

DANMARKS NATIONALBANK

SURVEY OF THE DANISH FOREIGN EXCHANGE AND OTC DERIVATIVES MARKET

2016



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**SURVEY OF THE DANISH
FOREIGN EXCHANGE AND
OTC DERIVATIVES MARKET
IN 2016**

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Survey of the Danish foreign exchange and OTC derivatives market in 2016 is available on Danmarks Nationalbank's website: www.nationalbanken.dk/en/ under Statistics – Find statistics – Special reports

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SURVEY OF THE DANISH FOREIGN EXCHANGE AND OTC DERIVATIVES MARKET IN 2016

SUMMARY

- Reduced turnover of foreign exchange derivatives, driven by outright forwards and FX swaps, vis-à-vis financial counterparties, while turnover vis-à-vis non-financial counterparties is increasing.
- Turnover of interest rate derivatives back at the pre-2013 level after a marked fall in EUR interest rate derivatives in particular. This is a global tendency.
- Considerable increase in outstanding foreign exchange derivatives, driven by outright forwards and FX swaps.
- Small reduction in outstanding interest rate derivatives, fewer outright forwards and a larger share of interest rate swaps.
- Turnover and outstanding positions are generally increasing for Scandinavian currencies, but decreasing for EUR.

About the survey

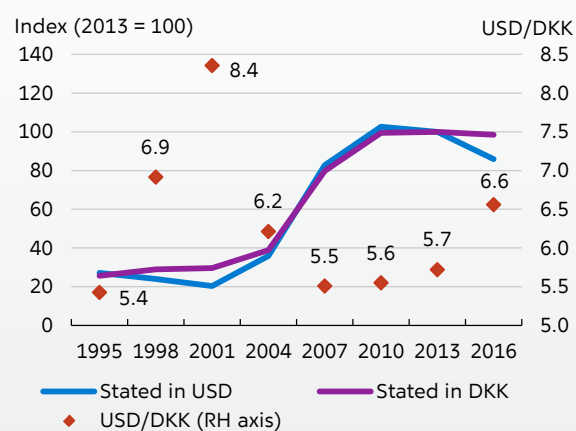
Every third year, the Bank for International Settlements (BIS), working in cooperation with central banks worldwide, conducts a survey of the global foreign exchange and OTC derivatives market broken down by turnover and outstanding positions. The Danish contribution is compiled by Danmarks Nationalbank on the basis of responses from the major Danish market participants. Data is compiled as the nominal (notional) value of all transactions and contracts on all banking days in April 2016 and all outstanding positions at end-June 2016, respectively. Consequently, the results may to some extent be affected by special circumstances in the periods in question. As regards turnover, duplicated reporting of transactions between two reporting institutions has been eliminated.

Since the survey is part of the global BIS survey, all results presented in this report will be stated in USD, despite any exchange rate fluctuations. Many of the observations illustrate changes in composition, and hence the currency of calculation is less important.

1. For more information about the survey, see BIS – <http://www.bis.org/publ/rpfx16.htm>.

Box 1

Turnover in the Danish foreign exchange market – effect of choice of currency of calculation



TURNOVER – FOREIGN EXCHANGE

Falling turnover in the Danish foreign exchange market...

In April 2016, turnover in the Danish foreign exchange market (spot, forward, FX swaps, currency swaps and currency options) totalled approximately 101 billion dollars per banking day for all currency pairs. This is a fall of approximately 17 billion dollars (14 per cent) relative to 2013. Stated in DKK, the fall in turnover was approximately 10 billion per banking day compared with 2013, corresponding to a fall of just 1.5 per cent. So the stronger fall in dollar terms is to a large extent attributable to strengthening of the dollar since 2013.

... driven by FX swaps and spot transactions

The lower turnover of foreign exchange derivatives has been driven by FX swaps and spot transactions, which – despite a reduction in turnover per banking day of just over 15 billion USD – account for 89 per cent of total turnover. Conversely, turnover of outright forwards and currency swaps has risen by almost 8 per cent since 2013, and together with currency options – for which turnover has decreased by as much as 68 per cent – they make up the rest of the Danish foreign exchange market.

Turnover has increased vis-à-vis non-financial counterparties...

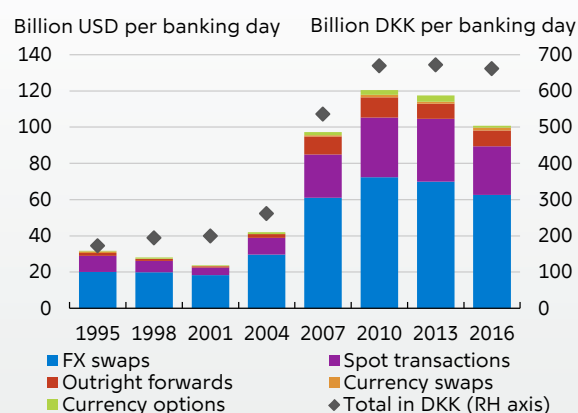
Despite an aggregate reduction in USD terms, turnover vis-à-vis both Danish and foreign non-financial counterparties has risen by a total of 34 per cent since 2013. Non-financial customers are now counterparties for 28 per cent of turnover in the Danish foreign exchange market, with foreign customers accounting for the predominant share – 84 per cent.

...but is decreasing vis-à-vis financial institutions

Conversely, the share of turnover with financial counterparties has fallen from 82 per cent in 2013 to 72 per cent in 2016 – driven primarily by foreign customers, which – despite a reduction in turnover of almost 26 per cent – account for just over 91 per cent of total turnover with financial counterparties.

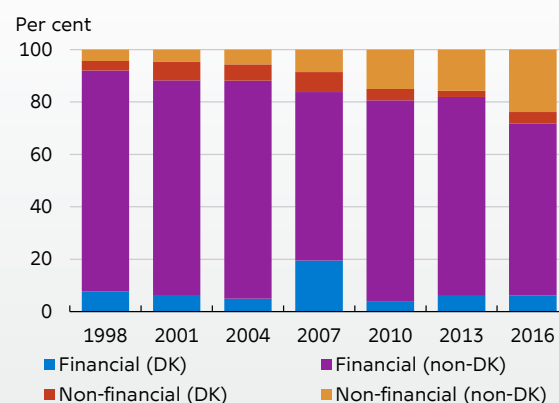
Turnover in the Danish foreign exchange market by instrument

Chart 1



Turnover in the Danish foreign exchange market by counterparty

Chart 2



Stable distribution on the most frequently used currencies...

The distribution of turnover on the most frequently used currencies (USD and EUR) and DKK has been relatively constant since 2013. In the survey, all currency transactions are registered in currency pairs. This means that each transaction is included twice so that the currencies' shares of total foreign exchange turnover add up to 200 per cent, cf. Chart 3.

...reduction in Japanese yen...

For the other currencies there have been changes, however. For example, the Japanese yen accounts for only 10 per cent of turnover in 2016, down from just over 16 per cent in 2013.

...while the Scandinavian currencies and the pound sterling are gaining ground

On the other hand, the turnover shares of the Scandinavian currencies (excl. DKK) and the pound sterling have risen considerably. At more than 12 per cent, the Swedish krona is the fourth most frequently traded currency in the Danish foreign exchange market (after USD, EUR and DKK), followed by the Norwegian krone (almost 11 per cent) and the pound sterling (just over 9 per cent), which also has a larger share in 2016 than it did in 2013.

A larger share of electronic direct turnover...

From the 2013 survey onwards, information is also collected about turnover broken down by execution method.

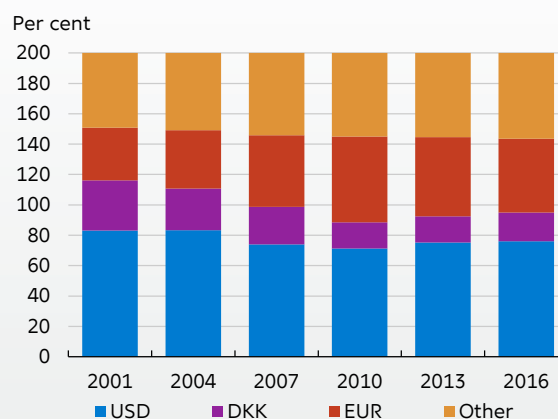
Electronic transactions account for 56 per cent of turnover in the Danish foreign exchange market in 2016, compared with 47 per cent in 2013. Direct transactions make up around three quarters of all electronic trading.

...and voice-based indirect turnover

The aggregate share of voice-based turnover is declining – driven by a fall in direct turnover. On the other hand, turnover of voice-based indirect transactions has increased, from just under 8 per cent in 2013 to just over 18 per cent in 2016. Compared with 2013, a larger share of turnover takes place via indirect channels, i.e. via a third party. Indirect transactions account for approximately one third of turnover in 2016, compared with just over one fifth in 2013.

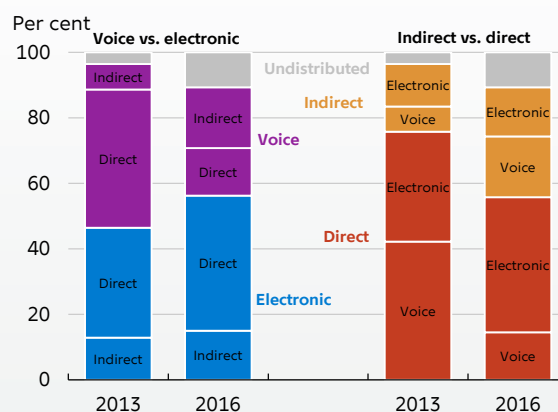
Turnover in the Danish foreign exchange market by currency

Chart 3



Turnover in the Danish foreign exchange market by execution method

Chart 4



Note: As regards execution methods, the breakdown relates to whether the transaction was made electronically via a trading platform or by voice via e.g. a telephone call, and whether it was a direct transaction between the buyer and the seller or an indirect transaction, i.e. via a third party.

Denmark's share of the global foreign exchange market has declined

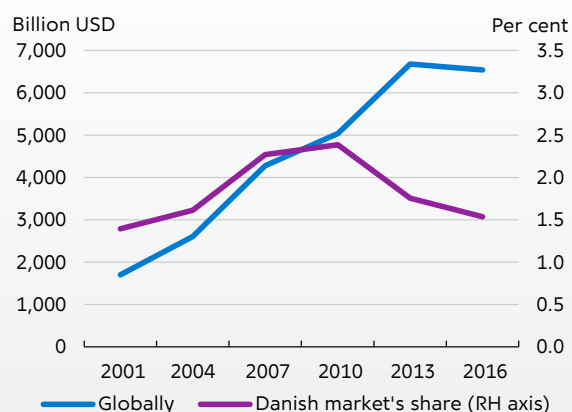
In April 2016, turnover in the Danish foreign exchange market accounted for just over 1.5 per cent of global turnover, down from almost 1.8 per cent in 2013. Although this share might seem to be modest, the Danish foreign exchange market is the tenth largest market worldwide measured by turnover. Global foreign exchange trading has decreased by 2 per cent relative to 2013, i.e. by somewhat less than the Danish market in USD terms.

In a global perspective, the largest foreign exchange market, the UK, has shrunk by a full 11 per cent (300 billion USD per banking day) since 2013. In contrast, turnover has increased in the foreign exchange markets in Singapore and Hong Kong SAR, which now account for almost 14 per cent of global turnover. Along with the UK, the USA and Japan they have a 77 per cent share of global turnover.

Higher global turnover of Danish kroner

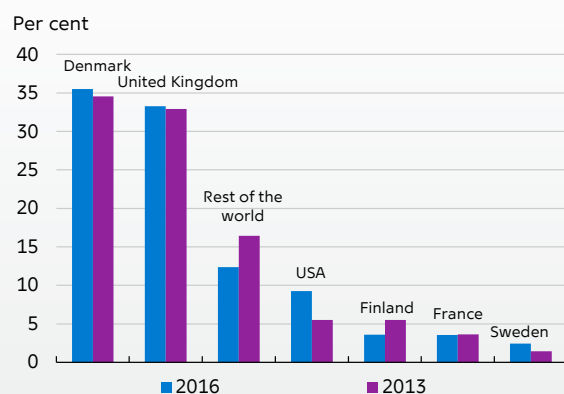
In the global BIS report, DKK ranks 21st among the currencies included in the largest share of turnover. Transactions in the foreign exchange market where DKK is one of the two currencies involved account for just over 0.8 per cent (53.9 billion USD) of total turnover. Despite a small increase relative to 2013, the ranking of DKK remains unchanged. Transactions in the foreign exchange market in Denmark make up approximately 36 per cent of total turnover involving DKK. The UK market accounts for 33 per cent, so that around 70 per cent of global turnover in DKK takes place in either the Danish or the UK foreign exchange market.

Turnover in the foreign exchange market Chart 5



Source: BIS - <http://www.bis.org/publ/rpfx16.htm>.

Turnover of DKK broken down by market Chart 6



Source: BIS Table 6.1 - <http://www.bis.org/publ/rpfx16fxt.pdf>.

TURNOVER – OTC INTEREST RATE DERIVATIVES

Turnover of interest rate derivatives back at a lower level...

In April 2016, turnover of OTC interest rate derivatives in the Danish market was just under 10 billion dollars per banking day. This is 50 billion dollars lower than in April 2013, when turnover was extraordinarily high.

...after a marked fall in EUR

The fall is primarily attributable to a marked fall in turnover of EUR interest rate derivatives due to a significantly reduced need for hedging interest rate risk in the euro market compared with 2013. The tendency for EUR to fall is seen globally, and turnover in EUR has been reduced by 44 per cent relative to 2013, to 24 per cent of total turnover in interest rate derivatives. Instead, turnover of USD has more than doubled so that just over half (51 per cent) of all turnover of interest rate derivatives is now in USD.

Relative strengthening in the north...

Turnover of interest rate derivatives in the Danish market has generally been falling for all currencies. However, a corresponding reduction has not been seen for the Scandinavian currencies, particularly the Swedish krona. This reflects a changing product composition in the Danish market. Interest rate derivatives in SEK and NOK account for almost 24 per cent of turnover, up from 8 per cent in 2013.

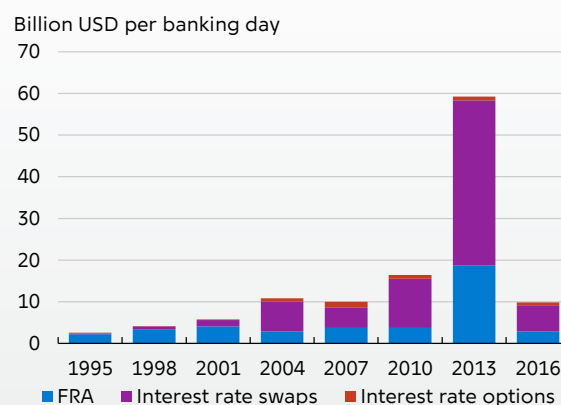
...and higher turnover with Danish non-financial customers

Despite a marked overall decline, turnover of interest rate derivatives vis-à-vis Danish non-financial customers has more than doubled relative to 2013. All the same, Danish non-financial customers still account for less than 6 per cent of the Danish market. 94 per cent of turnover of interest rate derivatives in the Danish market takes place with financial counterparties, primarily non-residents.

Denmark is a small market in global terms...

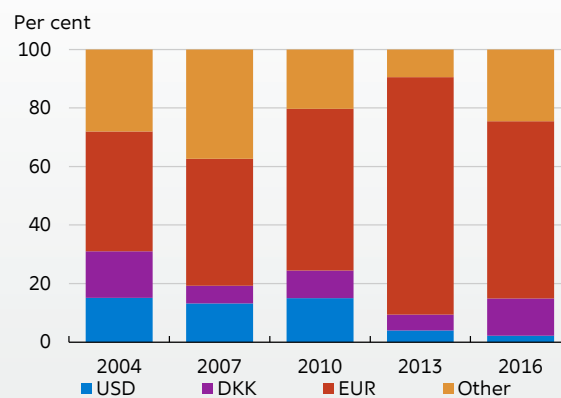
The Danish market for OTC interest rate derivatives accounted for just over 0.3 per cent of global turnover in April 2016. In 2013, when turnover

Turnover of OTC interest rate derivatives in the Danish market by instrument Chart 7

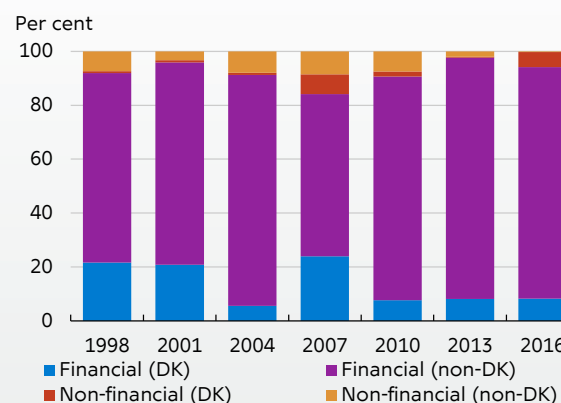


Note: FRA = Forward Rate Agreements.

Turnover of OTC interest rate derivatives in the Danish market by currency Chart 8



Turnover of OTC interest rate derivatives in the Danish market by counterparty Chart 9



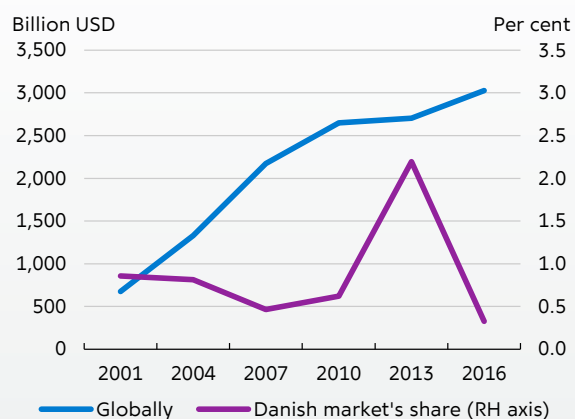
was extraordinarily high, this share was 2.2 per cent.

...while USD takes the global lead

Unlike turnover in the Danish market, global turnover of interest rate derivatives has increased by more than 15 per cent compared with 2013 – driven mainly by interest rate swaps. This increase has taken place even though a number of currencies have weakened against the currency of calculation, i.e. USD, in the past three years.

Turnover of OTC interest rate derivatives

Chart 10



Source: BIS Table 5 – <http://www.bis.org/publ/rpfx16ir.pdf>
– The global total has been calculated on a net-gross basis.

OUTSTANDING POSITIONS – FOREIGN EXCHANGE

Outstanding positions in foreign exchange derivatives at an all-time high...

Outstanding foreign exchange derivatives in the Danish market (measured in USD) increased by 480 billion USD (37 per cent) from June 2013 to June 2016, to a total notional value of almost 1,079 billion USD. Adjusted for changes in the USD/DKK exchange rate, outstanding positions have increased by 61 per cent.

... driven by outright forwards and FX swaps...

The increase in the Danish reporting institutions' outstanding positions in foreign exchange derivatives has been driven mainly by outright forwards and FX swaps, which have increased by 83 per cent since 2013. Outstanding positions in currency swaps have also increased, but by less – just over 4 per cent.

...which then account for the largest share of outstanding positions

The 2013 survey was an exception, but now outright forwards and FX swaps once again account for the largest share of outstanding positions in foreign exchange derivatives – more than 60 per cent. The second most frequently used instrument, currency swaps, accounts for just over 36 per cent in 2016, while the share of OTC options has been reduced to a good 3 per cent, which means that it has more than halved since 2013.

Larger outstanding positions in the Scandinavian currencies

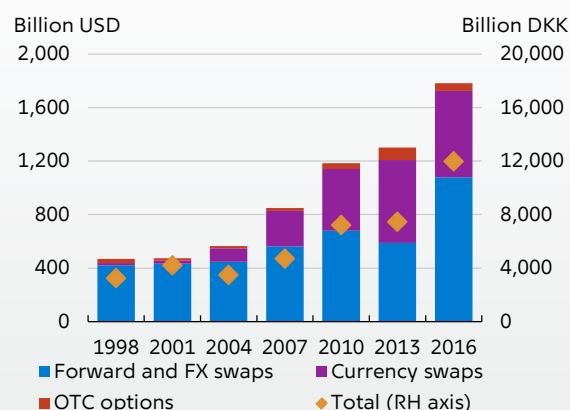
As was the case for turnover, the survey also shows a shift in outstanding positions in foreign exchange derivatives broken down by currency from EUR to other currencies – notably Swedish kronor and Norwegian kroner. Again, this reflects a change in the product composition.

Non-financial counterparties account for a larger share

Broken down by counterparty, outstanding positions vis-à-vis financial and non-financial counterparties, respectively, have increased by the same volume – approximately 240 billion USD. Consequently, non-financial corporations are now coun-

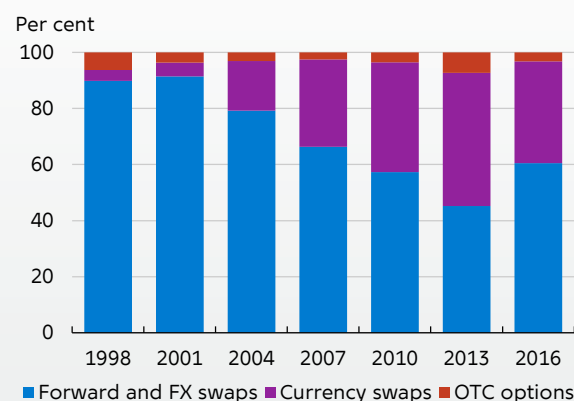
Outstanding positions in foreign exchange derivatives in the Danish market

Chart 11



Outstanding positions in foreign exchange derivatives in the Danish market by instrument

Chart 12



terparties to 22 per cent of total Danish outstanding positions in foreign exchange derivatives, up from 12 per cent in 2013.

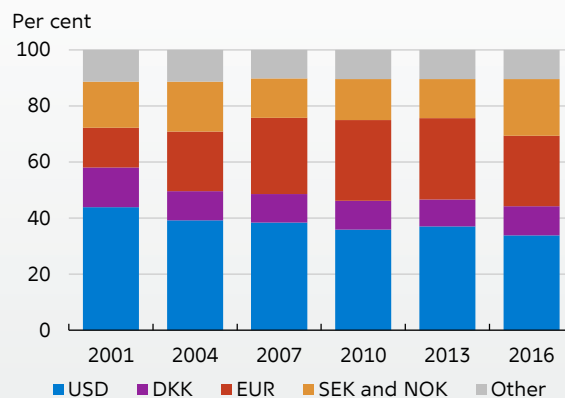
So although the increase in volume terms was the same, the share of outstanding positions where the counterparty is a financial institution has been reduced from 88 to 78 per cent.

More subdued growth in a global perspective

Total global outstanding positions in foreign exchange derivatives have increased by just under 6 per cent since 2013, to 85,710 billion USD. This means that the global increase has been more subdued than that seen in the Danish market. As in Denmark, developments have been driven by outright forwards and FX swaps, while there has been a small reduction in outstanding currency swaps.

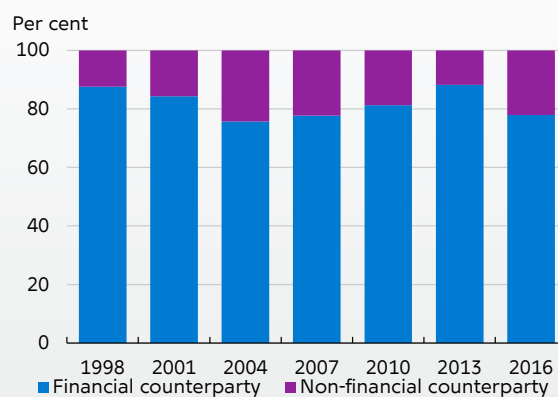
Outstanding positions in foreign exchange derivatives in the Danish market by currency

Chart 13



Outstanding positions in foreign exchange derivatives in the Danish market by counterparty

Chart 14



OUTSTANDING POSITIONS – INTEREST RATE DERIVATIVES

Small reduction in total outstanding positions in interest rate derivatives...

Outstanding interest rate derivatives in the Danish market have been reduced by almost 209 billion USD (corresponding to just over 3.4 per cent) since 2013 and totalled 5,895 billion USD in June 2016. Measured in DKK, outstanding positions have increased by 4,696 billion – almost 13.5 per cent.

...driven by a marked fall in outright forwards...

Outstanding outright forwards have been reduced by 764 billion USD (43 per cent) relative to 2013. In June 2016, outstanding positions totalled 1,026 billion USD.

...and larger outstanding positions in interest rate swaps and OTC options...

The marked decline in outright forwards is almost matched by strong increases in outstanding positions in interest rate swaps (454 billion USD) and OTC options (101 billion USD).

...so that interest rate swaps now account for more than three quarters of outstanding positions

Developments in 2016 have led to a shift in the composition of outstanding positions in interest rate derivatives in the Danish market. Interest rate swaps' share of total outstanding positions has increased by almost 10 percentage points to more than three quarters. Outright forwards account for 17 per cent in 2016, down from 29 per cent in 2013.

A general reduction for EUR...

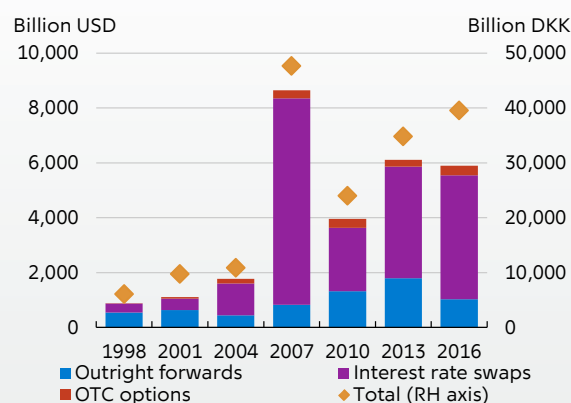
For outstanding interest rate derivatives in EUR, a general, marked reduction is seen across instruments, with OTC options as an exception. Overall, interest rate derivatives in EUR have been reduced by 802 billion USD, corresponding to a fall of 22 per cent.

...while the Scandinavian currencies have seen an increase and a change of instruments

The decline in outright forwards is also seen for the Scandinavian currencies, for which outstanding positions have decreased by approximately

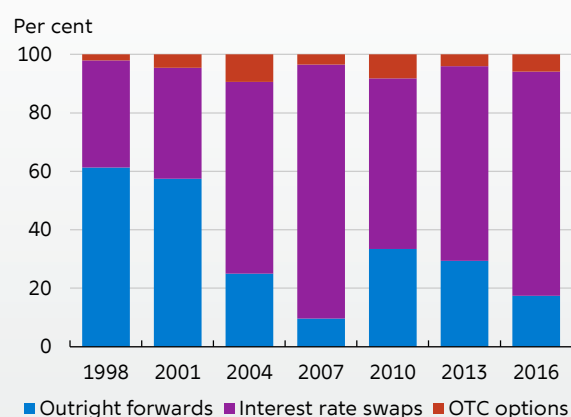
Outstanding positions in interest rate derivatives in the Danish market

Chart 15



Outstanding positions in interest rate derivatives in the Danish market by instrument

Chart 16



298 billion USD, especially for Swedish kronor and Danish kroner. Conversely, outstanding positions in interest rate swaps in these currencies have increased by 729 billion USD. Overall, outstanding positions in Scandinavian currencies have increased by 461 billion USD (21 per cent). Combined with the reduction in EUR, this means that in 2016 Scandinavian currencies account for more than 44 per cent of total outstanding interest rate derivatives in the Danish market.

Mainly financial sector counterparties

Despite the decline in total outstanding interest rate derivatives, the breakdown by counterparty has been unchanged in 2016 compared with 2013. This means that 97 per cent of all interest rate derivatives are still with financial counterparties.

Outstanding positions in interest rate derivatives are also declining globally

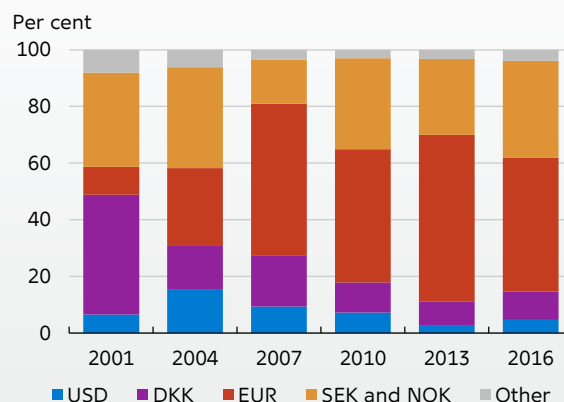
At the global level, outstanding interest rate derivatives have decreased by a good 25 per cent, to 437 billion USD in 2016. This means that outstanding positions have been reduced relatively more at the global level than in Denmark, where the reduction was only 3.4 per cent. Unlike in the Danish market, the fall at the global level is attributable to smaller outstanding positions in interest rate swaps.

CCPs are less important in Denmark than globally

As a new element in the 2016 survey, BIS has asked the reporting institutions to state the percentages of their outstanding positions that are with CCPs (central counterparties, also known as clearing houses) as counterparties. At the global level, CCPs account for 75 per cent of total outstanding positions in interest rate derivatives, while the share in Denmark is 44 per cent. However, the pattern is slightly different for foreign exchange derivatives, where CCPs account for only 2 per cent globally and 0 per cent in Denmark.

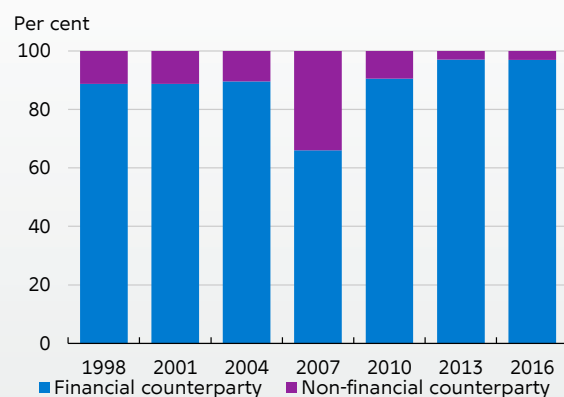
Outstanding positions in interest rate derivatives in the Danish market by currency

Chart 17



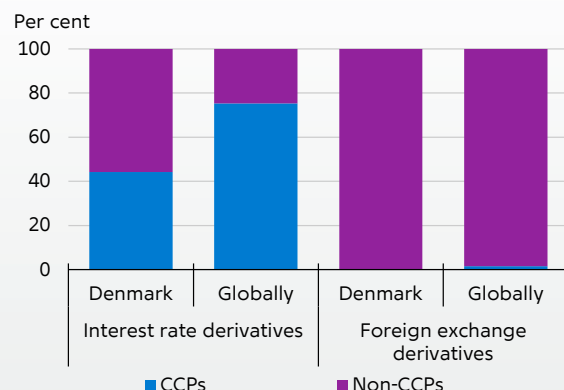
Outstanding positions in interest rate derivatives in the Danish market by counterparty

Chart 18



CCPs as counterparties

Chart 19



SUPPLEMENTARY
INFORMATION
AND TABLES

SUPPLEMENTARY INFORMATION

POPULATION

The 2016 international survey comprised the largest market players in 52 countries. The Danish part has included six banks in respect of turnover (selected from among all banks with trading desks in Denmark, including foreign branches with trading desks in Denmark) and five banks in respect of positions (selected from among the banks that have their headquarters and trading desks in Denmark), which are jointly estimated to account for more than 98 per cent of turnover in the foreign exchange and derivatives products comprised by the survey. The comparability of the individual surveys may therefore be affected by relocation of intra-group activities.

SOURCES AND METHODOLOGIES

The survey solely comprises OTC contracts concluded and settled between two parties, either directly or indirectly via a broker. 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 calculated as the nominal (or notional) value of all transactions and contracts concluded on all banking days in April 2016 and all positions at end-June 2016.

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 size of trades. This means that e.g. two identical contracts in kroner for yen concluded in 2013 and 2016, respectively, are included in the survey at different values, depending on the exchange rates. A truer picture of developments is achieved by adjusting for changes in exchange rates.

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/rpfx16.htm>. The website also provides further information on sources and methodologies (Statistical notes).

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Turnover in the foreign exchange market by instrument

Table 1

	April 1995	April 1998	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
<i>Billion dollars per banking day</i>								
Spot transactions	8.9	6.3	4.3	9.2	23.9	33.0	34.6	26.9
Outright forwards	1.5	1.1	0.7	2.1	10.0	11.1	8.3	8.7
FX swaps	20.1	19.9	18.3	29.6	61.0	72.4	70.0	62.6
Currency swaps	0.9	0.1	0.1	0.2	0.7	1.3	1.2	1.6
FX options	0.4	0.7	0.4	1.0	1.6	2.6	3.3	1.1
Total foreign exchange market	31.8	28.0	23.8	42.1	97.2	120.5	117.4	100.8
Total foreign exchange market, in DKK	172.6	194.0	199.1	261.6	535.9	668.8	672.0	661.6
<i>Billion dollars in April</i>								
Total foreign exchange market	541	533	429	800	1,750	2,168	2,349	2,016

Turnover in the foreign exchange market by counterparty

Table 2

	Total foreign exchange market				Total foreign exchange market			
	April 2007	April 2010	April 2013	April 2016	April 2007	April 2010	April 2013	April 2016
	<i>Billion dollars per banking day</i>				<i>Share in per cent</i>			
Reporting institutions	71.3	84.9	72.5	44.6	73	71	62	44
Danish	14.6	2.8	1.5	1.4	15	2	1	1
Foreign	56.7	82.2	71.0	43.2	58	68	61	43
Other financial institutions	10.2	12.2	23.7	27.7	10	10	20	27
Danish	4.3	1.8	5.6	4.8	4	1	5	5
Foreign	5.8	10.4	18.1	22.9	6	9	15	23
Non-financial customers	15.8	23.3	21.3	28.6	16	19	18	28
Danish	7.4	5.1	2.8	4.5	8	4	2	4
Foreign	8.4	18.2	18.5	24.1	9	15	16	24
Total	97.2	120.5	117.4	100.8	100	100	100	100

Turnover in the foreign exchange market by counterparty and instrument

Table 3

	April 2016				
	Spot transactions	Outright forwards	FX swaps	Currency swaps	FX options
	<i>Billion dollars per banking day</i>				
Reporting institutions	11.8	5.1	26.1	1.1	0.5
Danish	0.0	0.3	1.0	0.1	0.0
Foreign	11.7	4.9	25.1	1.0	0.5
Other financial institutions	7.6	2.2	17.3	0.5	0.2
Danish	0.8	1.8	2.2	0.0	0.0
Foreign	6.9	0.4	15.1	0.4	0.2
Non-financial customers	7.4	1.4	19.3	0.0	0.4
Danish	1.0	1.1	2.3	0.0	0.1
Foreign	6.5	0.3	17.0	0.0	0.3
Total	26.9	8.7	62.6	1.6	1.1

Turnover in the foreign exchange market by currency

Table 4

	Total foreign exchange market				Total foreign exchange market			
	April 2007	April 2010	April 2013	April 2016	April 2007	April 2010	April 2013	April 2016
	<i>Billion dollars per banking day</i>				<i>Share in per cent</i>			
Danish kroner against dollars	13.1	11.0	10.4	10.4	13	9	9	10
Danish kroner against euro	9.5	8.0	8.3	6.8	10	7	7	7
Danish kroner against other currencies	1.6	1.8	1.5	1.9	2	1	1	2
Euro against dollars	24.1	38.5	37.0	30.0	25	32	32	30
Euro against other currencies	12.3	21.6	16.0	12.3	13	18	14	12
Dollars against other currencies	34.7	36.2	41.0	36.2	36	30	35	36
Other currency pairs	2.0	3.3	3.3	3.2	2	3	3	3
Total	97.2	120.5	117.4	100.8	100	100	100	100
Total Danish kroner*	24.1	20.8	20.2	19.1	25	17	19	19
Total dollars*	71.9	85.8	88.3	76.6	74	71	75	76
Total euro*	45.9	68.1	61.3	49.1	47	57	54	49
Total other currency pairs*	52.6	66.2	65.0	56.8	54	55	52	56

* As the currencies are included in pairs, e.g. Danish kroner against dollars is included in both "Total Danish kroner" and "Total dollars". Consequently, turnover in the last four rows adds up to 200 per cent.

Turnover in the foreign exchange market by currency and instrument

Table 5

April 2016					
	Spot transactions	Outright forwards	FX swaps	Currency swaps	FX options
<i>Billion dollars per banking day</i>					
Danish kroner against dollars	0.7	1.2	8.5	0.0	0.0
Danish kroner against euro	1.3	0.9	4.5	0.0	0.0
Danish kroner against other currencies	0.3	0.7	0.9	0.0	0.0
Euro against dollars	8.7	1.9	18.4	0.8	0.3
Euro against other currencies	3.8	1.7	6.3	0.1	0.4
Dollars against other currencies	10.6	1.7	23.0	0.6	0.3
Other currency pairs	1.6	0.5	1.1	0.0	0.0
Total	26.9	8.7	62.6	1.6	1.1
Total Danish kroner	2.3	2.8	13.9	0.1	0.1
Total dollars	19.9	4.9	49.9	1.4	0.6
Total euro	13.7	4.5	29.1	0.9	0.7
Total other currency pairs	17.7	5.2	32.4	0.8	0.8

* As the currencies are included in pairs, e.g. Danish kroner against dollars is included in both "Total Danish kroner" and "Total dollars". Consequently, turnover in the last four rows adds up to 200 per cent.

Turnover in foreign exchange instruments by maturity

Table 6

	Outright forwards				FX swaps			
	April 2007	April 2010	April 2013	April 2016	April 2007	April 2010	April 2013	April 2016
<i>Share in per cent</i>				<i>Share in per cent</i>				
7 days or less	27	69	67	62	76	80	78	77
More than 7 days and up to 1 year	72	31	33	38	24	20	22	23
More than 1 year	1	1	0	1	0	0	0	1
Total	100	100	100	100	100	100	100	100

Turnover in foreign exchange instruments by trading method and counterparty

Table 7

April 2016										
	Voice		Electronic		Not broken down	Voice		Electronic		Not broken down
	Direct	Indirect	Direct	Indirect		Direct	Indirect	Direct	Indirect	
	<i>Billion dollars per banking day</i>					<i>Share of counterparty in per cent</i>				
Reporting institutions	8.5	12.7	19.3	4.1	0.1	19	28	43	9	0
Danish	0.4	0.7	0.2	0.1	0.0	29	54	12	5	1
Foreign	8.1	11.9	19.1	4.0	0.1	19	28	44	9	0
Other financial institutions	3.9	5.2	10.4	7.7	0.5	14	19	37	28	2
Non-financial customers	2.3	0.8	12.0	3.4	10.2	8	3	42	12	36
Total	14.7	18.7	41.6	15.1	10.7	15	19	41	15	11

Turnover in interest rate derivatives by instrument

Table 8

	April 2001	April 2004	April 2007	April 2010	April 2013	April 2016
	<i>Billion dollars per banking day</i>					
Forward Rate Agreements, FRAs	4.1	2.9	3.7	3.7	18.8	2.9
Interest rate swaps	1.5	7.2	4.9	11.8	39.5	6.3
Interest rate options	0.2	0.7	1.4	0.9	0.9	0.7
Total interest rate derivatives	5.8	10.8	10.0	16.4	59.2	9.9
	<i>Billion dollars in April</i>					
Total interest rate derivatives	104	206	181	295	1,185	197

Turnover in interest rate derivatives by counterparty

Table 9

	Total				Total				Per instrument in April 2016		
	April 2007	April 2010	April 2013	April 2016	April 2007	April 2010	April 2013	April 2016	Forward Rate Agreements, FRAs	Interest rate swaps	Interest rate options
	<i>Billion dollars per banking day</i>				<i>Share in per cent</i>				<i>Billion dollars per banking day</i>		
Reporting institutions	6.6	8.3	21.9	1.1	66	51	37	11	0.4	0.5	0.3
Danish	1.9	1.0	3.9	0.2	19	6	7	2	0.1	0.1	-
Foreign	4.7	7.4	18.0	0.9	46	45	30	9	0.3	0.4	0.3
Other financial institutions	1.8	6.5	36.0	8.2	18	40	61	83	2.5	5.2	0.4
Danish	0.5	0.3	1.0	0.6	5	2	2	6	-	0.6	0.1
Foreign	1.4	6.3	35.0	7.5	14	38	59	76	2.5	4.7	0.4
Non-financial customers	1.6	1.5	1.4	0.6	16	9	2	6	0.0	0.6	0.0
Danish	0.7	0.3	0.2	0.6	7	2	0	6	0.0	0.5	0.0
Foreign	0.9	1.2	1.2	0.0	9	7	2	0	-	0.0	-
Total	10.0	16.4	59.2	9.9	100	100	100	100	2.9	6.3	0.7

Turnover in interest rate derivatives by currency

Table 10

	Total				Total				Per instrument in April 2016		
	April 2007	April 2010	April 2013	April 2016	April 2007	April 2010	April 2013	April 2016	Forward Rate Agreements, FRAs	Interest rate swaps	Interest rate options
	<i>Billion dollars per banking day</i>				<i>Share in per cent</i>				<i>Billion dollars per banking day</i>		
Danish kroner	0.6	1.6	3.2	1.3	6	9	5	13	0.0	1.2	0.0
Euro	4.4	9.1	48.1	6.0	43	55	81	61	1.6	4.1	0.4
Dollars	1.3	2.5	2.4	0.2	13	15	4	2	0.0	0.2	-
Yen	0.0	0.0	0.0	0.0	0	0	0	0	-	-	-
Pounds sterling	0.2	0.0	0.7	0.0	2	0	1	0	-	0.0	-
Swiss francs	0.1	0.2	0.0	0.0	1	1	0	0	-	0.0	-
Swedish kronor	1.0	0.8	4.4	2.2	10	5	7	22	1.2	0.7	0.3
Norwegian kroner	2.5	2.3	0.4	0.2	25	14	1	2	0.1	0.1	0.0
Other currencies	0.0	0.1	0.1	0.1	0	0	0	1	-	0.0	-
Total	10.0	16.4	59.2	9.9	100	100	100	100	2.9	6.3	0.7

Turnover in foreign exchange derivatives involving DKK, broken down by currency market

Table 11

	Foreign exchange market		Foreign exchange market	
	April 2013	April 2016	April 2013	April 2016
	<i>Billion dollars per banking day</i>		<i>Share in per cent</i>	
Denmark	19.8	19.1	35	36
UK	18.9	17.9	33	33
Rest of world	9.4	6.7	16	12
USA	3.2	5.0	5	9
Finland	3.2	1.9	5	4
France	2.1	1.9	4	4
Sweden	0.8	1.3	1	2
Total	57.4	53.9	100	100

Outstanding positions in OTC derivatives by instrument

Table 12

	July 1998	July 2001	July 2004	July 2007	July 2010	July 2013	July 2016
	<i>Billion dollars, end-June</i>						
Foreign exchange derivatives	468.1	474.0	564.1	849.4	1,183.8	1,301.7	1,781.8
Interest rate derivatives	884.3	1,106.0	1,772.2	8,647.7	3,952.5	6,104.1	5,895.3
Other derivatives	0.5	1.0	1.4	19.4	39.2	28.5	14.4
Equity	0.5	0.8	0.8	19.4	4.9	5.8	4.6
Commodity	-	-	-	-	-	3.5	4.6
Credit	-	0.2	-	-	34.3	19.3	4.7
Other	-	-	0.6	-	-	0.0	-
Total outstanding positions in derivatives	1,353.0	1,581.0	2,337.8	9,516.5	5,175.6	7,434.3	7,691.5
Total outstanding positions in derivatives, stated in DKK	9,358.4	13,216.3	14,527.5	52,446.7	28,733.1	42,547.2	50,469.4

**Outstanding positions in foreign exchange and interest rate derivatives
by instrument type**

Table 13

	Total foreign exchange market				Total foreign exchange market			
	July 2007	July 2010	July 2013	July 2016	July 2007	July 2010	July 2013	July 2016
Foreign exchange derivatives	<i>Billion dollars, end-June</i>				<i>Share in per cent</i>			
Outright forwards	563.0	678.5	588.6	1,078.8	66	57	45	61
Currency swaps	264.9	462.9	617.8	645.3	31	39	47	36
OTC options	21.5	42.5	95.3	57.7	3	4	7	3
Total	849.4	1,183.8	1,301.7	1,781.7	100	100	100	100
Interest rate derivatives								
Forward Rate Agreements (FRAs)	830.1	1,322.4	1,789.8	1,026.2	10	33	29	17
Interest rate swaps	7,515.6	2,307.0	4,068.5	4,522.7	87	58	67	77
OTC options	301.9	323.1	245.8	346.4	3	8	4	6
Total	8,647.7	3,952.5	6,104.1	5,895.3	100	100	100	100

Outstanding positions in foreign exchange and interest rate derivatives by currency

Table 14

	Total foreign exchange market				Total foreign exchange market			
	July 2007	July 2010	July 2013	July 2016	July 2007	July 2010	July 2013	July 2016
Foreign exchange derivatives	<i>Billion dollars, end-June</i>				<i>Share in per cent</i>			
Dollars	326.1	425.0	481.2	603.5	38	36	37	34
Danish kroner	86.4	121.9	125.6	183.5	10	10	10	10
Euro	230.8	339.8	377.0	448.3	27	29	29	25
Swedish kronor	80.5	105.4	123.5	229.8	9	9	9	13
Norwegian kroner	38.5	68.3	58.3	131.2	5	6	4	7
Other	87.1	123.5	136.2	185.6	10	10	10	10
Total	849.4	1,183.8	1,301.7	1,781.7	100	100	100	100
Interest rate derivatives								
Dollars	810.7	285.7	171.7	269.1	9	7	3	5
Danish kroner	1,541.2	420.7	507.3	595.1	18	11	8	10
Euro	4,646.7	1,857.9	3,589.4	2,787.6	54	47	59	47
Swedish kronor	1,345.4	780.8	1,145.6	1,211.9	16	20	19	21
Norwegian kroner	7.5	489.3	495.9	802.6	0	12	8	14
Other	296.1	118.0	194.2	228.9	3	3	3	4
Total	8,647.7	3,952.5	6,104.1	5,895.3	100	100	100	100

