



Survey of the Danish foreign-exchange and derivatives market
turnover in April 2007

25 September 2007

SUMMARY

An internationally coordinated survey ...

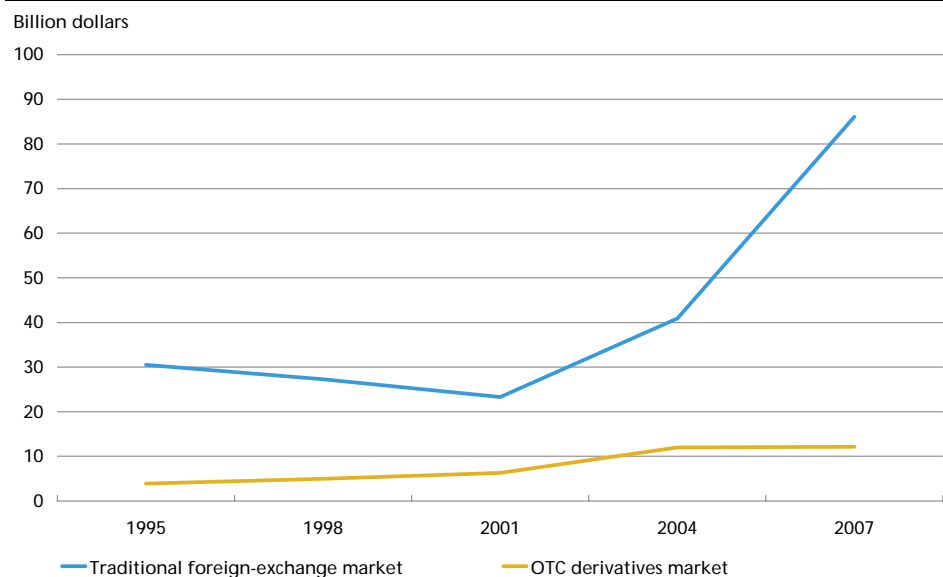
In April 2007, Danmarks Nationalbank conducted a survey of the turnover in the Danish markets for foreign exchange (spot transactions, outright forwards and FX swaps) and OTC derivatives (foreign-exchange and interest-rate derivatives). The survey is part of a major international survey that has been conducted every third year since 1989, coordinated by the Bank for International Settlements, BIS.

... shows a significant increase in the turnover in the foreign-exchange market and a steady development in the derivatives market

In April 2007, the Danish banks that participated in the survey reported turnover in the foreign-exchange market of 86.1 billion dollars per banking day, which means that turnover had more than doubled since the 2004 survey, cf. Chart 1. Growth rates were high for all three instruments, but especially FX swaps, which already account for by far the largest share, contributed strongly to the overall increase. The turnover of OTC derivatives was at more or less the same level as in 2004. This development masked a small rise in turnover of foreign-exchange derivatives and a small fall in interest-rate derivatives. The euro's share of foreign-exchange transactions had increased since 2004. If the general weakening of the dollar since April 2004 is taken into account, the actual increase in turnover in the foreign-exchange market was 96 per cent, while trade in OTC derivatives had declined by 9 per cent in relation to 2004.

The euro's share of foreign-exchange transactions has increased

TURNOVER IN THE DANISH FOREIGN-EXCHANGE AND DERIVATIVES MARKET PER BANKING DAY IN APRIL Chart 1



TURNOVER IN THE FOREIGN-EXCHANGE MARKET ROSE SUBSTANTIALLY

A strong increase in turnover in the foreign-exchange market

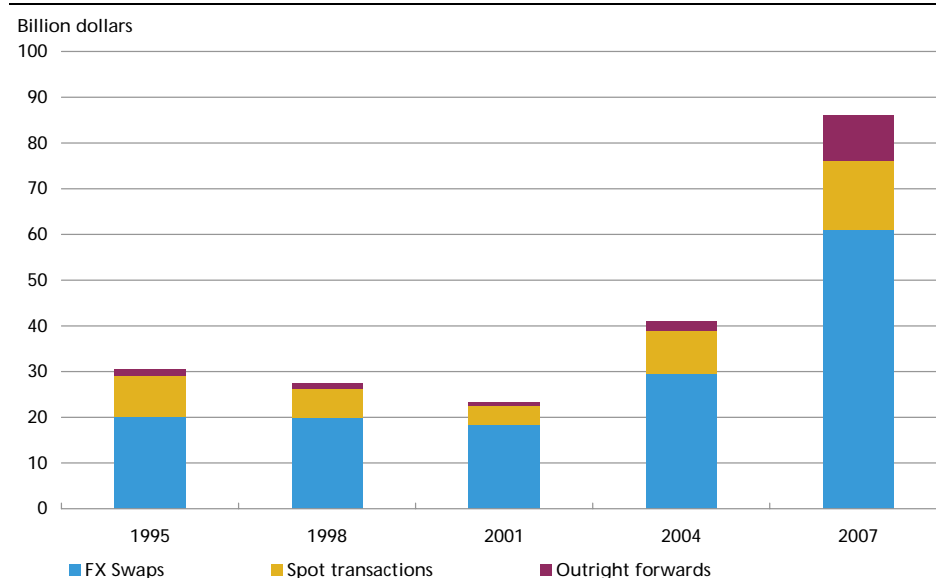
In April 2007, the reporting Danish banks had average daily turnover of 86.1 billion dollars in traditional foreign-exchange instruments (spot transactions, outright forwards and FX swaps). Consequently, turnover had more than doubled since the previous survey in April 2004, cf. Chart 2.

FX swaps account for by far the largest share

The increase in turnover in the foreign-exchange market was observed across all instrument types. As previously, the most widely traded instrument type was FX swaps, accounting for around 70 per cent of total turnover in the foreign-exchange market in 2007. Turnover of this instrument type had more than doubled since 2004. Trade in spot transactions and outright forwards had also increased considerably. Outright forwards showed the largest increase in per cent, growing by as much as 376 per cent.

TURNOVER OF TRADITIONAL FOREIGN-EXCHANGE INSTRUMENTS PER BANKING DAY IN APRIL BROKEN DOWN BY INSTRUMENT

Chart 2



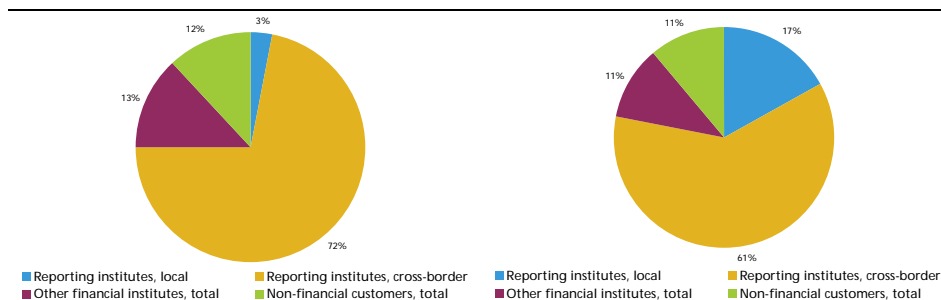
Most transactions are still with foreign banks as counterparties ...

Higher turnover was reported for all counterparty groups, i.e. "local and cross-border reporting institutes", "other financial institutes" and "non-financial customers". The percentage distribution of turnover among the groups was by and large the same as in the 2004 survey. This means that trade among reporting institutes was still dominant, accounting for 78 per cent of turnover (this includes institutes participating in the Danish survey as well as those participating in other countries). Foreign counterparties still accounted for the largest share, but Danish institutes recorded the highest increase. In 2004, only 3 per cent of turnover in the foreign-exchange market was transacted with a Danish counterparty; in 2007 it was 17 per cent, cf. Chart 3.

... but Danish banks have gained a much larger share

TURNOVER OF TRADITIONAL FOREIGN-EXCHANGE INSTRUMENTS IN APRIL 2004 AND 2007 BROKEN DOWN BY COUNTERPART

Chart 3

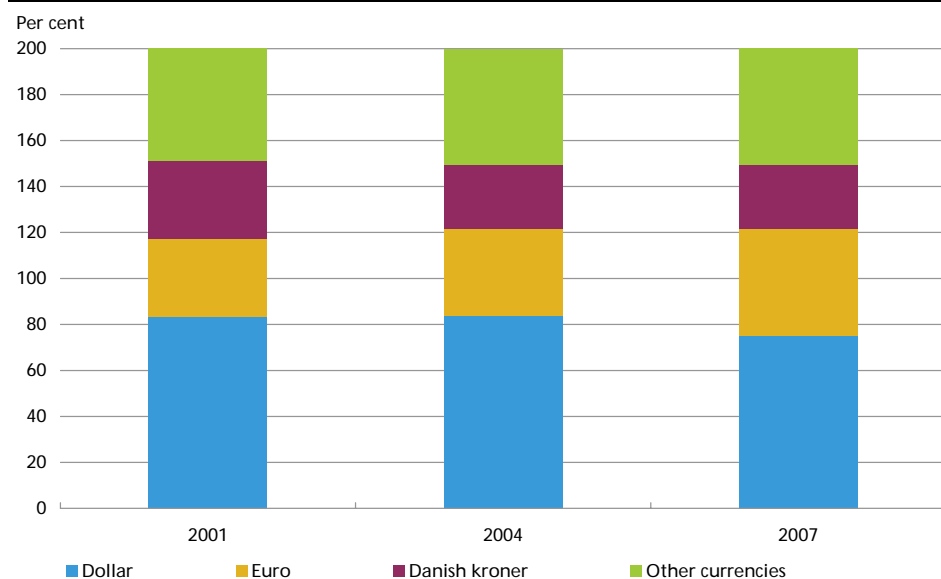


More transactions are denominated in euro

Compared with previous surveys, minor changes had taken place in the distribution by currency, in that the share of euro transactions had increased at the expense of dollar transactions, cf. Chart 4. This trend is purely attributable to FX swap contracts. In 2004, 95 per cent of all contracts had one leg in dollars, while the equivalent 2007 figure was 80 per cent. The euro was a transaction currency in 24 per cent of all FX contracts in 2004, rising to 37 per cent in 2007. The shares of Danish kroner and "other currencies" were virtually unchanged in 2007 compared with 2004.

TURNOVER OF TRADITIONAL FOREIGN-EXCHANGE INSTRUMENTS PER BANKING DAY IN APRIL BROKEN DOWN BY CURRENCY

Chart 4



Note: In the survey all foreign-exchange transactions are registered in currency pairs. This means that in Chart 4 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

Declining turnover of interest-rate derivatives ...

Aggregate turnover of interest-rate derivatives was 10.0 billion dollars per banking day in April 2007, cf. Chart 5. This was a decline by 7 per cent compared with 2004.

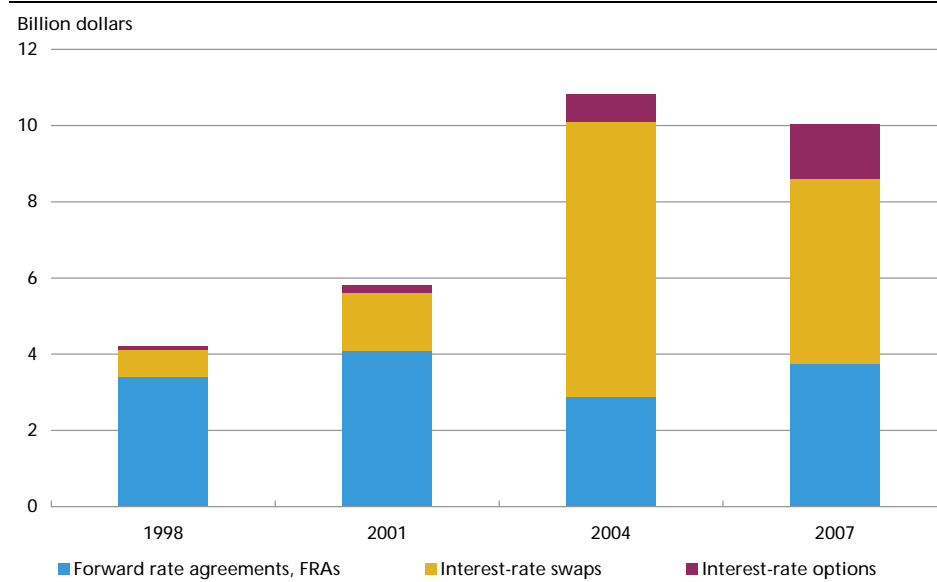
... is solely attributable to lower turnover in interest-rate swaps

The declining turnover in the market for interest-rate derivatives was solely a result of lower turnover of interest-rate swaps, which fell by 2.3 billion dollars per banking day. Growth in turnover of interest-rate swaps had,

however, been unusually high in 2004. In contrast, turnover in interest-rate options and FRAs had increased compared with April 2004, by 105 per cent for interest-rate options and 29 per cent for FRAs. Despite the fall, interest-rate swaps were still the most traded type of interest-rate derivative in April 2007.

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

Chart 5



Foreign counterparties are still dominant

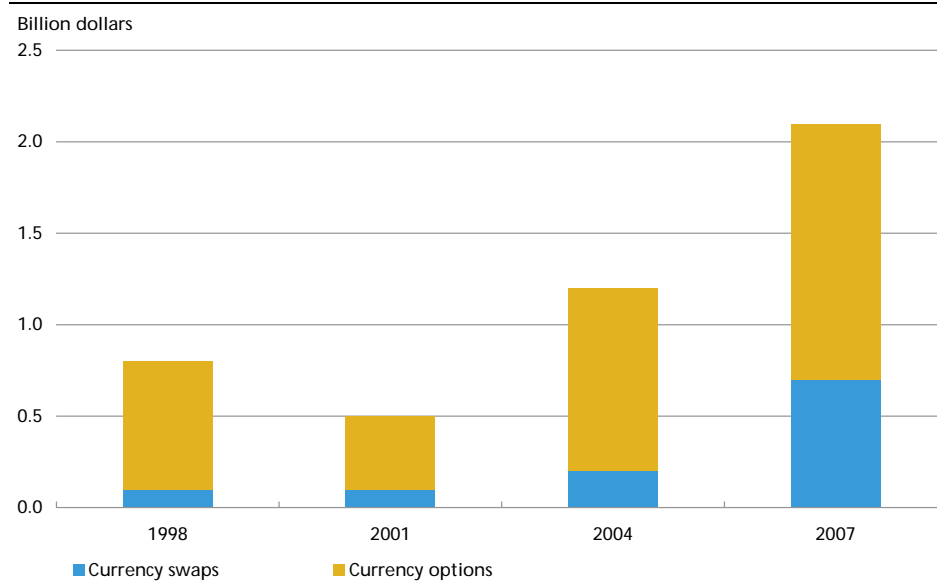
In general, turnover of interest-rate derivatives was concentrated on very few reporting institutes. Compared with the 2004 survey, there were fewer contracts with foreign counterparties, which nonetheless accounted for 70 per cent of turnover in 2007. The currency distribution varied greatly across product types. FRAs were mainly denominated in the Nordic currencies, predominantly Norwegian kroner. However, the euro has gained considerable ground since 2004. Interest-rate swaps were primarily denominated in euro or dollars, while only a small share was in the Nordic currencies.

TURNOVER OF FOREIGN-EXCHANGE DERIVATIVES

Increasing turnover of foreign-exchange derivatives

Unlike the interest-rate derivatives market, the foreign-exchange derivatives market (currency swaps and currency options) grew from 2004 to 2007. Turnover in OTC foreign-exchange derivatives was 2.1 billion dollars per banking day in April 2007, up from 1.2 billion dollars in 2004. The increase in turnover compared with 2004 was attributable to both currency swaps and currency options, cf. Chart 6.

TURNOVER OF FOREIGN-EXCHANGE DERIVATIVES PER BANKING DAY IN APRIL
BROKEN DOWN BY TYPE OF INSTRUMENT Chart 6



Opposite counterparty distributions for the two instrument types

In April 2007, as previously, currency swaps were primarily traded with cross-border reporting counterparties. This category accounted for 70 per cent of turnover in April 2007. In contrast, 62 per cent of currency option turnover was with local counterparties. Both local reporting institutes and local non-financial institutes were well represented as purchasers of currency options.

A higher share of contracts denominated in euro

The currency distribution for both currency swaps and currency options showed a predominance of dollars and euro, in that 44 and 69 per cent, respectively, of all trades in foreign-exchange derivatives had one leg in these currencies. Turnover in euro had thus gained ground at the expense of dollars, since the corresponding 2004 figures were 59 and 64 per cent. Compared with 2004, slightly more traded contracts had one leg in Danish kroner.

SUPPLEMENTARY INFORMATION

Population

The 2007 international survey comprises the largest market players in 54 countries. The Danish part of the survey comprises 6 banks that are estimated to account for more than 95 per cent of the turnover covered by the survey. Reporting for the survey takes place on the basis of the country location of the trade desk, so 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 institutes has been eliminated. Turnover is stated as the gross value of all trades concluded in April 2007, i.e. the sum of the numerical purchase and sales values.

Comments in the special report are based on turnover per banking day; in April 1998 and 2004 there were 19 banking days, in April 2001 and 2007 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 2004 and 2007, 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. The text refers to exchange-rate adjustments made by calculating the value of trade in 2004 using the exchange rates applying in 2007.

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 institutes and non-financial customers. For each counterparty category, a distinction is also made between local and cross-border counterparties.

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.
- Currency 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, www.bis.org/triennial.htm. The website also provides further information on sources and methodologies (Statistical notes).

Contact Rune Egstrup, tel. (+45) 33 63 68 23, e-mail re@nationalbanken.dk

Future publications Article in Danmarks Nationalbank, Monetary Review, 4th Quarter 2007.

Table 1 Turnover of traditional foreign-exchange contracts broken down by type of instrument

	April 1992	April 1995	April 1998	April 2001	April 2004	April 2007
Billion dollars per banking day						
Spot transactions	10.5	8.9	6.3	4.3	9.2	15.1
Outright forwards	2.0	1.5	1.1	0.7	2.1	10.0
FX swaps	14.4	20.1	19.9	18.3	29.6	61.0
Total foreign-exchange contracts ..	26.9	30.5	27.3	23.3	40.9	86.1
Billion dollars in April						
Total foreign-exchange contracts ..	511	519	519	419	777	1,550

Table 2 Turnover of traditional foreign-exchange contracts broken down by counterpart

	Total			Total			By instrument in April 2007		
	April 2001	April 2004	April 2007	April 2001	April 2004	April 2007	Spot transactions	Outright forwards	FX swaps
Billion dollars per banking day			Percentage share			Billion dollars per banking day			
Reporting dealers	17.4	30.7	66.9	75	75	78	10.3	7.0	49.6
Local	1.1	1.3	14.2	5	3	17	1.4	0.2	12.6
Cross-border	16.3	29.4	52.7	70	72	61	8.9	6.8	37.0
Other financial institutions ...	3.2	5.4	9.4	14	13	11	1.6	0.9	6.9
Local	0.4	0.7	4.1	2	2	5	0.3	0.6	3.2
Cross-border	2.8	4.7	5.3	12	11	6	1.3	0.3	3.7
Non-financial customers	2.7	4.8	9.8	12	12	11	3.2	2.1	4.5
Local	1.6	2.5	6.8	7	6	8	2.1	1.6	3.1
Cross-border	1.1	2.3	3.0	5	6	3	1.1	0.5	1.4
Total	23.3	40.9	86.1	100	100	100	15.1	10.0	61.0

Table 3 Turnover of traditional foreign-exchange contracts broken down by currency pair

	Total				Spot transactions		Outright forwards		FX swaps	
	April 2004	April 2007	April 2004	April 2007	April 2004	April 2007	April 2004	April 2007	April 2004	April 2007
Billion dollars per banking day			Percentage share		Billion dollars per banking day					
Danish kroner v. US dollar	8.5	13.0	21	15	0.2	1.0	0.3	1.1	8.1	10.9
Danish kroner v. euro	2.2	9.3	5	11	1.5	2.5	0.3	1.0	0.5	5.8
Danish kroner v. other currencies	0.7	1.5	2	2	0.2	0.3	0.2	0.4	0.3	0.8
Euro v. US dollar	9.8	20.9	24	24	3.5	5.1	0.3	4.1	6.0	11.7
Euro v. other currencies	3.3	9.9	8	11	2.3	3.6	0.4	1.2	0.5	5.1
US dollar v. other currencies	16.0	30.7	39	36	1.4	2.4	0.4	1.8	14.1	26.5
Other currency pairs	0.3	0.8	1	1	0.1	0.2	0.1	0.4	0.2	0.2
I alt	40.9	86.1	100	100	9.2	15.1	2.1	10.0	29.6	61.0
Turnover in which the currency enters into										
Danish kroner	11.5	23.8	28	28	1.8	3.8	0.9	2.5	8.8	17.5
US dollar	34.4	64.6	84	75	5.1	8.5	1.1	7.0	28.2	49.1
Euro	15.4	40.1	38	46	7.3	11.2	1.0	6.3	7.0	22.6

Table 4 Turnover of traditional foreign-exchange contracts broken down by original maturity

	Outright forwards			FX swaps		
	April 2001	April 2004	April 2007	April 2001	April 2004	April 2007
Percentage share						
Seven days or less	16	22	27	63	69	76
Over seven days and up to one year	83	76	72	35	30	24
Over one year	1	1	1	1	1	0
Total	100	100	100	100	100	100

Table 5 Turnover of foreign-exchange derivatives and interest-rate derivatives broken down by type of instrument

	April 1998	April 2001	April 2004	April 2007
Billion dollars per banking day				
Foreign-exchange derivatives				
Currency swaps	0.1	0.1	0.2	0.7
Currency options	0.7	0.4	1.0	1.4
Total foreign-exchange derivatives	0.8	0.5	1.2	2.1
Interest-rate derivatives				
Forward-rate agreements (FRAs)	3.4	4.1	2.9	3.7
Interest-rate swaps	0.7	1.5	7.2	4.9
Interest-rate options	0.1	0.2	0.7	1.4
Total interest-rate derivatives	4.2	5.8	10.8	10.0
Billion dollars in April 2007				
Total foreign-exchange derivatives	15	9	23	38
Total interest-rate derivatives	78	104	205	180

Table 6 Turnover of interest-rate derivatives broken down by counterpart

	Total			Total			By instrument in April 2007		
	April 2001	April 2004	April 2007	April 2001	April 2004	April 2007	Forward rate agreements (FRAs)	Interest-rate swaps	Interest-rate options
Billion dollars per banking day Percentage share Billion dollars per banking day									
Reporting dealers	4.69	8.00	6.60	81	74	66	2.58	3.61	0.41
Local	1.00	0.47	1.94	17	4	19	0.49	1.32	0.13
Cross-border	3.69	7.53	4.66	64	70	47	2.09	2.29	0.28
Other financial institutions ..	0.86	1.87	1.84	15	17	18	0.39	1.06	0.39
Local	0.21	0.14	0.46	4	1	4	0.01	0.42	0.03
Cross-border	0.65	1.74	1.38	11	16	14	0.38	0.64	0.36
Non-financial customers	0.24	0.95	1.61	4	9	16	0.77	0.20	0.64
Local	0.05	0.08	0.74	1	1	7	0.15	0.09	0.50
Cross-border	0.19	0.86	0.87	3	8	9	0.62	0.11	0.14
Total	5.79	10.82	10.05	100	100	100	3.74	4.87	1.44