Irish Results of the BIS Foreign Exchange and Over-the-Counter Derivatives Survey 2007

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Abstract

The CBFSAI participated in the most recent survey of turnover in global foreign exchange and over-the-counter (OTC) derivatives markets, which is coordinated by the Bank for International Settlements every three years. The survey results for Ireland show a large increase in turnover in foreign exchange instruments, driven mostly by growth in foreign exchange swaps. At the same time, there was a decline in OTC derivatives trading in recent years. The strong growth in the Irish market in foreign exchange products is attributable to increased hedging of foreign exchange risk, arising from greater cross-border liabilities related to structured finance instruments, cross-border risk management, and increased overseas trade and globalisation. Some OTC instruments have become less important since the introduction of the euro, such as forward-rate agreements. On the other hand, interest-rate swaps, despite a decline in turnover, still have the highest volume of turnover, and are the main trading instrument for hedging and taking positions on interest rate movements. The decline in their turnover may, however, reflect clearer market expectations of interest rate movements in 2007. Survey data were collected before the turmoil in the financial markets that commenced in the summer of 2007, but the results suggest that the Irish banking system had hedging in place prior to the financial market turmoil and foreign exchange volatility.

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1. Introduction

In April 2007, the Central Bank and Financial Services Authority of Ireland (CBFSAI) participated in a global survey of foreign exchange (FX) and derivatives market activity, coordinated by the Bank for International Settlements (BIS).[2] This survey takes place on a triennial basis, and the last survey was conducted in April 2004. In the 2007 survey, 54 central banks and monetary authorities (including the CBFSAI) undertook national surveys of turnover in the foreign exchange market — i.e. spots, outright forwards and foreign exchange swaps — and over-the-counter (OTC) currency and interest-rate derivatives.[3] The objective of the survey is to provide comprehensive and internationally consistent information on turnover and amounts of contracts outstanding in these markets. This paper will concentrate on the Irish results of the turnover section of the survey. An analysis of the turnover data is interesting, as it contains information on the flow of transactions, rather than outstanding amounts at a point in time. In 1995, the then existing Central Bank Survey of Foreign Exchange Market Activity was combined with an international survey of derivatives market activity for the first time, and data from 1995 to the latest survey are included in this article by way of comparison.

The survey found an increase in activity in the Irish foreign exchange market of almost 50 per cent between April 2004 and April 2007, with foreign exchange swaps driving most of the growth.[4] The distribution of turnover among counterparties changed since the previous survey, with the share of turnover attributable to other financial institutions increasing.

[2] Results of the 2007 survey are available on the CBFSAI website, www.centralbank.ie.

[3] In 1995, 47 resident credit institutions took part in the survey, this rose to 71 in the 1998 survey. All resident credit institutions in Ireland participated in the Irish component of the survey in April 2001, while only a sample of 19 and 20 credit institutions active in the foreign exchange and derivatives markets were invited to complete the April 2004 and April 2007 surveys, respectively. A list of reporting institutions can be found on the Central Bank website. Therefore some of the differences between survey results can be accounted for by different reporting institutions participating in each wave.

[4] All data have been adjusted for local double counting. Double counting arises because transactions between two reporting entities are recorded by each of them and are therefore reported twice to the CBFSAI. To derive a representative measure of the overall market size, it is necessary to halve those transactions that were collected twice. Data are US dollar amounts.

The survey results also indicate that activity in the OTC derivatives market declined over the period. This is attributable to the decrease that occurred in the single-currency interest-rate derivatives side of the OTC market. Interest-rate swaps, while remaining the most popular instrument in terms of turnover, actually declined between the two surveys. At the same time, turnover rose in OTC foreign exchange derivatives contracts, which somewhat offset the total decline in OTC derivatives. In terms of relative position of average daily turnover in interest-rate OTC derivative products, Ireland has dropped down to joint 17th place from joint 11th place in the 2004 survey, with turnover in Ireland in 2007 being comparable to that in Norway.

One of the most striking results of the 2007 survey was the increase in turnover in 'other' currencies, i.e. the residual from main currencies such as the euro, sterling and the US dollar. For example, in OTC foreign exchange derivatives, 21 per cent of turnover was accounted for by such 'other' currencies.

Measured by volume, the results of the survey show that interest-rate and foreign exchange swaps were the most important sectors of the Irish foreign exchange and OTC derivatives market in April 2007. This was also the result of the Euro Money Market Survey 2007, an annual survey conducted by the European Central Bank (ECB), which found that these two instruments accounted for 73 per cent of turnover in the euro area.[5] Although Irish banks participated in the ECB Euro Money Market Survey, the results are released in aggregate, so no breakdown is available for Ireland.[6]

2. Traditional Foreign Exchange Market

There was a sizeable increase in activity in the foreign exchange market in Ireland since the previous survey (Chart 1). The reported average daily turnover in foreign exchange

[5] Credit institutions are surveyed by a working group comprising staff members from the ECB and national central banks. The survey is conducted during the second quarter of each year in the Euro Money Market Survey.

[6] Nine credit institutions in Ireland participated in the ECB Euro Money Market Survey in 2006, while seven institutions participated in the 2007 survey.

Table 1: Foreign Exchange Market Turnover in Ireland

US$ million	1995	1998	2001	2004	2007
Spot	53,508	98,120	74,911	92,790	75,402
Outright Forwards	3,079	23,933	11,019	3,284	13,485
Foreign Exchange Swaps	22,830	71,000	65,212	41,904	112,827
Total	**79,417**	**193,053**	**151,142**	**137,978**	**201,714**

markets of $10.1 billion in April 2007 compares with $6.9 billion in April 2004, representing an increase of nearly 50 per cent. This general growth in volume in Ireland is in line with developments in the international market, with the global BIS survey reporting an unprecedented 69 per cent increase in average daily turnover since April 2004 (Chart 2).

Looking at the different instruments, turnover in foreign exchange spot transactions in Ireland declined between April 2004 and 2007, with the daily average of $3.8 billion reverting back to close to 2001 levels. Foreign exchange spot activity accounted for 37 per cent of overall turnover in the traditional foreign exchange market, down from two thirds of turnover in 2004. This is in line with the findings of the global survey — that nearly a third of average global daily turnover in the foreign exchange market was related to spot transactions.

Foreign exchange swaps, on the other hand, accounted for 56 per cent of turnover in 2007, compared with 30 per cent in 2004, and accounted for most of the increase in turnover in foreign exchange transactions between 2004 and 2007 (Table 1). Foreign exchange swaps are useful cash management tools for companies that have assets and liabilities denominated in different currencies, and this may explain their increasing popularity. The average daily turnover in this category rose from $2.1 billion in 2004 to $5.6 billion in 2007. The expansion in foreign exchange swap turnover was also particularly strong in the global aggregates, with more than half of the increase in turnover accounted for by the growth in foreign exchange swaps.

Regarding the duration of foreign exchange swaps, the BIS global results of the survey found that contracts with a duration exceeding one year represented a small proportion of the total. In Ireland, however, there was a shift from a small proportion of foreign exchange swaps being over one year, to a third being fixed at that duration (Table 2).

Chart 1: Average Daily Turnover in the Foreign Exchange Market in Ireland

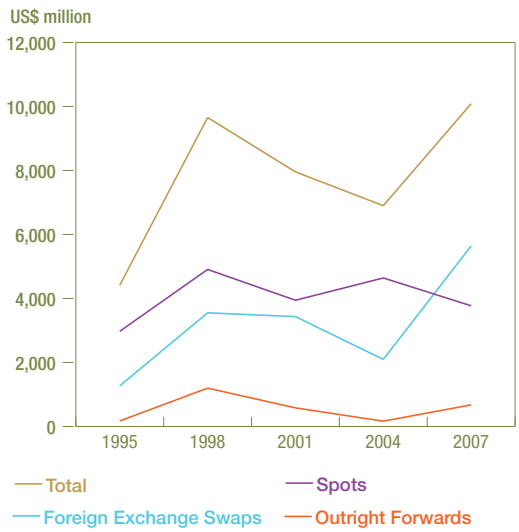


Chart 2: Global Average Daily Foreign Exchange Turnover

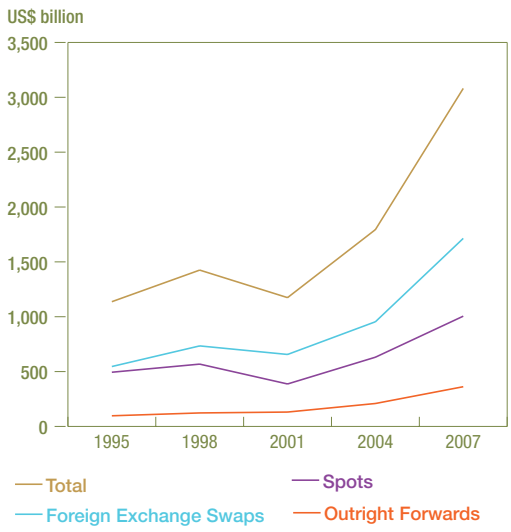


Table 2: Maturity Breakdown of Foreign Exchange Swaps and Outright Forwards

% Share

Foreign Exchange Swaps	1995	1998	2001	2004	2007
Seven days or less	45	58	63	59	29
Over seven days and up to one year	51	42	33	38	38
Over one year	4	1	4	4	33
	100	100	100	100	100
Outright Forwards	**1995**	**1998**	**2001**	**2004**	**2007**
Seven days or less	9	37	16	42	45
Over seven days and up to one year	88	63	82	53	48
Over one year	2	2	1	5	7
	100	100	100	100	100

The Euro Money Market Survey reported that turnover volume in foreign exchange swaps in the euro area market in 2007 was nearly a third higher than in 2004. Reasons mentioned for the higher levels of activity in the euro area were the more frequent use of swaps for liquidity management. Furthermore, interest and exchange rate risks are partly hedged through foreign exchange swaps and forwards. The divergent expectations of policy rate changes in the euro area and in the US particularly contributed to the growth of foreign exchange swaps (ECB, 2007a).

Over 97 per cent of foreign exchange swaps were traded on a cross-border basis. The growth in foreign exchange swaps is perhaps also symptomatic of the increase in cross-border risk management and exposures through structured finance and synthetic instruments. For example, a mortgage-backed security registered in Ireland but secured on non-euro denominated loans, would make use of foreign exchange swaps to offset foreign exchange risk associated with the issuer converting part of the payments of principal and interest into euro. The increased foreign exchange hedging identified in the survey in this regard appears timely given the current financial market and exchange rate volatility that has arisen.

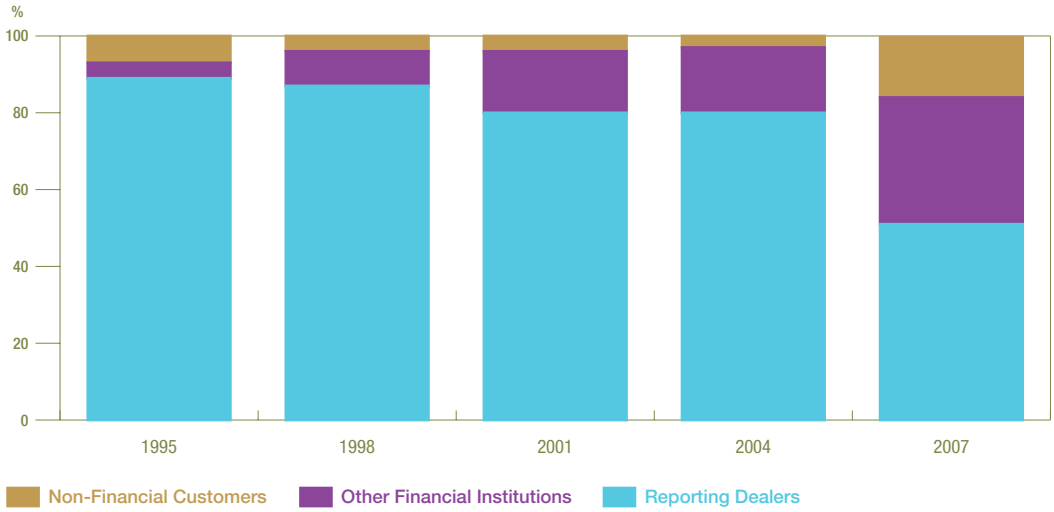
Outright forwards accounted for a small proportion of foreign exchange turnover in April 2007. While turnover in outright forwards increased by over 300 per cent since the previous survey, these instruments only accounted for 7 per cent of foreign exchange transactions. Over 90 per cent of outright forwards were of a maturity of less than one year.

Counterparty

'Reporting dealers' are defined as mainly large commercial and investment banks and securities houses that either participate in the inter-bank market, or have an active business with large customers. Counterparties to dealers are grouped into two separate categories, and are termed non-reporting customers. 'Other financial institutions' are those financial institutions that are not classified as reporting dealers, and this category includes smaller commercial banks, investment banks and securities houses, as well as mutual funds, hedge funds, insurance companies, etc. 'Non-financial customers' are any other counterparty than those defined above, such as corporates and governments.

The most dramatic shift in the distribution of trading among counterparties was recorded in the 2007 survey (Chart 3). Turnover among reporting dealers accounted for nearly 90 per cent of all transactions in the 1995 survey. This remained stable in the 1998 survey, but the proportion dropped to four-fifths in the 2001 and 2004 surveys. However, turnover between reporting dealers accounted for just over half of all transactions in the 2007 survey and business conducted with customers (i.e. other financial institutions and non-financial customers) has become more important in the most recent survey. The counterparty with the largest increase was other financial institutions. Business with non-financial customers rose from a low of 4 per cent in 1998, to 15 per cent in 2007, which may reflect growing sophistication of treasury dealers in large corporations.

Chart 3: Turnover by Counterparty in the Foreign Exchange Market



The increase in turnover between reporting dealers and other non-reporting financial institutions has been influenced by several factors. First, the rise in electronic trading platforms contributed to growth in this segment. For example, electronic trading allows increased use of algorithmic trading, which is designed to exploit high-frequency movements in exchange rate quotes that are available electronically, based on a set of predetermined rules (Galati and Heath, 2007). Foreign exchange markets have offered investors with short-term horizons relatively attractive risk-adjusted returns and investors with longer-term horizons (for example, pension funds) opportunities for diversification of their portfolios. The rise in trading between reporting dealers and non-financial customers can also be attributed to the substantial growth in international trade, and to an expansion in hedging activity (BIS, 2007).

Chart 4: Turnover of Foreign Exchange Swaps by Counterparty

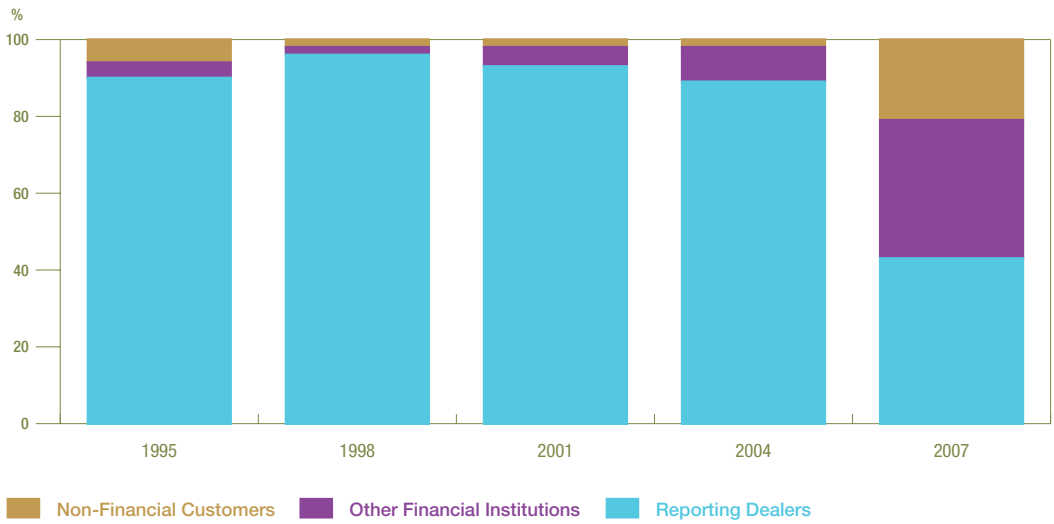


Table 3: Currency Distribution of Foreign Exchange Turnover in Ireland

% Share	2001	2004	2007
USD/EUR	54	60	28
USD/GBP	15	14	18
USD/CAD	1	3	13
EUR/GBP	8	7	9
USD/JPY	10	5	7
EUR/CHF	1	1	4
USD/AUD	1	2	3
USD/SEK	n.a.	n.a.	3
EUR/JPY	5	2	3
USD/CHF	2	2	2
EUR/AUD	0	0	0
EUR/SEK	n.a.	n.a.	0
EUR/CAD	0	0	0
Other	3	4	10
Total	**100**	**100**	**100**

Note: The SEK was separately identified in the 2007 survey as a main currency for the first time.

Foreign exchange swaps, the largest foreign exchange sector, recorded a decline in transactions between reporting dealers from 96 per cent of transactions in 1998, to 43 per cent in 2007 (Chart 4). Other financial institutions increased their proportion of trades in foreign exchange swaps by 30 percentage points since 2001, while transactions with non-financial customers increased by 19 percentage points over the same period. As mentioned earlier, foreign exchange swaps are widely used in securities markets as a way of offsetting exchange rate risk. The traditional 'book and hold' strategy of credit institutions, whereby credit institutions originated and held loans on their balance sheets, has now shifted towards an 'originate and distribute' strategy. Loans continue to be originated by a credit institution, but through securitisation, the underlying risk of the original loan is redistributed to institutional investors. A large proportion of debt securities in Ireland are issued by other financial institutions, which have sizeable exposures to non-euro instruments, and this may have contributed to the rise in the importance of this counterparty.

Currency Breakdown

In terms of currency composition, the dollar's share of foreign exchange activity in Ireland dropped by ten percentage points between the two latest surveys, down to four fifths in April 2007. The US dollar/euro was the most traded currency pair; however, the proportion of turnover in this currency pair dropped by over a half between the last two surveys. The biggest increase over the period was in US dollar/Canadian dollar trades, rising by 10 percentage points between the two surveys. Most of this was in the foreign exchange swaps category. One explanation for the increase in Canadian dollar trades was increased trades with Canadian clients. The Canadian dollar was the seventh most traded currency in the global survey.

Given the increasing interest in the identification of turnover in all reporting countries' currencies, the BIS expanded the currency breakdown in the 2007 survey of 'other' currencies in Table 3 to include, for example, emerging market currencies. The proportion of currencies in the 'other' column rose from 4 per cent in 2004, to nearly 10 per cent in 2007. The Norwegian krone was highest among the other currencies, and the majority of this was turnover in foreign exchange swaps. Some emerging market currencies were identified in the new breakdown for the first time; for example, the Polish zloty represented 3.1 per cent of the other category.

Analysis shows that the New Zealand dollar accounted for 12 per cent of turnover in 'other' currencies. There was also a small increase in trading in the Australian dollar, and these two currencies are commonly used as the target currency in carry trades[7] due to high official interest rates in these countries. The strategy involves borrowing funds at a low interest rate in one currency (the funding currency) and

[7] A 'carry trade' is defined as a leveraged cross-country position designed to take advantage of interest-rate differentials and low volatility.

buying a higher-yielding asset in another (the target currency). The strategy is only profitable as long as the gains from interest-rate differentials are not expected to be overwhelmed by exchange rate movements in the short to medium term (Galati, Heath and McGuire, 2007).

3. OTC Derivatives Market

While care should be exercised in making comparisons based on two months' data, as volatility in foreign exchange and derivatives markets can lead to large differences month to month, average daily turnover in the OTC derivatives market[8] decreased between 2004 and 2007, falling from $12.6 billion to $7.8 billion. This compares with an increase of $6.7 billion in average daily turnover in the period from 2001 to 2004. The migration of trades to other European branches of reporting institutions since the previous survey has affected turnover in Ireland, as have differences in the reporting population in each survey. Turnover in single-currency interest-rate derivatives[9] accounted for most of the change over the two periods, contracting by 43 per cent between April 2004 and 2007. Increased turnover in OTC currency contracts[10] offset part of the decrease in interest-rate derivatives.

Single-Currency Interest-Rate Derivatives

Average daily turnover in forward-rate agreements (FRAs) fell from $1 billion in 2004 to $99 million in 2007, while average daily turnover in interest-rate swaps fell by almost $4 billion between the two surveys (Chart 5). By 2007, FRAs only accounted for 1 per cent of average daily turnover in single-currency interest-rate derivatives (SCIRDs), down from a high of 89 per cent in 1995.

The Irish market in FRAs began to develop in the mid-1980s and grew into a sizeable market, and was the instrument most used by Irish credit institutions in the 1995 derivatives survey (O'Sullivan, 1995). The proportion of SCIRDs turnover accounted for by FRAs dropped dramatically with the introduction of the euro, when they became less popular with Irish banks. The ECB Euro Money Market Survey 2007 also found that turnover in FRAs has declined in importance since 2004. FRAs are mainly used for managing and covering short-term interest-rate risks. Even though they can also be used for speculating and arbitraging between financial assets and liabilities, banks reported in the ECB survey that interest in this

[8] Turnover volumes for transactions in currency swaps, currency options, forward-rate agreements (FRAs), interest-rate swaps and interest-rate options, adjusted for local double-counting, are included. Although currency swaps and currency options are also foreign exchange derivatives, they are included in the over-the-counter derivatives segment.

[9] i.e. forward-rate agreements, interest-rate swaps and interest-rate options.

[10] i.e. currency swaps and currency options.

Chart 5: Average Daily Turnover in Single-Currency Interest-Rate Derivatives

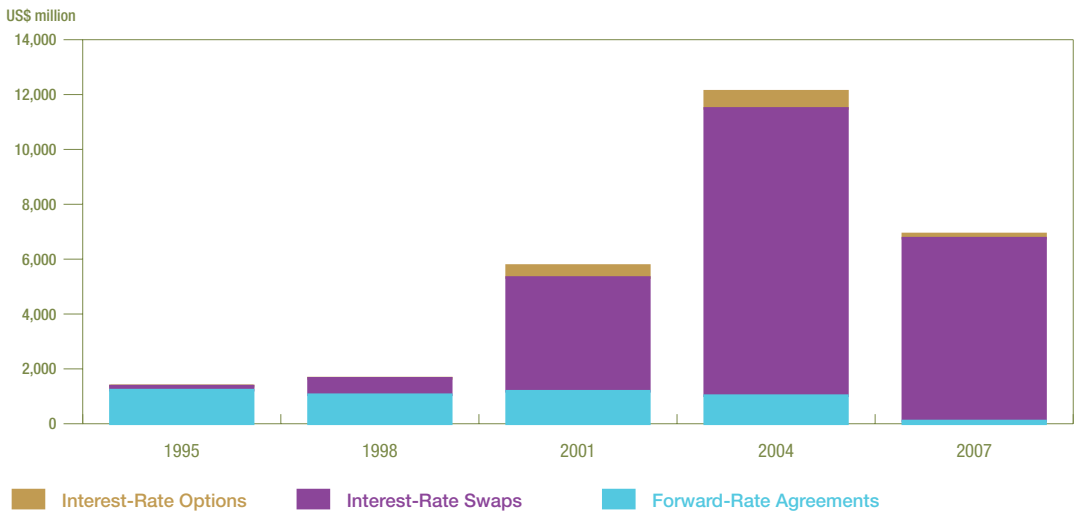


Table 4: Turnover of Single-Currency Interest-Rate Derivatives in Ireland

US$ million	1995	1998	2001	2004	2007
Forward-rate agreements	22,897	21,134	22,488	20,456	1,970
Interest-rate swaps	2,989	11,952	78,776	209,415	133,297
Interest-rate options	162	180	8,311	12,512	3,060
Total	**26,048**	**33,266**	**109,575**	**242,383**	**138,327**

product as a speculative or trading tool has been declining in recent years. The downturn in the use of FRAs is probably also related to the success of the euro interest-rate swap market.

The decline in the proportion of single-currency interest-rate derivatives attributable to FRAs was replaced by an increased proportion of interest-rate swaps, which jumped from just 11 per cent in 1995 to 72 per cent in the 2001 survey, and accounted for 96 per cent in 2007. This is high by international standards, with interest-rate swaps accounting for 72 per cent of global turnover in the OTC interest-rate segment. However, turnover in swaps in Ireland actually declined since the last survey, with average daily turnover of $6.7 billion in 2007, compared with $10.5 billion in 2004. Interest-rate swaps were affected by the non-sampling in 2007 of an active institution in the 2004 survey, while the migration of business to other European branches of reporting institutions also impacted the data on interest-rate swaps. Those institutions that did record an increase in the turnover of swaps since the previous survey stated that trading of short-term Eonia swaps accounted for their increased turnover.

> "The prominent role in the euro interest-rate market for swaps was probably related to the fragmentation of the euro area government bond market between various issuers, none of which even comes close to the United States in terms of amounts outstanding along the entire maturity spectrum. This fragmentation makes it more costly to trade interest-rate risk in the spot market, causing market participants to rely on swaps instead" (BIS, 2007).

Overnight interest-rate swaps (OISs), which are overwhelmingly based on the euro overnight index average (EONIA) rate, have become the main trading instrument for speculating on and hedging against interest-rate movements. The Euro Money Market survey in 2006 reported that trading activity in interest-rate swaps, or more specifically OISs, increased during 2006 when the ECB changed its policy rates several times (ECB, 2007a). Data from the 2007 survey, however, showed a decline in turnover in both OISs and other interest-rate swaps (ECB, 2007b). This may reflect improved expectations by the market of ECB interest rate moves, which were well communicated in 2007.

Turnover in interest-rate options has historically been low, and declined to just 2 per cent of SCIRDs from a high of 8 per cent in the 2001 survey. More interest-rate options were bought in Ireland than sold, and euro denominated options accounted for two-thirds of turnover. In aggregate, these instruments accounted for 13 per cent of turnover of interest-rate derivatives in the global survey in 2007.

OTC Foreign Exchange Derivatives

OTC currency contracts only accounted for 11 per cent of OTC derivatives market activity in Ireland. Currency options were the main driving force offsetting the total decline in the OTC market, with an average daily turnover of $446 million in April 2007, compared with $208 million in April 2004 (Chart 6). This development is attributable to increased business by IFSC entities. Currency swaps increased by 61 per cent between the two surveys but overall turnover remained very modest. Cross-currency swaps are a rather specific and complex product, as they are a mixture of foreign exchange and interest-rate products (ECB, 2007a). For the first time in the global BIS survey, the rate of increase in the currency segment of the OTC derivatives market surpassed that of the interest-rate segment.

Chart 6: Average Daily Turnover in Foreign Exchange OTC Instruments

Counterparty

The change in the counterparties in the OTC market between the previous two surveys was even more dramatic than in the foreign exchange market (Chart 7[11]). Between the 2001 and 2004 survey, the proportion of trades with other financial institutions increased dramatically, at the expense of trades between reporting dealers. This increase was reflected in the activities of mutual funds, hedge funds and insurance companies in the OTC derivatives market. Transactions between reporting dealers as a share remained stable between the two latest surveys. However, transactions with other financial institutions dropped from nearly a third in 2004 to 12 per cent in 2007. Non-financial customers, such as corporates and governments, accounted for close to one-fifth of turnover.

[11] Trading in the foreign exchange OTC market was very small as a proportion of overall turnover, and therefore counterparty breakdown is more volatile in this category.

Chart 7: Counterparty in OTC Derivatives Market

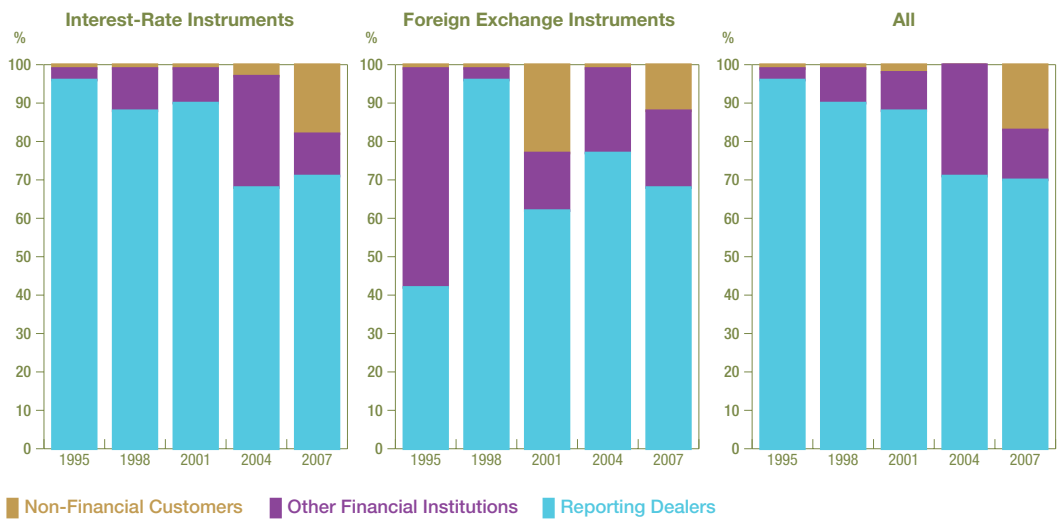


Table 5: Currency Breakdown of OTC Foreign Exchange Instruments

% Share	2001	2004	2007
USD/CAD	0	2	45
USD/EUR	21	18	16
USD/GBP	0	15	5
USD/JPY	17	48	4
USD/AUD	0	0	3
EUR/JPY	16	4	2
EUR/GBP	33	4	2
USD/CHF	1	3	1
EUR/CHF	2	2	1
USD/SEK	n.a.	n.a.	0
EUR/CAD	9	0	0
EUR/AUD	0	0	0
EUR/SEK	n.a.	n.a.	0
Other	0	2	21
Total	**100**	**100**	**100**

Note: The SEK was separately identified in the 2007 survey as a main currency for the first time.

Currency Breakdown

OTC currency derivatives accounted for just 11 per cent of total OTC turnover in 2007. The US dollar/Canadian dollar was the most commonly traded pair in OTC currency contracts, a large increase since the 2004 survey. Most of this was in the currency swaps category. This is in contrast with the 2004 survey which was dominated by US dollar/Japanese yen derivatives, which accounted for 48 per cent of turnover. In 2007, nearly three-quarters of turnover in currency options had the US dollar as one side of a currency pair, mostly against euro, sterling or the Japanese yen. One of the main developments in the 2007 survey was a large increase in the proportion of trades with 'other' currencies in OTC foreign exchange instruments. Other currencies measure currency pairs that don't include the US dollar or euro. The Japanese yen and sterling accounted for nearly one-third of 'other' currencies.

Over half of trades in OTC interest-rate derivatives were denominated in euro, followed by the US dollar, and sterling. Together these three currencies accounted for 92 per cent of turnover in OTC interest-rate derivatives in April 2007, compared with 86 per cent in 2001. The Canadian dollar, which increased in importance in other foreign exchange products, lost the biggest share since 2004. Turnover with sterling was smaller in 2007 than in 2001, while the dollar increased in importance. Turnover in euro denominated interest-rate swaps remained the most important category, but fell from 70 per cent of interest-rate swaps in 2004, to 57 per cent in 2007.

Table 6: Currency Breakdown of OTC Interest-Rate Derivatives

% Share	2001	2004	2007
Euro	51	62	57
US dollar	18	15	22
Pound sterling	17	11	13
Swedish krona	1	1	4
Japanese yen	5	2	2
Australian dollar	1	0	1
Norwegian krone	1	1	1
Swiss franc	3	1	0
Danish krone	1	0	0
Czech koruna	0	0	0
Canadian dollar	3	6	0
Singapore dollar	0	1	0
Total	**100**	**100**	**100**

4. Electronic Trading

The foreign exchange landscape has changed notably over the past three years, largely due to the introduction and development of new trading contracts (Christodoulou and O'Connor, 2007). In order to capture these developments, the BIS began to collect an expanded dataset on the execution method for foreign exchange contracts in the 2007 survey.[12] Electronic trading has become a more important execution method in the foreign exchange market and the growth in the number and variety of electronic trading platforms has contributed to the increase in turnover. Electronic systems reduce trading costs and other barriers to entry while enhancing pricing transparency. Electronic broking systems are trades executed through automated order matching systems, whereas electronic trading systems are defined as trades executed through a single-bank proprietary platform or a multi-bank dealing system.

The data show that 39 per cent of total Irish foreign exchange turnover was executed through either electronic broking or electronic trading systems (Chart 8).[13] This figure is higher than for the UK, where 30 per cent of total foreign exchange turnover was executed through these two electronic trading systems. However, the overall figure for electronic trading in the UK may be higher as some of the inter-bank and customer direct trading reported by the UK survey respondents is also likely to be executed electronically (Christodoulou and O'Connor, 2007). There is variation across countries in the significance of electronic execution in the inter-bank market, with almost 60 per cent of foreign exchange turnover in Switzerland executed through electronic platforms, compared with 10 per cent in Belgium. The median share is 34 per cent.

In Ireland, nearly half of all foreign exchange swaps and foreign exchange options were traded through electronic platforms in April 2007. Two thirds of spot-trades were executed through either an inter-dealer direct or a customer direct, while almost half of outright forwards were executed directly through customers.

[12] Foreign exchange instruments in this category are foreign exchange spots, outright forwards, foreign exchange swaps and foreign exchange futures.

[13] Definitions of execution methods of foreign exchange transactions are provided in Annex II.

Chart 8: Execution Method by Foreign Exchange Instrument

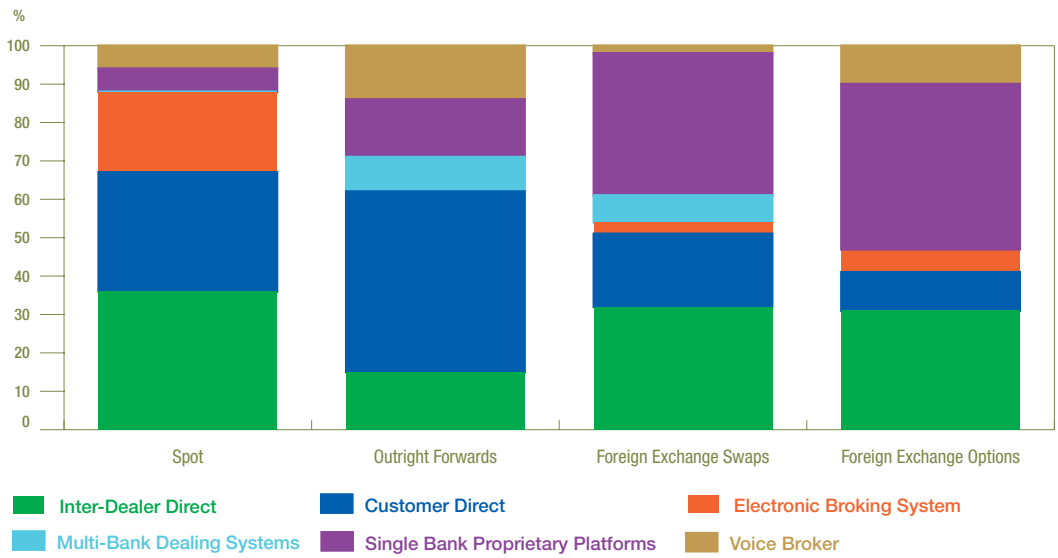
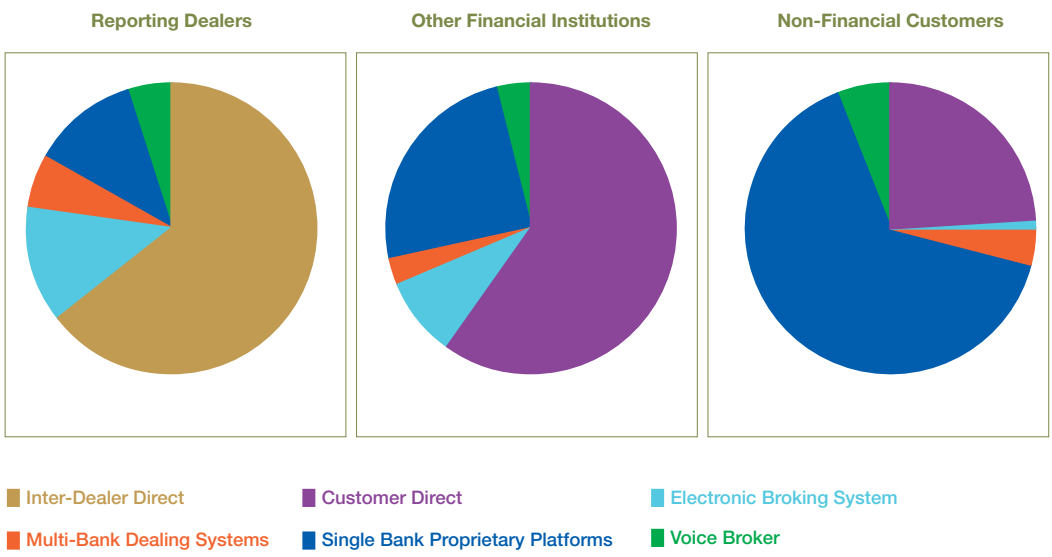


Chart 9: Execution Method by Counterparty in the Foreign Exchange Market



Trades with reporting dealers accounted for around half of total foreign exchange transactions (Chart 9). These are trades executed between two dealers where both dealers participate in the triennial survey and are not intermediated by a third party. Two-thirds of transactions by reporting dealers are inter-dealer direct, for example, a transaction executed between two reporting dealers via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing.

Trades with other financial institutions accounted for over a third of total foreign exchange transactions. For the most part, transactions were customer-direct trades, i.e. trades executed between the reporting dealer and either a customer or a non-reporting dealer that are not intermediated by a third party. A transaction between a reporting dealer and a non-reporting dealer that is executed via direct telephone communication or direct electronic dealing systems would be an example of this.

5. Conclusion

Turnover in the foreign exchange market in Ireland increased substantially between 2004 and 2007, mirroring developments in the international market. However, unlike the global OTC derivatives market, turnover in OTC interest-rate derivatives declined in Ireland over the same period. Both foreign exchange and interest-rate swaps had the largest volume of turnover, but despite this, turnover in interest-rate swaps actually fell between the two surveys.

Nearly three-quarters of the growth in aggregate turnover in the foreign exchange market can be attributed to an increase in transactions between reporting dealers and other non-reporting financial institutions. Trades among reporting dealers in the OTC market remained stable since 2004, but non-financial customers became more active.

The landscape of derivatives trading in Ireland has changed significantly over the past decade. The most traded instrument in 1995 was foreign exchange spots. In 2001, four-fifths of turnover was divided between foreign exchange spots, and foreign exchange and interest-rate swaps. By 2007, both foreign exchange and interest-rate swaps dominated turnover.

The use of hedging, through both foreign exchange and interest-rate swaps, and in particular the increase in other financial institutions as a counterparty, was timely in advance of recent financial market turmoil and foreign exchange volatility. Increased hedging

in this regard is perhaps also indicative of the increased exposures to overseas debt instrument and synthetic risk products. There was also evidence of increased carry trades in recent years. Overall, the results of the 2007 BIS Triennial Survey suggest that the Irish banking sector had definite hedging in place prior to recent credit market turmoil and foreign exchange volatility, which should help ensure the resilience of the Irish banking system.

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Annex I — BIS Survey Methodology and Definitions

The Irish component of the 2007 survey was completed by 20 credit institutions. Survey participants provided details of their gross turnover for the 20 business days in April 2007, broken down by instrument, counterparty and currency. Turnover data provide a measure of market activity, and can also provide a rough proxy of market liquidity. Turnover is defined as the gross value of all new deals entered into during a given period and is measured in terms of the nominal or notional amount of the contracts. The basis for reporting was the location of the sales desk, and all transactions were reported in US dollar equivalents.

The survey collected data on the following types of transactions:

Foreign Exchange Transactions

Spot transactions: Single outright transactions involving the exchange of two currencies at a rate agreed on the date of the contract for value or delivery (cash settlement) within two business days. The spot legs of swaps and swaps that were for settlement within two days (i.e. tomorrow/next day swaps) were excluded from this category.

Foreign exchange swaps: Transactions which involve the actual exchange of two currencies (principal amount only) on a specific date at a rate agreed at the time of the conclusion of the contract (the short leg) and a reverse exchange of the same two currencies at a date further in the future at a rate (generally different from the rate applied to the short leg) agreed at the time the contract is agreed (the long leg). Short-terms swaps carried out as 'tomorrow/next day' transactions are included in this category.

Outright forwards: Agreements for delayed delivery of financial instruments or commodities in which the buyer agrees to purchase and the seller agrees to deliver, at a future date, a specified instrument or commodity at a pre-agreed price or yield. Forward contracts are generally not traded on organised exchanges and their contractual terms are not standardised.

OTC Foreign Exchange Derivatives

Currency swaps: Contracts which commit two counterparties to exchange two streams of interests payments in different currencies for an agreed period of time and to exchange principal amounts in different currencies at a pre-agreed exchange rate at maturity.

Currency options: Option contracts that give the right to buy or sell a currency with another currency at a specified exchange rate during a specified period.

OTC Single-Currency Interest-Rate Derivates

Forward-rate agreements (FRAs): Interest rate forward contracts in which the rate to be paid or received on a specific obligation for a set period of time, beginning at some time in the future, is determined at contract initiation. A FRA is an instrument that enables a borrower or lender to fix in advance the interest costs or earnings on a future transaction.

Interest-rate swaps: Agreement to exchange periodic payments related to interest rates on a single currency; can be fixed for floating, or floating for floating based on different indices. This group includes those swaps whose notional principal is amortised according to a fixed schedule independent of interest rates. Interest rate swaps developed so that parties to the swap could exploit their comparative advantage in accessing different markets.

Interest-rate options: Option contracts that give the right to pay or receive a specific interest rate on a predetermined principal for a set period of time. Included in this category are interest-rate caps, floors, collars, corridors, swaptions and warrants.

Annex II — Execution Method of Foreign Exchange Transactions

Reporting institutions were asked to provide information on the execution method (notional amounts) used to settle their foreign exchange turnover transactions. The execution method has to be separately identified for foreign exchange spots, outright forwards, FX swaps and options. The execution methods are defined as follows:

Inter-bank Direct (inter-reporting dealer): Trades executed between two dealers where both dealers participate in the triennial survey and are not intermediated by a third party. For example, a transaction executed between two reporting dealers via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing.

Customer Direct (inter-dealer customer): Trades executed between the reporting dealer and either a customer or a non-reporting dealer (transactions with reporting dealers should only be reported in inter-bank direct) that are not intermediated by a third party. For example, a transaction between a reporting dealer and a non-reporting dealer that is executed via direct telephone communication or direct electronic dealing systems such as Reuters Conversational Dealing.

Electronic Broking Systems: Trades executed via automated order matching system for foreign exchange dealers. Examples of such systems are EBS and Reuters Matching 2000/2.

Electronic Trading Systems: Trades executed via a single-bank proprietary platform or a multi-bank dealing system. These systems are generally geared toward customers. Examples of multi-bank systems include FXAll, Currenex, FXConnect, Globalink, and eSpeed.

Voice Broker: Transactions executed via telephone communication with a foreign exchange voice broker.