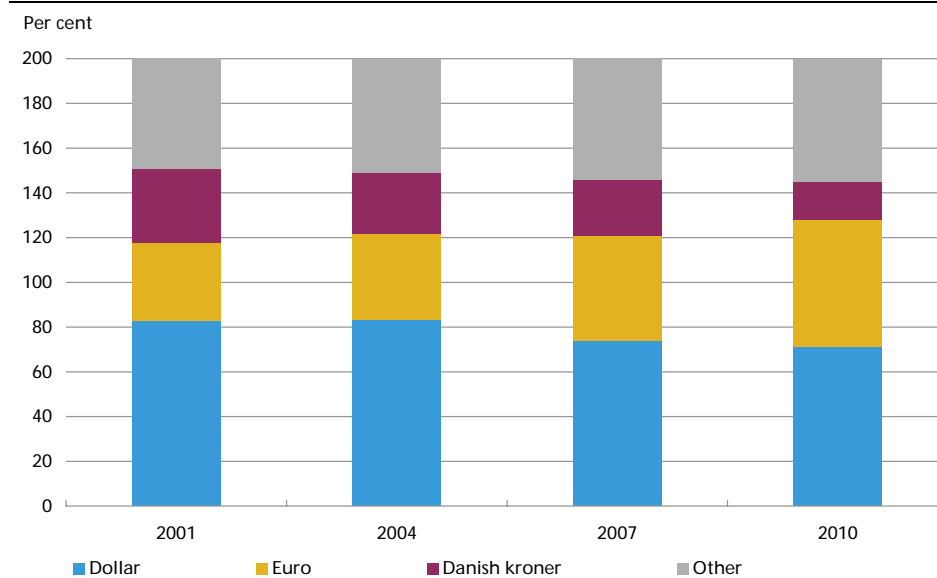
A rising share of euro transactions

The euro's share of transactions has been rising throughout the period since its introduction. The increase from 2007 to 2010 was at the expense of

both the dollar and the Danish krone. The dollar remains the most heavily traded currency, partly because FX swaps constitute the largest market, and it is traditionally dollar-based.

TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET PER BANKING DAY  
IN APRIL BY CURRENCY

Chart 5



Note: In the survey all foreign-exchange transactions are registered in currency pairs. This means that in the chart the transaction of each currency is counted twice and thus the currency share of the total turnover sums to 200 per cent.

## TURNOVER OF INTEREST-RATE DERIVATIVES

Pronounced increase in turnover of interest-rate derivatives ...

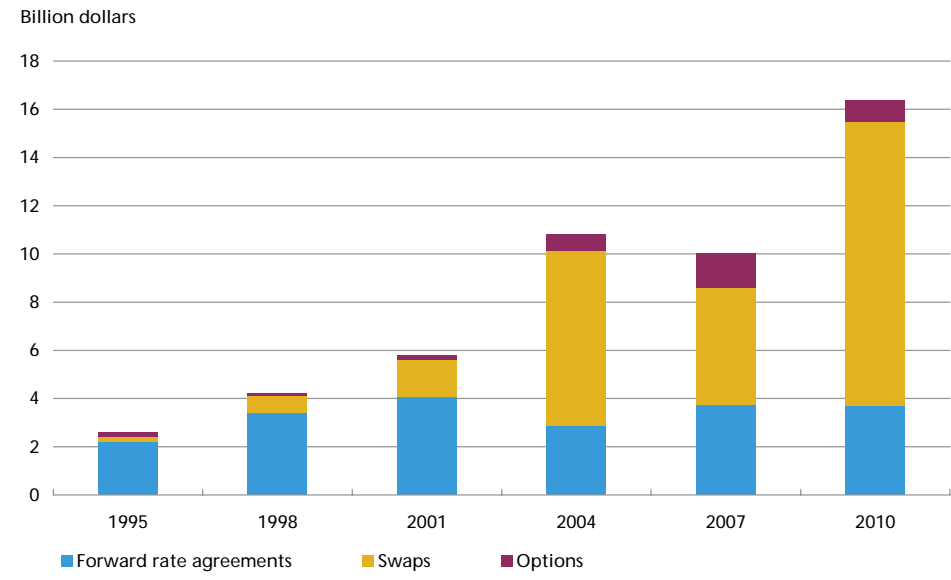
Total turnover of interest-rate derivatives was 16.4 billion dollars per banking day in April 2010, an increase of 64 per cent in relation to April 2007, when trading averaged 10 billion dollars per banking day.

... primarily reflecting rising turnover of interest-rate swaps

The overall increase in turnover is primarily attributable to growing trade in interest-rate swaps. Since 2004, interest-rate swaps have accounted for the major share of turnover in interest-rate derivatives, and this share has now increased further.

TURNOVER OF INTEREST-RATE DERIVATIVES PER BANKING DAY IN APRIL BY INSTRUMENT

Chart 6



Foreign counterparties are still dominant

Trading in interest-rate derivatives mainly takes place with foreign counterparties, who accounted for 90 per cent of turnover in April 2010. Foreign banks accounted for 45 per cent of turnover, while foreign "other financial institutions" accounted for 38 per cent.

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**SUPPLEMENTARY INFORMATION**

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**Population**

The 2010 international survey comprises the largest market players in 53 countries. The Danish part of the survey comprises six banks that are estimated to account for more than 95 per cent of the turnover of foreign-exchange and derivatives products covered by the survey. Reporting for the survey takes place on the basis of the country location of the trade desk, meaning that the comparability of the individual surveys may be affected by relocation of intra-group activities.

**Sources and methodologies**

The survey solely comprises OTC contracts concluded and settled directly between two parties. All reported trades are concluded by the banks' entities in Denmark and include intra-group trades concluded on market terms. Duplicated reporting of transactions between two local reporting dealers, i.e. the two counterparties, has been eliminated. Turnover is stated as the nominal or notional value of all trades and contracts concluded on all banking days in April 2010.

Comments in the report are based on turnover per banking day; in April 1998 and 2004 there were 19 banking days, in April 2001, 2007 and 2010 there were 18.

Results are stated in billion dollars in order to ensure comparability between national surveys. Consequently, the exchange rate at the time of reporting affects the turnover. This means that e.g. two identical contracts in kroner for yen concluded in 2007 and 2010, respectively, are included in the survey at different values, depending on the exchange rates. A more true picture of the development is achieved by adjusting for exchange rate developments. However, they have had little impact on the overall development from 2007 to 2010.

For all contracts, turnover is broken down by currency and counterparty, and for outright forwards and FX swaps also by original maturity. Turnover is broken down by three counterparty categories, namely other reporting dealers, other financial institutions and non-financial customers. For each category, a distinction is also made between local and cross-border counterparties.

Unlike the 2004 survey, the 2007 and 2010 surveys also include foreign-exchange transactions (spot transactions, outright forwards and currency swaps), without exchange of liquidity on the value date. Instead of an actual exchange of liquidity, only the difference between the exchange rates on the trade and value dates is exchanged.

The following instruments are included in the survey:

- Spot transaction: Foreign-exchange trade for settlement within two banking days of the trade date.
- Outright forward: Foreign-exchange trade for settlement later than two banking days after the trade date.

- FX swap: Transaction that combines a spot transaction with a forward transaction in the opposite direction.
- Currency swap: A transaction involving ongoing swaps of interest payments and principals in different currencies.
- FX option: A transaction that grants one party the right, but not the obligation, to buy or sell an amount in a given currency at an agreed price at an agreed future point in time.
- Forward rate agreement (FRA): An agreement to fix a rate of interest for an agreed amount over a future period.
- Interest rate swap: An agreement to swap interest payments for a period. Typically, fixed interest rates are swapped for variable interest rates.
- Interest-rate option: A transaction that grants one party the right, but not the obligation, to receive or pay a specified rate of interest on an agreed principal in a future period.

The results of the global survey can be found at the BIS website, <http://www.bis.org/publ/rpfx10.htm>. The website also provides further information on sources and methodologies (Statistical notes).

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Future publications	Article in Danmarks Nationalbank, Monetary Review, 4th Quarter 2010.

## TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET BY INSTRUMENT

Table 1

	April 1995	April 1998	April 2001	April 2004	April 2007	April 2010
	Billion dollars per banking day					
Spot .....	8.9	6.3	4.3	9.2	23.9	33.0
Outright forwards .....	1.5	1.1	0.7	2.1	10.0	11.1
FX swaps .....	20.1	19.9	18.3	29.6	61.0	72.4
Currency swaps .....	0.9	0.1	0.1	0.2	0.7	1.3
FX options .....	0.4	0.7	0.4	1.0	1.6	2.6
Total foreign-exchange market .....	31.8	28.1	23.8	42.1	97.2	120.5
	Billion dollars in April					
Total foreign-exchange market .....	541	534	428	800	1,750	2,168

## TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET BY COUNTERPART

Table 2

	Foreign exchange total			Foreign exchange total		
	April 2004	April 2007	April 2010	April 2004	April 2007	April 2010
	Billion dollars per banking day			Percentage share		
Reporting dealers .....	31.6	71.3	84.9	75	73	71
Local .....	1.4	14.6	2.8	3	15	2
Cross-border .....	30.2	56.7	82.2	72	58	68
Other financial institutions .....	5.5	10.2	12.2	13	10	10
Local .....	0.7	4.3	1.8	2	4	1
Cross-border .....	4.8	5.8	10.4	11	6	9
Non-financial customers .....	5.0	15.8	23.3	12	16	19
Local .....	2.6	7.4	5.1	6	8	4
Cross-border .....	2.4	8.4	18.2	6	9	15
Total .....	42.1	97.2	120.5	100	100	100

## TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET BY COUNTERPART AND INSTRUMENT

Table 3

	April 2010				
	Spot	Outright forwards	FX swaps	Currency swaps	FX options
	Billion dollars per banking day				
Reporting dealers .....	13.5	7.0	61.7	1.0	1.6
Local .....	0.5	0.4	1.3	0.3	0.2
Cross-border .....	13.0	6.6	60.4	0.7	1.4
Other financial institutions .....	3.0	2.6	5.9	0.3	0.3
Local .....	0.1	0.5	1.0	0.1	0.0
Cross-border .....	2.9	2.1	4.9	0.2	0.3
Non-financial customers .....	16.5	1.6	4.6	0.0	0.6
Local .....	1.3	1.1	2.6	0.0	0.1
Cross-border .....	15.2	0.5	2.0	0.0	0.5
Total .....	33.0	11.1	72.4	1.3	2.6

TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET BY CURRENCY Table 4

	Foreign exchange total			Foreign exchange total		
	April 2004	April 2007	April 2010	April 2004	April 2007	April 2010
	Billion dollars per banking day			Percentage share		
Danish kroner v. dollar .....	8.6	13.1	11.0	20	13	9
Danish kroner v. euro .....	2.3	9.4	8.0	5	10	7
Danish kroner v. other currencies .....	0.8	1.6	1.8	2	2	1
Euro v. dollar .....	10.2	24.1	38.5	24	25	32
Euro v. other currencies .....	3.7	12.3	21.6	9	13	18
Dollar v. other currencies .....	16.3	34.7	36.2	39	36	30
Other currency pairs .....	0.4	2.0	3.3	1	2	3
<b>Total .....</b>	<b>42.1</b>	<b>97.2</b>	<b>120.5</b>	<b>100</b>	<b>100</b>	<b>100</b>
Danish kroner, total* .....	11.6	24.1	20.8	28	25	17
Dollar, total* .....	35.1	71.9	85.8	83	74	71
Euro, total* .....	16.1	45.8	68.1	38	47	57
Other currency pairs, total* .....	21.4	52.7	66.2	51	54	55

\* Since each currency combination is counted twice, e.g. "Danish kroner v. dollar" is counted both in "Danish kroner, total" and "Dollar, total". Thus the total turnover in the last four rows sum to 200 per cent.

TURNOVER IN THE DANISH FOREIGN-EXCHANGE MARKET BY CURRENCY AND COUNTERPART Table 5

	April 2010				
	Spot	Outright forwards	FX swaps	Currency swaps	FX options
	Billion dollars per banking day				
Danish kroner v. dollar .....	0.3	0.9	9.7	0.1	0.0
Danish kroner v. euro .....	2.3	0.9	4.6	0.0	0.2
Danish kroner v. other currencies .....	0.3	0.8	0.7	0.0	0.0
Euro v. dollar .....	15.1	3.1	18.4	0.5	1.3
Euro v. other currencies .....	6.2	2.0	12.4	0.4	0.7
Dollar v. other currencies .....	7.4	1.9	26.3	0.3	0.2
Other currency pairs .....	1.4	1.5	0.3	0.0	0.1
<b>Total .....</b>	<b>33.0</b>	<b>11.1</b>	<b>72.4</b>	<b>1.3</b>	<b>2.6</b>
Danish kroner, total* .....	2.9	2.6	15.0	0.1	0.3
Dollar, total* .....	22.9	5.9	54.4	0.9	1.6
Euro, total* .....	23.6	6.1	35.4	0.9	2.2
Other currency pairs, total* .....	16.7	7.7	39.9	0.7	1.1

\* Since each currency combination is counted twice, e.g. "Danish kroner v. dollar" is counted both in "Danish kroner, total" and "Dollar, total". Thus the total turnover in the last four rows sum to 200 per cent.

TURNOVER IN OUTRIGHT FORWARDS AND FX SWAPS BY ORIGINAL MATURITY Table 6

	Outright forwards			FX swaps		
	April 2004	April 2007	April 2010	April 2004	April 2007	April 2010
	Percentage share					
7 days or less .....	22	27	69	69	76	62
Over 7 days and up to 1 year .....	76	72	31	30	24	38
Over 1 year .....	1	1	1	1	0	0
<b>Total .....</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

## TURNOVER IN OTC INTEREST-RATE DERIVATIVES BY INSTRUMENT

Table 7

	April 2001	April 2004	April 2007	April 2010
Billion dollars per banking day				
FRAs .....	4.1	2.9	3.7	3.7
Swaps .....	1.5	7.2	4.9	11.8
Options .....	0.2	0.7	1.4	0.9
<b>Total interest-rate instruments .....</b>	<b>5.8</b>	<b>10.8</b>	<b>10.0</b>	<b>16.4</b>
Billion dollars in April				
<b>Total interest-rate instruments .....</b>	<b>104</b>	<b>205</b>	<b>180</b>	<b>295</b>

## TURNOVER IN OTC INTEREST-RATE DERIVATIVES BY INSTRUMENT AND COUNTERPART

Table 8

	Total			Total			By instrument in April 2010		
	April 2004	April 2007	April 2010	April 2004	April 2007	April 2010	FRAs	swaps	Options
Billion dollars per banking day      Percentage share      Billion dollars per banking day									
Reporting dealers .....	8.00	6.60	8.34	74	66	51	2.06	6.07	0.21
Local .....	0.47	1.94	0.98	4	19	6	0.05	0.92	0.01
Cross-border .....	7.53	4.66	7.35	70	47	45	2.00	5.15	0.20
Other financial institutions ..	1.87	1.84	6.53	17	18	40	1.41	5.01	0.12
Local .....	0.14	0.46	0.28	1	4	2	0.19	0.06	0.03
Cross-border .....	1.74	1.38	6.25	16	14	38	1.21	4.94	0.09
Non-financial customers .....	0.95	1.61	1.53	9	16	9	0.23	0.73	0.57
Local .....	0.08	0.74	0.30	1	7	2	0.03	0.21	0.07
Cross-border .....	0.86	0.87	1.23	8	9	7	0.21	0.51	0.51
<b>Total .....</b>	<b>10.82</b>	<b>10.05</b>	<b>16.40</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>3.70</b>	<b>11.80</b>	<b>0.91</b>